



**ICMA
SURE** 2022
INTERNATIONAL CONFERENCE
ON MULTIDISCIPLINARY APPROACHES
FOR SUSTAINABLE RURAL DEVELOPMENT

CERTIFICATE

THIS CERTIFICATE IS PRESENTED TO

**Arief Sudarmaji, Purwoko Hari Kuncoro, Saparso Saparso, Yogi Ramadhani, Mahbub
Junaedi**

WITH THE TITLE

Design of Navigation Control on the Automated Mobile Sprinkler for Dry Land Cultivation

IN RECOGNITION OF THE OUTSTANDING CONTRIBUTION AS

Presenter(s)

ON INTERNATIONAL CONFERENCE

**5 th International Conference on Multidisciplinary Approaches for Sustainable
Rural Development 2022**

“ ICMA-SURE 2022 ”

**“ The Advanced Strategies To The Development of Rural Resources
For A Smart Society ”**

Purwokerto - Indonesia, November 8-9, 2022



Prof. Dr. Riffa Naufalin, S.P., M.Si.

Head of LPPM Jenderal Soedirman University



5th International Conference on Multidisciplinary Approaches for Sustainable Rural Development (ICMA - SURE)

LETTER OF ACCEPTANCE AND INVITATION

Date : November 5, 2022

No. : 004/LoA/ICMA-SURE-2022

Dear Arief Sudarmaji, Purwoko Hari Kuncoro, Saparso Saparso, Yogi Ramadhani, Mahbub Junaedi

Thank you for submitting your abstract for presentation at the 5th International Conference on Multidisciplinary Approaches for Sustainable Rural Development (ICMA-SURE) 2022. After reviewing your abstract, we are pleased to inform you that your abstract entitled:

Design of Navigation Control on the Automated Mobile Sprinkler for Dry Land Cultivation

ID Paper: 3259

meets preliminary acceptance requirements set forth by our Scientific Committee to be presented as Oral Presentation at the conference. The conference will be held online on 8-9 November 2022 using the Zoom application.

The Oral/Poster Presentation Guidelines can be found at the following link:

<https://icmasure.lppm.unsoed.ac.id/>

Regarding the payment, you also need to re-register to get a bill number. Please make bill payments before 6 November 2022. The payment and re-registration steps are explained in the ICMA SURE 2022 Payment Guideline.

If you require any further information, please do not hesitate to contact us or visit our website. We look forward to seeing you at the conference.

Yours Sincerely,




Amin Fatoni, S.Si., M.Si., Ph.D.
Chairman of ICMA-SURE 2022



PROGRAM AND ABSTRACT BOOK

“ICMA The 5th SURE”

INTERNATIONAL CONFERENCE
ON MULTIDISCIPLINARY
APPROACHES FOR SUSTAINABLE
RURAL DEVELOPMENT

ORGANIZED BY:
INSTITUTE OF RESEARCH AND COMMUNITY SERVICE (LPPM)
JENDERAL SOEDIRMAN UNIVERSITY
PURWOKERTO, CENTRAL JAVA
NOVEMBER, 8-9 2022



**ICMA
SURE** 2022
INTERNATIONAL CONFERENCE
ON MULTIDISCIPLINARY APPROACHES
FOR SUSTAINABLE RURAL DEVELOPMENT

PROGRAM AND ABSTRACT BOOK

THE 5TH ICMA-SURE

International Conference on Multidisciplinary Approaches
for Sustainable Rural Development
2022

***“THE ADVANCED STRATEGIES TO THE
DEVELOPMENT OF RURAL RESOURCES FOR A
SMART SOCIETY”***

Purwokerto, Central Java, Indonesia
November 8–9, 2022

Organized by:





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COMMITTEE

| | | | |
|-----|---|---|--|
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| 12. | Coordinator of Proceeding | : | Dr. Afik Hardanto |
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| 13. | Coordinator of Website Division | : | Muhammad Syaiful Alim, S.T., M.T. |
| 14. | Coordinator of Invited Speakers | : | Dr. Condro Wibowo, S.TP., M.Sc., Ph.D. |



WELCOME MESSAGE FROM THE RECTOR OF UNSOED

Assalamualaikum Warrahmatullah Wabarakatuh

Ladies and Gentlemen,
Best wishes to all of us

On behalf of Universitas Jenderal Soedirman, I would like to welcome all of the speakers and participants at the fifth International Conference on Multidisciplinary Approaches for Sustainable Rural Development (ICMA-SURE) with the theme of **“The Advanced Strategies to The Development of Rural Resources for a Smart Society”**.

Rural resources provide a number of advantageous strategies that ensure the availability of commodities and services for supplying, controlling, and sustaining culture. In the era of globalization and industry 4.0, our understanding of the research and innovation in this subject must be comprehensive and cross-disciplinary. Through equal participation and a collaborative approach to research, the development of the rural area is supposed to be improved. In this circumstance, enhancing the competence and aptitude of academic scholars is a strategic program that must be carried out. In terms of knowledge, comprehension, and experience of natural-socio-culture, which is rich in human concerns and environmental challenges. Not simply in terms of improving science and technology.

The nation's overall economic development strategy must adopt a new paradigm that sees the village as a potential hub for economic activity. To optimize the potential of rural areas, policymakers must establish appropriate policies that take into account changing internal and external situations. Rural development should receive greater attention, and villages should be treated with more consideration. One possible strategic move is to establish an appropriate resources.

Science and technology-related research, teaching, and community service are long-standing strengths of Universitas Jenderal Soedirman. Unsoed aims to produce competent graduates with strong leadership skills, in-depth industry knowledge, and innovative ideas who can adapt to societal, economic, and technological changes. Universitas Jenderal Soedirman is strongly committed to achieving this objective in order to collaborate with the scientific community in developing answers for redesigning our society, including in the fields of economics and related areas toward smart society 5.0.



In order to solve disruptive issues in the development of rural resources and entrepreneurship, we expect that this discussion will emerge in ideas, plans, and actions. Again, congrats to the planning team and everyone who took part..

Wassalamualaikum Warrahmatullah Wabarakatuh

Prof. Dr. Ir. Akhmad Sodik, MSc.Agr.
Rector UNSOED





WELCOME MESSAGE FROM THE CHIEF OF LPPM UNSOED

Assalamualaikum wr. wb.

- Honorable Rector of Jenderal Soedirman University, Prof. DR. IR. Akhmad Sodik, M.SC.Agr
- Honorable Vice Rector of Jenderal Soedirman University
- Honorable Deans and Head of Institutions at Jenderal Soedirman University
- Honorable keynote speakers:
 1. Prof. (Em) Zainal Aznam Mohd Jelani from University Putra Malaysia
 2. Dr. MD Sayed Uddin from University Malaysia Sabah
 3. Amy Purwoko from Sealedair Singapore, Singapore
 4. Prof. Tao Liu from Xiamen University, China
 5. Warissara Sorat, PH.D from prince of Songkla University, Thailand
 6. Prof. Zhang Jing from University of Toyama
 7. DR. Ing. Suroso, ST., M.Sc from Jenderal Soedirman University, Indonesia
 8. DR. Ick Rangga Rawono, S.H., S.E., M.Si., M.H.AK from Jenderal Soedirman University, Indonesia
- Distinguished guests, and participants

On behalf of the Research and Community Service Institute of Jenderal Soedirman University, it is my pleasure to welcome you to the 5th International Conference on Multidisciplinary Approaches for Sustainable Rural Development (ICMASURE) 2022. It is our honor to be host ICMASURE 2022. Our institute held this conference as our commitment to support the research dissemination on Rural Development. There are three basic needs in rural development for a sustainable future. The first one is improving millions of people's welfare in the country (nearly half of the world population), reducing the rural-urban gap, stamping out poverty, and preventing city migration. The second one is protecting and preserving natural, landscape and cultural resources. Last but not least is ensuring universal access to food with a sustainable farming production.

We do hope in this conference, multidisciplinary scientist around the world would share their studies that might be beneficial for future needs in Rural Development, as indicated in this year conference theme of **"The advanced strategies to the development of rural resources for a smart society"**.



The purposes of the conference are:

- To provide a forum for scientific discussion, professional networking, research collaboration, education, and dissemination of scientific research, innovation, and industrial products,
- To increase the quality of research and development in the multidisciplinary approach for sustainable rural development,
- And to encourage the local and regional young scientists to attend and present their works at the international level.

The success of the ICMA SURE 2022 would not have been attained without strong support from keynote speakers, participants, and the committee.

I would like to thank all of them for helping to make a very successful conference. We hope you will enjoy a pleasant and valuable virtual conference at ICMA-SURE 2022, organized by the Research and Community Service Institute, Jenderal Soedirman University.

Maju terus pantang menyerah!

Wassalamualaikum wr. wb.

Prof. Dr. Rifda Naufalin, S.P., M.Si.
The Chief of LPPM UNSOED



GREETING FROM THE CHAIRMAN OF 5TH ICMA SURE 2022

Assalamualaikum Warrahmatullah Wabarakatuh

On behalf of the Committee, I am very pleased that the **5th International Conference on Multidisciplinary Approaches for Sustainable Rural Development (ICMA-SURE)** has attracted many scientist from Indonesia, Malaysia, Thailand, China, Vietnam, Korea and Japan as well as other countries. The registered abstracts in this conference were more than 100 articles covering wide variety of subject grouped, divided in three symposia of Material Science and Engineering, Life and Applied Science, and also Arts and Humanities. The given oral and poster presentation would show outputs for future need as indicated in the conference theme of **“The Advanced Strategies to The Development of Rural Resources for A Smart Society”**.

The purposes of the conference are:

- to provide a forum for scientific discussion, professional networking, research collaboration, education, and dissemination of scientific research, innovation and industrial products.
- to increase the quality of research and development in the multidisciplinary approach for sustainable rural development.
- to encourage the local and regional young scientists to attend and present their works at the international level.

The success of the Conference would not have been attained without strong supports from contributing scientists and as well as Research and Society Service of Universitas Jenderal Soedirman Committee. I would like to thank all of them for helping to make a very successful conference. We hope that you will enjoy a pleasant and valuable conference organized by the Research and Society Service Institute, Jenderal Soedirman University.

Thank you

Wassalamualaykum Warrahmatullah Wabarakatuh

Amin Fatoni, Ph.D.

5th ICMA-SURE Chairman



SCOPE OF THE CONFERENCE

**ARTS AND
HUMANITIES**

**ENGINEERING
AND APPLIED
SCIENCE**

**AGRICULTURAL
& BIOSCIENCE**

**ECONOMICS &
BUSINESS**

**HEALTH
SCIENCES**



PLENARY SESSION SPEAKERS

Invited Speakers



Prof. (Em) Zainal Aznam Mohd Jelani
University Putra Malaysia



Dr. MD Sayed Uddin
University Malaysia Sabah



Amy Purwoko
Sealedair Singapore



Prof. Tao Liu
Xiamen University



Warissara Sorat, Ph.D.
Prince of Songkla University



Prof. Zhang Jing
University of Toyama



Dr. Ing. Suroso, S.T., M.Sc.
Jenderal Soedirman University



**Dr. Ick Rangga Bawono, S.H.,
S.E., M.Si., M.H.Ak.**
Jenderal Soedirman University



INVITED SPEAKERS ABSTRACT



Islamic Perspectives of Welfare and Cruelty in Livestock Production

Z.A. Jelani

Malaysian Society of Animal Production (MSAP); Emiritus Professor of
University Putra Malaysia
Envirovolution Sdn Bhd, No. 1, Sunway SPK Damansara,
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ABSTRACT

Animals were domesticated for several purposes mainly as sources of food and non-food materials including fiber, skin, draft power and companion. The rearing of farm animals is therefore an important component in an agricultural system. In the process of farming, men tend to overlook the moral principles involved in its rearing and intentions. The religion of Islam has always viewed animals as extraordinary creations of God. Islamic as written in the Qur'an and the Hadiths clearly mentioned the importance and roles of animals to mankind and the forbidden acts or attitudes of human towards animals during their close association. The teaching clearly mentions that under any circumstances, it is not justifiable to cause unavoidable pain and suffering to the innocent creatures of God. Many verses in the Qu'ran and Hadiths mentioned the importance to provide physical and psychological needs of all animals. Although the Qur'an states that man should use the animals for their need, that do not mean to allow us to break established normal values designed to protect the animal rights. This presentation briefly highlights some of these with the aim of reminding human of the Islamic teachings of the respects and responsibilities due to all animals and creations of God.



The Role of Social Cohesion in Community Resilience During Covid-19 Pandemic

Dr. MD Sayed Uddin

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ABSTRACT

COVID-19 outbreak pandemic is causing devastating damage to millions of lives around the world. In addition to the direct health impacts of the virus, evidence showed that the social, demographic, economic, businesses, environmental, behavioural, psychological, institutional and political responses to, and consequences of, the pandemic have been profound. Resilience assessment built a bridge between longer term sustainable development and shorter term crisis management, allowing these two sectors to develop common strategies. Community resilience measures how rural communities use resources within their community structures to adapt to social uncertainties. Previous studies found that the society with less social cohesion among the community has suffered tremendously. Cohesion appeared to decline quite substantially around the pandemic, compared to pre-pandemic periods. Understanding the socioeconomic impacts of the pandemic is crucial, including elements of social cohesion. This paper aims to look into the role of social cohesion in family and community resilience during COVID-19 pandemic. The study adopted Buckner's Index Of Cohesion (Neighborhood Cohesion Instrument) Scale to measure social cohesion and Index Of Perceived Community Resilience (IPCR) Scale by Kulig et al. (2013) in order to understand the degree of resilience in the rural communities in Sabah, Malaysia. Data were collected from the two different districts in Sabah, Malaysia (Kota Belud & Semporna). Using convenience sampling technique, data were collected through online survey questionnaire. A total of 345 responses were saved and run for the data analysis through IBM SPSS 28. The purpose is to understand different societal responses to the COVID-19 outbreak and factors affecting social cohesion towards family and community resilience. Results indicated that there is a positive association between social cohesion and rural community resilience during COVID 19 pandemic. The study recommends that there is a need and guidance to explore numerous government and non-government initiatives to improve social cohesion in order to enhance community resilience.

Keywords: Social cohesion, Family and Community resilience, Covid 19

Acknowledgements: The researchers would like to thank the Research Management Centre (Pusat Penyelidikan Dan Inovasi), Universiti Malaysia Sabah (UMS), for the generous research funding and support.



Packaging for Food Processing and Food Manufacturing

Amy Purwoko

Sealedair, Singapore

Food packaging is an essential component of food preservation. Food packaging is intended to contain, convey, protect, preserve, display, and inform food goods. The role of packaging is to safeguard products and keep the investment in the product while minimizing food waste. Packaging safeguards energy investments in food production, cultivation, and processing. Proper packing ensures that energy is not wasted throughout transportation, retailing, shopping, storage, and cooking. Packaging can help to improve the shelf life of food goods significantly. Hermetic packing consists of leak-proof seals that act as a barrier to microorganisms and prevent contamination.

Packaging accounts for 4% of the energy consumed in the meat production chain. Modified environment packaging of fresh beef extends shelf life, allows for more product distribution, and prevents contamination. Good packaging needs to be outstanding, attractive appearance, and also can be used for brand building. Some innovative packaging is described in the presentation.



Biosecurity Seaweed Farming China

Tao Liu

State Key Laboratory of Marine Environmental Science and College of Ocean and Earth Sciences, Xiamen University, Xiamen 361102, China

ABSTRACT

China's large-scale seaweed industry is well-developed from seaweed aquaculture, rather than wild seaweed resources. More than 70% is directly used for food consumption, and 20%-25% is used for aquatic animal feed. The Biosecurity of seaweed in China includes quality security, genetic security and disease prevention, that secure the safety of human consumption products, natural population and farming management. Technical specification and regulations for seed production of kelp are given as the examples for the indications of the standards of seaweed farming and products. A number of laws and standards of seaweed farming and products in state and local levels are listed, Quality safety of aquatic products indexes, such as the number of microorganisms and heavy metals are high-lighted. As the promotion of seaweed culture in different regions, specifically from north to south of China, risks of genetic erosion from artificially selected varieties to local populations were discussed. Focusing on the disease control in seaweed farming in China, national statistics of prevention and control of large-scale seaweed farming diseases were provided since 2020. Physiological diseases, pathogenic diseases, pests and harmful fish remain as the major challenges to the health management of seaweed farming. The cultivation of high-quality varieties "Resistant and high-yielding varieties" is an important basis for reducing seaweed diseases and increasing yields. Due to the growing demand for seaweed food and the government's determination to reduce carbon dioxide emissions, China's seaweed farming industry will continue to develop. Government supervision and good aquaculture operations are important measures to ensure the safety of seaweed.



Development of Competency, Standard of Practices, and Community-based Management System for Preparedness and Response to Emergency Situations from COVID-19 Pandemic in Risk Areas

Warissara Sorat
Prince of Songkla University

ABSTRACT

Developing competency among non-professional health to prepare and respond to the epidemic situation of COVID-19 by community participation is an excessive obligation during the pandemic. This Research and Development aims to assess knowledge and competency at individual and community levels in preventing COVID-19 in the group of non-healthcare professionals working on COVID-19 in risk areas and develop a risk communication learning toolkit and community-based surveillance and control in Khlong La Subdistrict, Khlong Hoi Khong District, Songkhla Province, from March 2021 to January 2022.

Purposive sampling was selected from the administrative department (15 people) and village health volunteers (VHV) responsible for the COVID-19 outbreak and control in 7 villages (95 people). The study was divided into 3 phases.

Phase 1: Collects and synthesizes the body of knowledge from past research. and interviewing a sample group (Focus group interview) of 15 people until the straightforward information to design an established knowledge that corresponds to the needs of the area.

Phase 2: Utilizes data from Phase 1 to develop knowledge and learning materials. The preliminary quality check was carried out by 1 nursing teaching specialist, 1 community member, and 1 volunteer with health knowledge. Then, the knowledge was tested with the local sample group (N = 10). One group pre-posttest to assess pre- and post-test knowledge using statistics. The non-parametric (Wilcoxon Signed Ranks Test) found that the samples with more knowledge after teaching were more than those with the same knowledge or decreased knowledge It was found that the score was 3 times higher than the original with no statistical significance ($p > .05$) and the satisfaction of use was interviewed.

Phase 3: Evaluation The researcher used the learning outcomes and recommendations in Phase 2 to improve online knowledge on the Line Official Platform (Khlong Hoi Khong Fights COVID) for negligent access and reduce the pandemic. The effectiveness of the knowledge set developed on the Line OA in the sample group (N=7) was measured using a one-group pre-posttest to assess pre- and post-test knowledge. The non-parametric (Wilcoxon Signed Ranks Test) found that the samples with more knowledge after teaching were more than those with the same knowledge or decreased knowledge. It was found that the score was 3 times higher than before, not statistically significant ($p > .05$).

The interviews with the sample group reflected that the knowledge in the video clip format in the Line OA system is easy to access and easy to understand with the southern language voiceover and the illustrations of the real context suitable for further amplification.

Keywords: COVID-19, risk communication, investigation, surveillance and control



Impact of Climate Changes on Water and Nutrient Transport Into the Coastal Area and Its Leading Adaptation

Prof. Zhang Jing
University of Toyama

ABSTRACT

The temperature in Japan has been rising 1.7 times faster than the world's average due to ongoing global warming. The effects of the dramatic change have also begun to appear in the weather and the water cycle of some coastal cities. The rise in temperature has turned snowfall into rainfall, and as a result, the amount of snowfall in these area has decreased by up to 50% over the past 40 years. The reduction in the snowfall caused a deterioration in the function of water storage and groundwater recharge. These shifts are expected to increase river water and shallow groundwater volume and a shortened residence time before flowing to the coastal ocean, eventually decreasing nutrient concentrations in the terrestrial water. In order to adapt to the continuing global warming, it is vital to understand the current status of the water and nutrient dynamics in this area and then adopt appropriate measures based on scientific evidence in cooperation with the government. In this presentation, a three year ongoing project (Environment Research and Technology Development Fund) will be introduced, including (1) elucidation of the mechanisms of water and nutrient cycling in the region, (2) identification of factors causing changes in these processes due to climate change, and (3) future forecasts based on observational data and consideration of adaptive measures. Our goal is leading to conserve sustainable water and appropriate nutrient management. An ongoing UN Ocean Decade Incubator-WESTPAC programme, "Healthy, Productive and Sustainable Asian Marginal Seas: Understanding changes in the marine environment in response to global climate change", will also be briefly introduced.



Estimation of Meteorological Droughts over Cimanuk-Cisanggarung Watersheds using Standardized Precipitation Index Considering Climate Changes

Suroso¹, Annisa Nurfadila Wira Deviana¹, Ardianyah², Edvin Aldrian³

¹Department of Civil Engineering, Jenderal Soedirman University, Indonesia

²Department of Agricultural Engineering, Jenderal Soedirman University, Indonesia

³National Research and Innovation Agency, Indonesia

ABSTRACT

This study aims to develop a model of meteorological drought hazards using the Standardized Precipitation Index (SPI) over the Cimanuk-Cisanggarung watersheds with considering climate change. The severity, duration, and frequency of drought risks under future rainfall changes will be estimated using this approach. Instead of using a climate change projection based on the global/regional climate models, changes in rainfall patterns will be assessed using the Scenario-Neutral (SN) approach. The inverse model is then used to determine plausible future daily rainfall taking into account monthly seasonal patterns with the help of the Mann-Kendall trend test. This study utilizes the gridded daily rainfall data (1979-2019) obtained from the Climate Prediction Center. This study presents that monthly rainfall at the beginning of the year (Jan-Mar) will tend to increase while monthly rainfall in the mid-years (Aug-Oct) will decrease. This implies that drought risk will possibly be higher in the future.

Keywords: rainfall changes, meteorological drought risks, SPI, Cimanuk-Cisanggarung watersheds



National Economic Recovery (PEN) Through Data Strengthening And Digitization of General Trade in Micro, Small, and Medium Enterprises (UMKM) in Indonesia

**Icuk Rangga Bawono, Rifda Naufalin, Diah Setyorini Gunawan, Weni Novandari,
Jajang, Sri Maryani**

Universitas Jenderal Soedirman Purwokerto

ABSTRACT

The role of the informal sector in the form of Micro, Small, and Medium Enterprises (UMKM) is very large in supporting the Indonesian economy. The majority of UMKM, especially traditional stalls and wholesalers in Indonesia, are still managed traditionally and have not been touched by the digital world. The digitization of traditional stalls and wholesalers is a great opportunity to increase the competitiveness of UMKM. Through datadriven digitalization, the management and operation of traditional stalls and wholesalers can provide a competitive advantage to survive and continue to grow. Regarding the development of digital platforms, the management of the UMKM sector, especially traditional stalls and wholesalers, can be improved professionally with a data-driven concept. The basis for decision-making at the UMKM level (stalls and wholesalers) and principals will become more efficient and accurate. Macroeconomically, accurate data will make the economy more efficient and minimal. Through strengthening data and digitizing UMKM, it has the potential to recover the national economy.

Keywords: National economic recovery, UMKM, Data strengthening, Digitalization



CONFERENCE SCHEDULE

CONFERENCE DAY-1 Tuesday, November 8, 2022

| Time (GMT+7) | Session | Description |
|--|--|---|
| Onsite: LPPM Building, Universitas Jenderal Soedirman | | |
| Online: Zoom https://bit.ly/ICMA_MainRoom | | |
| 07.30 – 08.00 | Participants join the Zoom | |
| 08.00 – 08.05 | Opening | MC: Nadia Gitya Yulianita & Indriyati Hadiningrum |
| 08.05 – 08.10 | National anthem “Indonesia Raya” | |
| 08.10 – 08.15 | Remark by the Head of LPPM Universitas Jenderal Soedirman Prof Dr. Rifda Naufalin | |
| 08.15 – 08.25 | Opening remark by the Rector of Universitas Jenderal Soedirman Prof Dr. Akhmad Sodik | |
| 08.25 - 08.30 | Short break | |
| 08.30 – 09.00 | <i>Islamic Perspectives of Welfare and Cruelty in Intensive Livestock Production</i> Prof. (Em) Zainal Aznam Mohd Jalan, Malaysian Society of Animal Production, Malaysia | PLENARY 1: Moderator: Dr. Afik Hardanto |
| 09.00 – 09.30 | <i>Estimation of Meteorological Droughts over Cimanuk-Cisanggarung Watersheds using Standardized Precipitation Index Considering Climate Changes</i> Dr. Ing. Suroso, Jenderal Soedirman University, Indonesia | |
| 09.30 - 10.00 | Discussion | |
| 10.00 - 10.15 | Tea Break | |
| 10.15 - 10.45 | <i>Impact of Climate Changes on Water and Nutrient Transport Into The Coastal Area and Its Leading Adaptation</i> Prof. Zhang Jing, University of Toyama, Japan | PLENARY 2: Moderator: Probo Hardini, Ph.D |
| 10.45 – 11.15 | <i>Biosecurity of Seaweed Farming in China</i> Prof. Tao Liu, Xiamen University, China | |
| 11.15 – 11.45 | Discussion | |
| 11.45 – 12.30 | Lunch break | |
| 12.30 – 14.30 | Parallel Session Day-1 | Room Moderator and Host |
| 14.30 | Announcement End of Day-1 Session | Moderator |



CONFERENCE DAY-2 Wednesday, November 9, 2022

| Time (GMT+7) | Session | Description |
|---|--|---|
| Onsite: LPPM Building, Universitas Jenderal Soedirman | | |
| Online: Zoom https://bit.ly/ICMA_MainRoom | | |
| 08.30 – 08.55 | Participants join the Zoom Room | |
| 08.55 – 09.00 | Opening | MC: Nadia Gitya Yulianita & Indriyati Hadiningrum |
| 09.00 – 09.30 | <i>The role of social cohesion in community resilience during COVID-19 pandemic</i> Dr. MD Sayed Uddin, University Malaysia Sabah, Malaysia | PLENARY 3: Moderator: Intan Shaferi |
| 09.30 – 10.00 | <i>National Economic Recovery (PEN) Through Data Strengthening and Digitization of General Trade in Micro, Small, and Medium Enterprises (UMKM) in Indonesia</i> Dr. Ick Rangga Bawono, Jenderal Soedirman University, Indonesia | |
| 10.00 – 10.20 | Discussion | |
| 10.20 – 10.30 | Tea Break | |
| 10.30 – 11.00 | <i>Packaging for Food Processing and Food Manufacturing</i> Amy Purwoko, Sealedair Singapore | PLENARY 4: Moderator: Ns. Dian Ramawati |
| 11.00 – 11.30 | <i>Development of Competency, Standard of Practices, and Community-based Management System for Preparedness and Response to Emergency Situations from COVID-19 Pandemic in Risk Areas</i> Warissara Sorat, Ph.D, Prince Songkla University, Thailand | |
| 11.30 – 11.50 | Discussion | |
| 11.50 – 12.30 | Lunch break | |
| 12.30 – 14.30 | Parallel Session Day-2 | Room Moderator and Host |
| 14.30 – 15.00 | Closing Ceremony | |



ROOM LINK

Dear Participants,

Thank you for registering to our virtual conference. The conference will be conducted on **November 8–9, 2022 from 8:00 AM to 15:30 PM WIB (GMT+7)**. Please check the time difference (on your part) so that you won't miss our conference.

Here's the link to join our plenary sessions. This link is **for all Plenary Sessions**:

https://bit.ly/ICMA_MainRoom

The link to join the **Parallel Session**:

Parallel Session Day-1

Tuesday, November 8, 2022 (12.30 – 14.30 GMT +7)

| Room | Zoom Link | Moderator | Host |
|--------|---|---|----------------------------------|
| Room 1 | https://bit.ly/ICMAParallel_Room1 | Nuriyeni Kartika B., S.IP., M.A., Ph.D | Wawan Hidayat |
| Room 2 | https://bit.ly/ICMAParallel_Room2 | Ulil Afwa, S.H., M.H. | M. Al Daffa Priambodo Santoso |
| Room 3 | https://bit.ly/ICMAParallel_Room3 | Dyahruri Sanjayasari, S.Pt., M.Si. | Wildan Tsalas Mufadhil |
| Room 4 | https://bit.ly/ICMAParallel_Room4 | Krissandi Wijaya, S.TP., M.Agr.Sc., Ph.D | Syahrul Saepuloh |
| Room 5 | https://bit.ly/ICMAParallel_Room5 | Dr. Dadan Hermawan, S.Si., M.Sc. | Faizal Akbar |
| Room 6 | https://bit.ly/ICMAParallel_Room6 | Dr. Arif Setyo Upoyo, S.Kep., Ns. M.Kep. | M. Agung Eka Prasetya |
| Room 7 | https://bit.ly/ICMAParallel_Room7 | Dr. Sidik Awaludin, M.Kep., Sp. Kep.MB. | Athif Izzuddin |
| Room 8 | https://bit.ly/ICMAParallel_Room8 | Mekar Dwi Anggraeni, M.Kep., Ph.D. | Arsyl Adimi Sulaeman |



Parallel Session Day-2

Wednesday, November 9, 2022 (12.30 – 14.30 GMT +7)

| Room | Zoom Link | Moderator | Host |
|--------|---|--|-----------------------------|
| Room 1 | https://bit.ly/ICMAParallel_Room1 | Kholifatus Sa'adah, S.Hub.Int., M.Hub.Int. | Aji Satrio Winasis |
| Room 2 | https://bit.ly/ICMAParallel_Room2 | Dr. Sri Wahyu Handayani, S.H., M.H. | Justicia Sekar Maharani |
| Room 3 | https://bit.ly/ICMAParallel_Room3 | Dr. Nuning Vita Hidayati, S.Pi., M.Si. | Nurul Izzah Islamy |
| Room 4 | https://bit.ly/ICMAParallel_Room4 | Susanto Budi Sulistyio, S.TP., M.Si., Ph.D. | Nurmaya Fauztina Fauzani |
| Room 5 | https://bit.ly/ICMAParallel_Room5 | Anung Riapanitra, S.Si., M.Sc., Ph.D. | Rahma Ayulia Harjanti |
| Room 6 | https://bit.ly/ICMAParallel_Room6 | Siwi Pramutama Mars W., S.Si., M.Si., Ph.D. | Yusmita Puji Lestari |
| Room 7 | https://bit.ly/ICMAParallel_Room7 | Dr.nat.techn.apr. Hendri Wasito, M.Sc. | Harsanti Ratna Hanifah |
| Room 8 | https://bit.ly/ICMAParallel_Room8 | Hikmi Mukarromah Pratiwi, S.Kep., Ns., M.S | Millati Hanifah |



PARALLEL SESSION GUIDELINES

- The parallel session will be conducted virtually using zoom meeting platform on November 8-9, 2022 kindly refer to the updated.
- All moderators and presenters will be expected to use the virtual background
- Each virtual presentation is limited to 12 minutes (7 minutes presentation + 5 minutes Q&A). Kindly ensure that your presentation duration does not exceed 15 minutes. The presentation schedule will be strictly enforced by the moderator and technical host.
- Presentation should be in Power Point.
- Presenters should strictly follow the requirements for equipment and environment:
 - ✓ Laptop/desktop with camera and microphone/headset
 - ✓ Good and stable internet connection (wired connection recommended)
 - ✓ Bright and quiet environment
- All virtual presenters must be in the virtual room throughout his/her scheduled presentation session. Please log in to your scheduled presentation session at least 10 minutes in advance.
- Please rename your zoom account with : **YOUR ROOM_Your Name, example : ROOM 1_Maudy Ayunda**
- Please find Your Room in the Parallel Session Schedule below
- Enjoy your presentation



PARALLEL SESSION

DAY-1

Tuesday, November 8, 2022

| Room 1 (Day-1) | | |
|---|--|---|
| Moderator: Nuriyeni Kartika Bintasari, S.IP., M.A., Ph.D | | |
| Zoom Link: https://bit.ly/ICMAParallel_Room1 | | |
| Time: 12.30-14.30 GMT+7 | | |
| No. | Name | Title |
| 1. | Adhi Iman Sulaiman, Masrukin Masrukin, Dindy Darmawati Putri, Irene Kartika Eka Wijayanti, Yuli Risnawati | Community-Based Tourism Village Development |
| 2. | Harun Nur Jamiel | The Effects of Local Governmental Incomes, General Allocation Funding and Special Allocation Funding on Open Unemployment in West Java Province: A Panel Data Analysis from 2013 to 2020 |
| 3. | Jaryono, Tohir Tohir, Rasyid Mei Mustafa | Analysis of the Merdeka Belajar-Kampus Merdeka (MBKM) Student Exchange in The Economic Education Department |
| 4. | Aldila Krisnaresanti, Lina Rifda Naufalin, Adi Indrayanto | The Adoption of Digital Marketing MSMEs in Banyumas Regency, Indonesia |
| 5. | Tohir Tohir, Adi Indrayanto, Dadang Iskandar | Analysis of Business Management Problems in MSMEs in Banyumas Regency |
| 6. | Rahab | Rural Tourism Destination Branding Strategy With Collaborative Approach of Local Stakeholders |
| 7. | Eko Arief Wibowo | Diversion in the Settlement of All Criminal Acts Performed by Children for the Establishment of Restorative Justice |
| 8. | Christina Tri Setyorini | The Implementation of Village's Fund on Goods and Services Procurement |
| 9. | Pramono Hari Adi, Rio Dhani Laksana | Quality Improvement of SME's Handicraft Products in Banyumas Regency |
| 10. | Rio Dhani Laksana | Economic Recovery after the Covid 19 Pandemic of Utilization of Village-Owned Enterprises in Indonesia |



Room 2 (Day-1)

Moderator: Ulil Afwa, S.H., M.H.

Zoom Link: https://bit.ly/ICMAParallel_Room2

Time: 12.30-14.30 GMT+7

| No. | Name | Title |
|-----|---|---|
| 1. | Ahmad Sabiq, Waluyo Handoko, Andi Ali Said Akbar, Bowo Sugiarto, Titis Perdani | Deparpolisasi From The People's Level: Blank Box Movement in the 2019 Pilkada in Kebumen Regency |
| 2. | Nurani Ajeng Tri Utami | The Urgence of Paralegal Position in Law Enforcement in Indonesia Through the Provision of Legal Assistance |
| 3. | Rahtami Susanti | Settlement of Children's Cases During the Covid-19 Pandemic Through Online Trials to Realize Protection Against Children in Conflict With the Law |
| 4. | Imam Santosa, Muslihudin, Wiwiek R. Adawiyah | Variation of Intensity of Independent Farmer Elements of Different Social Class in Balanced Reciprocity Relationship |
| 5. | Usep Muttaqin, Chusni Hadiati, Nadia Gitya Yulianita | Felicity Condition of Directives Speech Act Uttered by Indonesian Public Figures during Covid-19 |
| 6. | Hariyadi, Muhammad Taufiqurrohamn, Arizal Mutahir | Construction of Female Agency in Indonesian Contemporary Horror Films |
| 7. | Renny Miryanti, Sri Wijayanti, Nurul Azizah Zayzda, Kholifatus Saadah, Ayu Agustiniingsih | The Role of ASEAN Integrated Food Security Framework in Realizing Indonesian Food Security |
| 8. | Weda Kupita | Fictitious-Positive Decision Dispute Resolution at PTUN For the Achieving Unity of Proceedings and Legal Certainty |
| 9. | Ulil Afwa, Agus Mardianto, Ml. Wiwik Yuni Hastuti | The Effectiveness of The Investment Alert Task Force in Law Enforcement of Illegal Online Loan Eradication in Banyumas Regency |
| 10. | Ade Maman Suherman | Model of Legal Protection of Geographic Indications in Facing the Asean Economic Community (AEC) |
| 11. | Erlangga Girindra Buana | Juridical Analysis of Article 12 Letter (a) in Law Regarding Notary Positions Against Notaries Who Are Declared Bankrupt |



Room 3 (Day-1)

Moderator: Dr. Dyahruri Sanjayasari, S.Pt., M.Si.

Zoom Link: https://bit.ly/ICMAParallel_Room3

Time: 12.30-14.30 GMT+7

| No. | Name | Title |
|-----|--|---|
| 1. | Hamdan Syakuri, Petrus Hary Tjahja Soedibyo, Sri Marnani, Marhaendro Santoso, Taufik Budhi Pramono, Kasprijo Kasprijo, Anandita Ekasanti, Agung Cahyo Setyawan, Rima Oktavia Kusuma, Rudy Wijaya, Dewi Nugrayani, Emyliana Listiowati, Mustika Palupi, Purnama Sukardi | Health Study of Nilem (<i>Osteochilus vittatus</i>) Received Diet with Salt Supplementation: Hematological Profiles and Occurrence of <i>Aeromonas hydrophila</i> Bacteria in the Digestive Tract |
| 2. | Endang Hilmi, Uus usman, Achmad Iqbal | The External And Internal Factor and Ecosystem Services to Support Mangrove Rehabilitation Planning in North Coast Jakarta |
| 3. | Endang Hilmi, Arif Mahdiana, Diki Arliansah | The inventory of fishing ground and friendly fishing gear in lagoon and mangrove ecosystem of Segara Anakan Cilacap |
| 4. | Dyahruri Sanjayasari, Maria Dyah Nur Meinita, Amron, Sesilia Rani Samudra | Settlement performance of juvenile green shell (<i>Perna viridis</i>) on different substrates based on attachment, byssus production and byssus strength |
| 5. | Alif Arfa Maulida Firdauzi, Aulidya Nurul Habibah, Gratiana Ekaningsih Wijayanti | The Primary Culture and Subculture of Kidney-Derived Cells of The Bony Lip Barb Fish (<i>Osteochilus vittatus</i>) Using Different Concentrations of Serum |
| 6. | Irene Kartika Eka Wijayanti, nfn Sunendar, Lutfi Zulkifli, Rifki Andi Novia, Alpha Nadeira Mandamdari, Tatang Widjojoko, Adwi Herry Koesoema Elyanto, Syahrul Ganda Sukmaya | The level of farmer satisfaction with the citronella partnership in Patikraja District (Case in Kedungrandu Village) |
| 7. | Yulia Sistina | Larvae and Fries Survival from Several Hours Post Mortem Broodstock Of Ornamental and Consumption Fish Gamet |
| 8. | Nageeb Mohammed Suliman, Rifda Naufalin, Condro Wibowo, Nur Aini, Erminawati Wuryatmo | Influence of Modified Atmosphere Packaging on the Quality of Chicken Meat |
| 9. | Agung Cahyo Setyawan, Ficky Setya Aji Nugroho, Shaumy Widiyantika Humaira, Dela Mefiana, Purnama Sukardi | Colour change and growth of zebra fish, <i>Danio rerio</i> , fed natural food |
| 10. | Juni Sumarmono, Triana Setyawardani, Setya Agus Santosa, Nur Aini | Reducing Acid Whey Production During Manufacture of Concentrated Yogurt |



Room 4 (Day-1)

Moderator: Krissandi Wijaya, S.TP., M.Agr.Sc., Ph.D.

Zoom Link: https://bit.ly/ICMAParallel_Room4

Time: 12.30-14.30 GMT+7

| No. | Name | Title |
|-----|--|--|
| 1. | Sri Rahayu | Nutrient profile, protease and cellulase activity Of protein extract hermetia illucens larvae Rearing on various substrates |
| 2. | Nur Aini | Nutritional and sensory characteristics of corn-mungbean cookies compared to wheat cookies |
| 3. | Purwandaru Widyasunu, A.H Syaeful Anwar, Prastama Surya Nirwangga | Effect of Liquid Organic Extract and Compost of Azolla Microphylla Biomass Basis on the Changes in N Nutrients in Ultisol and Pak Choi Yield |
| 4. | Eni Sumarni, Loekas Soesanto, Okti Herliana, I Wayan Anik Leana, Lutfi Zulkifli, Whidiatmoko Herry Purnomo, Priswanto Priswanto | Identification of Main Fungal Disease from Hydroponic Melon (<i>Cucumis melo</i> L.) in Greenhouse in Temanggung Regency |
| 5. | Wijonarko G., Rifda Naufalin, Karseno, Ike Sitoresmi Mulyo Purbowati | Effect of Temperature and Relative Humidity on Microbial Profile, Brix Value and Total Sugar Of Coconut Sap in Susukan Village, Sumbang District |
| 6. | Titin Widiyastuti, Bambang Hartoyo, SRI RAHAYU, Singgih Sugeng Santoso | Antibody Titer of Broiler Chickens who Get Peptide Supplementation from Chicken Feet in Feed |
| 7. | Rozi Rozi, Rahayu Kusdarwati, Suwarno Suwarno, Wiwiek Tyasningsih | Identification outer membrane protein, LamB (malto porin) of <i>Aeromonas hydrophila</i> , a protective vaccine antigen against Aeromonosis in <i>Goramy</i> (<i>Osphronemus goramy</i>) |
| 8. | Shafira Audy Prameswari, Yoana Rizki Deviriandra, Ariadne Hapsari Putri Taufik, Rizky Aliyah Putri, Athaya Helia Untari, Afifah Afifah | Stomatal Opening Model for Plant Growth inside Plant Factory |
| 9. | Condro Wibowo | The effect of various main coating materials and sprayer nozzle size on the shelf life of tomato |
| 10. | Alaeldin Mohammed Ahmed Musa, Rifda Naufalin, Ike Sitoresmi Mulyoand, Isti Handayani, Erminawati Erminawati | The Effect of Microwave Application on the Drying of Banana Flour (<i>Musa paradisiaca formatypica</i>) Inoculated by <i>Cronobacter sakazakii</i> Bacteria |



Room 5 (Day-1)

Moderator: Dr. Dadan Hermawan, S.Si., M.Sc.

Zoom Link: https://bit.ly/ICMAParallel_Room5

Time: 12.30 – 14.30 GMT+7

| No. | Name | Title |
|-----|--|--|
| 1. | Ari Asnani, Dadan Hermawan, Hendri Wasito | Phytochemical Analysis of <i>Strobilanthes cusia</i> |
| 2. | Uyi Sulaeman, Yusuf Mathiinul Hakim, Dian Riana Ningsih | Design of Ag ₃ PO ₄ /AgCl/g-C ₃ N ₄ /PtCl ₆ ²⁻ quaternary photocatalyst for enhanced photocatalytic and antibacterial activity |
| 3. | Dadan Hermawan, Salsabil Rahmadina, Irmanto Irmanto, Mudasar Mudasar, Hassan Y Aboul-Enein | Chiral Separation of Hydroxychloroquine by High-Performance Liquid Chromatography Method using Amylose Tris (3,5-dimethyl phenyl carbamate) as Chiral Column |
| 4. | Dadan Hermawan, Annisa Mutiara Fitri, Cacu Cacu, Amin Fatoni, Ponco Iswanto, Uyi Sulaeman | High-Performance Liquid Chromatography Method for Chiral Separation of Sulconazole using Cyclodextrin as Chiral Column |
| 5. | Hari Prasetyo | Improved Over Current Relay (OCR) Coordination Using Time Multiple Setting (TMS) |
| 6. | Zein Hanni Pradana, Solichah Larasati, Khoirun Ni'amah | Planning and Prediction Coverage Area Using Urban Macro LOS for New Industrial Area |
| 7. | Triyani Triyani, Marwah Daud Wijayanti, Siti Rahmah Nurshiami | The implementation of eccentric digraph to determine the center of the earth region and division of the time zone of the world |
| 8. | Hasyim Asyari | Performance Analysis of Work Skills Training and Stress Level in Completing Cognitive Task on Students with Special Needs Using Virtual Reality Video |
| 9. | Mardiyah Kurniasih | Application of N-methyl chitosan as an antifungal of <i>C. Albicans</i> on nylon fabrics |
| 10. | Zaskia Alifia, Nurianah Tri Puji Astuti, Misbachul Syurur Ramadhan, Rizqi Afifah, Anung Riapanitra | Green Synthesis of BiVO ₄ Nanorods by <i>Nigella Sativa</i> Extract and Evaluation of Their Antibacterial Activity Against <i>Pseudomonas Aeruginosa</i> |
| 11. | Zohan Syah Fatomi, Sholihun, Wahyu Tri Cahyanto, Mukhtar Effendi | Phonon Effect on the Vacancy Concentration in Diamond and α -Tin: A DFT-based Quantum calculations |
| 12. | Imron Rosyadi | Multivariate soft sensor for product monitoring in the debutanizer column with deep learning |



Room 6 (Day-1)

Moderator: Dr. Arif Setyo Upoyo, S.Kep., Ns., M.Kep.

Zoom Link: https://bit.ly/ICMAParallel_Room6

Time: 12.30 – 14.30 GMT+7

| No. | Name | Title |
|-----|---|--|
| 1. | Nina Setiawati | Characteristics of Adolescents with Risky Sexual Behavior in Banyumas |
| 2. | Taryanto | The Effect of Telenursing on Adherence To Antiretroviral Therapy of People Living with Hiv (Plwh): A Systematic Review |
| 3. | Eni Rahmawati, Dian Susmarini, Desiyani Nani | Determinant Factors of Neonatal Respiratory Distress in Rural Indonesia |
| 4. | Risyawanti nur fajriani | mHealth Intervention To Improve Breast Cancer Prevention and Early Detection : A Literature Review |
| 5. | Anton Budhi Darmawan, Nia Krisniawati, Rani Afifah Nur Hestiyani, Anriani Puspita Karunia Ning Widhi, Dhadhang Wahyu Kurniawan, Eman Sutrisna | Clinical Presentation of Otomycosis Caused By Candida |
| 6. | Daniel Joko Wahyono, Gita Nawang Tantri, Saefuddin Aziz, Aris Mumpuni, Nurtjahjo Dwi Sasongko, Adi Amurwanto | Relative Expression of mRNA YY1 in Serous Carcinoma as a Predictor of Ovarian Cancer Pathogenesis |
| 7. | Agustina Desy Putri Budi Utami | mHealth Interventions to Improve Breastfeeding Self Efficacy: Literatur Riview |
| 8. | Hikmi Muharromah Pratiwi | Skin-to-skin Contact and Parental Distress among Parents with Preterm Infant in NICU: A Review |
| 9. | Hery Winarsi, Gumintang Ratna Ramadhan, Hernayanti Hernayanti | Cowpea Beans (<i>Vigna Unguiculata</i>) Sprout Yoghurt Reduce Malondialdehyd Levels and Body Mass Index of Type 2 Diabetes Mellitus with Obesity |
| 10. | Puji Lestari, Dian Ramawati | Early Detection of Sepsis in Neonates: A Systematic Review |
| 11. | Agung Prabowo, Mustafa Mamat, Firman Sukono, Diah Paramita Amitarwati, Agus Sugandha, Supriyanto Supriyanto, Slamet Riyadi | Determination of Agricultural Insurance Premium Prices Based on Rainfall Index with the Black-Scholes Model |
| 12. | Aprilia Kartikasari | Factors Affecting Dating Behavior in Teenagers |



Room 7 (Day-1)

Moderator: Dr. Sidik Awaludin, S.Kep., Ns., M.Kep., Sp. Kep. MB

Zoom Link: https://bit.ly/ICMAParallel_Room7

Time: 12.30 – 14.30 GMT+7

| No. | Name | Title |
|-----|--|---|
| 1. | Surya Bakti, Endang Triyanto | Relationship of Family Support to Compliance with Hypertension Patients Performing Routine Blood Pressure Control at Kemranjen I Public Health Center |
| 2. | Sidik Awaludin | The Effect of Electronic-Tindak Lanjut Tensiku (E-Titenku) Intervention Model on Coronary Heart Disease Prevention Knowledge |
| 3. | Zunaidi Ahmad | Interventions To Improve Quality of Life People Living with Hiv/Aids: A Systematic Review |
| 4. | Isni Maftuhah, Saryono | Distraction Techniques To Reduce Anxiety in Pre-Operative Patients |
| 5. | Yunita Sari | Knowledge toward Diabetic Wound Care Management and Related Factors : A Cross-Sectional Study in Nurses |
| 6. | Meivita Dewi Purnamasari | Improvement of Complementary Feeding Practices with MPASI Education Videos Based on Local Wisdom |
| 7. | Yunita Sari | Nurses' Perceived Barriers to the Prevention of Pressure Injury and Related Factors |
| 8. | Nely Sofia Rahman | Factors That Affect the Successful Implementation of Family Integrated Care in Adolescents who Experience Bullying : A Systematic Review |
| 9. | Triyanto , Ridlwan Kamaludin | The Role of Mindfulness on Work Stress in Emergency Room Nurses : A Literatur Rievieu |
| 10. | Dwi Christanto | The Effect of Anesthetic Spinal Block Height on Post Operative Shivering in Recovery Room of Emanuel Hospital |
| 11. | Mahila Asana, Reza Nur 'Aidah, Akmal Ryan Muttaqin, Sandra Novitasari Divandra Putri Luvithania and Indah Setiawati* | Community-Based Used Cooking Oil Management Strategy Using The AHP Approach |



Room 8 (Day-1)

Moderator: Mekar Dwi Anggraeni, M.Kep., Ph.D.

Zoom Link: https://bit.ly/ICMAParallel_Room8

Time: 12.30-14.30 GMT+7

| No. | Name | Title |
|-----|---|---|
| 1. | Rifda Naufalin, Abdul Mukhlis Ritonga, Ami Nurhidayah | Accelerated shelf life testing of the microcapsules of Kecombrang flower, leaf, and stem using a critical moisture content approach |
| 2. | Retno Supriyanti | The Use of the Watershed Method in the Identification of Microscopic Image Characteristics of Leukocyte Cells |
| 3. | Wahyu Widanarto | Time tuning of high-energy ball milling in the production of reduced graphene oxide from activated rice husk charcoal |
| 4. | Amin Fatoni, Indah Rahma Cahyanti, Zufahair Zufahair, Hartiwi Diastuti, Mekar Dwi Anggraeni | Alginate-Fe ₃ O ₄ nanoparticle Composite Synthesis and Application for Glucose Biosensor |
| 5. | Afik Hardanto | Groundwater Potential Zone Classification Using Geospatial Approach |
| 6. | Dadang Iskandar | Analysis and design of tracer study information system to support IKU "Main Performance Index" 1 |
| 7. | Amin Fatoni, David Hutama, Dadan Hermawan, Wahyu Widanarto, Mekar Dwi Anggraeni | Activated Carbon "NiFe ₂ O ₄ Doped Calcium Nanoparticles Composite for Carbon Paste Electrode of Glucose Biosensor |
| 8. | Amin Fatoni, Mekar Dwi Anggraeni, Eni Rahmawati | Fabrication of wearable device for neonatal jaundice based on chest skin color |
| 9. | Mekar Dwi Anggraeni, Amin Fatoni, Eni Rahmawati | Development of Neonatal Jaundice Screening and Caring Application: An Information Needs Assessment |
| 10. | Eko Murdyantoro, Hesti Susilawati, Arief Wisnu Wardhana | Cognitive Radio for Efficient Spectrum Utilization |
| 11. | Mekar Dwi Anggraeni, Endang Triyanto, Asep Iskandar, Amin Fatoni | Development and Validation of a Self-Monitoring Non-invasive Anemia Prediction Smartphone App for Pregnant Women in Developing Countries |
| 12. | Sesilia Rani Samudra, Isnaini Prihatiningsih, Dyahruri Sanjayasari | Phytoplankton Community Structure in the Coastal Waters of Brebes, Central Java, Indonesia: Study in the Green Mussel (<i>Perna viridis</i>) Cultivation Area |



DAY-2

Wednesday, November 9, 2022

| Room 1 (Day-2) | | |
|---|--|--|
| Moderator: Kholifatuz Sa'adah, S.Hub.Int., M.Hub.Int. | | |
| Zoom Link: https://bit.ly/ICMAParallel_Room1 | | |
| Time: 12.30 – 14.30 GMT+7 | | |
| No. | Name | Title |
| 1. | Bintan Nabila | Contribution of Tobacco Farming Income to Household Welfare in Kertek District, Wonosobo Regency |
| 2. | Nur Chasanah, Ade Irma Anggraeni, Wita Ramadhanti | Analysis for Digital Marketing Organic Coconut Sugar at KUB Central Agro Lestari, Purbalingga, Central Java, Indonesia |
| 3. | Hatta Setiabudhi | Factors Affecting Corporate Financial Performance Using human resource accounting disclosures as an intervening variable in banking on the Indonesian stock exchange |
| 4. | Altri Mulyani, Ulfah Nurdiani, Syahrul Ganda Sukmaya | Lemon Citrus Farming Income (Case study: PT. Cilengko Lentera Al-Barokah) |
| 5. | Istiqomah, Lilis Siti Badriah, Wiwiek Rabiatal Adawiyah | Transformation of Traditional Market Management and Its Contribution to Promote Informal Sector |
| 6. | Muslihudin | Fulfillment of the Educational Rights of Migrant Workers' Children In Sabah Malaysia |
| 7. | Dwiki Oktobrian, Guntur Pembayun Putro, Aura Salsabila Ayodya Swastiko | Immoral Offense Eligibility as Criminal Acts Objects for Restorative Justice Filing |
| 8. | Waluyo Handoko, Andi Ali Said Akbar, Bowo Sugiarto, Titis Perdani, Ahmad Sabiq | Deparpolisasi From the People's Level: Blank Box Movement in the 2019 Kebumen's Pilkada |
| 9. | Intan Shaferi | The Power of Transformative Relational Marketing of Batik MSMEs in Banyumas and Purbalingga Regencies |



Room 2 (Day-2)

Moderator: Dr. Sri Wahyu Handayani, S.H., M.H.

Zoom Link: https://bit.ly/ICMAParallel_Room2

Time: 12.30 – 14.30 GMT+7

| No. | Name | Title |
|-----|--|--|
| 1. | Tri Lisiani Prihatinah, Ulil Afwa, Sulistyandari Sulistyandari, Ari Tri Wibowo, Rohaida Nordin | Justice in The Benefit Sharing of The Traditional Knowledge of Indigenous People Commercialization (Comparative Study Indonesia and Malaysia) |
| 2. | Tri Lisiani Prihatinah | The Experience of Disable Person in Accessing Public Facilities at University |
| 3. | Erlinda Bestia Saraswidayanti | Implementation of the Te Goeder Trouw Principle in the Binding Agreement for the Sale and Purchase of Land Rights (Study of Supreme Court Decision No. 2142/Pdt/2019 And Supreme Court Decision No. 1938/K/Pdt/2008) |
| 4. | Lintang Desi Sungkono | Legal Strength To Bind The Deed Of Amendment Of The Articles Of Articles Made In Circular Resolution And Understanding |
| 5. | Ade Sarastya Dini | Legal Protection For Notaries As The Reporting Party In The Prevention And Eradication Of The Crime Of Money Laundering |
| 6. | Nicita Meinanda Yudisti | Excellence of Environmental Aspects in Realizing Sustainable Housing Delivery System in Rural Areas |
| 7. | Dwita Darmawati, Cut Misni Mulasiwi, Ramita Kholifaturrohman, Monica Rosiana, Dwita Aprillia Floresti, Triani Arofah, Puji Lestari | Response Rate in Tracer study: Why it tends to be low? A case in FEB UNSOED |
| 8. | Wafa Nihayati Inayah | The Existence of Customary Law as the Local Wisdom of the Kuta Village Customary Law Community in Protecting and Managing the Environment |
| 9. | Abdul Aziz Nasihuddin, Sri Wahyu Handayani, Kadar Pamuji, Supriyanto Supriyanto, Suyadi Suyadi, Hendi Budiaman, Ichsan Sjuhudi | The Effectiveness of Implementing an Alternative Model of Legislative Analysis to Test the Effectiveness of the Implementation of Regional Regulations of Banyumas Regency 2019 - 2021 |
| 10. | Sri Wahyu Handayani, Kuat Puji Puji Prayitno | Land Mafia Prevention Strategy in Pandak Village, Baturraden District, Banyumas Regency |
| 11. | Dwiana Martanto, Abdul Aziz Nasihuddin | Data-based Legal Policy in Overcoming Illegal Mining on Mount Botak, Buru Regency, Maluku Province for Sustainable Environmental Development |



Room 3 (Day-2)

Moderator: Dr. Nuning Vita Hidayati, S.Pi., M.Si.

Zoom Link: https://bit.ly/ICMAParallel_Room3

Time: 12.30 – 14.30 GMT+7

| No. | Name | Title |
|-----|---|---|
| 1. | Arief Sudarmaji, Purwoko Hari Kuncoro, Saparso Saparso, Yogi Ramadhani, Mahbub Junaedi | Design of Navigation Control on the Automated Mobile Sprinkler for Dry Land Cultivation |
| 2. | Lubna, M H., Naufalin, R, Erminawati, M., Tir, Y. and Ibrahim, A. I. | Study on physicochemical and sensory characteristics of peanut yogurt |
| 3. | Ratna Stia Dewi | Isolation and Potential of Fungi from Oil Spill Waters For Decolorization of Batik Wastewater |
| 4. | Endang Srimurni Kusmintarsih | Molecular characterization of Wolbachia pipientis in Mosquitoes |
| 5. | Chomsiatun Nurul Hidayah | The Relationship Between Induction of Gonadotropin Releasing Hormones to Reproductive Performance in Batur Sheep |
| 6. | Sukamto | Resistance of Several Varieties and Potential Isolates of Rhizosphere Bacteria to Control Leaf Spot Disease in Citronella Grass (Cymbopogon nardus var genuinus L). |
| 7. | Ratna Stia Dewi, Santi Dwi Astuti, Sakidin | Potential of Fungi Isolate from Disposal Waste Processing of Mocaf Making |
| 8. | Sri Handayani | Macroalgae biodiversity in Pari Island Cluster, Kepulauan Seribu District |
| 9. | Sorta Basar Ida Simanjuntak, Tegar Aldi Saputro, Elly Tuti Winarni | Growth Performance of Osteochilus hasselti fed Algae Supplementation and Maintenance in Biofloc System. |
| 10. | Nuning Vita Hidayati | Marine litter pollution in the mangrove area of the Plawangan Barat, Segara Anakan, Cilacap, Indonesia |
| 11. | Nuning Vita Hidayati | Distribution and Composition of Marine Debris in the Plawangan Timur, Segara Anakan, Cilacap |
| 12. | Rima Oktavia Kusuma, Muh Sulaiman, Anandhita Ekasanti, Hamdan Syakuri, Emylana listyowati, Dewi Nugrayani | Isolation and Identification of Bacillus Bacteria from Mucus and Digestive tract of Udikan fish (Tor. Sp) Caught in the Pelus River Banyumas based on the 16S rRNA gene |



Room 4 (Day-2)

Moderator: Susanto Budi Sulistyo, S.TP., M.Si., Ph.D.

Zoom Link: https://bit.ly/ICMAParallel_Room4

Time: 12.30 – 14.30 GMT+7

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| 3. | Dwi Sunu Widyartini, Hexa Apriliana Hidayah, Agatha Sih Piranti, and Arya Warihjati | Macroalgae community distribution pattern in Pecaron Beach Waters, Kebumen Regency |
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| 7. | Regita Puspitasari | Extraction of Bioactive Components of Kecombrang (<i>Etlingera elatior</i>) and Roselle (<i>Hibiscus sabdariffa</i> L) Flowers by Microwave Assisted Extraction Method and Their Application to Functional Food Products |
| 8. | Irfan Fadhlurrohman, Juni Sumarmono, Mays Tianling, Rizki Prasetya, Anggita Safitri, Usamah Abdi Kafa, Triana Setyawardani | Physical and Chemical Properties of Cow's Milk Yoghurt Added Whey Protein Concentrate (WPC) |
| 9. | Purwandaru Widyasunu, A.H Syaeful Anwar, and Prastama Surya Nirwangga | Effect of Liquid Organic Extract and Compost of <i>Azolla Microphylla</i> Biomass Basis on the Changes in N Nutrients in Ultisol and Pak Choi Yield |



Room 5 (Day-2)

Moderator: Anung Riapanitra, S.Si., M.Sc., Ph.D.

Zoom Link: https://bit.ly/ICMAParallel_Room5

Time: 12.30 – 14.30 GMT+7

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| 2. | Mukti Trenggono, Rizqi Rizaldi Hidayat, Isnaini Prihatiningsih, Hendrayana | Eddy Currents Distribution for Predicting Upwelling in the Southern Waters of Java |
| 3. | Astrid Lastania Sukmana Putri, Hety Handayani Hidayat, Siswanto Siswanto, Nur Wijayanti | Motivating Factors Analysis for Halal Certification on the Catering and Restaurant Services in Banyumas Regency |
| 4. | Hasyim Asyari | Proposed Improvement to Increase Machine Efficiency and Waste Minimization in Garment Production Using Total Productive Maintenance (TPM) and Waste Assessment Model (WAM) in CV. Sanggria Indah, Tasikmalaya |
| 5. | Asmoro Widagdo | Morphotectonic Study Based On The Mountain Sinuosity (SMF) Method in Kramat And Surrounding Area, Karangmoncol-Purbalingga District |
| 6. | Gito Sugiyanto, Purwanto Bakti Santoso | The Impact of the Outbreak Novel Coronavirus Disease (Covid-19) Pandemic on Air Transportation |
| 7. | Jessy Melinda, Siti Rahmah Nurshiami, Triyani Triyani | Application of Failure Mode and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) In Determining Prevention Efforts Failure of The Fire Extinguishing Process |
| 8. | Marifatul Nur yuniati, Agus Sugandha, Agung Prabowo, Siti Rahmah Nurshiami | Solution of Polynomial Non-Linear Diophantine Equation $ax^2-kxy+y^2+lx=0$ |
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Room 6 (Day-2)

Moderator: Siwi Pramatama Mars Wijayanti, S.Si., M.Si., Ph.D.

Zoom Link: https://bit.ly/ICMAParallel_Room6

Time: 12.30 – 14.30 GMT+7

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| 2. | Budi Ertanto | The Effect of App Health Detection Early Diagnosis on the quality of life in the elderly who are at risk of suffering from communicable diseases (DM) |
| 3. | Siwi Pramatama Mars Mars Wijayanti | Assessing the User Satisfaction on Covid-19 Vaccination Service in Indonesia |
| 4. | Arie Sasongko, Iwan Purnawan | Mobile App for the Accuracy of Emergency Drug Administration in Children's Cardiovascular Resuscitation : A Literature Review |
| 5. | Catur Novihantoro | Implementation of Telenursing Education Applications for Families Caring for Patients with Physical Mobility Disorders at Home : A Systematic Review |
| 6. | Any Yuliani | Factors Affecting Nurse Caring Behavior in ICU |
| 7. | Indri Lestariningsih | Comparison of Glasgow Coma Scale (GCS) with Revised Trauma Score (RTS) in Assessing Mortality of Head Injured Patients : Sistematic Review |
| 8. | Lita Heni Kusumawardani, Rahmi Setiyani, Asep Iskandar | The Readiness of Discharge planning in Aspects of Caregiver Awareness among Caring for the Elderly with Stroke |
| 9. | Aprilia Safaroni Roni | Smartphone-based Interdialyst Weigh Gain interventions against diit program adherence in Chronic Renal Failure patients hemodialysis program: Systematic Review |
| 10. | Nur Indarwati Septiriana, Arif Setyo Upoyo | Educational Model to Increase Competence of Palliative Nurses : A Systematic Review |



Room 7 (Day-2)

Moderator: Dr.nat.techn. apt. Hendri Wasito, M.Sc.

Zoom Link: https://bit.ly/ICMAParallel_Room7

Time: 12.30 – 14.30 GMT+7

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| 1. | Umar Akhsani | Improved Triage Result Accuracy Using Digital Triage App: A Systematic Review |
| 2. | Wahyudin, alfi muntafiah, arfi nurul hidayah | Role of visiting patient application to reduce anxiety, stress and depression in brain tumor patients in the meranti care room, prof. Dr. margono soekarjo purwokerto |
| 3. | Nugrahani Sekarratri Bintang, Salman Fareza Muh., Amalia Choironi Nur, Sarmoko Sarmoko | Bioinformatics Analysis of Active Compound of Sambiloto (<i>Andrographis paniculate</i>) Plant as Anti-Breast Cancer |
| 4. | Indah Sulistiyawati, Daniel Joko Wahyono, Wahyu Siswandari | Prevalence and diversity of ciprofloxacin-resistant <i>Klebsiella pneumoniae</i> clinical isolates |
| 5. | Keksi Girindra Swasti, Hasby Pri Choiruna, Wahyu Ekowati, Reza Fajar Amalia | Mental Health's Description of Jenderal Soedirman University Students Pasca Covid-19 Pandemic |
| 6. | Slamet Rosyadi | Innovation adoption of "Elsimil" application for preventing of the Stunting cases in Banyumas Regency |
| 7. | Dian Susmarini | Simulation Methods and Lectures in Enhancing Professional Attitudes in Social Media Communication in Nursing Students |
| 8. | Shafira Audy Prameswari, Yoana Rizki Deviriandra, Ariadne Hapsari Putri Taufik, Rizky Aliyah Putri, Athaya Helia Untari, Afifah Afifah | The Effect of Celery Ethanol Extract on Proteinuria in Unilateral Ureter Obstruction Rat Model |
| 9. | Made Sumarwati, Wastu Adi Mulyono, Haryatiningsih Purwandari, Raisha Jasmine Faradhyanti | The Self-Regulated Learning in completing writing assignments: A descriptive research |
| 10. | Haris Raditya Soebandrio, Salsabil Rahmadina, Dea Mudrikah, Zeha Kirana, Hendri Wasito | Potential of Spirulina (<i>A. Platensis</i>) as Organism Model for Biomarker Finding of Alkalinity Stress in Plants |



Room 8 (Day-2)

Moderator: Hikmi Mukarromah Pratiwi, S.Kep., Ns., M.S.

Zoom Link: https://bit.ly/ICMAParallel_Room8

Time: 12.30 – 14.30 GMT+7

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| 2. | Fajar Wahyu Pribadi, Afifah Afifah, Catharina Widiartini, Gita Nawangtantrini | The Effect of Black Garlic On Necrotic Tubular Score |
| 3. | Siti Munfiah, Yudhi Wibowo, Muhammad Zaenuri Syamsu Hidayat, Octavia Permata Sari, Diah Krisnansari | Relationship Between Nutritional Status and Anemia In Linggasari's Spraying Farmers, Kembaran District, Banyumas Regency |
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| 5. | Sarmoko | Bioinformatics Analysis of Active Compound of Sambiloto (<i>Andrographis paniculate</i>) Plant as Anti-Breast Cancer |
| 6. | Ismiralda Oke Putranti | The Efficacy of Achatina fulica Snail Slime Cream in Maintaining Antioxidant Enzymes in Sunburn Model Mice |
| 7. | Colti Sistiarani | Infections of Baby Symptoms of Fever, Cough, Diarrhea During The Covid-19 Pandemic in Banyumas |
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| 9. | N M Yudisti, Muslihudin, and Yanto | The Important Role of Environmental Aspects in Realizing Sustainable Housing Delivery System in Rural Areas as Buffer Zone of Urban Areas |
| 10. | Desiyani Nani, Saryono Saryono, Dian Ramawati | Restricted and Repetitive Behavior in Children With Autism Spectrum Disorders |
| 11. | Saryono, Desiyani Nani, Atikah Proverawati, Sarmoko | Effect of Moringa Leaves on High Density Lipoprotein (HDL) levels |



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Colour Change and Growth of Zebra Fish, *Danio Rerio*, Fed Natural Food

Agung Cahyo Setyawan, Ficky Setya Aji Nugroho, Shaumy Widiyantika Humaira, Dela Mefiana, Purnama Sukardi

Natural feed is a food which comes from the environment in which they live. In this study bloodworms (*Chironomus* sp.), *Spirulina* sp. and *Moina* sp. used as feeds. The purpose of this study was to determine the colour change and growth of zebrafish fed natural food. A total of 420 fish were kept in a closed recirculation system designed to use 545 L of water with water changes every three and a half (3.5) minutes. The fish were grouped by the type of food and replicated four times, with density as sub treatment. All fish were fed 6% of body weight. The growth of fish measured by its weight and length, while the colour measured using chromameter. The results showed that the three diets had the same effect on the growth of fish weight as well as on density. However, diet significantly affected the length of growth and colour, as well ($P < 0.05$).



The Effect of Microwave Application on the Drying of Banana Flour (*Musa paradisiaca formatypica*) Inoculated by *Cronobacter sakazakii* Bacteria

Alaeldin Mohammed Ahmed Musa, Rifda Naufalin, Ike Sitoresmi Mulyoand, Isti Handayani, Erminawati Erminawati

Instant baby porridge is a porridge that has instant components, therefore no need a cooking process for serving. Banana flour is one of the ingredients that can be used for instant baby porridge because it contains 88.00% carbohydrates. Drying is an important step in the making of flour, including banana flour. Recent studies have stated that several bacteria resistance to drying; one of them is *Cronobacter sakazakii* bacteria. The purpose of this study is to determine effect of microwave power and duration on the total reduction of *Cronobacter sakazakii* bacteria and determine the combination of microwave power and duration which result in the highest total reduction of *Cronobacter sakazakii* bacteria. In this study, a Completely Randomized Design (CRD) was used with the first factor is microwave power (100, 200, 300 watts) and the second factor is drying duration (10, 20, 30 s). The results showed that microwave power and drying duration and their interactions affect the total reduction *Cronobacter sakazakii* bacteria. The highest reduction in total bacteria *Cronobacter sakazakii* found in the treatment of 300 watts for 30 seconds with total microbes 4.75 log CFU/g, color for lightness (L^*) 75.76; for redness (a^*) +2.98; for yellowness (b^*) +16.42; water content of 8.7%; ash content of 3.45%; protein content of 3.04%; fat content of 0.67%; and carbohydrates content of 84% .



The Primary Culture and Subculture of Kidney-Derived Cells of The Bony Lip Barb Fish (*Osteochilus vittatus*) Using Different Concentrations of Serum

Alif Arfa Maulida Firdauzi, Aulidya Nurul Habibah, Gratiana Ekaningsih Wijayanti

Cell and tissue culture has advanced and developed in a short time yet continuous improvement needs to be conducted for better results. This research was conducted to obtain suitable culture conditions of kidney-derived cell culture from bony lip barb kidney (*Osteochilus vittatus*). The development of primary cell culture from the kidney fragments was performed in a cell culture medium composed of DMEM supplemented with various concentrations (0%, 5%, 10%, and 15%) of Fetal Bovine Serum, Penicillin-Streptomycin, and 2Mm L-Glutamine, and incubated at 29°C with 0.8% CO₂. The results showed that the primary cell culture achieved confluence on day four and subsequently subcultured. The addition of 10% serum increased cell density and cell survival. The cell morphological evaluation using a phase-contrast microscope showed two dominant cell types for both primary and subcultures, i.e. erythrocytes and small-rounded cells. The highest cell yield was obtained with the addition of 10% serum concentration with Population Doubling Time (PDT) and Population Doubling Level (PDL) for 69 h 23 min and 0.47 times, respectively. Statistical analysis indicated that serum addition significantly increased cell density of the primary culture ($p < 0.05$). A better proportion of serum supplementation to culturing success is essential to establish an auspicious cell line.



Design of Navigation Control on the Automated Mobile Sprinkler for Dry Land Cultivation

Arief Sudarmaji, Purwoko Hari Kuncoro, Saparso Saparso, Yogi Ramadhani, Mahbub Junaedi

This paper presents the design of navigation control of automated mobile sprinkler for dry land cultivation. The mobile sprinkler is aimed for plant watering on dry land cultivation. The navigation control of mobile sprinkler is designed to track the path of trench and to drive sprinklers for giving water to plants. The trench is made of 4-inch pipe, following the beds on the land. The main parts of navigation control consist of dual infrared sensor module, colour sensor module, I2C Real Time Clock, microcontroller module of Arduino built-in esp8266 controller, pair of DC motor, and pair of DC pump. The infrared sensor is as track sensor, while the colour sensor to indicate the position and mode of watering sprinklers. There are three sprinklers on each right side and left side. Watering mode are idle-1, idle-2, off-watering, one side watering, two sides watering.



The Effect of Various Main Coating Materials and Sprayer Nozzle Size on the Shelf Life of Tomato

Condro Wibowo

Agricultural commodities are perishable, therefore, appropriate postharvest treatments are required to maintain quality and extend the shelf life. Storage at low temperatures is one of common procedures to be applied on the products. This method requires special equipment that are not cheap, another option is to apply a coating, because of its beneficial effects on agricultural commodities, easily applied, cheap and suitable for the farmers. Starch-based coating is widely used. The goal of this study is to see how different coating materials and sprayer nozzle sizes affect the physical and chemical properties of tomatoes during storage. This study employed a completely randomized design method with two factors: variations in the type of main coating material (P): canna starch (P1), potato starch (P2), sweet potato starch (P3), and sprayer nozzle size. 0.6 mm (N1); 1.0 mm (N2); 1.5 mm (N3) (N3). Each treatment was repeated three times. The study show that the type of main coating material and variations in sprayer nozzle diameter can maintain the brightness level and total soluble solids value of tomatoes on day 6 observation. The appropriate coating for tomato fruit were coated with sweet potato starch, and the sprayer nozzle diameter was 1.0 mm. This procedure could be an alternatives for the farmers on maintaining the quality of tomatoes during storage at room temperature.



Biomass Production of Decomposer Bacterial Consortium

Dini Ryandini, Meyta Pratiwi, Sri Martina Wiraswati, Afifah Mariana

A consortium of decomposer bacteria with cellulolytic, amylolytic, chitinolytic, xylanolytic, lignolytic, proteolytic and lipolytic activities has been investigated in this study. The bacterial consortium comprises 5 isolates i.e. isolate LG 73, LG 101, LG 113, LG 126 and SA 127 which were characterized as thermotolerant due to their ability to grow up to 50°C. In addition, these bacteria also showed negative antagonist activities among them. The propagation of cell biomass has been tested on growth media containing different carbon and nitrogen sources combination as follows: A (brown sugar and rice bran), B (molasses and rice bran), C (rice washing water and rice bran), D (sugar and rice bran), and E (brown sugar and tempeh liquid waste). Interestingly, the growth media containing molasses and rice bran (B) showed optimum cell biomass result which characterized with highest total bacterial number: 7,988 (log of cell number). Furthermore, enzymatic ability of decomposer bacterial consortium in this medium were stabile which indicated by the cellulolytic, amylolytic, chitinolytic, lignolytic and proteolytic index are 1.424, 1.691, 2.082, 1.541, and 1.222, respectively. Meanwhile, the xylanolytic and lipolytic activity of decomposer bacterial consortium were not observed consistently.



Macroalgae Community Distribution Pattern in Pecaron Beach Waters, Kebumen Regency

Dwi Sunu Widyartini, Hexa Apriliana Hidayah, Agatha Sih Piranti, and Arya Warihjati

Macroalgae are multicellular eukaryotic organisms whose structure is clearly indistinguishable (Thallophyta), and photosynthetic, so it acts as one the buffers of other organisms that exist around it such as being producers in the food chain, sheltering other organisms, and providing oxygen to the surrounding environment. Pecaron Beach is located in Srati Village, Ayah District, Kebumen Regency. Pecaron Beach conditions have a substrate type of sand and coral fragments. This study aims to determine the pattern of macroalgae distribution in the waters of Pecaron Beach Kebumen. The research method uses a survey method with a purposive random sampling technique using a squared plot of 1 x 1 m. Variables observed in this study are macroalgae distribution patterns. The observed parameters consist of the main parameters and supporting parameters. The main parameters consist of macroalgae biomass, while the supporting parameter consists of depth values at low tide, salinity, temperature, acidity degree (pH), wave height, phosphate levels, and nitrates of water. The data obtained were then analyzed for distribution patterns using the Morisita index calculated with Microsoft Excel 2019. The results of the study on Pecaron Beach found 12 species, i. e. *Chaetomorpha antenina*, *Valoniopsis pachynema*, *Chaetomorpha crassa*, *Ulva lactuca*, *U. rigida*, *U. fasciata*, *Chondracanthus harveyanus*, *Tricleocarpa fragilis*, *Gelidium rigidum*, *Palmaria palmata*, *Eucheuma spinosum*, *Callophyllis crispata*, and *Sargassum crassifolium*, with distribution patterns at clustered species, with the highest distribution pattern values in *Ulva lactuca*, *U. rigida*, and *U. fasciata* species (26), and the lowest distribution pattern in *Chondracanthus harveyanus* (4.59).



Settlement Performance of Juvenile Green Shell (*Perna viridis*) on Different Substrates Based on Attachment, Byssus Production and Byssus Strength

Dyahruri Sanjayasari

The success of green mussel (*Perna viridis*) cultivation is highly dependent on internal and external factors. Internal factors such as the size of the shellfish affect the initial stage of substrate selection and the strength of its attachment to the substrate. While external factors such as tides, currents, hydro-dynamic action can affect the attachment to the substrate and attachment strength in the cultivation area. The success of mussels in choosing the right substrate in the juvenile phase will increase the survival rate and optimize the growth of mussels. Green mussels attach to the substrate by producing byssus or known as bysogenesis. The substrates that have been used in mussel cultivation in Indonesia include nylon rope and plastic rope. However, these two types of substrates do not have filaments which may increase mortality, reduce larval attachment, and increase predation on shellfish. Therefore, considering the importance of knowing the characteristics of byssus production in the mechanism of attachment of mussels to the substrate, current study tested five (5) types of substrates consisted of cakil rope, cotton rope, goni, coconut rope and nylon rope on the settlement performance of juvenile mussels with different durations of observation time (i.e. 24 and 48 h). The variables measured were attachment, byssus production and byssus strength. The result revealed that nylon rope had the lowest percentage of attachment on the number of juvenile mussels attach to the rope in both 24 and 48 h durations. The highest production on the number of byssus were observed for rope cakil, goni and coconut in both observation times. Meanwhile, the strongest byssus was found on the juvenile mussel which attach on goni rope at the 24 h observation time and the weakest byssus performance was observed in juvenile mussel which attach on nylon rope at the 48 h observation time



The Inventory of Fishing Ground and Friendly Fishing Gear in Lagoon and Mangrove Ecosystem of Segara Anakan Cilacap

Endang Hilmi, Arif Mahdiana, Diki Arliansah

Segara Anakan Cilacap has a characteristic to support the organisms live, because of the presence of lagoons, mangroves and rivers. Segara Anakan Cilacap is used as a fishing ground for aquatic organisms. The inventory of fishing ground and friendly fishing gear can be used to preserve lagoon as an area of fishing activities. This study aimed to find and develop a mapping of fishing grounds and fishing gear. This research method uses mapping analysis, Code of Conduct for Responsible Fisheries (CCRF) methods and fishes potential. The results showed that the utilisation of fishing gear were fishing net in Ujung Alang and Ujung Gagak





The External And Internal Factor and Ecosystem Services to Support Mangrove Rehabilitation Planning in North Coast Jakarta

Endang Hilmi, Uus Usman, Achmad Iqbal

The mangrove ecosystem on North Coast of Jakarta has many services and function both of ecology, social and economic function and services, including the tidal flooding reduction, land subsidence reduction, pollution reduction, ecotourism and others. However, the mangrove ecosystem in North Coast of Jakarta Mangroves are being badly damaged, so require effort and activity to rehabilitate. This research aimed to develop a rehabilitation strategy of mangrove ecosystem in North Coast of Jakarta to reduce coastal disaster and to support ecosystem services. The methods of this research used IFAS, EFAS analysis and Bucharad analysis. The results showed that the ecosystem services of mangrove ecosystem were are ecotourism, conservation, wildlife reserves, reduction of tidal flooding, abrasion and accretion, reduction of intrusion, reduction of land subsidence, economic income, fishing and fishpond activities, pond activities, and social benefits. The strategy of mangrove rehabilitation was weakness-opportunity strategy (minimalizing weakness, taking advantage of opportunities, and avoid threats. The strategies of mangrove rehabilitation planning were mangrove rehabilitation, mangrove revitalization, support creative economy, developing greenbelt, increasing human resources and developing blue carbon.



Identification of Main Fungal Disease from Hydroponic Melon (*Cucumis melo* L.) in Greenhouse in Temanggung Regency

Eni Sumarni, Loekas Soesanto, Okti Herliana, I Wayan Anik Leana, Lutfi Zulkifli, Whidiatmoko Herry Purnomo, Priswanto Priswanto

RahayuMakmur Farmer Group in Bansari Distric, Temanggung Regency has been carrying out hydroponic melon cultivation business since 2018. Hydroponic melon is a method of cultivating melons and grown in a greenhouse using substrat planting media. The melon cultivation has problems, namely plant diseases, even in a closed greenhouse. The melon plant disease caused huge losses in melon cultivation until the melon plants died. The purpose of this descriptive study was to identify the cause of the melon plant disease. Samples of sick melon plants were taken and grown on PDA media in the laboratory. The fungus that grows is identified based on the literature. The identification results showed that the main disease causing hydroponic melon plants in the greenhouse was the fungus *Fusarium solani*. The fungi have crescent-shaped macroconidia with 1-3septa, hyaline, thick walls, and form chlamydospores that are spherical in intercalary and hyaline



Health Study of Nilem (*Osteochilus vittatus*) Received Diet with Salt Supplementation: Hematological Profiles and Occurrence of *Aeromonas hydrophila* Bacteria in the Digestive Tract

Hamdan Syakuri, Petrus Hary Tjahja Soedibyo, Sri Marnani, Marhaendro Santoso, Taufik Budhi Pramono, Kasprijo Kasprijo, Anandita Ekasanti, Agung Cahyo Setyawan, Rima Oktavia Kusuma, Rudy Wijaya, Dewi Nugrayani, Emyliana Listiowati, Mustika Palupi, Purnama Sukardi

The addition of salt in feed could be expected to improve fish health. This study aimed to determine possibility to improve the health status of nilem (*Osteochilus vittatus*) by applying salt supplementation in feed. An experiment was carried out based on completely randomized design, consisting of five treatments and six replicates. The treatments were salt supplementation with doses of 0% (control), 1%, 2%, 3%, and 4% of feed. The Fish fingerlings (2.3 ± 0.16 g) were reared in a recirculation system using container containing 40 liters of water with a density of 15 individuals per container and fed test diet for 60 days. Fish health was observed based on the blood profiles which included hemoglobin, hematocrit, erythrocyte count, and blood glucose levels; and the number of bacteria and the proportion of *Aeromonas hydrophila* observed from fish intestines representing the anterior, middle, and posterior sections. The results showed relatively similar blood profiles in fish of all treatments. The group received salt supplementation of 2% showed the highest number of intestinal bacteria in comparison with other treatment groups. The digestive tract of Nilem that was fed a diet containing more than 2% salt showed a lower proportion of *Aeromonas hydrophila* compared to control and 1% salt treatment fish. This result indicates that salt supplementation could affect fish health by modulating digestive tract bacteria.



The Level of Farmer Satisfaction with the Citronella Partnership in Patikraja District (Case in Kedungrandu Village)

Irene Kartika Eka Wijayanti, nfn Sunendar, Lutfi Zulkifli, Rifki Andi Novia, Alpha Nadeira Mandamdari, Tatang Widjojoko, Adwi Herry Koesoema Elyanto, Syahrul Ganda Sukmaya

Citronella (*Cymbopogon nardus*) is a type of essential oil plant. One of the districts in Central Java that has high potential to develop citronella oil is Banyumas Regency. PT Dewara Nusa Jaya is one of the essential oil refining factories in Banyumas Regency, Central Java which has a partnership with farmers. The purpose of this study was to examine the level of farmer satisfaction with the existing partnership pattern. Research respondents consisted of 40 respondents. Respondents came from fragrant lemongrass farmer groups, namely partner farmers, chairmen and administrators of farmer groups. The data analysis method used the farmer satisfaction analysis method using the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) analysis. The results showed that the level of farmer satisfaction with the attributes of the partnership was quite satisfied. While the results of the analysis of Importance Performance Analysis (IPA) the level of importance of the partnership attribute is greater than the level of partnership performance that occurs.

Keywords: satisfaction, partnership, citronella, CSI, IPA



Physical and Chemical Properties of Cow's Milk Yoghurt Added Whey Protein Concentrate (WPC)

Irfan Fadhlurrohman, Juni Sumarmono, Mays Tianling, Rizki Prasetya, Anggita Safitri, Usamah Abdi Kafa, Triana Setyawardani

The purpose of this research was to examine the physical and chemical characteristics of cow's milk yogurt with the addition of WPC. The physical characteristics observed included color (L^* , a^* , b^* , whiteness index, hue, chroma), texture (firmness, work of penetration, resistance to probe withdrawal), while the chemical characteristics observed included water content, total solids, and titratable acidity. The main research materials are fresh cow's milk, Whey Protein Concentrate (WPC), and starter yogurt. The study was conducted using a Completely Randomized Design (CRD) with 5 treatments and 4 replications. The treatments consisted of control (P0), adding WPC as much as 2% (P1), 4% (P2), 6% (P3), and 8% (P4) of the amount of milk. Data were analyzed using analysis of variance and post-hoc orthogonal polynomial test. The results showed that the addition of WPC up to 8% caused a very significant difference to the water content, total solids, titratable acidity, firmness, and work of penetration of yogurt. However, the addition of WPC up to 8% did not cause a significant difference in the color characteristics of yogurt. Total solids of yogurt increased from 12.08% (control) to 17.74% along with the addition of WPC up to 8%. Based on the results of the research, it can be concluded that the addition of WPC up to 8% can decrease the water content, firmness, and work of penetration of yogurt, as well as increase the total solids and titratable acidity of yogurt. However, it did not cause a noticeable change in the color characteristics of yogurt. However, it did not cause a significant change in the color characteristics of yogurt.

Keywords: yogurt, cow's milk, WPC, physical characteristics, chemical characteristics



Hydrodynamic Model of Tidal Current In The Area of *Perna viridis* Cultivation, Brebes Water

Isnaini Prihatiningsih, Wawan Hidayat, Rizqi Rizaldi Hidayat, Dyahruri Sanjayasari, Sesilia Rani Samudra

In the coastal community of Brebes Regency, his main job is as a farmer cultivating green mussels. The hydro-oceanographic conditions of the Brebes area play a very important role in the process of sediment transport and deposition on the coast of Brebes. Based on this, it is necessary to conduct a study to model and determine the pattern of tidal currents in the waters of Brebes. This study aims to compare the accuracy of the current model using the hydrodynamic model with the in situ measurement results. The current pattern that is formed follows the direction of the wind that blows in each season, in the west monsoon the current goes to the east, while in the east monsoon the current goes to the west. During the west monsoon, the highest current velocity occurs at full tide of 0.084m/s and the lowest is 0.013 m/s, the transitional season I at low tide is 0.05 m/s and the lowest is 0.018m/s, east monsoon is at low tide. of 0.062 m/s and the lowest was 0.023 m/s, and in the second transitional season at low tide, it was 0.043 m/s and the lowest was 0.026 m/s. The simulation configuration of the model did not have results that were similar to the results of in situ measurements caused by inappropriate mesh size and area, measuring instruments used in the field, and the weather at the time of measurement.



Reducing Acid Whey Production During Manufacture of Concentrated Yogurt

Juni Sumarmono, Triana Setyawardani, Setya Agus Santosa, Nur Aini

The manufacture of concentrated yogurt from fresh yogurt requires partial whey separation in order to obtain soft, creamy-like, and nutrients-densed products. Concentrated yogurt can be considered as one of functional milk products, with longer shelf-life and broader application than fresh yogurt. Production of high amount of acid whey is one of problems during concentrated yogurt manufacturing. The objective of this study was to determine a way to reduce the amount of acid whey during manufacture of concentrated yogurt. Hydrocolloids was added to improve water holding capacity and hence reducing the amount of acid whey. Different hydrocolloids showed different effects on the water holding capacity, hence the amount of acid whey was also vary. The product posses desirable textural characteristics, that is soft and creamy with paste-like consistency.

Keywords: concentrated yogurt, acid whey, whey separation, functional food



Effects of Kasgot and Zeolite as Soil Conditioner on Physiological Character and Yield of Shallot (*Allium ascalonicum* L.) in Inceptisol Soil

Kharisun Kharisun, Ratri Noorhidayah, Purwanto Purwanto, Ismangil Ismangil, Rostaman Rostaman, Fillah Fauziyah, Muhammad Rif'an, Rifqi Andi Novia

Shallot is one of the vegetable commodities having a high economic value. The demand of shallot will continue to increase in line with the increasing the consumption of community. However, it doesn't followed by increasing the production of shallot. Inceptisols is one type of soil in Indonesia that is potential to be developed as shallot plantation, but it requires amendment to support plant growth. The compost of kasgot and zeolite as a soil amendment is expected to have capability to improve the quality of the inceptisol soil. This aims of the study were to: 1) determine the effect of kasgot on the physiological character and yield of shallot, 2) determine the effect of zeolite on the physiological character and yield of shallot, and 3) explain the interaction between kasgot and zeolite on the physiological character and yield of shallot. The research was carried out from January to May 2022, in the Screen House Faculty of Agriculture, Jenderal Soedirman University. The experiment of the research is Randomized Complete Block Design (RCBD) with 2 factors. The variables observed were leaf greenness, chlorophyll content, stomata density, total phenol, saponin, leaf area, bulb diameter, bulb number, and fresh bulb weight. The results showed that kasgot increases the number of bulb, fresh bulb weight, and total phenol. Zeolite increase the greenness of the leaves of shalot. The interaction between kasgot and zeolite had a significant effect on the leaf greenness and number bulb. The combination of 1000 kg/ha of kasgot and 500 kg/ha of zeolite shows the best greenness of the leaves and the number of bulb.



Study on Physicochemical and Sensory Characteristics of Peanut Yogurt

Lubna, M H., Naufalin, R, Erminawati, M., Tir, Y. and Ibrahim, A. I.

This present investigation aimed to study the influence of incubation temperature and skimmed milk ratio on physicochemical properties, microbiological and sensory characteristics of peanut yogurt. Method of Association of Official Analytical Chemistry International (AOAC) and Indonesian National Standard (SNI) were used to analyse the physicochemical properties of peanut yogurt: ANOVA was performed to evaluate the different between data by SPSS Version 17 and Microsoft Excel 2016. Yogurt was made by using different incubation temperatures (37 and 45°C), incubation times (18 and 24 hrs) and skimmed milk ratios (3 and 5%). The results showed no significant differences ($P > 0.05$) between Physicochemical of peanut yogurt samples in colour, culture cells and total solids, whilst there were significant differences ($P \leq 0.05$) between each peanut yogurt sample in pH (3.89, 41.17, 33.76, 4.29, 3.88, 3.86, 3.62, and 4.20) and viscosity (5.40, 5.40, 5.50, 5.10, 4.80, 4.10, 4.90, and 4.50). General results from this present study established that producing yogurt from peanut milk by incubation temperature at 37°C for 18hrs and skimmed milk ratio 3%, can increase the physicochemical and sensory properties of peanut yogurt based on reducing the aroma of peanut.

Keywords: Peanut Milk, Fermentation, Yogurt, Physicochemical, Sensory Characteristics



Testing of NPH-Zeo Granule Compound Fertilizer Formula on Yield and N Levels in Onion Plant Tissue on Ultisol

Muhammad Rif'an

This study aims to: (1) determine the effect of NPH-Zeo Granule compound fertilizer formula and onion varieties and their interaction on yield and N levels in onion plant tissue on Ultisol and (2) determine the best NPH-Zeo Granule fertilizer formula on yield and N levels in onion plant tissue on Ultisol. This research was conducted at the Green House of the Faculty of Agriculture, Jenderal Sudirman University. Analysis of fertilizer, soil, and plant tissue was carried out at the Soil Science Laboratory, Faculty of Agriculture, Jenderal Sudirman University, Purwokerto. The study used a Completely Randomized Design (CRD), with two factors and three replications. The first factor is the shallot variety consisting of two levels (levels): Bima and Bauji varieties, the second factor is the composition of NPH-Zeo granule compound fertilizer formula which consists of six levels: K0 (without fertilization or control), K1 (4.43%- 0%), K2 (3.45%-5%), K3 (3.11%-8.68%), K4 (3.03%-11.51%) and K5 (2.89% N-13,75% P2O5). The results showed that the NPH-Zeo Granule compound fertilizer formula had an effect on total N of soil, tissue N content and fresh plant weight. Onion varieties affect on plant fresh weight, root fresh weight and root dry weight and there is no interaction between the composition of NPH-Zeo Granul compound fertilizer formula and onion varieties in all research variables. The K4 fertilizer formula gave the best effect on increasing plant yields and total soil N, while the K3 fertilizer formula increased plant tissue N levels up to 2.44%.



Influence of Modified Atmosphere Packaging on the Quality of Chicken Meat

Nageeb Mohammed Suliman, Rifda Naufalin, Condro Wibowo, Nur Aini, Erminawati Wuryatmo

Meat and its products are an essential component of human food, and their consumption has grown worldwide in recent years. Meat products are subject to deterioration and short shelf life. Therefore, packaging conditions are essential to increase chicken meat's shelf life and avoid food spoiling and waste. The main characteristic of MAP is the replacement of ambient air with gases necessary to effectively regulate the gas environment during product storage, which prevents the growth and reproduction of microorganisms, the oxidative rancidity of fats, and the slowing down of the oxidative discolouration of myoglobin. The main gases used in the modified atmosphere packaging (MAP) are oxygen, carbon dioxide, and nitrogen. The present review intends to describe the value of meat in human existence, explain the hazards of microorganisms on chicken meat quality, and emphasize the importance of chicken meat packaging. The effect of MAP has been studied. The results showed that the treatment of MAP was significant in terms of physic-chemical, microbial, odour, and sensory evaluation. In addition, the use of MAP for food has developed rapidly, as well as the importance of packaging in preserving the nutritional value of chicken meat, extending the shelf life, increasing the distribution of products, and reducing waste during food storage.



Marine litter pollution in the mangrove area of the Plawangan Barat, Segara Anakan, Cilacap, Indonesia

Nuning Vita Hidayati

Marine debris is a persistent solid originating from land, bodies of water, and beaches flowing into the sea. Marine litter in the mangrove ecosystem causes problems and pollution, including disruption of biota life, inhibition of mangrove growth, and reduced marine biodiversity. The purpose of this study was to determine the density of marine debris based on size, amount, and weight as well as the composition and spatial distribution of marine debris in the mangrove area of Plawangan Barat, Segara Anakan, Cilacap. Sampling was carried out in the mangrove area, Plawangan Barat with 13 sampling sites using a 5m x 5m line transect. Marine debris density based on the size is 0.76 items/m² of meso and 42.6 items/m² of macro, while marine debris density based on the item is 43.36 items/m² and weight is 988.16 items/m². The composition of marine debris obtained consisted of 9 categories: plastic, foam plastic, cloth, glass and ceramics, metal, paper and cardboard, rubber, wood, and other materials, with the type of plastic dominating the marine debris. The highest distribution of marine debris is at station 2. This study contributes to becoming baseline data in the program to reduce marine debris in Indonesia, especially in Cilacap.



Distribution and Composition of Marine Debris in the Plawangan Timur, Segara Anakan, Cilacap

Nuning Vita Hidayati

The mangrove area in Segara Anakan has benefits for aquatic ecology and is influenced by various activities such as anthropogenic, agriculture, tourism, and industry. These activities have a negative impact, such as the occurrence of marine debris. Marine debris is a solid material that is persistent, made or processed, disposed or scattered in the marine and coastal environment. The study aims to determine the type, composition, and density distribution of marine debris in the mangrove area of Plawangan Timur, Segara Anakan, Cilacap. Marine debris found consisted of 9 types, namely plastic, styrofoam, cloth, glass and ceramics, metal, paper and cardboard, rubber, wood, and other materials. The composition of marine debris was dominated by plastic. The relative density of macro and meso sizes was 16.08 items/m² and 0.64 items/ m², type density 0.04-13.12 items/ m², weight density 0.60-112.21 grams/ m². The high distribution of marine debris was found at station 9 and station 2 because it is directly related to the river which contributes to marine debris input.



Nutritional and sensory characteristics of corn-mungbean cookies compared to wheat cookies

Nur Aini

Mung bean flour and cornflour can be used as alternatives in making cookies, which are one of the most popular food products and do not require ingredients that can expand in volume. In addition to reducing dependence on wheat flour, cornflour which is high in fiber and green bean flour which is high in protein are very good for health. In making cookies, sweeteners are needed, the sweeteners used are granulated sugar and crystalline coconut sugar. This study aims to: 1) Determine the effect of various types of formulas on the chemical properties of the resulting cookies. 2) Study the effect of various types of cookie formulas on the panelists' preference level based on organoleptic tests. This research was conducted experimentally using a Randomized Block Design with two factors being tested, namely the type of flour and the type of sugar. Chemical data were analyzed using ANOVA at the 95% confidence level and if there was a significant effect, it was continued with the Duncan Multiple Range Test (DMRT) at the 95% confidence level. Sensory data were analyzed using the Friedman test at a 95% confidence level and if there was a significant effect, it was followed by a double comparison test with a 95% confidence level. The results showed that the different formulas for cookies in each treatment had a significant effect on water content, ash content, protein content, carbohydrate content, and iron content, but had no significant effect on fat content, dietary fiber content, and total sugar content. Sensory testing on cookie products showed that the differences in the cookie ingredient formula in each treatment had a significant effect on the color, aroma, texture, flavor, and overall parameters. cookies that have the best nutritional content are corn cookies and green beans sweetened with sugar with a water content of 4.03%, ash content of 1.83%, protein 18.62%, carbohydrates 48.17% and iron 1.52%.



Exploration and Remediation Ability Test of Indigenous Bacteria From Rice Field Pemalang Regency on Lead (Pb) Contaminated Soil

Okti Herliana, Yugi Rahayu Ahadiyat, Sapto Nugroho Hadi, Ida Widiyawati, Ahmad Fauzi, Wilis Cahyani, Ardiansyah

Lead (Pb) is one of the pollutants that can be found in paddy fields because of agrochemical using. One of the efforts to improve the quality of polluted soil is bioremediation by utilizing indigenous bacteria. who have tolerant properties and potential to be bioremediators because they are able to survive in polluted environments. This study aims to explore, tes of resistance and test of remediation ability of indigenous bacteria in Pb-polluted mediums. Soil samples were taken from five areas in Pemalang Regency, namely Dukuh Kembang, Krajan Barat I, Krajan Barat II, Krajan Timur I, and Krajan Timur II, Mandiraja Village, Moga District. The stages of the study include sampling, measurement of soil pH, analysis of Pb content in soil, dilution of soil samples to 10^{-4} , bacterial isolation, counting of numbers and morphological observations of colonies, gram staining and endospores, growth curve tests, resistance tests and remediation tests. The results of bacterial isolation with NA medium plus Pb 5 ppm obtained five bacterial isolates, namely KB1, KB2, KM, KT1, and KT2. Based on TPC (Total Plate Count) test with a range of 30-300 colonies, the number of bacterial colonies ranged from 1.8×10^6 – 2.4×10^6 CFU/ml. The morphological characteristics of the colonies of the five bacterial isolates are that they have a round shape and flat elevation.



Effect of Liquid Organic Extract and Compost of *Azolla microphylla* Biomass Basis on the Changes in N Nutrients in Ultisol and Pak Choi Yield

Purwandaru Widyasunu, A.H Syaeful Anwar, and Prastama Surya Nirwangga

Pak choy (*Brassica rapa* L.) is a vegetable from the Brassicaceae family that is in great demand because it contains protein, fat, Ca, P, Fe, Vitamins A, B, C, E, and K which are very good for health, have high nutritional content, have good Prospect; become a commodity of high economic value. This study aims to determine 1) the best dose of organic liquid extract and compost of *Azolla microphylla* biomass basis on an availability of N in Ultisol, 2) the best dose organic liquid extract of *Azolla microphylla* biomass basis on pak choi growth and yield, and 3) their interaction on Ultisol's N-availability, N uptake of pak choi, and growth and yiled of pak choi. This research was conducted in a green house, while soil and plant tissue analysis both were done at the Laboratory of Soil and Land Resources, Faculty of Agriculture, Jenderal Sudirman University. This study used a randomized block design (RBD) consisting of 16 treatment combinations with 4 replications, so that there were 64 experimental units (each experimental unit consisted of 2 polybags). The first factor is the concentration of organic liquid extract of *Azolla microphylla* biomass base (P) which is 5 mL/liter of water, 10 mL/liter of water, and 15 mL/liter of water. The second factor is the dose of compost (K) *Azolla microphylla* biomass basis, namely 24.06 grams, 48.12 grams, and 72.18 grams. The data obtained were variance analyzed at the 5% level, then if it had a significant effect, it was continued with the Duncan's Multiple Range Test (DMRT) test at the 5% significance level. The nutrient content of organic liquid extract has elements of N: 0.02%, P: 0.004%, and K: 0.58%, while the compost content has N: 2.32%, P: 0.90%, and K: 1.18%. The results of this study were that the concentration of organic liquid extract and the dose of compost *Azolla microphylla* biomass basis had not significant effect on Ultisol's N-availability, but it had a significant effect on plant N uptake. Plant N uptake in P1K1 treatment : 3,37 g/crop, P1K3 : 3,64 g/crop, P2K2 : 7,25 g/crop, and P3K3 : 3,92 g/crop. The organic liquid extract of *Azolla micophylla* biomass basis has a very significant effect on crop dry weight basis. The results obtained are P3K2 : 3.18 g, P1K3 : 3.45 g, and P3K3 : 3.65 g. There were significant effect of both two factors on pak choi's N uptake.

Keywords: pak choi, compost, organic liquid extract, *Azolla microphylla*



Extraction of Bioactive Components of Kecombrang (*Etlingera elatior*) and Roselle (*Hibiscus sabdariffa* L) Flowers by Microwave Assisted Extraction Method and Their Application to Functional Food Products

Regita Puspitasari

Kecombrang (*Etlingera elatior*) is a type of spice plant that widespread in Indonesia that has traditionally been used and utilized by the community as medicine and flavouring. Roselle is a shrub or shrub that is a seasonal plant, has functional properties that benefit the body because it contains antioxidants. Kecombrang and roselle are widely known to the public as plants that have many benefits but not many people consume them. This is due to the lack of public interest in consuming kecombrang and roselle in their original form. This study used RAK with 3 levels, namely with the composition of the ratio of kecombrang and roselle extracts 20:20, 15:25, 10:30. The analysis observed in this study is was total phenols, total flavonoids, vitamin c, pH value, and antioxidant activity. Based on the results of the best physicochemical tests obtained in jelly candy with an extract composition of 15:25, with a pH value of (3.1), total phenol (28.315 mg/g), total flavonoids (26.253 mg/g), vitamin C (8.34 mg/g), and antioxidant activity (66,26%).

ON MULTIDISCIPLINARY APPROACHES
FOR SUSTAINABLE RURAL DEVELOPMENT



Accelerated shelf life testing of the microcapsules of Kecombrang flower, leaf, and stem using a critical moisture content approach

Rifda Naufalin, Abdul Mukhlis Ritonga, Ami Nurhidayah

Microcapsules are dry processed products based on powder or flour. Microcapsules have low water content, but have the potential to be damaged due to their hygroscopic nature or easy to absorb water. This study aims to estimate the shelf life of microcapsules of flowers, stems, and leaves of kecombrang (*Etlingera elatior*) with the acceleration method based on the critical moisture content approach using aluminium foil packaging. The parameters measured in this study were the initial moisture content, the critical moisture content, and the equilibrium moisture content to obtain the accurate isothermic sorption curve. Furthermore, there are several supporting variables that need to be considered in determining shelf life. The supporting variables that must be analyzed in determining the shelf life of microcapsules of flowers, stems, and leaves are the area of the packaging, the weight of the packaging solids, the pure vapour pressure, and the permeability of the packaging. The results of the calculation of shelf life showed that leaf microcapsules had the highest shelf life of 41 months, flower microcapsules at 40 months, and stem microcapsules at 37 months.

Keywords: Microcapsules of flower, leaf, and stem of kecombrang, Shelf Life, Accelerated Shelf Life Testing Methode, Critical Moisture Content



Isolation and Identification of Bacillus Bacteria from Mucus and Digestive tract of Udikan fish (*Tor. Sp*) Caught in the Pelus River Banyumas based on the 16S rRNA gene

Rima Oktavia Kusuma, Muh Sulaiman, Anandhita Ekasanti, Hamdan Syakuri, Emyliana listyowati, Dewi Nugrayani

Several genus of *Bacillus* are known have beneficial metabolic substances and enzymatic abilities that can be utilized to maintain fish health. Udikan fish (*Tor. Sp*) live in the Pelus river, with a smaller population size due to overfishing and habitat destruction. This study aims to isolate and identify *Bacillus* sp bacteria occure in mucus and digestive tract based on the 16S rRNA gene. This gene is stable and not easy to mutate so suitable for identification. After going through isolation and planting in specific media, the type of bacilus species that was identified was *Bacilus cereus*. *Bacillus cereus* is included in probiotic bacteria that can help the body's resistance against pathogenic bacteria in fish.

Keywords: *Bacillus*, Udikan fish, 16S rRNA



Identification Outer Membrane Protein, LamB (Maltoporin) of *Aeromonas hydrophila*, a Protective Vaccine Antigen Against Aeromonas in Goramy (*Osphronemus goramy*)

Rozi Rozi, Rahayu Kusdarwati, Suwarno Suwarno, Wiwiek Tyasningsih

The outer membrane protein (OMPs), LamB (maltoporin) of *Aeromonas hydrophila*, is significantly capable and immunogenic of eliciting protective immune responses against pathogens infection in teleost. The confirmed *A. hydrophila*, a total of nine isolates, were screened for the presence of the two housekeeping genes including 16S rDNA, and rpoD by PCR assays, and sequenced analyses This study aimed to identify maltoporin protein (Omp46) *A. hydrophila* local isolate as a vaccine candidate and to examine the efficacy of the administration of Omp46 via intraperitoneal injection against *A. hydrophila* infection compared to formaline-killed whole-cell (FKC) vaccine. The results of the study in the form of Omp46 obtained by the SDS-PAGE technique followed by electroelution and the concentration was calculated using the Nanodrop method, the results obtained showed an average of 114 g/ml. The results showed that serum lysozyme activity was significantly increased in the FKC and OMP groups at 21 days and the serum antibody titers of vaccinated goramy in the FKC and OMP groups increased significantly at 21 days and 28 days. The relative survival percentage (RPS) of the Omp46 group challenged by *A. hydrophila* SB86 was 88%. OMP46 treatment this is higher than the RPS of the FKC group corresponding to 46% each. Meanwhile, RT-qPCR analysis revealed that Omp46 could significantly enhance the expression genes of the IgM, and IL-1b compared with the FKC immunized group. These results indicate that Omp46 is a potent vaccine candidate that is effective against the pathogenic *A. hydrophila*.



Phytoplankton Community Structure in the Coastal Waters of Brebes, Central Java, Indonesia: Study in the Green Mussel (*Perna viridis*) Cultivation Area

Sesilia Rani Samudra, Isnaini Prihatiningsih, Dyahruri Sanjayasari

Phytoplankton is the main food for green mussels (*Perna viridis*). Green mussels get their food by filtering the water that passes through their bodies, so these organisms are called filter feeders. The availability of phytoplankton in the green mussel cultivation area needs to be known because it can affect the production of green mussel cultivation. This study aims to determine the abundance, diversity, and dominance of phytoplankton in the green mussel cultivation area on the coast of Brebes, Central Java, Indonesia. This research was conducted at three stations for green mussel cultivation, namely Grinting; Sawojajar; and Randusanga Kulon. Samples were taken in March-June 2022 using the purposive sampling method. The abundance of phytoplankton at Grinting Station ranged from 7,343-1,044,784 cells.L-1; with diversity index values ranging from 0.65-1.17; and dominance index 0.24-0.93. The division with the most species found at Grinting Station was Eustigmatophyceae (93%). The abundance of phytoplankton at Sawojajar Station ranged from 2,914-51.172 cells.L-1; with diversity index values ranging from 0.82 to 2.94; and a dominance index of 0.07-0.73. The divisions with the most species found at Sawojajar Station are Bacillariophyceae (63%) and Dinophyceae (16%). The abundance of phytoplankton at Randusanga Kulon Station ranged from 9,652-18,241 cells.L-1; with diversity index values ranging from 1.28-2.56; and dominance index 0.13-0.32. The divisions with the most species found at Randusanga Kulon Station were Bacillariophyceae (54%) and Dinophyceae (33%).



Stomatal Opening Model for Plant Growth inside Plant Factory

Shafira Audy Prameswari, Yoana Rizki Deviriandra, Ariadne Hapsari Putri Taufik, Rizky Aliyah Putri, Athaya Helia Untari, Afifah Afifah

Indoor cultivation, such as in a plant-factory, creates possibility to adjust various micro-climate conditions for optimal plants growth. Increased production can be achieved by maximizing stomatal opening, thereby increasing photosynthesis. The objectives of this research are; firstly, to create a model of stomatal opening by using easily measured micro-climate variables of the plant environment. Secondly, choosing the most appropriate model between linear and non-linear models, namely Artificial Neural Network (ANN) for practical use in plant-factory environment control system. Two mini plant-factories are provided with red and blue LED grow lights of 48 watts each. Red spinach (*Amaranthus tricolor* L.) was used as a model plant for this study. The temperature and humidity in the plant-factory are maintained by electronic control system. Measurements were conducted on temperature, humidity, intensity of light radiation, and stomatal opening. Each measurement became were saved in variables, namely; airTemp, RH, Rad, stOpen. The time of leaf sampling and the day of sampling were entered into the variables sampTime and grStage. While the wavelength of light, entered the Light variable. Linear analysis showed that airTemp and grStage can be predictor variables on stomatal opening. Non-linear analysis using Artificial Neural Network (ANN) shows that the 6-6-1 network architecture with 50,000 iterations designed to predict stomatal openings. The linear and non linear model can be used in a control system, with optimization of maximum stomatal opening.



Growth Performance of *Osteochilus hasselti* fed Algae Supplementation and Maintenance in Biofloc System.

Sorta Basar Ida Simanjuntak, Tegar Aldi Saputro, Elly Tuti Winarni

Algae are unicellular organisms with high nutritional content, such as *Spirulina platensis* and *Chlorella vulgaris*. Both of these algae species contain high protein and antioxidants, so they can be used as feed supplements. Residual feed and waste products can worsen the quality of fish rearing media. The purpose of this study was to determine the effect of differences in feed supplemented by algae and rearing systems and to obtain the best feed composition and rearing system to increase the growth of *Osteochilus hasselti*. The study was conducted experimentally with a factorial randomized block design. The first factor was feed, namely P0, P1, P2, P3 and P4. The second factor is the maintenance system, namely non-biofloc (B0) and biofloc (B1). The results showed that feed supplementation could increase the growth rate of *Osteochilus hasselti*. The best feed supplementation was a combination of *S. platensis* 2 g/kg + *C. vulgaris* 3 g/kg feed. The best biofloc rearing system increased the growth of *Osteochilus hasselti*. The biofloc maintenance system can increase the growth of *Osteochilus hasselti*, while feed supplementation can increase the immunity and growth of *Osteochilus hasselti*.

Keywords: algae; biofloc system; growth; *Osteochilus hasselti*



Macroalgae biodiversity in Pari Island Cluster, Kepulauan Seribu District

Sri Handayani

Macroalgae are an important primary marine producer because it supports the life of other organisms at a higher trophic level in aquatic ecosystems, mostly found in intertidal and subtidal zones. This study aimed to determine the diversity of macroalgae in the Pari Island cluster, in particular species diversity and its relationship to local aquatic environmental conditions. This research was conducted in September 2022 in the Pari island group of both Pari Island and Kongsi Island. The research method used is a survey method, with analytical methods using the Shannon-Wiener Diversity Index (H'), Dominance Index (D), Evenness (E), and Similarity Index, the calculation of diversity parameters is carried out using PAST4.0 software. The results showed that there were 24 macroalgae species from 3 divisions, namely Chlorophyta (11 species), Phaeophyta (5 species), and Rhodophyta (8 species). The inter-island species richness shows that Pari Island has 18 species and Kongsi Island has 15. The diversity of Pari island is ($H' = 2.314$, $E = 0.594$, $D = 0.121$) and Kongsi island is ($H' = 1.191$, $E = 0.481$, $D = 0.211$). The largest species are *Acantophora spesifera* (Rhodophyta), with 395 individuals, *Boergeresia forbesii* (Chlorophyta), with 125 individuals and *Padina australis*. (Phaeophyta) with 92 individuals. Based on the discussion, the diversity of macroalgae species in the Pari Island cluster is still quite high and can be used as an indicator of marine ecosystems.



Nutrient Profile, Protease and Cellulase Activity of Protein Extract *Hermetia illucens* Larvae Rearing on Various Substrates

Sri Rahayu

The objective of this explorative research was to evaluate the nutrient profile, protease, and cellulase activity of maggot protein extract (MPE) derived from BSF maggot reared in different substrates, namely A (restaurant waste and rejected milk), B (layer manure), C (kitchen waste). Results showed that maggot meal from layer manure had the highest protein content (45.36%) and the lowest fat content (18.44%). Amino acids of maggot meal contained high levels of glutamate, aspartate, alanine, valine, leucine, and isoleucine. Lauric acids were contained in maggot meal from kitchen waste (33.79%), layer manure (32.18%), restaurant waste and rejected milk (22.94%). Maggot meal from layer manure had the highest oleic acids viz. 15.13%. Protein concentration of MPE from various substrates were 0.56 mg/ml to 0.601 mg/ml (60% w/v ammonium sulfate saturation) and 0.555 mg/ml to 0.609 mg/ml (70% ammonium sulfate saturation). The protease activity of MPE from layer manure substrates showed optimum activity and a stable condition in neutral to alkaline pH, its activity was 0.748 U/mg at pH 7.0 and pH 11.0 (60% w/v ammonium sulfate saturation) and 0.774 units/mg (70% w/v ammonium sulfate saturation). The highest cellulase activity was found in MPE from kitchen waste which remained stable at pH 5.0-11.0. In general, maggots from different sources of substrates had different nutrient profiles and enzyme activities. Protein extract from maggot growing in layer manure had the most adequate nutrient profile to be used as an alternative source of protein feed and protease enzymes.



Resistance of Several Varieties and Potential Isolates of Rhizosphere Bacteria to Control Leaf Spot Disease in Citronella Grass (*Cymbopogon nardus* var *genuinus* L).

Sukamto

Citronella grass (*Cymbopogon nardus* var *genuinus* L) is an essential oil-producing plant known as "Citronella Oil of Java". At present, citronella plants are widely developed in several areas in Indonesia. Leaf spot disease is one of the diseases which is a main problem in the cultivation and development of citronella grass in Indonesia and India. This study aims to determine the resistance of several varieties, and to find out potential isolates of rhizobacteria to control leaf spot disease on citronella plants. The results of isolation and identification, leaf spot disease caused by *Curvularia andropogonis* (Wakker) BOEDJIN. Observation of the disease intensity in 4 gardens at Merauke shows that each variety and clone has a different response to leaf spot disease. The variety of Citrona 1 Agribun are more resistant than Citrona 2 Agribun and seraiwangi 1, with disease intensity of 14.73%, 41.28% and 23.28%, respectively. In vitro testing, showed that some isolates and botanical pesticides can inhibit the growth of *C. andropogonis*. Whereas the results of the fungicides test showed that mankozeb was effective in inhibiting the growth of *C. andropogonis*. The use of rhizobacteria as an antagonist, botanical pesticides and other control components needs to be done to control leaf spot disease in citronella grass in the field.



Antibody Titer of Broiler Chickens who Get Peptide Supplementation from Chicken Feet in Feed

Titin Widiyastuti, Bambang Hartoyo, Sri Rahayu, Singgih Sugeng Santoso

The study aims to examine the use of chicken feet peptide in feed as an immunomodulator in terms of the antibody titer of broiler chickens. The research material used 120 doc broiler chickens, which were raised for 35 days. The research method used is a Complete Randomized Design (Randomized Completely Design), the treatment is the supplementation of chicken feet peptide in the feed consisting of: R0 (Basal feed /control), R1 (supplementation of 2% chicken feet peptide), R2 (supplementation of 4% chicken feet peptide), R3 (supplementation of 6% chicken feet peptide). The observed study was the antibody titer (AI, ND, Mycoplasma and Pullorum), it was measured using the Haemagglutination Inhibition (HI) technique. The collected data were analyzed for variance and if the treatment had an effect continued the BNJ test. The results showed that all chicken feet peptide supplementation treatments showed high AI titers ranging from 24 to 29 ($P < 0.01$), while ND titers were low, while Mycoplasma and Pullorum were negative ($P > 0.05$). Broiler chickens that received peptide supplements from chicken feet showed protection against AI infection but were low against ND, Mycoplasma and Pullorum. Base on the result, broiler chickens that received peptide supplements from chicken feet showed protection against AI infection but were low against ND, Mycoplasma and Pullorum.



Effect of Temperature and Relative Humidity on Microbial Profile, Brix Value and Total Sugar Of Coconut Sap in Susukan Village, Sumbang District

Wijonarko, G, Rifda Naufalin, Karseno dan Ike Sitoresmi Mulyo Purbowati

Temperature and relative humidity are factors that affect the microbial profile and brix value of coconut sap. High temperature and relative humidity tend to support the growth of microbes. On the other hand, high relative humidity will reduce the brix value of coconut sap. Therefore, it is necessary to study the relationship between agroclimate conditions with microbial profile, brix value and total sugar of coconut sap in Susukan Village. This study is expected to provide benefits for those who need coconut sap as a source of *S. cerevisiae* and as raw material in brown sugar making. Samples of coconut sap were taken at simple random. The temperature and relative humidity were recorded for each sampling. The coconut sap is put into sterile plastic bottles and then using an ice box, it is taken to the Agricultural Technology Laboratory for analysis. The analysis included total microbial, total yeast, total bacteria, yeast percentage, brix value and total sugar of coconut sap. The data were analyzed to determine the relationship and level of closeness. The results showed that at temperature 29.7oC and relative humidity 83% total microbial coconut sap 7.54 log cfu/ml, total yeast 5.43 log cfu/ml total bacteria 2.96 log cfu/ml and percentage of yeast 76.55%. Brix value and total sugar at the same condition were 15.6% and 8.45% High temperature and relative humidity will increase the total microbial, total yeast, total bacteria. While the value of brix and total sugar will decrease at high temperature and relative humidity. There is a strong correlation between temperature and total microbes, brix value and total sugar. The correlation coefficients in a row were 0.74; -0.75 and -0.70. The strong correlation also observed between relative humidity and total microbial, total yeast and brix value. The correlation coefficients in a row were 0.78; 0.75; and -0.813.

Keywords: temperature, relative humidity, total microbes, brix, total sugar



Larvae and Fries Survival from Several Hours Post Mortem Broodstock Of Ornamental and Consumption Fish Gamet

Yulia Sistina, Siwi Pratama Mars Wijayanti, Lilik Kartika Sari, Rika Prihati Cahyaning Pertiwi, dan Achmad Iqbal

Urgently needed getting data from post mortem resource gamet cells to produce new individual, especially for fresh water species for application in real life in near future. This experimental study used post mortem broodstock of 1, 2, 5, or 6 hours post mortem from consumption or ornamental type fish as model material. Each material has six different source of gamet (fresh gamet from alive broodstock) to be fertilized, as 6 treatments, namely (1) female male fresh (FMF) as control (2) Female fresh Male post mortem striping (FFMPMS), (3) female fresh male post mortem testis (FFMPMG), (4) Female postmortem male fresh (FPMMF), (5) Male post mortem striping female fresh (MPMSFF), and (6) male postmortem testes female fresh (MPMGFF). Results showed that 1 hours, 2 hour, and 5 hours post mortem gamet of consumption fish source resulting in viable individual survive up to fries assessment. Results from 6 hours post mortem of ornamental fish source gamet also proven having good qualities resulted in new individual survive up to fries assessment. As recommendation that if we found an endanger species already dead, save their gonad, isolate their gamet cells for conservation, as contribution for shifting paradigm from anthropocentric to bio-centered.

Keyword : fresh water fish



Model of Legal Protection of Geographic Indications in Facing the Asean Economic Community (AEC)

Ade Maman Suherman

Geographical Indications (GI) are at the crossroads between three central issues in international law, namely: International Trade, Intellectual Property Rights, and Agricultural Liberalization Policies. In the ASEAN regional scope, there is a plan to realize trade liberalization through the Asean Economic Community (AEC). Recognition of Geographical Indications as part of IPR becomes the pros and cons among countries that join the WTO. The existence of interested parties as parties recognized in the TRIPS arrangement (as well as the arrangement of 'institutions' that become representatives of the legal standing of Geographical Indications is a separate study. Therefore, it is necessary to conduct research on the model of legal protection of geographical indications in dealing with the Asean Economic Community (AEC) which includes An analysis will be produced on the Protection of Geographical Indications in the International Convention after the birth of TRIPS (Trade-Related Intellectual Property Rights); Identification of problems related to the concept of ownership of Geographical Indications as Common Property; and Legal Protection of Geographical Indications in the AEC to produce a model for the legal protection of Geographical Indications in facing ASEAN. Economic Community (AEC) This research is a sociological juridical with a qualitative research approach.



Deparpolisasi From The People's Level: Blank Box Movement in the 2019 Pilkada in Kebumen Regency

Ahmad Sabiq, Waluyo Handoko, Andi Ali Said Akbar, Bowo Sugiarto, Titis Perdani

The presence of a sole candidate in the Pilkada (local head election) raises disappointment among the wider community who expect the emergence of several alternative figures from political parties. The failure of these political parties were answered by the presence of the blank box movement. This movement became phenomenal in the Kebumen's Pilkada because it was able to garner support of 39% of the vote against the sole candidate. This phenomenon illustrates the phenomenon of deparpolisasi, a situation where citizens build a movement of distrust and anti-political parties. This phenomena previously occurred during the New Order era when the state weakened the party by imposing policies to free people from political parties' allegiance. The difference is that the deparpolisasi in Kebumen was carried out by residents who were disappointed with parties' poor performance in local democracy. This study uses a qualitative paradigm with a case study model. This study focuses on explaining why political parties are unable to compete in the Kebumen's election and the emergence of the pro-blank box movement. Data collection techniques were carried out by FGD, in-depth interviews, observation, document studies and literature studies. The data were analyzed through an interactive analysis model. The results showed that first, the decision of all political parties in Kebumen to only nominate a sole candidate was based on political logic, especially seeking legal asylum for corruption cases of party officials who served in the DPRD (local parliament). Second, the attitude of deparpolisasi and anti-sole candidate of Kebumen's people is based on their commitment to the implementation of democracy. Third, the Kebumen blank box movement did not stop after the election but continued and is now being transformed into a control movement over the government of Kebumen.



Immoral Offense Eligibility as Criminal Acts Objects for Restorative Justice Filing

Dwiki Oktobrian, Guntur Pembayun Putro, Aura Salsabila Ayodya Swastiko

Restorative Justice has experienced a new phase in Indonesia since 2020. Since that year, the Police and the Prosecutor's Office have been competing to formulate internal regulations as a form of deadlock in revising the Criminal Procedure Code (KUHP), one of the new substances of which is the idea of Restorative Justice. Restorative Justice allows a case to not proceed to the court based on a peace agreement between the victim and the perpetrator to create the restoration for victims and social harmonization. Recently, there have been cases in Indonesia regarding the use of Restorative Justice in immoral cases, such as rape, that is then reconciled by marrying the victim and the perpetrator. Such marriage in no way will bring happiness or restores the victim's condition but adds to the suffering of the victim and further destroys social harmony. This phenomenon is analyzed with a normative approach which shows that the factors for the emergence of daunting peace under the pretext of Restorative Justice arise from the regulations dissimilarity between the Police and Prosecutor's Office; only in the Prosecutor's Office, immoral cases are cases that are excluded as objects of cases in Restorative Justice. Police regulations improvement must be carried out immediately so that the practice of marrying the victims with their perpetrators in immoral cases can be completely terminated from the start. Even a peace process proposal for immoral crime cases should not need to be facilitated because of the heavy impact felt by the victim or their family.



Diversion in the Settlement of All Criminal Acts Performed by Children for the Establishment of Restorative Justice

Eko Arief Wibowo

The Law on the Juvenile Criminal Justice System must prioritize a restorative justice approach that is applied in the form of diversion, but it is only intended for perpetrators of child crimes who are threatened with imprisonment under seven years. for child perpetrators who are threatened with a criminal sentence of more than seven years. In practice, the application of the principle of restorative justice for child offenders who are threatened with a sentence of more than seven years has been partially implemented through discretion but discretion can also cause problems of injustice, due to differences in treatment in the law enforcement process. The purpose of this research is to find out how the implementation of the principles of restorative justice in the criminal legislation in force in Indonesia and how to apply diversion for child offenders who are threatened with a criminal sentence of more than seven years in order to realize restorative justice. The type of research is normative legal research, to seek and find the data needed to answer the problem. The results of the study revealed that the Indonesian criminal law laws and regulations have not regulated the principles of restorative justice for child offenders who are threatened with imprisonment for more than seven years. Theoretically, historically, normatively and procedurally practice, diversion can also be applied to resolve criminal cases committed by children who are threatened with imprisonment for more than seven years. Keywords: children, diversion, restorative justice, criminal act



Construction of Female Agency in Indonesian Contemporary Horror Films

Hariyadi, Muhammad Taufiqurrohamn, Arizal Mutahir

Studies of women in Indonesian horror films usually employ two perspectives. The first perspective sees women as being exploited, objectified, and sexually commodified. The second one perceives women as scary figures since in Indonesian horror films the ghosts who terrorize human life are women or used to be women when they were still alive. The article takes a different view as it uses female agency concept to look at contemporary horror that feature women as the main characters. The article examine how women are represented when they become main characters in two films: Pengabdi Setan (2017), and Perempuan Tanah Jahanam (2019). The films were chosen due to the prominent feature of women, cinematic achievement, and commercial success. In the article, textual analysis is used to uncover cultural structure, and through it, the article critically examined their ideological contents. The article employed female agency as a new analytical framework in looking at gender representation in horror films where in previous studies women were only seen as victims of sexual exploitation and/or as perpetrators of terror. The two films being analyzed represent women as strong characters without turning them into ghosts. The female protagonist in Pengabdi Setan is practically a leader in her family as they try to deal with supernatural events threatening them. Meanwhile in Perempuan Tanah Jahanam the main female character take on mysterious events in a remote village which is unknowingly related to her family and is able to remove a curse plague them for many years. This article shows that female characters in contemporary Indonesian horror films do not always be sexual exploitation or turn into terrorizing ghosts so that the binary opposition of victims or perpetrators is no longer the norm.



Variation of Intensity of Independent Farmer Elements of Different Social Class in Balanced Reciprocity Relationship

Imam Santosa, Muslihudin, Wiwiek R. Adawiyah

Independence is the core goal of every farmer's community empowerment. In the pattern of reciprocal social relations, it turns out that the achievement of the goal of independence is different for each social class of farmers. This problem is urgent to be studied seriously. The purpose of this research is to examine the variation of the element of independence in farmers with different social classes with balanced reciprocity social relations. The location of research was carried out intentionally in the rural areas of Banyumas Regency and Purbalingga Regency, Central Java Province, Indonesia. The research method used is an in-depth case study with a quantitative and qualitative approach. The results showed that there were various types of independence in respondents from the cluster of farm laborers and farmers who owned land. This type of independence is categorized based on personal, economic, social, cultural and technological aspects. Even though they are in a balanced reciprocity relationship, the intensity level of independence in each type of element varies in the two clusters of respondents. The highest intensity value is found in socio-cultural independence. The element of independence in personal, economic and technological aspects is still low in the farm labor cluster. Of course, the state of independence requires several motivating factors so that farm labor respondents are able to increase the intensity of their independence in personal, economic and technological aspects.



Fulfillment of the Educational Rights of Migrant Workers' Children in Sabah Malaysia

Muslihudin

Children of migrant workers in Malaysia experience problems related to access to the right to education. The problem is actually inherited from their parents who do not have citizenship documents. In other words, Indonesian Migrant Workers (IMW) are illegal. This study aims to determine the fulfillment of the rights of children of migrant workers, especially in terms of the right to education. The method used in this study is a mixed method, which combines quantitative and qualitative research methods. Methods of data collection by questionnaires, interviews and focus group discussions. The method of analysis is interactive analysis. The results showed that not all children of migrant workers in Sabah received basic education due to limited school facilities and inaccessibility of access to existing educational places or institutions. The existing basic education institutions are also not facilitated by the government, both the Malaysian and Indonesian governments. Because of the status that IMW's children are not Malaysian citizens, the Malaysian government does not feel responsible for fulfilling their educational right to obtain basic education. The Indonesian government has tried to fulfill their right to education but it is not significant because it is very small compared to the number of PMI children. Basic education institutions are facilitated by non-governmental organizations (NGOs) that are purely from the private sector in minimal conditions both in quality and quantity. Keywords: education, children of Indonesian migrant workers, illegal, Sabah Malaysia.



The Urgence of Paralegal Position in Law Enforcement in Indonesia Through the Provision of Legal Assistance

Nurani Ajeng Tri Utami

Legal aid distribution at the moment does not yet reach whole Indonesian people because existing limitations for the implementation of the law so that paralegal is required to increase the range of legal aid. Considering the importance of that, it is needed to legitimation for a paralegal position in enforcement law for optimizing the role of the paralegal. The aim of this study is to knowing the importance and legitimacy of paralegal position in regulations legislation in Indonesia and to knowing optimization of the position and role of paralegals in enforcement law through legal aid. Method research used is juridical normative with approach statute, analysis, and concepts. Research results show that reason that is a consequence of the rule of law adopted by Indonesia and is a right constitutional as well as a protection right basic as equality before the law, setting more carry on of legal aid regulation, as aspect obligations and state responsibilities in giving legal aid, guarantee certainty for paralegal law in operating their duties, and as the effort for creating order in organizing giver legal aid especially paralegals. Optimization of paralegals position in the enforcement of Indonesian law in giving legal aid could be conducted through increasing paralegal competence with follow the training, networking, and cadre of paralegals from start district level, regional until lowest in the village, Skill advocate Public in the form of defense and support to the community, and giving law protection for paralegals in operating their job in giving legal aid



Rural Tourism Destination Branding Strategy With Collaborative Approach of Local Stakeholders

Rahab

Rural tourist destinations in Banyumas Regency are very diverse and interesting. Brand strategy in rural tourism destinations is the key to creating rural tourism competitiveness. The aim of this paper is to explore the role of local stakeholder collaboration in designing brand strategies for rural tourism destinations. A qualitative descriptive approach is used in exploring various local village stakeholders who are the pillars for designing brand strategies in promoting tourist destinations in rural areas. The in-depth interview technique with the snow ball method was used to obtain various information related to the actors driving the development of village tourism, the motivation of stakeholders in collaborating, the constraints of stakeholders in designing a village tourism destination brand strategy and the relationship and role of local stakeholders in the formulation of a tourism destination brand strategy. This study provides an overview that local stakeholders design tourism destination brand strategies including primary, secondary and tertiary stakeholders. The main motivation of stakeholders to collaborate in designing brand strategies is because they want the tourism potential of their village to be known by the public. The main obstacle in developing a brand strategy for rural tourism destinations is limited knowledge about the local characteristics of the village's tourism potential. In addition, this study also found that the unclear description of the roles and duties of stakeholders in developing a tourist destination brand strategy was their main obstacle in developing a tourist destination brand strategy. Minimal interaction and communication that tends to be formality causes the project to design a village tourism destination brand strategy does not go according to plan. This study concludes that the collaboration of stakeholders is the key to success in the design of tourist destination brand strategies. Communication and interaction of all actors in the village needs to be built so that synergies occur in encouraging the development of rural tourism through tourism destination branding strategies.



Settlement of Children's Cases During the Covid-19 Pandemic Through Online Trials to Realize Protection Against Children in Conflict with the Law

Rahtami Susanti

The technical examination of cases of Children in Conflict with the Law (ABH) underwent a change when the Covid-19 pandemic hit Indonesia in early 2020. Health protocols that require social distancing in the context of preventing the corona virus prompted the Supreme Court to make a breakthrough in resolving cases in court, namely through online trials (electronic). Online hearings for children's cases during the COVID-19 pandemic are a form of protection for ABH. This study aims to produce scientific studies related to the settlement of ABH cases during the Covid-19 pandemic and barriers to online trials. This research is included in the category of legal research with a normative juridical approach, namely an inventory of laws and regulations relating to online trials and the juvenile criminal justice system. The results show that the Supreme Court's efforts to issue an online trial policy for children's cases are a form of protection for children's rights where during the pandemic it is not possible for children to attend court because of the risk of being affected by COVID-19 while the case still has to be resolved. Some of the obstacles found in the online trial, among others, were related to technical problems in the form of an unstable internet network and inadequate availability of electronic devices and the problem of human resources who did not master technology. The results of the research are expected to contribute to the development of the law, especially related to the protection of ABH.



The Role of ASEAN Integrated Food Security Framework in Achieving Indonesian Food Security

Renny Miryanti, Sri Wijayanti, Nurul Azizah Zayzda, Kholifatus Saadah, Ayu Agustiningsih

The report of The World Food Program of the United Nations (WFP) in 2021 hunger map shows that even though Southeast Asia has fertile land and is surrounded by maritime wealth, however many ASEAN (Association of Southeast Asian Nations) countries still has a number of poverty and inability to access food and nutrition. ASEAN through the AIFS (ASEAN Integrated Food Security) Framework encourages ASEAN countries try to realize ASEAN regional food security. This study will examine the role of the AIFS (ASEAN Integrated Food Security) Framework in achieving food security in Indonesia. This research used qualitative method, and the collecting data used primary data collection conducted through interviews with related parties, and secondary data through literatures review related to the implementation of the ASEAN Integrated Food Security Framework or other food security policies. The theory of international organization role is used to answer the research question. This research found that AIFS plays role as an arena rather than instrument and independent actor in achieving food security in ASEAN and particularly in Indonesia.



The Experience of Disable Person in Accessing Public Facilities at University.

Tri Lisiani Prihatinah

Since its promulgation in 2016, one of the important issues is the availability of public facilities for persons with disabilities. This study aims to understand the problems of public facilities experienced by persons with disabilities in universities in Indonesia. Using the historical approach, it has been identified that specific steps can be taken to begin to address the problem. The main objective is to develop recommendations that can be used by government authorities to improve access of persons with disabilities at universities. The needs analysis highlights three main types of barriers to access and mobility, namely social barriers, psychological barriers, and structural barriers.





Justice in The Benefit Sharing of The Traditional Knowledge of Indigenous People Commercialization (Comparative Study Indonesia and Malaysia)

Tri Lisiani Prihatinah, Ulil Afwa, Sulistyandari Sulistyandari, Ari Tri Wibowo, Rohaida Nordin

Benefit sharing is a concept that is currently coming into force in the Intellectual Property Protection and Use of Traditional Knowledge and Traditional Cultural Expressions. Indonesia is a country that rich in abundant genetic resources, has a variety of diverse cultural and ethnic riches that make Indonesia one of the richest countries for traditional knowledge. Protecting traditional knowledge is very important because traditional knowledge is the identity of the community that owns it. Traditional knowledge is a right and cultural identity of the indigenous people and is part of the constitutional rights. The protection of traditional knowledge in Indonesia is regulated in the Copyright Law, Patent Law, and the Cultural Promotion Law. However, the protection of traditional knowledge in Indonesia is not optimal, because there are no rules regarding the distribution of benefits. Currently Malaysia does not have specific national legislation to regulate access to its genetic resources and ensure equitable sharing of benefit derived from their commercialization (ABS legislation). However, the State of Sabah and Serawak in Malaysia have enacted their ABS legislation to be implemented within their states territories. This paper will analyzed what the best regulation to give justice to indigenous people related their traditional knowledge commercialization inline with the principal issues to be considered in the manner of Convention on Biological Diversity (CBD) requirements.



The Effectiveness of The Investment Alert Task Force in Law Enforcement of Illegal Online Loan Eradication in Banyumas Regency

Ulil Afwa, Agus Mardianto, MI. Wiwik Yuni Hastuti

The presence of an online loan platform in the current Revolution 4.0 era has succeeded in accelerating the financial inclusion index in Indonesia. However, the emergence of illegal online loan platforms which is very disturbing and takes many victims, including in Banyumas Regency, has disrupted the presence of online loans as an alternative source of public funding other than conventional banks. A quite progressive step has actually been taken by OJK by forming an Investment Alert Task Force to supervise and take action against illegal online loan companies. However, empirical data shows resistance which is indicated by the increasing number of consumers who are victims of illegal online loan providers. The purpose of this study is to identify legal issues related to the handling of loans and legal culture in prismatic community patterns in Banyumas district, the mechanism of supervision and law enforcement carried out by the Investment Alert Task Force and analyze the effectiveness of the Investment Alert Task Force in eradicating illegal online loans in Banyumas. This research was conducted using a sociological juridical approach as well as primary data and secondary data as material for analysis. Furthermore, the results of this study are expected to contribute to improving the supervision and law enforcement system organized by the Investment Alert Task Force in eradicating illegal loans in Banyumas district.



Felicity Condition of Directives Speech Act Uttered by Indonesian Public Figures during Covid-19

Usep Muttaqin, Chusni Hadiati, Nadia Gitya Yulianita

This research aims to identify the felicity condition of directive speech acts uttered by high-profile figures in Indonesia. It attempts to classify the types of directive speech acts, their intended meaning, and felicity conditions. The qualitative method was used to accomplish the objective of the study. The data were high-profile Indonesian figures gathered from COVID-19-related news on an online news site (<http://www.merdeka.com>). The results show that the high-profile figures in the news used some types of directive speech acts in their utterances, namely forcing, inviting, asking, forbidding, reprimanding, urging, entreating, suggesting, commanding, advising, and daring. The speakers' intentions determine the intended meaning of each of those directive speech acts. Furthermore, the felicity condition of each directive speech act is analyzed by conducting four formulas, which are preparatory condition, propositional content, sincerity condition, and essential condition. These formulas determine the validity of the utterances. Thus, people reading the news can refer to whether the utterances are felicitous or not.

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Deparpolisasi From the People's Level: Blank Box Movement in the 2019 Kebumen's Pilkada

Waluyo Handoko, Andi Ali Said Akbar, Bowo Sugiarto, Titis Perdani, Ahmad Sabiq

The presence of a sole candidate in the pilkada (local head election) raises disappointment among the wider community who expect the emergence of several alternative figures from political parties. The failure of these political parties were answered by the presence of the blank box movement. This movement became phenomenal in the Kebumen's Pilkada because it was able to garner support of 39% of the vote against the sole candidate. This phenomenon illustrates the phenomenon of deparpolisasi, a situation where citizens build a movement of distrust and anti-political parties. This phenomena previously occurred during the New Order era when the state weakened the party by imposing policies to free people from political parties' allegiance. The difference is that the deparpolisasi in Kebumen was carried out by residents who were disappointed with partie's poor performance in local democracy. This study uses a qualitative paradigm with a case study model. This study focuses on explaining why political parties are unable to compete in the Kebumen's election and the emergence of the pro-blank box movement. Data collection techniques were carried out by FGD, in-depth interviews, observation, document studies and literature studies. The data were analyzed through an interactive analysis model. The results showed that first, the decision of all political parties in Kebumen to only nominate a sole candidate was based on political logic, especially seeking legal asylum for corruption cases of party officials who served in the DPRD (local parliament). Second, the attitude of deparpolisasi and anti-sole candidate of Kebumen's people is based on their commitment to the implementation of democracy. Third, the blank box movement did not stop after the election but continued and is now being transformed into a control movement over the government of Kebumen.

Keywords: party institutions, sole candidate, blank box movement, political control



Fictitious-Positive Decision Dispute Resolution at PTUN For the Achieving Unity of Proceedings and Legal Certainty

Weda Kupita

The Administrative Court (PTUN) has the authority to adjudicate ordinary state administrative disputes, namely disputes resulting from the issuance of written decisions by government officials, these disputes are classified as "ordinary state administrative disputes". The Administrative Court is also authorized to adjudicate "fictitious-positive decision disputes", namely disputes caused by legal events in the form of silence by government officials not issuing the requested decision, then the application is considered legally granted. Plaintiff (person or civil legal entity), before filing a lawsuit to the Administrative Court, it must first take an "Administrative Appeal", it is determined if the authorized official does not respond (acts in silence) to Administrative Appeal, then "Administrative Appeal are deemed granted". Then there will be a juridical problem: "whether the dispute will be tried by PTUN as" Ordinary State Administrative Dispute "or as" Fictitious-Positive Decision Dispute? ". The approach method used is Normative Juridical, qualitative normative analysis method, and grammatical and systematic interpretation method. Based on normative studies, it is not yet clear whether the legal event will become an "Ordinary TUN Dispute" or a "Fictitious-Positive Decision Dispute", because it cannot be classified into the two types of disputes. Certainty is needed, because the procedural law are very different between the two types of disputes. The Article 77 and Article 78 of the UU-AP need to be amended by adding the provisions in the next paragraph which stipulates: "if the applicant for an administrative objection or appeal wishes to submit to the Administrative Court, then the TUN dispute is resolved in the Ordinary Procedure or is resolved as a fictitious decision dispute- positive". It is very important to emphasize in the provisions of the article in order to realize the unity of the proceedings and legal certainty



Groundwater Potential Zone Classification Using Geospatial Approach

Afik Hardanto

Groundwater is an important process in the watershed hydrological system. Serayu watershed, the largest in Central Java Province, has bio-physic spatial variability that influences groundwater recharging. The aim is to derive the groundwater potential zone of the Serayu watershed. Five thematic maps were decided and applied for groundwater potential analysis, i.e. lithology, land use land cover, lineament, drainage, and slope gradient. Digital Elevation Model (DEM) and Landsat 8 image were analyzed to thematic raster with 1 x 1 km resolution. Weighted index calculated regarding the relation of five influence parameters then overlay calculated by QGIS-calculator. Groundwater classified into five categories, namely poor, low, moderate, good, and very good. Based on the final groundwater potential map, 0.02% of 3,727 km² is poor category, however most of Serayu watershed have moderate to good (48.77 and 29.77 %, respectively). The percentage of very good (10.57%) and low (10.87%) classes were rather similar. Spatial variability of groundwater potential zone indicates the complexity of Serayu watershed characteristics, thus an advanced approach may notice for the future water research and management perspective.



Determination of Agricultural Insurance Premium Prices Based on Rainfall Index with the Black-Scholes Model

Agung Prabowo, Mustafa Mamat, Firman Sukono, Diah Paramita Amitarwati, Agus Sugandha, Supriyanto Supriyanto, Slamet Riyadi

This article discusses the use of the European put option formula to calculate agricultural insurance premium prices based on the rainfall index. The data used in this study is data on rainfall and rice production in Banjarnegara Regency from 2014 to 2019 which are arranged in quarterly form. The research was completed by literature study and online secondary data searching. From the results of the research, rainfall data that has a strong correlation is rainfall in the tenth month (October) so that rainfall data on October is used as a rainfall index. From the calculation results, at the 5th percentile, the October rainfall is 2.2 mm. For this rainfall, a premium price of IDR 2,515,549.00 is obtained, if the trigger data for the last rainfall (2.2 mm) is used. When used as a reference, the average overall rainfall data (9.92 mm) obtained a premium of IDR 562,664.00. These results show that the selection of references gives very different results. The calculation results also show that the high and low percentiles affect the price of agricultural insurance premiums in Banjarnegara Regency. The higher the percentile value, the more rainfall will increase, and the premium price will increase.



Activated Carbon “ NiFe₂O₄ Doped Calcium Nanoparticles Composite for Carbon Paste Electrode of Glucose Biosensor

Amin Fatoni, David Hutama, Dadan Hermawan, Wahyu Widanarto, Mekar Dwi Anggraeni

Activated carbon was interesting material in various application due to their desirable characteristics such as large surface area, high electrical conductivity, and stability. This study aimed to describe the use of local coconut shell-based activated carbon (AC) to produce carbon paste electrodes used in the development of glucose biosensor. The performance of the carbon paste electrode was enhanced by using NiFe₂O₄ doped Ca nanoparticles (NiFe-Ca-nps) to improve the electron transfer behavior. The results showed that the best carbon paste electrode contains an activated carbon-paraffin oil ratio of 2:0.75 (w/w), with 8% (w/w) of NiFe-Ca-nps added to the activated carbon. The detection of hydrogen peroxide using an AC-NiFe₂O₄/CPE electrode showed an oxidation peak at 0.35 V and reduction peak at -0.5 V, with the optimum operational condition using 100mM phosphate buffer and optimum pH of 7.5. The glucose oxidase enzyme (GOx) was immobilized on the AC-NiFe₂O₄-Ca/CPE electrode for glucose determination, with optimum amount of 3 unit per electrode. The modified GOx-AC-NiFe₂O₄-Ca /CPE showed a linear response to detect glucose with regression equation of $y = 2,19x + 543,16$. The fabricated glucose biosensor did not reveal any significant difference in detecting glucose in blood samples when compared to the standard method used in the hospital



Alginate-Fe₃O₄ nanoparticle Composite Synthesis and Application for Glucose Biosensor

Amin Fatoni, Indah Rahma Cahyanti, Zufahair Zufahair, Hartiwi Diastuti, Mekar Dwi Anggraeni

Biosensors show promising analytical methods due to their selectivity. Glucose biosensors was one of the popular biosensors which was used enzyme as biosensing element with mostly electrochemical detection. However, continue improvements are needed to get the better biosensor performances. The study aim was to modify working electrode of electrochemical detection with the addition of Alginate-Fe₃O₄ nanoparticles. Alginate was used as an immobilization matrix for glucose oxidase enzymes, with the Fe₃O₄ nanoparticles to increase the conductivity of the electrochemical detection. Alginate - Fe₃O₄ nanoparticle modified electrodes showed higher currents peaks compare to the electrodes without the nanoparticles. The optimal condition obtained from the electrochemical detector with Alginate-Fe₃O₄ composites were added Fe₃O₄ of 10% (w/w), the scan rate 0.1 mV/s, the buffer pH of 7.0, buffer concentration of 0.1 mM, and a temperature of 40°C. The modified electrode showed linear response to detect glucose with the limit of detection of 2.81 mM and limit of quantification of 9.51 mM.



Synthesis of Chitosan-Cobalt Complex Composite as an Adsorbent of Methylene Blue Dye

Anung Riapanitra, Ahmad Shalahuddin, Kapti Riyani, Tien Setyaningtyas, Dian Windy Dwiasi

Dyes in the textile industry Wastewater is dangerous for environmental and therefore it is necessary to process the waste before disposal. The adsorption method is effective for the treatment of wastewater. Research on the adsorption of Methylene Blue dye has been carried out to assess the ability of chitosan modified with cobalt (II) to reduce the concentration of Methylene Blue dye. Modification of chitosan with cobalt (II) was performed using the coprecipitation method. Functional group identification for chitosan and chitosan-cobalt (II) was performed using FTIR. The batch method was carried out for the adsorption process, including the pH variation and contact time. The adsorption analysis of Methylene Blue uses ultraviolet-visible spectroscopy. The result of the research showed that the yield of chitosan-cobalt(II) synthesized is 77.89 % (w/w). The chitosan-cobalt (II) reduced the concentration of Methylene Blue up to 78,37%.



Phytochemical Analysis of *Strobilanthes cusia*

Ari Asnani, Dadan Hermawan, Hendri Wasito

A *Strobilanthes cusia* is a plant that has long been used in traditional medicine in China and India. The significant potential of *S. cusia* extract is as an anti-viral in various pandemic diseases, namely severe acute respiratory syndrome (SARS), herpes simplex virus type-1 (HSV-1), and Human Coronavirus NL63. Moreover, *S. cusia* extract has also been reported to have potential antibacterial, antioxidant, anti-inflammatory, and anti-tumor properties. Currently, *S. cusia* is widely planted as an intercrop on Mount Sindoro and Prau, Temanggung. However, the analysis of the content of bioactive compounds and the pharmacological potential of *S. cusia* plants in Temanggung has never been carried out. Based on this, research has been carried out on phytochemical analysis and identification of bioactive compounds using FT-IR and GC-MS spectra on the leaves of *S. cusia*, which have been domesticated in Temanggung. This study showed that the leaf extract of *S. cusia* contains bioactive compounds of the terpenoid and flavonoid groups. GC-MS and FT-IR analysis identified the bioactive compounds in the leaf extract of *S. cusia*. The results of this study help describe the metabolite profile and pharmaceutical potential of bioactive compounds from *S. cusia*.



Morphotectonic Study Based On The Mountain Sinuosity (SMF) Method in Kramat And Surrounding Area, Karangmoncol-Purbalingga District

Asmoro Widagdo

The study area is in the Karangmoncol District and its surroundings, Purbalingga Regency, Central Java Province, Indonesia. The study was conducted to determine the level of tectonic activity using morphometric analysis in the slopes and valleys. The analysis carried out is Mountain Front Sinuosity (Smf). Geological mapping was carried out to determine the types of rocks in the research area. Smf measurements were carried out on each rock group. Smf measurement is done by selecting a certain elevation contour line facing the valley. Two points on the contour line are connected by a straight line. The value of Smf is calculated by dividing the length of the selected contour line (Lmf) by the length of the straight line of two points on the contour (Ls). The rock of the Halang Formation in the northern part of the study area which is old (Late Miocene) has a high Smf value (3.89 points) which indicates it is not tectonically active. The rock of the Kumbang Formation in the middle of the study area that is old (Late Miocene) has a moderate Smf value (2.67 points) which indicates it has a weak tectonic level. The rocks of the Kumbang Formation are composed of volcanic rocks such as lava, breccia and tuff that are dipped to the south. The young Tapak Formation rock (Pliocene) in the southern part of the study area has a high Smf (3.16 points) which indicates it is not tectonically active.



Motivating Factors Analysis for Halal Certification on the Catering and Restaurant Services in Banyumas Regency

Astrid Lastania Sukmana Putri, Hety Handayani Hidayat, Siswantoro Siswantoro, Nur Wijayanti

Halal certification guarantees that a product is halal for consumption or use, especially for Muslim consumers. However, the number of halal-certified restaurants and catering services in Banyumas Regency, with its predominantly Muslim population, is still very limited. Therefore, this study analyzes the motivational factors for Halal certification in the hospitality industry. The method used is a multiple linear analysis with 9 motivational factors obtained from an in-depth literature study. The regression model formed has an R square value of 48.1%, meaning that 48.1% of the nine factors studied are able to explain the existing motivation. From the t-test, it is known that there are 7 factors that significantly affect the motivation of restaurant and catering business owners in halal certification, namely customer awareness, religion, the role of halal certificates, increased turnover, halal producer awareness, globalization and the environment. Based on these results, it is hoped that it can be used by related parties to increase motivation so that there is an acceleration of halal certification to support the food and beverage obligation program in Indonesia in 2024.



High-Performance Liquid Chromatography Method for Chiral Separation of Sulconazole using Cyclodextrin as Chiral Column

Dadan Hermawan, Annisa Mutiara Fitri, Cacu Cacu, Amin Fatoni, Ponco Iswanto, Uyi Sulaeman

Chiral separation of sulconazole by the high-performance liquid chromatography (HPLC) method using cyclodextrin as stationary phase (25 cm x 4.6 mm x 5 μ m) has been successfully achieved in this research. The optimized HPLC method was obtained using acetonitrile: water (0.2% HCOOH) (13:87, v/v) as mobile phase, 1.0 mL/min flow rate, 2 μ L injection volume, and 230 nm UV wavelength. This HPLC method has been successfully applied for the determination of sulconazole in the pharmaceutical sample with a percentage recovery of 102.47% (RSD = 0.80%)

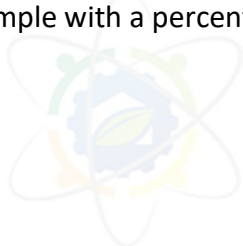




Chiral Separation of Hydroxychloroquine by High-Performance Liquid Chromatography Method using Amylose Tris (3,5-dimethyl phenyl carbamate) as Chiral Column

Dadan Hermawan, Salsabil Rahmadina, Irmanto Irmanto, Mudasir Mudasir, Hassan Y Aboul-Enein

Chiral separation of hydroxychloroquine by the high-performance liquid chromatography (HPLC) method using Lux® 5 Amylose-1 as stationary phase (250 × 4,6 mm) has been successfully achieved in this research. The optimized HPLC method was obtained using acetonitrile:water:dimethylamine (47:52:1, v/v) as mobile phase, 0.6 mL/min flow rate, 1 µL injection volume, and 343 nm UV wavelength. This HPLC method has been successfully applied for the determination of hydroxychloroquine in the pharmaceutical sample with a percentage recovery of 98.47%.





Analysis and design of tracer study information system to support IKU "Main Performance Index" 1

Dadang Iskandar

Study Tracer is one way of photographing alumni activities after graduating from the world of education into the world of work, work situations, competency levels and career journeys within alumni. A tertiary study tracer is a study conducted between 6 months to 6 years after graduating from education which is used to determine educational outcomes, educational outputs and evaluation of the learning process in higher education. Currently, the importance of study tracers for higher education institutions is increasing from time to time. Now tracers are used for various purposes including as Key Performance Indicators, Accreditation, as well as Belmawa ranking and clustering. Currently, General Sudirman University only has a study tracer system in mid-November 2021, which is located at tracer.unsoed.ac.id. The previous study tracer only used the previous need to trace alumni using only the google form. The current response rate at Jenderal Soedirman University on 28 November 2021 has only reached 30.5% of graduates, even though for the university's IKU needs, it is 80% consisting of working alumni, entrepreneurial alumni and alumni continuing their studies. The current study tracer system is still not in accordance with the needs because the system built is only limited to filling out forms and downloading in excel form, it is necessary to develop a better system to make it easier for all parties, from alumni, study tracer teams, study programs, surveyors and leaders. With these needs, it is necessary to analyze and design a system that is able to accommodate the needs of the study tracer at Jenderal Soedirman University. Study Tracer is one way of photographing alumni activities after graduating from the world of education into the world of work, work situations, competency levels and career journeys within alumni. A tertiary study tracer is a study conducted between 6 months to 6 years after graduating from education which is used to determine educational outcomes, educational outputs and evaluation of the learning process in higher education. Currently, the importance of study tracers for higher education institutions is increasing from time to time. Now tracers are used for various purposes including as Key Performance Indicators, Accreditation, as well as Belmawa ranking and clustering. Currently, General Sudirman University only has a study tracer system in mid-November 2021, which is located at tracer.unsoed.ac.id. The previous study tracer only used the previous need to trace alumni using only the google form.



Cognitive Radio for Efficient Spectrum Utilization

Eko Murdyantoro, Hesti Susilawati, Arief Wisnu Wardhana

Cognitive radio is a future technology developed with the aim of optimizing the effective use of radio spectrum resources. The spectrum sensing function is a key process of the cognitive radio system. The cognitive system will identify a spectrum of primary users (PU) or licensed users who are inactive/iddle to be utilized efficiently. The cognitive radio sensing performance is strongly influenced by the selected threshold value in spectrum sensing. Selection of this threshold value is an important step in generating PU status. Threshold values are determined by refining and optimizing several parameters. This paper presents the determination of the optimal threshold value for the SNR (signal to noise ratio) in such a way that the spectrum sensing performance obtained is optimal. Simulation implementation using Matlab program.

Keywords: Cognitive Radio, Spectrum Sensing, Energy Detection, spectrum utilization



The Impact of the Outbreak Novel Coronavirus Disease (Covid-19) Pandemic on Air Transportation

Gito Sugiyanto, Purwanto Bektı Santoso

The Impact of the Outbreak Novel Coronavirus Disease 2019 (Covid-19) Pandemic on Air Transportation. Abstract. The outbreak of the Novel Coronavirus Disease 2019 (Covid-19) pandemic has drastically disrupted the air cargo industry and air transportation. On 11 March 2020, the World Health Organization declared the Covid-19 outbreak a pandemic. The air cargo industry and air transportation sector has remained one of the hardest-hit global industries since the outbreak pandemic. Since the Covid-19 outbreak started, the number of infected cases reached 616,746,365 on 18 September 2022 and 6,529,580 people have died worldwide due to the Covid-19. Based on data from the Ministry of Health of the Republic of Indonesia as of 18 September 2022, in Indonesia the number of cases infected with Covid-19 reached 6,407,123 people; 6,221,389 people had recovered from Covid-19 and 157,884 people died. The method used in this study is literature review. Based on Airports Council International (ACI), for the full year 2021, the Covid-19 outbreak removed 4.6 billion passengers compared to 2019, representing a loss of 50.3% of global passenger traffic. Over the first two years of the pandemic, the Covid-19 outbreak reduced the number of passengers at the world's airports by 10.2 billion. The Asia Pacific region is expected to have the slowest recovery, reaching only 62% of 2019 levels in 2022. The impact of the Covid-19 pandemic on air transport in Indonesia, the number of air transport passengers in 2020 decreased 57.76% of 2019.

Keywords: air transportation, Covid-19, pandemic, civil aviation



Improved Over Current Relay (OCR) Coordination Using Time Multiple Setting (TMS)

Hari Prasetyo

Proper coordination between overcurrent relay (OCR) is needed to improve the reliability of the power distribution system. By choosing the proper time multiple setting (TMS), an optimum setting of OCR coordination can be achieved. This study improve working time coordination of OCR bay transformer using time multiple setting. Simulations were carried out to see the performance of the OCR bay transformer against a 3 phase short circuit on the 20 kV outgoing bus. The 3 phase short circuit was chosen because it produces the largest fault current among other types of short circuits. The discussion focuses on the OCR bay transformer, consist of OCR incoming 20 kV and OCR outgoing 150 kV. Existing data and calculation results were used as a parameter in the simulation. Simulation results with existing tms 0.21 and 0.23 for OCR incoming 20 kV and OCR outgoing 150 kV, respectively, have the potential to cause miscoordination of the OCR working time. Smaller short circuit current, bigger potential miscoordination. Resetting tms improves coordination of OCR bay transformer working time according to the standard used. Bigger value of tms, as long as it meets the standar, better OCR working time coordination to protect phase-phase fault current.



Performance Analysis of Work Skills Training and Stress Level in Completing Cognitive Task on Students with Special Needs Using Virtual Reality Video

Hasyim Asyari

Cognitive impairment is a condition where in everyday life a person has difficulty remembering, learning new things, concentrating, or making decisions. People with cognitive impairment can still carry out activities with the help of virtual reality device technology. The use of virtual reality can help simulate the interaction process as well as train independence. VR can help the process of assembling certain items such as lego. This study aims to analyze how SLB students complete the preparation of lego manually and using VR. Involving 5 students of special school with an age range of 16-18 years who have interests and talents. The collection of stress level data using Polar H10, NASA-TLX questionnaires, and measurement of assembly time. The results of the study include that the manual assembly time is faster, with 94.40 compared to VR of 101.80 seconds. The stress level using VR has a mean SDNN value of 70.72 ms, while the mean value of manual SDNN is only 63.16 ms. The higher SDNN value for the VR method indicates a lower stress level than the manual method. Based on the NASA-TLX questionnaire, it was found that both the VR and manual methods had a light workload category with WWL values of 32.53 and 35.67. Shows that the workload is slightly heavier using manual methods than VR. The workload of the manual method is higher than the VR method. Considering the use of the VR method in assisting the method of preparing something, it can be considered to facilitate the learning process for SLB students.



Proposed Improvement to Increase Machine Efficiency and Waste Minimization in Garment Production Using Total Productive Maintenance (Tpm) and Waste Assessment Model (WAM) In CV. Sanggria Indah, Tasikmalaya

Hasyim Asyari

CV. Sanggria Indah is a company engaged in the manufacture of clothing by producing beach clothes for adults and children. Some of the commonly encountered problems related to production are: the number of breakdown maintenance on the machine, and the lack of maintenance on the machine where the machine is often broken and hampers the production process and also causes the defect of final product due to failed in passing quality control. Based on these problems, a study was conducted using the Total Productive Maintenance (TPM) and Waste Assessment Model (WAM) methods to propose improvements to increase machine effectiveness and reduce waste. Data was obtained through direct observation, and interviews with employees, managers and CEOs. The results showed that due to the frequently repaired engine (Six Big Losses) there was a significant decrease in engine speed (0.92) . In addition, regarding Overall equipment effectiveness (OEE), the lowest value was obtained in the performance value (0.85). The implemented Waste Assessment Model (WAM) indicates that the most waste are defect (0.24) and transport (0.21). Analyzing the cause of the low OEE value and the high value of Six Big Losses, because the machine often suffers damage due to the continuous machine operation and lack of maintenance. The proposed improvement recommendation is to provide machines and operators with an ideal rest schedule and also adopt the concept of autonomous maintenance.



Potential of Spirulina (*A. Platensis*) as Organism Model for Biomarker Finding of Alkalinity Stress in Plants

Hendri Wasito, Haris Raditya Subandrio, Salsabil Rahmadina, Dea Mudrikah, Zeha Kirana

Alkalinity stress influences some plants to express growth disorders such as a decrease in the amount of chlorophyll and the occurrence of interveinal chlorosis or yellowish symptoms on young leaves which will inhibit plant growth. However, Spirulina (*A. Platensis*), microalgae which are able to live at alkaline pH, can be potentially used as an indicator of environmental stress in terms of organism model to study biomarker agent for environmental stress. This study aims to compare the metabolite profile of Spirulina which is affected by various alkalinity conditions in microorganisms based on an un-targeted metabolomics approach using liquid chromatography mass spectrometry (LCMS). This study used Spirulina which was cultured for 14 days at different alkalinity conditions of pH 5 and pH 8. After cultured, the density of Spirulina cells was counted using a sedgewick rafter. Subsequently extracted with ethanol, then the obtained filtrate was injected into LCMS. The LCMS raw data were then processed using several softwares for un-targeted analysis, such as MS-DIAL, SIMCA-P and R statistic data processing. Each data group was discriminated using Principal Component Analysis (PCA) as multivariate data analysis. Metabolites that have the potential as biomarkers were further predicted using Partial Least Squares-Discriminant Analysis (PLS-DA) and Hierarchical Clustering Analysis (HCA). The results of the research are metabolite profiles of both alkalinity conditions successfully discriminated and several metabolites found to be predicted as potential biomarker, of alkalinity stress response for organism.

Keywords: alkaline stress, biomarkers, metabolomics, spirulina



Multivariate soft sensor for product monitoring in the debutanizer column with deep learning

Imron Rosyadi

Soft sensors have been extensively proposed to predict ill-to-measure variables in the industrial processes. In this paper, we develop multivariate soft sensor for the debutanizer column. The soft sensor is proposed to replace chromatograph-based butane content out of the debutanizer column. Recently, deep learning method has been implemented as a better feature representation of complex system. We developed an LSTM-based multivariate soft sensor and compare the output with univariate LSTM and statistical ARIMA soft sensor. Our results show that the univariate LSTM soft sensor perform better than the other methods.





Development and Texting of Convolutional Neural Network for Detecting of Ship based on Land look Satellite Image Data

Jamrud Aminuddin, R. Farzand Abdullatif, Mashuri, Eca Indah Anggraini, Syahrul Fadholi Gumelar, Ariantika Rahmawati

The phenomenon of particular concern to the ship detection process using a remote sensing system is the form of images with various positions due to the ship's rectangular and narrow dimensions and the high viewing angle from space. This condition is different if the shooting process is carried out close to objects on the earth's surface. Considering the situation of recording data from a very far position, refining the convolutional neural network (CNN) method for processing remote sensing image data continues to be developed, primarily related to detecting ships. The latest development of the CNN algorithm shows its ability to see vessels by taking into account the orientation factor of objects at sea level with almost perfect accuracy. However, the system has not been able to detect in detail the movements and types of ships recorded by remote sensing satellite sensors. Therefore, an automatic ship detection instrument is needed based on Land look USGS base map high-resolution image data. The sample of image data were acquired from the waters of the Natuna islands-Indonesian area and taken at a scale of 1: 2000. The data obtained from the acquisition are five high-resolution image data 1680×840 pixels, in which there are 32 ship image data and 3100 non-ship image data 80×80 pixels. The ship image data is then processed by color and geometry augmentation to produce 1440 new data. The image processing stage afterward is reading and splitting the dataset, creating a Convolutional Neural Network (CNN), and training and testing the CNN model. Based on the results of the ship and non-ship objects detection with the CNN model, the accuracy results are 96.91% and 96.69%, with a training time of 11.62 seconds

Keywords: CNN, Natuna, satellite, sensing, ship, USGS



Application of Failure Mode and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) In Determining Prevention Efforts Failure of The Fire Extinguishing Process

Jessy Melinda, Siti Rahmah Nurshiami, Triyani Triyani

Banyumas is one of the regencies that still experiences frequent fires. The fire caused physical or material losses. To minimize fire losses, many efforts can be made to prevent the occurrence of these potential causes which are the cause of the failure of the firefighting process. This study aims to implement the Failure Mode and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) methods in determining efforts to prevent fire suppression failures. The result of the FMEA is Risk Priority Number (RPN) values to assess critical potential causes that need to be analyzed using FTA. There are 10 critical potential causes, namely burned assets, complex assets to save, victims panicking, witnesses/owners were not present, officers slipping, water sources being far from the location, victims being rescued too late, victims being trapped, officers being hit by debris, and officers inhaled excess smoke (congested). The result of the FTA is in the form of a minimum path set that can be used as a reference in determining efforts to prevent failure in the firefighting process in the Banyumas Regency. These efforts include bringing back up trucks, expanding the scope of socialization, having a person in charge of places that are not inhabited, officers using Self-Contained Breathing Apparatus (SCBA), officers immediately reaching hotspots, and inspecting fire protection at agencies.



Application of N-methyl Chitosan as an Antifungal of *C. Albicans* on Nylon Fabrics

Mardiyah Kurniasih

A polycationic biopolymer called chitosan has antifungal properties against *Candida albicans*. Nevertheless, it lacks solubility, so chitosan derivatization was applied. N-methyl chitosan, a chitosan derivative, has a higher solubility than chitosan. N-methyl chitosan was obtained by amine reduction. This study aimed to synthesize and determine the optimum conditions for coating N-methyl chitosan on nylon fabrics and test the antifungal activity of *C. albicans* on nylon fabrics coated with N-methyl chitosan. The synthesized chitosan and N-methyl chitosan were characterized using FTIR. The coating method used is pad-dry-cure. A laundering test was performed on the coating to determine its stability. Based on the study's results, N-methyl chitosan was obtained as much as 82.87% of the weight of chitosan. The IR spectra of N-methyl chitosan showed absorption of the –OH, NH and CH₃ groups. The results of coating optimization obtained the largest inhibition zone when coating using 1% N-methyl chitosan concentration, immersion time of 60 seconds, and frequency of 10 times. Three laundering of nylon fabrics coated with N-methyl chitosan did not eliminate the antifungal activity of *C. albicans*.



Solution of Polynomial Non-Linear Diophantine Equation $ax^2 - kxy + y^2 + lx = 0$

Marifatul Nur Yuniati, Agus Sugandha, Agung Prabowo, Siti Rahmah Nurshiami

Number theory is a part of mathematics that concerns the study of integers and their properties. In number theory, it is known as the Diophantine equation, which is a polynomial equation with the solution in the form of a non-negative integer. The non-linear Diophantine equation has several equations, including the non-linear exponential Diophantine equation and non-linear polynomial Diophantine equation. Polynomial Diophantine equations can be solved by various methods of solving such as using division, congruence theory, continuous fractions, Pell's equations, and others. The purpose of this study is to determine the possible positive integer solutions (x, y) in the polynomial non-linear Diophantine equation $ax^2 - kxy + y^2 + lx = 0$ for $2 \leq x \leq 15$ with a element Z . The results in this study using continued fractions and theorem on Pell's equations we obtained that the form of integers k and l , for a positive even integer obtained $l = a(n+1) - 1$ and $k = a(n+2)$, for a positive odd integer and $a \geq 3$ obtained $l = a(2n+1) - 1$ and $k = 2a(n+1)$ with n element N . In this study also presented the possible positive integer solutions polynomial non-linear Diophantine equation $ax^2 - kxy + y^2 + lx = 0$ for $2 \leq x \leq 15$ with a element Z .



Eddy Currents Distribution for Predicting Upwelling in the Southern Waters of Java

Mukti Trenggono, Rizqi Rizaldi Hidayat, Isnaini Prihatiningsih, Hendrayana

On an oceanic scale, such as the Southern Waters of Java of the Indian Ocean, the divergence process is one of the causes of upwelling. This study aimed to know the mechanism of the formation of eddy currents by a divergence; to know the variability of sea surface temperature, salinity, and chlorophyll-a in the eddy area; and to know the relationship between upwelling and eddy currents in the Southern Waters of Java. Data used include surface current, SST, salinity, chlorophyll-a, and SLA. Data processed by visualizing surface current data on SLA, SST, salinity, and chlorophyll-a. The results of this study showed that the number of cyclonic eddies formed in the Southern Waters of Java in 2008-2018 was 118. Sea level anomaly produced in the cyclonic eddy area tends to be lower than the surrounding area, ranging from -0.143 to 0.205 m. During the formation of eddy, the divergence process that lifts water mass from the bottom to the surface has caused changes in sea level. Sea surface temperature in the area of eddy formation has an average value of 24.691-30.313 °C, while salinity are 33.204-34.7 PSU and chlorophyll-a are 0.025-1.137 mg.m⁻³. The correlation test between eddy diameter and SLA, salinity, and chlorophyll-a showed a correlation value of -0.059, -0.019, and -0.107, respectively, while the correlation between eddy diameter and SST showed a correlation value of 0.091. These results revealed that in the cyclonic eddy area, the sea level anomaly value is lower than the surrounding area, there is a decrease in salinity and chlorophyll-a and an increase in sea surface temperature. The difference in the direction of this correlation indicates that the formation of cyclonic eddies does not directly affect changes in sea surface temperature, salinity, and chlorophyll-a values.



POTENTIAL OF FUNGI ISOLATE FROM DISPOSAL WASTE PROCESSING OF MOCAF MAKING

Ratna Stia Dewi, Santi Dwi Astuti, Sakidin

Businesses in the mocaf flour industry produce waste water which can potentially be a source of pollution if not managed properly. Mocaf flour wastewater contains organic compounds such as protein, starch and fat as well as cyanide content. Wastewater treatment has a weakness, namely the absence of specific microorganisms that can work optimally. This study aims to isolate and identify fungi that can grow in mocaf wastewater. This research started from the isolation of fungi from sediment and water in the mocaf wastewater disposal that grew on Potato Dextrose agar (PDA) media, as well as macroscopic and microscopic identification of fungi, qualitative testing on wastewater washing mocaf flour basic ingredients. From the isolation results obtained 16 isolates. The results of colonization and cell characterization were identified as the genus *Aspergillus*, *Trichoderma*, *Curvularia* and Phylum Basidiomycota. These fungi can be used as cyanide degrading agents in the wastewater of mocaf manufacture.



The Use of the Watershed Method in the Identification of Microscopic Image Characteristics of Leukocyte Cells

Retno Supriyanti

This paper will discuss the implementation of the use of watershed segmentation methods in the identification of morphological structures of leukocyte cells. This research is one of the preliminary research activities in the development of automatic detection software characteristic of leukocyte cells to support the diagnosis of leukemic. Watershed segmentation is capable of automatically segmenting the edges of objects so that they can recognize the shape or contour of leukocyte cells. After segmentation, further processing is to calculate the number, diameter, and circumference of the contours of the leukocyte cells. The system output results in the form of leukocyte cell contours along with parameters such as area, number, diameter, and circumference. The experiment was carried out on 36 leukocyte cell image data which had various characteristics. The results showed that the system had a success rate of 91.75%.



Temporal Spatial Abundance of Iron, Zink, and Copper Micronutrients in Different Flows at the Mengantibeach

Roy Andreas, Mukti Trenggono, Anganti Suratri

Research on the temporal spatial abundance of Fe, Zn and Cu micronutrients at different flows on the Menganti coast. This study aimed to determine the abundance of Fe, Zn and Cu micronutrients spatially, namely differences in location (sea water and submarine groundwater (SGD)) and temporal, namely the influence of rain intensity. The analytical method used a Uv-visible spectrometer for Fe abundance analysis and an atomic absorption spectrometer for Zn and Cu abundance analysis and data processed using SPSS. Processing of spatial data used Kruskal Wallis and processing of temporal data using paired t-test. The results showed that spatially the highest abundance were in September on ST 3 and TA 1, which were 0,098 ppm and 0,450 ppm for Fe and 0,275 ppm and 0,692 ppm for Zn, respectively. The highest spatial Cu were in September on ST 9 and TA 1 which were 0,657 ppm and 0,400 ppm, respectively. Spatial and temporal micronutrients showed no significant differences. The abundance of micronutrients varies because it was influenced by several factors such as SGD, pH, salinity and DO

ON MULTIDISCIPLINARY APPROACHES
FOR SUSTAINABLE RURAL DEVELOPMENT



The Implementation of Eccentric Digraph to Determine the Center of the Earth Region and Division of the Time Zone of the World

Triyani Triyani, Marwah Daud Wijayanti, Siti Rahmah Nurshiami

The eccentric digraph on graph G annotated with $ED(G)$ is a directional graph that has a set of points equal to G and a set of sides connecting the points u and v if v is the farthest point from u . One of the implementations of eccentric digraphs is to determine the center of a graph. This study aims to examine the Ka'bah in Mecca as the coordinate center of the earth's territory for the division of time zones in the world. The research procedure carried out is to represent the surface area of the earth into the form of a graph, construct the eccentric digraph of each subgraph using MATLAB R208a software by first determining the eccentric points and the eccentricity and of its points, determining the central point of the graph H as a representation of the intercontinental connection in the surface area of the earth and the Ka'bah, and determining the division of time zones in the world with the Ka'bah as the coordinate center of the earth's territory. The results of this study show that the point representing the Ka'bah is the central point of the graph H . In its eccentric digraph, the point has more exit degrees than the degree of entry and has the eccentricity of the smallest point, which is 13,497.61 km. This concludes that the Ka'bah is the coordinate center of the earth's territory. The result of the division of time zones in the world with the Ka'bah as the coordinate center or Ka'bah Mean Time (KMT), there are 24 time zones that divide 195 national capitals in the world.



Design of Ag₃PO₄/AgCl/g-C₃N₄/PtCl₆²⁻ Quaternary Photocatalyst for Enhanced Photocatalytic and Antibacterial Activity

Uyi Sulaeman, Yusuf Mathiinul Hakim, Dian Riana Ningsih

The Ag₃PO₄-based photocatalyst is an excellent photocatalyst that is active under visible light irradiation. The modification is needed to improve the photocatalytic ability as well as antimicrobial activity. This research aims to incorporate the PtCl₆²⁻ (anionic platinum hexachloride) and g-C₃N₄ (graphitic carbon nitride) on Ag₃PO₄/AgCl for degradation of Rhodamine B and antibacterial against *Staphylococcus aureus*. The quaternary photocatalyst of Ag₃PO₄/AgCl/g-C₃N₄/PtCl₆²⁻ was successfully synthesized by the co-precipitation method using the starting material of AgNO₃, KH₂PO₄, CaCl₂, melamine, and H₂PtCl₆·6H₂O. The product was characterized using XRD and SEM-EDS. The results showed that the structure of Ag₃PO₄ and AgCl was observed in XRD profile. Adding PtCl₆²⁻ complex ions on the surface of composite increased d-space of Ag₃PO₄. The element of C and N was also observed under EDS analysis. The formation of this quaternary composite significantly increased the photocatalytic activity of Rhodamine B degradation and antibacterial activity against *Staphylococcus aureus*. The higher activity of this composite might be caused by the effect g-C₃N₄ and of PtCl₆²⁻ treatment



Phonon Effect on the Vacancy Concentration in Diamond and α -Tin: A DFT-based Quantum calculations

Zohan Syah Fatomi, Sholihun, Wahyu Tri Cahyanto, Mukhtar Effendi

The formation energy and vacancy concentration investigation in diamond and α -tin is conducted based on the first principles calculation of density functional theory. The large supercell of up to 512 atoms is used to model the vacancy. The vibrational effect is studied by calculating the phonon density of states (Ph-DOS) using the Gaussian approach. We found that the formation energies for diamond and α -tin are 6.76 eV and 1.89 eV, respectively. We also found that the phonon-vibrational effect significantly increases vacancy concentration for diamond and α -tin. The increases are expected due to the softening of the vacancy system.





Time Tuning of High-Energy Ball Milling in the Production of Reduced Graphene Oxide from Activated Rice Husk Charcoal

Wahyu Widanarto

Due to its exceptionally high electron mobility and unique electrical, thermal, optical, and mechanical properties, graphene has emerged as one of the most technologically promising substances. However, the low-cost commercial manufacture of graphene of good quality remains a challenge. As a result, we utilized a high-energy ball milling technique to produce reduced graphene oxide (rGO) from activated rice husk charcoal as an enhanced carbon source. The as-manufactured rGO samples were evaluated to identify the influence of different milling periods (0, 50, 100, 150, and 200 minutes) on their structure, surface morphology, and carbon content. It was discovered that varying the ball milling time introduced structural flaws and eliminated oxygen functional groups, hence enhancing the overall properties of the produced rGO. In addition, the milling times adjustment was demonstrated to be successful in raising the element carbon and decreasing the oxygen content of rGO, where particle collisions mediated by thermal agitation played a significant impact. It was asserted that a high-energy ball milling technique with controlled milling times can be useful for the low-cost mass production of high-quality rGO from activated rice husk charcoal, leading to the development of a sustainable and environmentally friendly material required for a variety of applications.



Green Synthesis of BiVO₄ Nanorods by *Nigella Sativa* Extract and Evaluation of Their Antibacterial Activity Against *Pseudomonas Aeruginosa*

Zaskia Alifia, Nurianah Tri Puji Astuti, Misbachul Syurur Ramadhan, Rizqi Afifah, Anung Riapanitra

Pseudomonas aeruginosa is one of the bacteria most frequently detected in COVID-19 patients. Treatment of *Pseudomonas aeruginosa* infection should not rely only on the use of antibiotics because of the bacterial resistance of antibiotics over time. The suggested role of nanoparticles as next-generation antibiotics and inadequate information on the antibacterial activity of bismuth vanadate nanoparticles led us to investigate the green synthesis of bismuth vanadate (BiVO₄) nanorod using seed extracts of *Nigella Sativa* and its antibacterial activity against *P. aeruginosa*. BiVO₄ is a metal-semiconductor that is the potential as an antibacterial via the photodegradation method. This study reports the results of coprecipitation synthesis and the effect of *Nigella sativa* concentration as a bio-reducing agent. The composites were characterized using X-ray diffraction and Scanning Electron Microscope. Monoclinic phase was observed in all BiVO₄ samples. The morphology of the samples was rod-type which was more effective in absorbing visible light and possessed a higher surface area than the pristine BiVO₄ with sphere-grape morphology. The inhibition zone test of the nanorod BiVO₄ with *Nigella sativa* extract against *P. aeruginosa* was 5.95 mm, higher than the inhibition zone of pristine nanorod BiVO₄ of 3.1 mm.



Planning and Prediction Coverage Area Using Urban Macro LOS for New Industrial Area

Zein Hanni Pradana, Solichah Larasati, Khoirun Ni'amah

Coverage planning is affected by power receive, path loss, transmit power, device sensitivity, radius calculation cell, and radio link budget. This research design of coverage planning used frequency 2.3 GHz in Mijen District, Semarang City. We used 4 scenarios, i.e. outdoor-to-outdoor (O2O) uplink, outdoor-to-outdoor (O2O) downlink, outdoor-to-indoor (O2I) uplink, and outdoor-to-indoor (O2I) downlink for line-of-sight conditions. This paper considers using urban macro (uMa) propagation model based on standard 3GPP TR 38.901. We found that the simulation results of all scenarios observed SS-RSRP parameters. Scenario 3 has the highest average SS-RSRP which is -70.06 dBm, while for the SS-SINR parameter has the highest average is scenario 1, 7.11 dB.





The Adoption of Digital Marketing MSMEs in Banyumas Regency, Indonesia

Aldila Krisnaresanti, Lina Rifda Naufalin, Adi Indrayanto

This study focuses on the problems faced by MSMEs in adopting digital marketing. This research is survey research with respondents from micro and small entrepreneurs in Banyumas Regency. Data was collected using questionnaires, in-depth interviews, observations and Focus Group Discussions (FGD). Based on the results of the analysis, it can be identified three main problems faced by MSMEs in Banyumas Regency, namely digital literacy is still low, there are no human resources in businesses that specifically deal with digital marketing, there is still a reluctance to allocate funds specifically for internet needs.





Lemon Citrus Farming Income (Case study: PT. Cilengko Lentera Al-Barokah)

Altri Mulyani, Ulfah Nurdiani, Syahrul Ganda Sukmaya

California lemon farming in Banyumas Regency has been going on since 2013. The lemon planting area in Banyumas Regency is currently 12 ha with a total of 6,550 plants. California lemon farming in Banyumas Regency is an individual-owned business. However, California lemon farmers in Banyumas Regency have collaborated with PT. Cilengko Lentera Al Barokah for the procurement of plant seeds and the sale of crops. However, there are still problems experienced by lemon farmers with partners, including the weak bargaining power of farmers with partners and the lack of transparency in the grading process carried out. These conditions affect the income and sustainability of farmers' lemon agribusiness. This study aims to determine how much the cost of production, how much the cost of acceptance and income of Citrus Lemon farming at PT. Cilengko Al-Barokah. This study uses descriptive analysis method to determine the production costs, revenue costs, and income of Lemon Orange farming. The results showed that the average production of lemons was 14,400 kg/year, with an average price of Rp. 5,000/kg, and with an average production cost of Rp. 30,400,000/Year then get an income of Rp.72,000,000/Year and it can be calculated that the income from the lemon farming is Rp.41,600,000 in a year.



Contribution of Tobacco Farming Income to Household Welfare in Kertek District, Wonosobo Regency

Bintan Nabila

The size of the tobacco commodity and its contribution to state revenues do not always provide high income for farmers. The purpose of this study was to analyze the income of tobacco farming, and its contribution to household income, as well as to measure the level of household welfare. The number of respondents was 96 with proportionate random sampling technique. This study uses quantitative methods with descriptive analysis techniques, one sample t-test and farmer welfare analysis. The results of the one sample t-test state that the average income from tobacco farming is Rp. 1,581,267.00 per month, including low income because this value is smaller than KHL Wonosobo Regency, which is Rp. 1,853,000.00. Tobacco farming contributes to the total household income of farmers by 57.87%. The level of welfare of tobacco farmers is declared not yet prosperous because the average per capita income per month is Rp. 851,927.00 this value is below the value of KHL Wonosobo Regency, which is Rp. 1,853,000.00. The implication of this research is that farmers need to reduce the largest cost, namely labor so that they can reduce total costs and increase revenues. Local governments can provide direction and assistance to tobacco farmers so that they can allocate their land area for crops that are higher in demand, and plants that are not related to health cases, such as tobacco, so that they are safer to operate.



The Implementation of Village's Fund on Goods and Services Procurement

Christina Tri Setyorini

Procurement of goods and services is an activity associated to meeting an agency or institution's needs and providing resources, whether in the form of commodities or services. The village is a government institution that procures goods and services in accordance with Head of LKPP Regulation No. 13 of 2013, as amended by Head of LKPP Regulation No. 22 of 2015 regarding procurement of goods and services in the village, and regent regulations as the implementation rules per regency where the village is located. The goal of this study was to identify the obstacles associated with implementing the procurement of goods and services in the village and the efforts made to overcome these obstacles. This study employed a qualitative approach and the case study method in six villages within the Banyumas Regency subdistrict of Sumbang. In this study, the triangulation method was implemented through semi-structured interviews, observation, and document examination. The results of the study indicate that executing goods and services procurement presents obstacles at all phases, including planning, handover, implementation, oversight, reporting, and accountability. The greatest issue is to the quality of the village infrastructure and the absence of oversight and socialization of procurement standards for goods and services. The stages of planning are crucial since this is when the priorities for spending local funds are selected. Planning errors have an effect on every subsequent procedure. This research has investigated the challenges of implementing procurement of goods and services in the village and can thus provide direction for strategies to improve the implementation of procurement of goods and services in the village. In addition, the government might use this study's findings to formulate village-related policies and continue to improve.



The Effects of Local Governmental Incomes, General Allocation Funding and Special Allocation Funding on Open Unemployment in West Java Province: A Panel Data Analysis from 2013 to 2020

Harun Nur Jamiel

The study aims to investigate the contributions and effects of local governmental income, general allocation funding, and special allocation funding on income gaps and open unemployment. Drawing on the West Java provincial panel data, the study sought to examine the relationships of the existing variables by means of panel data regression analysis. Results indicated that local governmental incomes gave significantly negative influence to the income gaps, that general allocation funding gave (not significantly) positive influence to the income gaps, that local governmental incomes significantly gave negative influence to open unemployment, that general allocation funding significantly gave negative influence to open unemployment, and that special allocation funding significantly gave negative influence to open unemployment.



Factors Affecting Corporate Financial Performance Using human resource accounting disclosures as an intervening variable in banking on the Indonesian stock exchange

Hatta Setiabudhi

This study aims to analyze the factors that affect the company's financial performance with the disclosure of human resource accounting as an intervening variable in banking companies listed on the Indonesia Stock Exchange. The population in this study are all banking companies listed on the Indonesia Stock Exchange. The sample used is 35 companies. The sampling technique used purposive sampling method. The testing technique uses Partial Least Squares - Structural Equation Model (PLSSEM) using SmartPLS v.3.2.9. The results of the study indicate that the size of the company has no effect on Human Resources Accounting Disclosures. Firm age has a positive and significant effect on human resource accounting disclosures, Human Resource Accounting Disclosures do not mediate between the variables of firm size, firm age on financial performance.

Keywords: Company Size, Company Age, Financial Performance, Disclosure of Human Resource Accounting



The Power of Transformative Relational Marketing of Batik MSMEs in Banyumas and Purbalingga Regencies

Intan Shaferi

The power of transformative relational marketing for MSMEs is a reflect of how the performance of an entity. MSMEs are conducting the obligation to have good capacity in their performance. MSMEs batik is on of the growth sector. The current relational management aspect for MSMEs batik give alternate of combination aspects from entrepreneurial orientation, network capability, and response speed of the Batik MSMEs relational marketing. This study aims to examine the effect of entrepreneurial orientation, network capability, and response towards the transformative relational marketing. This research was taken place of Batik SMEs in Banyumas and Purbalingga Regencies, used the dependent variable of power of transformative relational marketing and the independent variables of partner network capability, entrepreneurial orientation, and customer response speed. This study used 120 MSME respondents in Banyumas and Purbalingga Regencies during January until June 2022. Analysis SEM PLS was used in this study. The results of the entrepreneurial orientation, partner network capability, and the response speed effect transformative relational marketing.



Transformation of Traditional Market Management and Its Contribution to Promote Informal Sector

Istiqomah, Lilis Siti Badriah, Wiwiek Rabiatal Adawiyah

Traditional markets have a very strategic role, especially for the lower middle class who generally make a living in the informal sector. One of the efforts that can be made to improve the performance of traditional markets is through market revitalization, by handing over market management from the government to more professional parties, such as Regional Owned Enterprises (BUMD). The management of two markets in Banyumas Regency, namely Karanglewas and Cilongok, since 2018 has been handed over to Perumda Pasar Satria. Since being managed by Perumda Pasar Satria, the performance of both markets has increased significantly. This study aims to describe the changes in market management under the management of Perumda Pasar Satria compared to the previous market management. The research method used is a case study. Initial data collection was carried out based on reports from secondary sources. Then the author conducted in-depth interviews with the Director of Perumda Pasar Satria and staff. More detailed information was extracted through in-depth interviews with the Market Head and staff, and then confirmed with the traders. The report is described descriptively. The results show that changes in market management include aspects of updating traders' data to regulate fees, increasing security aspects, responding speed to complaints from traders on market facilities, controlling electricity, increasing access to capital, organic waste management, and podcasts.



Analysis of the Merdeka Belajar-Kampus Merdeka (MBKM) Student Exchange in The Economic Education Department

Jaryono, Tohir Tohir, Rasyid Mei Mustafa

This study aims to analyze the effectiveness the implementation of Merdeka Belajar – Kampus Merdeka (MBKM) Student Exchange program in the Economic Education Department in terms of (1) Program planning that is prepared (2) Preparation of program implementation (3) Implementation of program implementation (4) Constraints faced in implementation program. Where the object of this research is the Economic Education Department, Faculty of Economics and Business, Jenderal Sudirman University. The use of qualitative descriptive methods in this study aims to explore in depth how the implementation of the Student Exchange program in the Economic Education department at Jenderal Sudirman University is obtained, so that a clear picture is obtained in order to contribute input in efforts to improve future programs. The subjects in this study were managers, lecturers, and students of Economics Education. Data was collected using in-depth interview, observation and documentation techniques. The results of data collection were then analyzed using interactive model analysis techniques consisting of data collection, data reduction, data presentation, data quality testing, and drawing conclusions. The results of the study show that the department has a careful planning by compiling curriculum documents, developing SOPs for program implementation and guidebooks. The program implementation runs smoothly supported by good program planning. The obstacle faced is the low motivation of students in participating in the program.



Community-Based Used Cooking Oil Management Strategy using the AHP approach

Mahila Asana, Reza Nur 'Aidah, Akmal Ryan Muttaqin, Sandra Novitasari Divandra Putri Luvithania and Indah Setiawati*

This study aim to determine priorities in the management of Used Cooking Oils (UCO) in the waste bank community. Analytical Hierarchy Process (AHP) used to prioritise UCO management strategy. A total of 5 people were taken as a sample of respondents using purposive sampling consisting of the Regent of Banyumas, head of the environmental department, head of the settlements department, waste department of the environmental service, and director of PT Banyumas Investama Jaya. The results show that in managing the UCO in the waste bank community, the main factor that must be considered is the community participation with the most important aspects. While overall shows that the priority scale of criteria and alternative management of UCO in the waste bank community with AHP in order of priority is recycling center. Thus, the recycling center development strategy becomes a top priority in the management of UCO in the waste bank community.



Analysis for Digital Marketing Organic Coconut Sugar at KUB Central Agro Lestari, Purbalingga, Central Java, Indonesia

Nur Chasanah, Ade Irma Anggraeni, Wita Ramadhanti

Coconut as one of the plantation crop commodities in Indonesia has given rise to various industries including the organic coconut sugar industry. Organic coconut sugar is the one of industry that has a very large export market potential. One of the Joint Business Groups in Purbalingga Regency is the Central Agro Lestari Joint Business Group (KUB). KUB Central Agro Lestari is engaged in the processing of organic coconut sugar with products in the form of organic coconut sugar block, organic coconut sugar powder, and organic coconut nectar. This research is a study that will analyze how the sale of very specific products such as organic coconut sugar with a target market in Indonesia is offered through the website. This research approach is quantitative where the data generated will be in the form of numbers where the research instrument used is a questionnaire. The result of this research analyzed whether the target market that has been previously set is achieved by using the KUB Central Agro Lestari website. This is done so that KUB Central Agro Lestari is able to trade directly to consumers and has database as a whole spread throughout Indonesia and the world.



Quality Improvement of SME's Handicraft Products in Banyumas Regency

Pramono Hari Adi, Rio Dhani Laksana

SMEs often face the problem of the policy determining the Quality of Competitive Strategy to develop business performance. To answer the problems above, it is necessary to analyze how to develop the performance of handicraft SMEs within the framework of the influence of the Quality of the Competitive Strategy of SMEs. Thus, a research model was developed using four research variables: strategic asset quality, adaptability, the entrepreneurial orientation of SME owners, and competitive strategy quality. Data regarding the variables studied used a structured questionnaire so that the structured statements in the questionnaire were able to answer the research variables, which 110 handicraft owners then answered in Banyumas Regency. The collected data were then analyzed using the Structural Equation Modeling (SEM) technique. The model testing results indicate that the model developed in this study is proven to be a fit. The analysis results of the influence of strategic asset quality, environmental adaptation, and entrepreneurial orientation have a positive and significant effect on the quality of the competitive strategy. Based on the results of the hypothesis, Improving the quality of the competitive strategy of the Handicraft Product Small Business Group in Banyumas Regency can be achieved by increasing the ability of asset quality indicators and the company's environmental adaptability.



Economic Recovery after the Covid 19 Pandemic of Utilization of Village-Owned Enterprises in Indonesia

Rio Dhani Laksana

The rural economy has a major contribution to the national economy. The role of BUMDes can be used by the government to optimize and maintain sustainability and strengthen micro and small businesses. Studies on the performance of BUMDes in Banyumas Regency and the weaknesses that arise in the management of BUMDes have never been carried out, especially after the post-covid pandemic. Therefore, it is very important to do this research on the policy on the utilization of village-owned enterprises in Banyumas Regency in Economic Recovery after the Covid-19 Pandemic. This study aims to examine the utilization of village-owned enterprises (BUMDES) in Banyumas Regency in economic recovery after the COVID-19 pandemic. The type of research that will be conducted is empirical descriptive research with a qualitative approach. Techniques for gathering data Observational, interview, and documenting techniques. Data reduction, data visualization, and conclusion drawing/verification are the analysis techniques used. 20 Bumdes managers from the Banyumas Regency are used in this study. Both primary and secondary data were used in this investigation. Purposive sampling is used in this research methodology. Techniques for gathering data Observational, interview, and documenting techniques. The results of this study concluded that: 1) Village income during the COVID-19 pandemic decreased due to limited community activities outside the home and reduced public spending. The decline in income from large events such as weddings and celebrations caused the rent for tents and other Bumdes income to decline. 2) The village party is now using a marketing strategy where activities outside the home such as the opening of the market and the community can return to their activities outside the home on the condition that they comply with the protocols set by the government such as keeping a distance and wearing masks. 3) The results of declining income during the covid pandemic Village-Owned Enterprises affect the level of community welfare with the income they get. 4) BUMDes besides being able to improve public services and optimize village assets, also play a role in supporting, facilitating, and coordinating the productive economic efforts of rural communities. BUMDes can be the parent of ecotourism activities or village ecotourism. BUMDes also plays an important role in providing convenience services in saving and borrowing small-scale business capital for productive businesses of rural communities in collaboration with external parties (both banks and private companies



Analysis of Business Management Problems in MSMEs in Banyumas Regency

Tohir Tohir, Adi Indrayanto, Dadang Iskandar

The problem of business management in MSMEs is an important problem that must be solved, but the training model for MSMEs regarding management that has been carried out so far has not been considered effective in improving the quality of MSME management. This study aims to analyze the characteristics of MSMEs in Banyumas and analyze what MSME management problems are faced by MSMEs in Banyumas. Based on the results of the research carried out, the characteristics of MSMEs were analyzed based on aspects of human resources, financial management conditions, production aspects, and marketing aspects.





The Effectiveness of Implementing an Alternative Model of Legislative Analysis to Test the Effectiveness of the Implementation of Regional Regulations of Banyumas Regency 2019 - 2021

Abdul Aziz Nasihuddin, Sri Wahyu Handayani, Kadar Pamuji, Supriyanto Supriyanto, Suyadi Suyadi, Hendi Budiaman, Ichsan Sjuhudi

This study has four specific objectives, namely the 1st year: (1) analyzing the model of legislation (RIA, RegMap, ROCCPI and MAPP). (2) formulate alternative evaluation models for Regency/City Regulations, and in the second year: (3) analyze Banyumas Regency Regulations for 2019-2021 using the evaluation model found in the first year; and (4) evaluate the effectiveness of the implementation of the evaluation model of the Banyumas Regency Regulations 2019-2021. The long-term goal of this research is to find an alternative model as a standard for testing the implementation of Regency/City Regional Regulations. This research uses the research and development method or Research and Development (R&D), which is a series of processes or steps to develop a newly legal product or improve an existing product so that it can be accounted for. This research uses the steps taken by Borg and Gall. The collected qualitative data were analyzed using the Miles and Huberman method which was carried out interactively and carried out continuously until it was complete, so the data is saturated. Activities in data analysis are data reduction, presentation of data, and conclusions.



Legal Protection For Notaries As The Reporting Party In The Prevention And Eradication Of The Crime Of Money Laundering

Ade Sarastya Dini

Notaries are public officials authorized to make authentic deeds. Notaries have an obligation to keep the contents of the deed secret. In Government Regulation No. 43 of 2015 concerning Reporting Parties in the Prevention and Eradication of the Crime of Money Laundering, Notaries are mandated as Reporting Parties who are required to report suspicious money transactions. The purpose of this study is to analyze the role of a notary in uncovering transactions with indications of money laundering and to analyze the legal protection obtained by a notary as the reporting party. The research method used is normative juridical. The data used is secondary data. The results of the study found that the role of the Notary in uncovering the crime of money laundering is as a Whistleblower who acts as a reporting witness, namely the whistleblower who reports and directly knows, sees and experiences for himself that there has been, is or will be a criminal act. The legal protections obtained by the Notary as the reporting party are procedural protection, namely the establishment of the Notary Honorary Council, formal protection, namely protection from legal guarantees, and special protection, namely protection provided by the Indonesian National Police. Suggestions, Notaries should apply the principle of caution in making deeds in order to help prevent money laundering.



Community-Based Tourism Village Development

Adhi Iman Sulaiman, Masrukin Masrukin, Dindy Darmawati Putri, Irene Kartika Eka Wijayanti, Yuli Risnawati

The development of tourist villages is a strategic program for improving the welfare of rural communities that have socio-economic, cultural, and natural environmental potentials that become local wisdom. The research used a case study qualitative research method to identify problems and develop community potential based on a deep and distinctive understanding. The research locations were in two tourist sites, namely the Herbal Health Tourism in Kalibakung, Balapulang District, Tegal Regency, and the Sodong Beach tourist location, Karangbenda Village, Maos District in Cilacap Regency, Central Java Province. The research subjects were determined by purposive sampling, namely tourism managers, business groups such as traders and farmers, village governments, and empowerment practitioners. Data were collected through direct observation, in-depth interviews, discussions, and document collection. Then the data were analyzed by interactive model data analysis and community development analysis. As a result, the tourism village development empowerment program needs participatory collaborative collaboration from various parties such as village governments, government agencies, tourism managers, economic business groups, and the community around tourism. The tourism development model through community empowerment is needed namely counseling, training, and assistance on tourism institutional management, administrative and financial management, tourism service management, quality improvement and standardization of tourism products, and tourism and product marketing promotion strategies. Tourist sites can be used as Unsoed fostered villages for student activities such as Community Service Programs, internship programs, practicum, and practical work, as well as research and community service for lecturers.



The Relationship Between Induction of Gonadotropin Releasing Hormones to Reproductive Performance in Batur Sheep

Chomsiatun Nurul Hidayah

Experiments were performed to determine the relationship between induction of Gonadotropin Releasing Hormone (GnRH) to oestrus activity and pregnancy rate of Batur sheep. Twenty Batur sheep were synchronized to oestrus using repeated intramuscularly injection of 2 ml PGF2 α in 11-day intervals. The GnRH induction was given intramuscularly on the 9th day for 10 Batur sheep, and 10 others were not injected as a control. Reproductive performance observed included oestrus intensity, oestrus onset, mating time period, and pregnancy rate. The data were analysed by regression correlation tests, and the chi square test used for pregnancy rate. The statistical analysis results showed that the induction of GnRH has a very significant relationship ($P < 0.01$) to the intensity and onset of oestrus as well as the time period of mating it has a significant relationship ($P < 0.05$). The pregnancy rate was significantly different ($P < 0.05$) between control and GnRH-induced in Batur sheep. The results showed that GnRH induction contributed to the intensity of oestrus, the onset of oestrus, and the mating time period of 37.88, 42.79, and 22.16%, respectively. The pregnancy rate in Batur sheep induced by GnRH compared to controls has 25.0% increased. It can conclude that GnRH induction was able to improve reproductive performance in Batur sheep



Data-based Legal Policy in Overcoming Illegal Mining on Mount Botak, Buru Regency, Maluku Province for Sustainable Environmental Development

Dwiana Martanto, Abdul Aziz Nasihuddin

Abstract. Gold mining at Mount Botak, Buru Regency, Maluku Province is carried out traditionally and produces waste containing heavy metals that are harmful to human health and cause environmental damage. Even though the local government has taken various steps to curb illegal miners, they have not been effective in stopping illegal mining activities, even indigenous peoples in the name of customary rights have urged the government to manage them professionally for economic reasons. Local government is challenged to make legal policies that respond to community demands while paying attention to environmental sustainability. This study aims to find the ideal policy concept for tackling illegal mining that supports environmental sustainability. The researcher uses doctrinal legal research based on a conceptual approach with a positivist paradigm and relies on normative juridical research to achieve this goal. The study results show that a data-based policy model supported by science becomes a reliable policy and supports sustainable environmental development.



Response Rate in Tracer Study: Why it Tends to be low? A Case in FEB UNSOED

Dwita Darmawati, Cut Misni Mulasiwi, Ramita Kholifaturrohmah, Monica Rosiana, Dwita Aprillia Floresti, Triani Arofah, Puji Lestari

This research aims to evaluate the implementation of tracer studies at FEB Unsoed and explore the readiness of FEB partners in carrying out tracer studies. Previous research shows a low response rate. The results of this research explore the causes of the low response rate. By using interviews and FGDs with alumni, several reasons were obtained which were the reasons for alumni not participating in the tracer study. These are problems related to understanding the benefits of tracer studies by alumni and alumni users who are still low, systems that are not attractive and easy to use, lack of surveyors who carry out tracer studies. The results of interviews and FGDs with FEB partners (KAFE) show that (KAFE) is ready to support FEB's efforts in increasing the quantity and quality of tracer study data. some implications are given based on the results of the study.



Molecular characterization of *Wolbachia pipientis* in Mosquitoes

Endang Srimurni Kusmintarsih

Wolbachia is a maternally inherited, intracellular bacteria known to infect a wide range of arthropods. Recent surveys indicate that around 16-20% of all insect species infected with Wolbachia including various species of mosquitoes, *Aedes albopictus*, *Armigerus*, *Culex*, and *Manzonia* which cause reproductive changes in their host. Wolbachia is also widespread in filarial nematodes. These bacteria were discovered by Hertig and Wolbach (1924) in the ovaries of the mosquito *Culex pipiens*. In 1936, Hertig formally named them as *Wolbachia pipientis* in honour of his collaborator. However, until now there have been no reports of the existence of endosymbionts from several genera of mosquitoes from Indonesia. Therefore, we screen Wolbachia on several mosquito genera. The aim of the study was to determine the spreading of Wolbachia endosymbiont in mosquitoes from Indonesia. Research methods used to survey. Mosquitoes were taken from various breeding and resting places, the captured mosquitoes were identified, then extraction was carried out, followed by PCR using a primer specific for Wolbachia. Analysis of PCR products was carried out by gel electrophoresis. visualization of amplicon bands under ultraviolet light. The results showed that the mosquitoes tested were positive for the Wolbachia endosymbiont.



Implementation of the Te Goeder Trouw Principle in the Binding Agreement for the Sale and Purchase of Land Rights (Study of Supreme Court Decision No. 2142/Pdt/2019 And Supreme Court Decision No. 1938/K/Pdt/2008)

Erlinda Bestia Saraswidayanti

This study aims to analyze the implementation of the te goeder trouw principle in the binding agreement on the sale and purchase of land rights and the legal consequences if the binding agreement on the sale and purchase of land rights does not apply the te goeder trouw principle in the Supreme Court Decision No. 2142/Pdt/2019 and Supreme Court Decision No. 1938/K/Pdt/2008. This study uses a normative juridical research method using secondary data sources. Qualitative normative data analysis. The results of the study indicate that the implementation of the te goeder trouw principle in the binding agreement on the sale and purchase of land rights in Supreme Court Decision No. 2142/Pdt/2019 applies the principle of subjective te goeder trouw, namely te goeder trouw which occurs during negotiations where in the agreement there is no agreement from one party or bad faith on one side. Meanwhile, the Supreme Court Decision No. 1938/K/Pdt/2008 applies the objective te goeder trouw principle because of the application of the te goeder trouw principle in the implementation of the agreement where there is bad faith on one party who abuses the situation so that there is a defect of will in the agreement. The legal consequence of not meeting the principle of te goeder trouw is that the aggrieved party can file a lawsuit to the court to cancel the sale and purchase binding agreement.



Legal Strength To Bind The Deed Of Amendment Of The Articles Of Articles Made In Circular Resolution And Understanding

Lintang Desi Sungkono

This study examines the Legal Strength of Binding the Deed of Amendment to the Articles of Association regarding Changes in the Quorum and Management determined through Circular Resolution and under the hand and examines the juridical reasons for the cancellation of the Deed of Amendment to the Articles of Association made before a Notary. There is already approval from the Ministry of Law and Human Rights declared null and void in the Court's decision. Agung Number 1320 K/Pdt/2016. The research method used is normative juridical, with secondary data analyzed a qualitative normative. The results of this study (1)Deed of Amendment to Articles of Association regarding changes to quorum and management determined through a Circular Resolution under legal and binding hands for the parties making it because it is based on Article 91 of the Limited Liability Company, Article 1320 and Article 1338 paragraph (1) Civil Law. (2)The juridical reason for cancellation of Deed Amendment to Articles of Association made before a Notary, with the approval of Ministry of Law and Human Rights, declared null and void at Cassation Level Decision because actions of defendants are contrary to Articles of Association that has agreed upon Circular Resolution and meet requirements Article 1365 Criminal Code, namely unlawful acts in form of violating agreement Circular Resolution, there are errors form intentional, losses as result unlawful acts that have been made by parties.



Development and Validation of a Self-Monitoring Non-invasive Anemia Prediction Smartphone App for Pregnant Women in Developing Countries

Mekar Dwi Anggraeni, Endang Triyanto, Asep Iskandar, Amin Fatoni

Anemia early detection plays an important role in preventing complications among pregnant women. Meanwhile, the low palpebral conjunctiva visual inspection is widely used to assess anemia among pregnant women by health care providers but the result has high subjectivity. There is need for a simple, non-invasive, and inexpensive method to assess anemia in developing countries. Therefore, this study aims to develop and validate anemia prediction using digital images capture with a smartphone app. A total of 82 pregnant women were analyzed for hemoglobin concentration with a commercial test kit, while the low palpebral conjunctiva images were simultaneously captured. The android software was then developed to predict the Hemoglobin concentration using low palpebral conjunctiva images. The developed software named Denia predicted anemia levels with linear regression of $y=12.258x + 63.695$, limit of detection and quantification of 1.9 and 6.6 g/dL respectively. In addition, the method showed high accuracy and precision with a RSD value of 4.08%, while the range of method was 1.9 to 15.6 g/dL which covered all samples from severe anemia to the normal highest Hemoglobin concentration. There was no difference between Hemoglobin concentration obtained from the developed software compared to the commercial test kit ($p>0.05$). The developed smartphone app is applicable for predicting anemia in pregnant women with great analytical performances. In addition, it also monitors health status during pregnancy which is very useful in developing countries.



The Important Role of Environmental Aspects in Realizing Sustainable Housing Delivery System in Rural Areas as Buffer Zone of Urban Areas

N M Yudisti, Muslihudin, and Yanto

Sustainable housing delivery issues continue to demand not only an urban renewal program, but also rural development as its buffer zone that is also able to properly negotiate between consumers, governments, and developers about the rate of degradation of environmental carrying capacity in the urban-rural area. Sustainable Housing Delivery System (SHDS) provides an inclusive housing delivery by taking-into-account the excellency of environmental aspects. The focus of this research examines how to develop SHDS for rural area development through literature review and content analysis. The type of research used is qualitative. Data collection occurs through interviews and observations. The results of the analysis are used as recommendations for rural development stakeholders in prioritizing each SHDS criteria to be implemented in rural areas. In conclusion, the environmental factor could be an important aspect of the rural areas development, by balancing between the components physical-environmental criteria.

Keywords: environmental aspects; housing delivery system; rural areas; sustainability



Excellence of Environmental Aspects in Realizing Sustainable Housing Delivery System in Rural Areas

Nicita Meinanda Yudisti

Sustainable housing delivery issues continue to demand not only an urban renewal program, but also rural development that is able to properly negotiate between consumers, governments, and developers about the rate of degradation of environmental carrying capacity in the rural area. Sustainable Housing Delivery System (SHDS) provides an inclusive housing delivery by taking-into-account the excellency of environmental aspects. The focus of this research examines how to develop SHDS using a mixed-method with Analytical Hierarchy Process (AHP) for rural area development. The type of research used is quantitative-qualitative (mixed-method). Meanwhile, the research strategy uses sequential exploratory qualitative research which is carried out first and then equipped with quantitative methods. Data collection occurs through interviews, observations and questionnaires. The results of the analysis are used as recommendations for rural development stakeholders in prioritizing each SHDS criteria to be implemented in rural areas. In conclusion, the environmental factor could be an excellent aspects of the rural areas development, by balancing between the components physical-environmental criteria.



Characteristics of Adolescents With Risky Sexual Behavior in Banyumas

Nina Setiawati

Risky sexual behavior that is generally carried out by teenagers is an activity that is often carried out during dating, namely, holding hands, kissing, and petting as well as having sex during courtship. The increasing percentage of adolescents who have had premarital sex will also increase the negative impacts that can occur, such as teenage pregnancy, sexually transmitted infections, to social impacts in society. The purpose of this study is to identify the characteristics of adolescents with risky sexual behavior in the Banyumas Regency. This research is a quantitative research using a cross sectional research design. The sample of this research is junior high school, high school and vocational high school students who attend school in Banyumas Regency. Probability sampling technique with proportionate stratified random sampling has been used and got 251 respondents. The results of this study found that the majority of adolescents with risky sexual behavior were middle adolescents (65.3%), female (58.6%), came from private schools (50.4%), lived with family (99.3%), had menarche and had wet dreams (99.1%), have been in a relationship (63.9%), not currently dating (70.6%), and low economic status (60.4%), and the education level of father (39.6%) and mother (37.9%) is elementary school.



Isolation and Potential of Fungi from Oil Spill Waters For Decolorization of Batik Wastewater

Ratna Stia Dewi

Batik wastewater contains fat where the concentration is above the quality standard which is difficult to degrade. One of the efforts to degrade the fat content of batik waste is to use fungi. The aim of this study was to obtain isolates of fungi from oil spill waters that have the potential to degrade fat in batik wastewater. The decrease in fat is in line with the decrease in other quality standard parameters, so that it is cultivated from isolates from waste oil disposal so that it is able to degrade other components in batik liquid waste. Fungi isolated from coastal oceanic polluted by oil refinery waste in the city of Cilacap. Isolation of fungi was carried out by growing samples on Potato Dextrose Agar (PDA) media with the dilution method. The fungal isolates that grew were characterized based on the morphological characteristics of the colonies and cells. Screening was carried out by inoculating fungal isolates on agar media containing 10% dye waste. A total of 6 isolates of fungi were isolated. The isolates were identified as belonging to the genus *Aspergillus* and *Rhizopus*. All isolates showed positive growth on dye agar medium. These isolates were considered as potential isolates and could be used for further wastewater degradation analysis.



Land Mafia Prevention Strategy in Pandak Village, Baturraden District, Banyumas Regency

Sri Wahyu Handayani, Kuat Puji Puji Prayitno

The rise of land mafia cases that occur in Indonesia from year to year which are detrimental to society and the state. Many land mafia cases occur starting from the village level, which is caused by the disorganization of village administration, abuse of authority of village officials and supported by the low awareness of villagers to register their land. This study examines empirically the strategy to prevent land mafia in Pandak village, Banyumas Regency using the data collection method of indepth interviews with village officials and residents of Pandak Village. The results of the empirical research were analyzed using the perspective of criminal law and administrative law using Lawrence Friedman's Theory. Based on the results of the study, it is known that the strategy to prevent the land mafia includes: (1) The local city and/or village government together with the BPN in collaboration with the KPK to conduct a Monitoring Center for Prevention (MCP) in realizing land registration transparency. (2) Minimizing the problem of overlapping land certificates by always monitoring new regulations in the land sector so that legal certainty for the community can be guaranteed. (3) After the data is inventoried, the area will be mapped with the aim of improving the status of community land ownership.



The Existence of Customary Law as the Local Wisdom of the Kuta Village Customary Law Community in Protecting and Managing the Environment

Wafa Nihayati Inayah

We can understand the local wisdom that exists in a community as noble cultural values that usance to regulate the order of people's lives wisely or wisely. This wisdom is not only in the form of cultural norms and worth, but also all elements of life in it since becoming representations of the way of life. Likewise, the unique cultural life of the indigenous law community of Kuta village is a community that still firmly holds and carries out traditions with the supervision of Duncan and its traditional leaders. This study aims to examine the values of local wisdom of the indigenous law community of Kuta village which has been institutionalized until now, especially wisdom in protecting and managing the environment. The method of approach in this research is empirical juridical or sociological legal research and can also be called field research. Juridical sociology is a study that seeks to identify the laws contained in society. The concept of legal pluralism no longer does not develop in the realm of the dichotomy between state law systems. At this stage of development, the idea of legal pluralism puts more emphasis on the interaction and co-existence of various legal systems that affect the work of norms and legal processes in society. In the legal community of Kuta Village in Karangpaningal Village, Tambaksari District, Ciamis Regency is represented in the tradition of building residential houses, enforcing prohibition forests, respecting sacred places, and trusting in their ancestors.



mHealth Interventions to Improve Breastfeeding Self Efficacy: Literatur Riview

Agustina Desy Putri Budi Utami

Background: Low birth weight is the major cause of high newborn mortality in Indonesia. Sufficient breastfeeding during few first days after birth may prevent low birth weight infant's morbidity and mortality. Improve maternal breastfeeding self-efficacy may increase breastfeeding rate, however mother with low birth weight infants tend to have low breastfeeding self-efficacy. m-Health has been grow as a well-known and easy to use health education media. **Purpose:** Provide an overview of the effect of health media interventions that have been tested in previous studies to increase breastfeeding self-efficacy **Method:** Articles search using electronic databases such as EBSCO, Google Scholar, IJSR, Pubmed, and Science Direcr. Search articles used are the last 5 years. The keywords used include "breastfeeding", AND "mHealth", AND "infant", AND "Self-efficacy", AND "social media education". Therefore, the authors are interested in discussing more deeply and evaluating further the effect of health media interventions in increasing breastfeeding self-efficacy. **Results:** According to 10 articles that obtained mHealth or educational media was proven to be effective in increasing breastfeeding self-efficacy. Interventions are given in the form of using smartphone-based applications, short messages in wa groups and videos. The intervention was able to increase knowledge, compliance, skills and self-motivation of breastfeeding .

Keyword: Breastfeeding



Fabrication of Wearable Device for Neonatal Jaundice Based on Chest Skin Color

Amin Fatoni, Mekar Dwi Anggraeni, Eni Rahmawati

Neonatal jaundice commonly occurs up to >80% of babies born. Hyperbilirubinemia in Indonesia is also one of the causes of the high infant mortality rate (IMR). Indonesia has a very high IMR of 26.9 per 1000 live births, and this figure is the highest in Southeast Asia. Physical examination with visual observation in new-born hyperbilirubinemia produces low accuracy result, subjective and depending on the experience of the examiner. On the other hand, standard examinations using equipment in hospital laboratories, provide accurate results, but are not necessarily affordable by all health facilities because they require high costs. Traditional medical diagnosis methods require trained personnel and complex testing equipment, so patients must go to hospital laboratories every time they need a medical measurement. This creates discomfort for patients when they must carry out health checks continuously (real-time) in the long term. The development of wearable electronic technology will change traditional diagnostic methods, and revolutionize medical devices by providing timely, remote, wearable, and portable functional facilities. In this research, we have developed wearable device for neonatal bilirubin prediction based on chest skin color monitoring using fabricated wearable device. The device consists of color sensor, microcontroller, monitor and power source. The result showed the linear responses of color sensor reading with the blood bilirubin analyzed by the hospital standard procedure. The recovery of the bilirubin prediction was 90-107% which was meet the method validation parameters.



Clinical Presentation of Otomycosis Caused by Candida

Anton Budhi Darmawan, Nia Krisniawati, Rani Afifah Nur Hestiyani, Anriani Puspita Karunia Ning Widhi, Dhadhang Wahyu Kurniawan, Eman Sutrisna

Background: Otomycosis is a fungal infection of the ear that is prevalent in areas with tropical and subtropical climates. The variation in prevalence is due to changes in humidity and temperature between regions. Otomycosis can be caused by numerous fungal species. *Aspergillus niger* and *Candida albicans* are the most often recognized fungus as otomycosis causal agents. Objective: The aim of the study to identification of clinical presentation of Otomycosis caused by *Candida*. Methods: A prospective study was conducted in the Department of Microbiology and Department of Ear, Nose and Throat (ENT), Medical Faculty of Jenderal Soedirman University-Margono Soekarjo Hospital, Purwokerto from April to September 2022. Results: A total sample of 47 patients who met inclusion and exclusion criteria clinical diagnosis of otomycosis were included in the study. Eight of the 47 patients diagnosed with otomycosis had bilateral disease. *Candida* was detected in 23 (41.8%) ears of 47 patients. In this study, clinical symptoms frequently observed in otomycosis patients included itching in 27.2%, ear obstruction in 25.4%, hearing loss in 21.8%, otorrhea in 20%, tinnitus and pain in 14.5%. On otoscopy examination, 30.2% of patients had a whitish fungal mass, 7.2% had brownish mold spores, and 3.6% had a mixture. 1.8% of patients had discharge, 7.2% had external auditory canal hyperemia, 5.4% had external auditory canal edema, and 1.8% had tragus pain. Conclusion: This study demonstrated that the most prevalent clinical symptom of otomycosis caused by *Candida* is itching, while the most prevalent sign is a white fungal mass.



Factors Affecting Nurse Caring Behavior in ICU

Any Yuliani

Background: Caring behavior is a form of caring in providing support in the form of providing education, attitudes, and actions of nurses to individuals, groups or communities who are sick or suffering to be able to improve their living conditions. Therefore, the authors are interested in discussing further about the factors that influence the caring behavior of nurses in ICU in the form of a systematic review. **Purpose:** To analyze the factors that influence the caring behavior of nurses in ICU based on evidence based research. **Methods:** This research is a literature study with a PRISMA approach. Systematic review using PICO. The search databases used are Pubmed, Scinedirect, Wiley Online Library, Proquest, DOAJ, Springer, Taylor and Francis with the keywords caring behavior AND nurse AND factors AND icu. **Results:** Of the 10 research articles reviewed, the quality of the articles obtained is the opportunity to have good caring behavior is 2.22 (AOR=2.22, 95%CI: 1.20, 4.10) times higher for nurses who work in a good work environment. compared to those who work in a bad work environment. Nurses who are satisfied with their work have a 2.79 (AOR: 2.79, 95% CI: 1.54, 5.08) chance to have good caring behavior than nurses who are dissatisfied with their work. Similarly, nurses who had a lower workload had a 3.01 (AOR: 3.01, 95% CI: 1.70, 5.33) times higher probability of having good caring behavior from nurses compared to nurses who reported have a high workload.

Keywords: caring behavior, nurse, factors, icu



Factors Affecting Dating Behavior in Teenagers

Aprilia Kartikasari

Puberty in adolescents affects their activities, including sexual behavior and attraction to the opposite sex. This attraction to the opposite sex triggers dating activities in teenagers. Many factors influence this. The purpose of this study was to determine the factors associated with dating behavior in early adolescents. This study uses a correlation analysis method, the sample in this study was 30 respondents, aged 12-19 years, currently or have been in a relationship, active in school, and do not have mental or physical disorders. This study relates the characteristics of the respondents including parents' occupations, parental education, frequency of communication between children and parents, the level of difficulty in discussing sexuality issues between children and their parents, toward dating behavior of teenagers. The results showed significant value to father's education ($p=0,02$), father's occupation ($p=0,009$), frequency of discussion ($p=0,02$), level of difficulty communicating sexuality ($p=0,017$), while in addition to these variables have a significance value $p>0.05$. The conclusion of this study showed that father's education, father's occupation, frequency of sexuality discussions, and level of difficulty communicating sexuality have a have a significant relationship with adolescent dating behavior.



Smartphone-Based Interdialyst Weigh Gain Interventions Against Diit Program Adherence in Chronic Renal Failure Patients Hemodialysis Program: Systematic Review

Aprilia Safaroni Roni

Background : The increase in fluid manifested from the weight gain of patients with chronic renal failure hemodialysis program has an impact on the risk of fluid accumulation, cardiovascular disorders, hypertension, cognitive impairment, increased hospital stay and death. Low adherence to the diit program is one of the factors causing the value of interdialyst weight gain to increase. **Objective:** Knowing smartphone-based interdialyst weight gain interventions that have been conducted previous studies to improve diit compliance of chronic renal failure patients with hemodialysis programs. **Methods:** This study studied literature using the PRISMA method, search techniques with PICO from PubMed databases, Google Scholar, ProQuest, Science Direct, SAGE journals with smartphone application keywords, chronic renal failure, hemodialysis, interdialyst weight gain, diit compliance with the established inclusion and inclusion criteria. Assess and analyze the quality of methodology in each study using The Joanna Briggs Institute (JBI) Critical Appraisal Checklist for randomized Controlled trials and JBI Critical Appraisal Checklist for quasi-experimental. **Results :** Of the 7 articles reviewed, analysis of the quality of the journal using analysis from The Joanna Briggs Institute (JBI) according to the criteria at least 50% met the critical appraisal criteria which was subsequently entered into data synthesis. It found that interdialyst weight gain interventions were shown to have an effect in improving diit adherence of chronic renal failure patients with hemodialysis programs. The form of this intervention is a fluid management calendar, IDWG calculator, e health education and smartphone-based recall.

Keywords: smartphone application, chronic renal failure, hemodialysis, interdialyst weight gain, diit compliance



Mobile App for the Accuracy of Emergency Drug Administration in Children's Cardiovascular Resuscitation : A Literature Review

Arie Sasongko, Iwan Purnawan

Background: Emergency conditions that require a special treatment, especially in cases that require cardiopulmonary resuscitation are those that require a quick and appropriate response in handling and decision making. The emergency problem in children's cases is a long time in calculating drug titration because of calculations based on age and anthropometric data so that sometimes it causes medical errors that will have an impact on cardio pulmonary resuscitation failure. Treatment errors have been reported in up to 41% of pediatric resuscitation caused due to underdose or overdose. **Purpose:** The purpose of this literature review is to analyze the effect of using drug administration calculation applications for the prevention of medical errors in emergency cases and pediatric cardio pulmonary resuscitation. **Methods:** This research method is a literature review using PRISMA analysis with a data base of PUBMED, Science Direct, Proquest, Springer, Wiley, Taylor and France from 2017-2022. **Results:** The use of mobile apps for drug administration or titration in cases of cardiovascular emergency children has proven to be effective and efficient because it can speed up the preparation time with dose accuracy so as to minimize ischemia assembled hypotension to vital organs and improve hemodynamic status and maintain neurological status.

Keywords: mobile app, drug dosage, medication error, cardiopulmonary resuscitation, pediatric



The Effect of App Health Detection Early Diagnosis on the Quality of Life in the Elderly who are at Risk of Suffering from Communicable Diseases (DM)

Budi Ertanto

Background: Diabetes Mellitus is one of the fastest growing life-threatening chronic diseases. Phenomena related to disease patterns in Indonesia lead to non-communicable diseases, namely hypertension and diabetes mellitus, which complications can potentially lead to long-term treatment (PJP) such as stroke and DM wounds. For this reason, interventions are needed in the form of family support in the form of instrumentals that can be used to diagnose quickly that can be used by elderly families so as to minimize the risk of long-term care and can be used to improve the quality of life of the elderly. One intervention in the form of support that can be applied is App Health Early Diagnosis/M.Health. **Clinical evidence regarding the application of the Health Early Diagnosis/M App. Destination:** To identify the Effect of App Health Detection Early Diagnosis on the quality of life in the elderly who are at risk of suffering from communicable diseases (Type II Diabetes Mellitus). **Research methods:** This research is a literature study with PRISMA approach. Systematic review using PICO. The search databases used are Google Scholar, PubMed, Alberta Health Services, and Wiley Online Library with the keywords app Health, Health, quality of life and diabetes mellitus type II **Results:** From the 3 research articles reviewed, it was found that mhealth has proven to improve the quality of life for people with type II diabetes mellitus who use Mhealth for more than 3 months and participate in activities in Mhealth. The intervention group got a high score compared to the control group. **Conclusion:** The use of mHealt such as Regulation-Based Electronic and Cellular Health Interventions Targeting Active Lifestyles in Adults, Oral Health Education Using Cellular Applications, M-Health Education significantly improves the quality of life in the elderly with type II diabetes mellitus.



Implementation of Telenursing Education Applications for Families Caring for Patients with Physical Mobility Disorders at Home : A Systematic Review

Catur Novihantoro

Background: Many families treat patients with impaired physical mobility independently at home, patients who are stable or with special considerations are usually allowed to go home by the hospital and continue treatment at home. One of the interventions that can be applied to help improve the knowledge and skills of families caring for patients at home is the telenursing application. **Objective:** To determine the implementation model of telenursing education applications in families who care for patients with impaired physical mobility at home. **Research Methods:** This research is a literature study with a PRISMA approach. Systematic review using PICO. The search databases used are Google Scholar, PubMed, Crossref, ScienceDirect and Wiley Online Library with the keywords telenursing OR telehealth OR mobile application AND physical immobility OR physical mobility impairment OR physical mobility disturbance AND therapy AND at home. **Result:** From the 6 research articles reviewed, it was found that the telenursing application is an implementation that can be applied to improve the knowledge and skills of families who care for sick family members at home. **Conclusion:** The telenursing application is the best solution to help families who care for patients with physical mobility impairments at home.

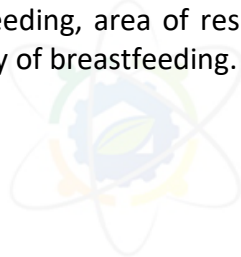
Keywords: Telenursing, Family, Physical Mobility Disorders, at Home



Infections of Baby Symptoms of Fever, Cough, Diarrhea during the COVID-19 Pandemic in Banyumas

Colti Sistiarani

The health of babies is something that is the focus of attention, especially during the Covid-19 pandemic. This study aims to identify infant health problems that occur during the Covid-19 pandemic and identify the causes of infant health problems during the Covid-19 pandemic. This research was conducted using quantitative methods. The sample in this study were mothers who had babies as many as 60 people. Data collection was done by filling out a questionnaire distributed to the baby's mother. Data analysis was performed using bivariate and multivariate analysis. The results of the study showed that there was a relationship between class participation of mothers under five, history of breastfeeding, area of residence and portion of food. The most influential factor is the history of breastfeeding.





Relative Expression of mRNA YY1 in Serous Carcinoma as a Predictor of Ovarian Cancer Pathogenesis

Daniel Joko Wahyono, Gita Nawang Tantri, Saefuddin Aziz, Aris Mumpuni, Nurtjahjo Dwi Sasongko, Adi Amurwanto

Daniel Joko Wahyono¹, Gita Nawang Tantri², Saefuddin Aziz¹, Aris Mumpuni¹, Nurtjahjo Dwi Sasongko¹, Adi Amurwanto¹ ¹Fakultas Biologi, Universitas Jenderal Soedirman, Purwokerto, Indonesia ²Fakultas Kedokteran, Universitas Jenderal Soedirman, Purwokerto, Indonesia Ovarian cancer (OC) is the leading cause of death from gynecological cancer. Most OC is classified as epithelial cancers and more than two-thirds of cases are serous histological subtypes. Yin-Yang 1 (YY1) is a ubiquitous Zinc-finger transcription factor and has an important role in controlling the cell cycle. Ovarian carcinoma has a positive correlation with YY1 expression and cancer proliferation. This study aims to determine the expression of mRNA YY1 profile in serous carcinoma as a predictor of ovarian cancer pathogenesis. The study was conducted by a cross-sectional study on 20 samples of FFPE patients with serous ovarian cancer by ethical approval. The relative expression of mRNA YY1 was analyzed by the RT-qPCR technique and the fold change value was calculated by the Livak method ($2^{-\Delta\Delta CT}$). The results of this study showed fold change in the relative expression of mRNA YY1 in the overexpressed group of 13 samples (65 percent) with a median value = 64 (2.114036081-162.016844) and the low expression group of 7 samples (35 percent) with a median value of 0.034434535 (0.006045176-1.117287138). By independent T-test, the mean value of the fold change the relative expression of mRNA YY1 between the sample group overexpression of the sample (71.462951±15.2874784, n=13) compared to the sample group low expression sample (0.309043±0.1641985



Restricted and Repetitive Behavior in Children With Autism Spectrum Disorders

Desiyani Nani, Saryono Saryono, Dian Ramawati

Background: Restrictive and repetitive behavior (RRB) is indicated by bounded and restricted interests, activities, sensory sensitivities, and stereotypical and repetitive motor movements of limited interest. The etiology of RRB has not been found clearly, allegedly due to gene mutations or genetic loci on certain chromosomes which are still being investigated. RRB is most strongly associated with autism but occurs in a number of other clinical disorders as well as in typical development. **Purpose:** The aim of this study is to determine previous studies on the identification of restricted and repetitive behaviors to predict autism spectrum disorders in children. **Methods:** This study was a literature study approach on the results of previous studies that discuss the restrictive and repetitive behavior in children with autism spectrum disorders from database PUBMED, Science Direct, and Google Scholar. **Results:** Literature studies on the results of previous studies show the emergence of RRB in pre-school age children is a negative prognostic indicator for the future. The effects of RRB at the age of 1-2 years and 3-5 years on cognitive function, adaptive ability and lead to ASD symptoms when children reach the age of 8-10 years. **Conclusion:** Restricted and repetitive behavior (RRB) detected in a child can be used to predict autism spectrum disorder (ASD). **Keywords:** Restrictive-repetitive behavior, Autism spectrum disorder, stereotyping, motor, sensory.



Simulation Methods and Lectures in Enhancing Professional Attitudes in Social Media Communication in Nursing Students

Dian Susmarini

Background. The use of social media as a communication means is increasing and wider. It is used in academic and clinical settings by nursing students. The recent case in which a nursing student exposed her practice regarding an opposite-sex patient demonstrated an ignorance toward professional behavior. **Aim.** This study aimed to differ the effect of simulation and lecture on professional attitudes regarding communication in social media among nursing students **Method.** A quasi-experimental pretest-posttest control group design was used. Second-year nursing students were divided into an experiment group (n=32) and a control group (n=35) based on their class. Fourteen questions from an adopted questionnaire were utilized to measure social media communication. Data were analyzed with the Mann-Whitney test because the data were not normally distributed. **Results.** The finding showed a not significant difference in the pretest score between the control and experiment groups (p 0.860). A similar result was identified in the post-test score, with a p-value of 0.179. These results confirmed that there was no difference between the teaching method with simulation and lecture in the teaching of social media communication behavior among students. **Conclusion.** Both methods can be used as a teaching methods for the professional behavioral topic. As it has the effect, teachers can opt for these methods as variations in teaching. Further research may investigate the effect of these teaching methods on social media communication behavior among nursing students in the clinical practice.



The Effect of Anesthetic Spinal Block Height on Post Operative Shivering in Recovery Room of Emanuel Hospital

Dwi Christanto

Objective: To identify the effect of spinal anesthesia block height on the incidence of postoperative shivering in the recovery room at the hospital. **Research Methods:** This research is a literature study with a PRISMA approach. Systematic review using PICO. The search databases used are Google Scholar, PubMed, Alberta Health Services, and Wiley Online Library with the keyword. **Results:** There was a relationship between the height of spinal anesthetic block and the incidence of shivering. The onset of hyperbaric bupivacaine was faster than isobaric bupivacaine. The incidence of postoperative shivering is more common in the underweight group, undergoing long-term surgery, and plastic surgery. **Conclusion:** Shivering during surgery is usually associated with a decrease in the patient's body temperature. There is an influence between the height of spinal anesthetic block and the incidence of shivering.

Keywords: shivering, spinal block height, spinal anesthesia, postoperative"



Determinant Factors of Neonatal Respiratory Distress in Rural Indonesia

Eni Rahmawati, Dian Susmarini, Desiyani Nani

Neonatal Respiratory Distress Syndrome (NRDS) is one of the leading causes of neonatal morbidity and mortality. Neonatal morbidity and mortality is still a serious problem, especially in developing countries where about 3/4 of neonatal deaths occur in the first seven days of life. This respiratory disorder occurs in 6%-7% of newborns, the highest incidence occurs in premature infants, followed by post-term infants and term infants. This study was conducted to determine the factors associated with respiratory disorders in neonates, both maternal and infant factors. This research is an observational study with a cross sectional type of case control design. The sample of this study were 93 neonates with respiratory disorders and 93 neonates without respiratory disorders. Data were analyzed using Chi-Square test. The study found a significant relationship between gestational age (p-value = 0.000), birth weight (p-value = 0.000) and method of delivery (p-value = 0.001) with respiratory disorders. Gender and parity were not found to have a significant relationship with respiratory disorders. Factors associated with respiratory disorders are gestational age, birth weight and delivery method. Keywords: birth weight



Service Quality for Sexual Spreading Infection Viewed from Internal and External Side of SSI Clinic of Community Health Services II Baturraden in Banyumas Regency

Fajar Tri Asih

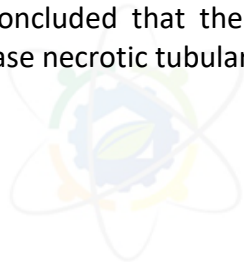
Sexually Transmitted Infections are a group of diseases that are transmitted mainly through sexual contact. Services provided to Sexually Transmitted Infection patients have not been running optimally. This research aimed to determine and analyze the SSI service quality viewed from internal and external factors in the SSI clinic of Puskesmas II Baturraden. This research employed a qualitative approach, while the subject of the study was the SSI clinic workers and the patients. Based on the results of this research, it was found that services given by the clinic workers had been done maximumly by utilizing the available health facilities. The availability of health facilities was still less adequate quantitatively; this is seen from the equipment that is still minimum in the examination room and the laboratory. Consequently, the given risk is any risk to the workers and the patients. The optimum service that had not been offered given resulted from the minimum human resource support, both qualitatively and quantitatively. Some of the services considered to have been good were health facilities that had been necessary for each examination stage; service stages had been made relatively fast and precise, rapid responsiveness of workers in responding to the patient's need, capable of developing a relationship with patients, and do professionally by always considering the patient's privacy.



The Effect of Black Garlic On Necrotic Tubular Score

Fajar Wahyu Pribadi, Afifah Afifah, Catharina Widiartini, Gita Nawangtantrini

Hyperuricemia could cause damage to the kidney due to inflammation and oxidative processes. Black garlic contains various active substances potential for anti-inflammatory and antioxidant. We aimed to investigate the effect of black garlic on necrotic tubular score in hyperuricemia animal model. The research method used in this study is experimental. Twenty-five white rats were randomly allocated to five groups in an experimental study : A (positive control), B (Allopurinol), C,D,E (hyperuricaemic, given black garlic 240,480,960 mg). After 14 days of exposure, necrotic tubular score were evaluated. Kruskal-Wallis followed by Man-Whitney tests was used to test the differences for necrotic tubular score. Based on the result of the research that has been done, it can be concluded that the administration of black garlic in various doses significantly decrease necrotic tubular scores





Genomic and Metabolomic Analyses of Marine Sediment-derived *Sinomicrobium* sp. PAP21 from Cenderawasih Bay National Park in the West Papua

Harwoko

Antimicrobial resistance is a global issue that has reached a critical point, with both common and life-threatening diseases become increasingly untreatable. The Bacteroidetes phylum is an understudied phylogenetic domain since there are only a few bioactive molecules reported from this taxonomic clade. The present study applied integrated genomic and metabolomic approaches on a marine sediment-derived bacterium, *Sinomicrobium* sp. PAP21. The genome sequences of this strain were analyzed to determine the presence, diversity, and distribution of biosynthetic gene clusters (BGCs). The crude extracts obtained from either single or co-culture in 5 different media and harvested at 3 different times (4, 5 and 7 days) have been measured by LC-HRMS. Subsequently, molecular networking was performed to compare all MS/MS spectra in each extract or a set of extracts and groups them according to their similarity via the establishment of a modified cosine score. Those samples were also assayed for antibacterial activity against Methicillin-Resistant *Staphylococcus aureus* ATCC 33592 (MRSA) and *Escherichia coli* ATCC 35218. This study indicates that PKS, NRPS, terpene and RiPPs (more than 80%) are the major BGCs in this strain. Interestingly, the culture using LB medium during 7 days cultivation revealed active against MRSA. The ethyl acetate extract possessing two target compounds (496.376 m/z and 482.36 m/z) would be promising new active molecule target due to its specific production by this experiment. Furthermore, the promising bioactive metabolites need to be isolated following metabolic fingerprinting and microfractionation.



Cowpea Beans (*Vigna unguiculata*) Sprout Yoghurt Reduce Malondialdehyd Levels and Body Mass Index of Type 2 Diabetes Mellitus With Obesity

Hery Winarsi, Gumintang Ratna Ramadhan, Hernayanti Hernayanti

This study aims to determine the effect of cowpea bean sprout yoghurt (CowpeaS-Yo) on body mass index (BMI) and malondialdehyde (MDA) levels in type-2 diabetes mellitus (T2DM) with obese patients. This study used a pretest-posttest control group design, with 20 women with T2DM with obesity, which was randomly divided into 2 groups, 10 women each. Group I was given CowpeaS-Yo, while group II was given a placebo as a control, 200 mL/day, for 2 months. Before and after the intervention, the subject's weight and height were measured, and 1 mL of their blood sample was taken, to check their plasma MDA levels. Data were analyzed using paired sample t-test. After two months of intervention, BMI decreased significantly from 28.53 ± 2.27 to 24.56 ± 2.55 kg/m² ($P=0.002$) in the group receiving CowpeaS-Yo, as well as decreased plasma MDA levels from 7.49 ± 0.72 to 6.24 ± 0.59 nmol/mL ($p=0.015$) compared to the control group. In conclusion, CowpeaS-Yo was able to control body weight and improve the antioxidant status of T2DM with obese patients. Keywords: Cowpea bean sprout yoghurt, BMI, MDA, Type 2 Diabetes Mellitus.



Skin-to-skin Contact and Parental Distress among Parents with Preterm Infant in NICU: A Review

Hikmi Muharromah Pratiwi

Background: Psychological distress of parents with preterm infant also could be treated appropriately by enhancing parent's involvement in infant care, including skin-to-skin contact. A few of studies related to skin-to-skin contact have revealed can benefit from infant and parental outcomes. The previous review only explored the distress among parents with healthy infant. The effect skin-to-skin contact among parents with preterm infant is necessary to be investigated. Objective: This article provided a review related to effect of skin-to-skin contact toward parent stress during preterm infant's hospitalization in NICU. A literature review was performed by searching of trials using PubMed, Cochrane Library, MEDLINE, and CINAHL and published in English from 2012 to 2022, English-published, full text availability related to skin-to-skin contact, or Kangaroo Mother Care, preterm infants and parental distress (mother and/or father) in NICU. Result: This study involved six trials and 577 parents with preterm infant. Fours studies explored maternal stress and the others assessed parental stress during NICU admission. Five trials reported parental stress deflation after skin-to-skin contact with their infant, otherwise one trial revealed that skin-to-skin contact escalated parental stress due to a more facilitated infant progression. Conclusion: Skin-to-skin contact benefits parents with preterm infants by decreasing the psychological distress during NICU admission.



Prevalence and diversity of ciprofloxacin-resistant *Klebsiella pneumoniae* clinical isolates

Indah Sulistiyawati, Daniel Joko Wahyono, Wahyu Siswandari

The persistence and proliferation of multidrug-resistant microorganisms have the potential to occur in health centers and patient care units. WHO reports that cases of *Klebsiella pneumoniae* infection treated with ciprofloxacin in 34 countries have resistance from 4.1% to 79.4%. This study aimed to analyze the prevalence and diversity of ciprofloxacin-resistant *K. pneumoniae* from patients at Margono Soekardjo Hospital, Purwokerto. This study used a purposive sampling technique from blood, sputum, urine, pus, feces, and pleural fluid. The research process includes isolates characterization and identification, ciprofloxacin resistance testing, and its prevalence. This study recorded 99 cases of *K. pneumoniae* infection, and 48.5% of isolates were resistant to ciprofloxacin from August-September 2022. Biochemical and morphological tests showed a characteristic diversity of isolated *K. pneumoniae* against *K. pneumoniae* subspecies *pneumoniae*. The prevalence of ciprofloxacin-resistant *K. pneumoniae* was from blood (7.1%), sputum (59.6%), pus (23.2%), urine (6.1%), feces (3.03%), and pleural fluid (1.01%).



Comparison of Glasgow Coma Scale (GCS) with Revised Trauma Score (RTS) in Assessing Mortality of Head Injured Patients : Sistematic Review

Indri Lestariningsih

Background : Head injury causes temporary or permanent damage to the brain. The incidence and mortality of head injuries is very high in the world. So it is necessary to assess trauma in head injury patients. Trauma assessment using the Glasgow Coma Scale (GCS) and Revised Trauma Score (RTS) is easy to use and has been studied to assess mortality in head injury patients. Research on the comparison of the Glasgow Coma Scale (GCS) and Revised Trauma Score (RTS) has not been widely carried out, so the authors interested in writing a systematic review of the comparison of the Glasgow Coma Scale (GCS) with the Revised Trauma Score (RTS) in assessing mortality in head injury patients. Objective: to analyze how the Glasgow Coma Scale (GCS) and Revised Trauma Score (RTS) compare in assessing mortality in head injury patients. Methods: This study is a systematic review study with the PRISMA approach based on inclusion criteria, namely studies focusing on head injury patients, articles published in 2016-2022, articles in English, and exclusion criteria, namely studies focusing other than head injury patients, articles published before 2016, articles other than in English. Systematic review using PICO. The search databases used were Pubmed, Science Direct, SAGE, and DOAJ with the keywords Glasgow Coma Scale, Revised Trauma Score, brain injury, mortality. Results: From the JBI analysis of all articles, it was found that the Glasgow Coma Scale (GCS) and Revised Trauma Score (RTS) proved effective in assessing mortality in head injury patients.



The Efficacy of *Achatina fulica* Snail Slime Cream in Maintaining Antioxidant Enzymes in Sunburn Model Mice

Ismiralda Oke Putranti

Achatina fulica snail slime was proven containing antioxidant enzymes such as superoxide dismutase, catalase and glutathione peroxidase that may give protection to the skin damage induced by UV radiation in our previous study. This study aimed to find the efficacy of snail slime cream in maintaining antioxidant enzymes in ultraviolet induced sunburn. Snail slime creams were formulated into 2%, 5% and 7%, and were tested included organoleptic test, homogeneity test, pH test, viscosity test and drying test. Seventy-eight male *Mus musculus* BALB/c mice were randomized into 26 groups. Each group was treated by given snail slime cream and radiated with UVA or UVB, and then was terminated after 24 and 48 hours. The level of antioxidant enzymes SOD, CAT and GPX were measured and analysed by using one-way ANOVA and continued by post-hoc LSD. The correlation test was also performed to analyse the correlation between cream dosages and the level of antioxidant enzymes in protecting mice skin from sunburn. The result showed that all cream formulation had no difference in organoleptic, homogeneity, pH, viscosity and drying tests. *A. fulica* snail slime creams significantly maintained the level of SOD, CAT and GPX in sunburn model mice ($p < 0,05$). Formulation 7% of snail slime cream showed the most effective formulation to maintain the level of antioxidant enzymes in sunburn model mice with significance $p < 0,05$ compared to negative controls and placebos and no significant difference ($p > 0,05$) with control and positive control groups.



Distraction Techniques to Reduce Anxiety in Pre-Operative Patients

Isni Maftuhah, Saryono

Surgery is a stressful event. Handling anxiety in patients undergoing surgery can be done through distraction techniques. This literature review explored intervention strategies for distraction techniques to reduce anxiety in pre-surgical patients. The literature review design was used to analyze the intervention strategy of the distraction technique. A literature study of 8 scientific articles was obtained from the journal Science Direct, PubMed, ProQuest, and EBSCO database for the last five years with keywords anxiety, pre-surgery, and distraction technique. Data analysis is presented in a table consisting of title, author, year, sample, methodology, and results. Several studies examined the benefits of audio and video distraction during various endoscopy procedures. The music video effectively produced a sustained reduction over time of participants' pain during the pump refill procedures; it was most effective in initially reducing participants' state anxiety at the initial intervention visit; however, it did not demonstrate a progressively sustained effect. Participants' opinions about the music video experience were positive. The pre-operative anxiety of children during dental visits can have an unfavorable impact on dental treatment outcomes. Thus, this study aimed to assess the efficacy of distraction using VR eyeglasses on children's preoperative anxiety in the waiting room. The use of VR glasses in the dental waiting room is associated with a decreased anxiety score in children 6-10 years old. The findings of this study provide support for a nursing theory and an evidence-based intervention that nurses can easily use to help patients reduce their pain and anxiety during a stressful procedure.



Mental Health's Description of Jenderal Soedirman University Students Pasca Covid-19 Pandemic

Keksi Girindra Swasti, Hasby Pri Choiruna, Wahyu Ekowati, Reza Fajar Amalia

It is important to give attention about mental health, because it can affect a person's physical health and also productivity. Ironically, the prevalence of mental health problems continues to increase with the Covid-19 pandemic, including among adolescents. The purpose of this study is to find out the picture of mental health in students after the Covid-19 pandemic. The study was conducted on 175 students in Banyumas Regency who were selected with a consequent technique with a data collection time of 2 weeks. Mental health conditions are measured by SRQ instruments. The data were analyzed univariately by displaying the value of the frequency distribution. The results showed that 60.7% of respondents had mental health problems and only 29.3% were mentally healthy. The most common symptoms of mental health problems experienced by respondents were fatigue easily (77.6%), feeling anxious, tense and worried (65.6%), and difficulty making decisions (58.6%). There were 24 respondents who had thoughts of ending their lives. Based on these results, it can be concluded that the majority of respondents have mental health problems indicated by physical, psychological, and cognitive symptoms. Mental health services are needed to reduce symptoms and restore students' mental health.



The Readiness of Discharge planning in Aspects of Caregiver Awareness among Caring for the Elderly with Stroke

Lita Heni Kusumawardani, Rahmi Setiyani, Asep Iskandar

The elderly with stroke depend on the people around them, so caregivers must be around the patient. Its readiness to care for the elderly with a stroke can cause the treatment to be not optimal so that it pays attention to the needs of the elderly. This study aimed to determine the readiness of discharge planning in the aspect of the awareness of elderly caregivers with stroke. The study was carried out within eight months. This type of research is descriptive exploratory with a cross-sectional study design and uses a purposive sampling method for 102 respondents with criteria that match the research sample. The inclusion criteria were that the respondent is the main caregiver for the elderly with stroke. Data analysis in this study used univariate analysis and data collection tools like questionnaires. The questionnaire was declared valid and reliable ($r\text{-value} > 0.361$; Cronbach's $\alpha = 0.811$). The respondents (caregivers) in this study obtained results with an age range of 17 to 74 years, and the median value of the respondent's age data is 43 years. The elderly age ranges from 60 to 88 years, and the median value of the respondent's age data is 67 years. The client's length of stay is in the range of 3-14 days, with a median value of 5 days of treatment. The description of the implementation of the readiness discharge planning in the aspect of caregiver awareness in caring for the elderly with stroke is in a good category, as many as 64 people (62.74%). Nurses are expected to maintain and improve discharge planning services for caregivers, especially stroke patients, to improve nursing care and quality of life for stroke patients.



The Self-Regulated Learning in completing writing assignments: A descriptive research

Made Sumarwati, Wastu Adi Mulyono, Haryatiningsih Purwandari, Raisha Jasmine Faradhyanti

Self-regulated learners manage their academic demands flexibly and critically to achieve the goals set. This study aimed to explore students' self-regulated Learning (SRL) description while completing a short scientific writing task. The SRL components include setting goals/achievements of task success, structuring the environment, task completion strategies, timing, seeking help, and self-monitoring. In this study, a cross-sectional design was applied. Simple random sampling was used, where a total 67 third year nursing students took part in the study by completing a set of work and questionnaires. The data were analysed using descriptive statistics and Pearson Correlation. The results show that time learning regulation is a regulatory learning activity which is the most challenging activity to manage, while the other components are average enough. The average quality of student writing is sufficient. SRL was negatively correlated with the quality of student writing ($r=-0.260$, $p<0.05$). Self-regulated learning still needs improvement to produce students with high SRL and excellent writing quality. The quality of the assignment is also one of the criteria to stimulate students to self-regulate.



Improvement of Complementary Feeding Practices with MPASI Education Videos Based on Local Wisdom

Meivita Dewi Purnamasari

The incidence of stunting is a major nutritional problem faced by Indonesia. The most decisive intervention to reduce the prevalence of stunting includes the provision of complementary foods to infants. Empowerment of mothers during the complementary feeding period can give positive results on the nutritional status of children. The purpose of the study was to identify the effect of MPASI education videos based on local wisdom on maternal practices and nutritional status of infants 6-24 months. The research design was a quasi-experimental with a two group pre-post test design, sample of 40 mothers of infants 6-24 months which taken by consecutive sampling. The results showed that there were differences in mother's practice before and after the complementary feeding education video (p value < 0.001 ; $= 0.05$), while there was no difference in nutritional status before and after the video was given. This study recommends providing MPASI educational media for mothers during the exclusive breastfeeding period as a preventive measure for early complementary feeding and increasing maternal readiness before the complementary feeding period.



Development of Neonatal Jaundice Screening and Caring Application: An Information Needs Assessment

Mekar Dwi Anggraeni, Amin Fatoni, Eni Rahmawati

Hyperbilirubinemia is still remaining a major health problem among newborn in developing countries. Improper jaundice newborn early detection and care may cause several adverse effects to infant. Mobile health (mHealth) applications becoming popular among young generation as a health education. Developing mHealth to address parent's information needs about caring newborn with jaundice developed in collaboration with health professionals to fill the gap. Participants were recruited using a purposive sample method. Data were collected at a secondary hospital, three Focus Group Discussions and eight in-depth interviews were conducted with 42 mothers who had hyperbilirubinemia newborn and seven nurses working in the NICU room. Content analysis was utilized to analyze the data. Participants identified information needed were signs of hyperbilirubinemia, hyperbilirubinemia infant's care at home, causes of hyperbilirubinemia, complications of hyperbilirubinemia, and emergency signs/indications refer to hospital. Based on this information, a mHealth App was developed and evaluated by three experts and twelve mothers to improve the application. The Dianing App is developed based on the suggested information needed by mothers having hyperbilirubinemia newborn. Mothers with hyperbilirubinemia newborn supposed the Dianing App beneficial and provide a set of key functionalities to meet information needs for monitoring and caring for hyperbilirubinemia newborn. Keyword: App, early detection, hyperbilirubinemia, newborn



Factors that Affect the Successful Implementation of Family Integrated Care in Adolescents who Experience Bullying : A Systematic Review

Nely Sofia Rahman

Background: Bullying is a negative action that is carried out repeatedly by other people or groups towards certain individuals. Various forms of bullying can be experienced by adolescents such as verbal, physical and relational bullying. Bullying has a significant negative impact on its victims. At this time a general consensus regarding the importance of family involvement in high-quality care has been widely carried out. Family-centered care is expected to improve the quality of care that focuses on adolescent victims of bullying by involving families in nursing and medical intervention plans. **Method:** This research is a literature study using PRISMA. Search for articles using electronic databases including Pub Med, Science Direct, SAGE and Google Scholar. The article used is the last 5 years. The Keyword used in this systematic review is ""Bullying + Family Integrated Care + Adolescent"". **Results:** From the search results of the article, the author has not found the application of Family Integrated Care in adolescents who experience bullying. The application of Family Integrated Care is more often used in NICU patients or pediatric patients who experience anxiety disorders during hospitalization. However, the authors found the application of Integrated Care and Family Centered Care to interventions for adolescent victims of bullying. There are 7 selected articles and there needs to be an increase in interventions involving the role of the family. Nurses can work with families to improve the quality and efficiency of care, as well as improve the knowledge and competence of nurses and families in caring for adolescent victims of bullying.

Keywords : Family Integrated Care + Bullying + Adolescent"



Bioinformatics Analysis of Active Compound of Sambiloto (*Andrographis paniculate*) Plant as Anti-Breast Cancer

Nugrahani Sekarratri Bintang, Salman Fareza Muh., Amalia Choironi Nur, Sarmoko

Breast cancer is a prevalent cancer among women, however the pharmacological treatment is not selective. The solution is to search active compounds contained in medicinal plants. It has been claimed that *Andrographis paniculate* has anticancer effects on metabolic signalling, cell proliferation, and apoptosis. This research attempts to identify potential anticancer molecular targets and binding energy of compounds in *A. paniculate*. Data were retrieved using the STITCH, STRING, Swiss, and NCBI databases. KEGG pathway and drug association for 644 genes were analysed to search gene ontology, using web gestalt and Cytoscape. The top 10 hub genes were determined, two of them were MAPK and AKT1. MAPK3 and AKT1 were then employed as docking receptors. Pymol was used to calculate RMSD in the validation process. Auto dock was used to calculate bond energy, while Biovia was used for visualization. The MAPK3 and AKT1 can function as docking receptors, with obtained RMSD MAPK3 of 0.427 and AKT1 of 0.552. Compound 18 has the lowest bond energy and was absent from hydrogen bonding in the MAPK3, but present in the AKT1. Compound 18 is the most promising kinase pathway-active compound to investigate.



Educational Model to Increase Competence of Palliative Nurses : A Systematic Review

Nur Indarwati Septiriana, Arif Setyo Upoyo

Background : The increasing need for palliative care has not been matched by optimal palliative services. This can occur due to a lack of knowledge, attitudes and competence about palliative care from health workers, one of which is a nurse. An effective educational intervention model is needed to improve the competence of nurses in palliative care. **Purpose:** To find out effective educational methods to improve the competence of palliative nurses, to find out the instruments used to improve the competence of palliative care, to find out the area of competence in palliative nursing **Method:** This study uses a literature review design. Article searches were carried out systematically by writing keywords in the Science Direct database, SAGE journals, EBSCO host, Willey Online, PubMed, Scopus, and Proquest. The selection of articles according to the PRISMA flow and the assessment of the quality of the articles were carried out with the Joanna Briggs Institute instrument. **Results:** Through the 13 articles reviewed, 4 effective educational methods were found to improve the competence of nurses, namely; the traditional method is face-to-face with lectures, traditional methods with workshops, multimedia learning methods and simulation methods. The domains of competence achieved in 13 journals include perception, attitude, knowledge, clinical competence (EOL, pain, communication, pediatric palliative), and self-efficacy. All educational methods have effective results in increasing knowledge and attitudes, while educational models of training/workshops, multimedia-based education, and simulations are more effective in increasing palliative care competencies because they apply practice in their learning. The traditional educational model that only provides face-to-face lectures, and discussions without practicing the results becomes ineffective in the increasing of knowledge, attitudes and clinical competence of palliative care. **Conclusions:** Various choices of educational models can be used to improve palliative care competencies such as simulation education models, workshops, and multimedia-based ones. The educational model is effective in increasing of palliative knowledge, attitudes, clinical competence (EOL, pain, communication, pediatric palliative), but in its implementation it is necessary to develop new learning methods.

Keywords: Palliative Care, Educational Interventions, Competency, Nurse



Effect of Blanket Warmer Use on Shivering Patients Post Regional Anesthesia : A Systematic Review

Pambudi Eko Prasetyo

Background : Shivering is closely related to hypothermy and is one of the serious problems in surgical patients and can adversely affect the patient's condition. In addition, shivering is also considered an important clinical problem to get attention to, especially since it affects the patient's comfort and increases metabolic needs that can cause problems and complications in the cardiovascular. One of the non-pharmacological interventions that can be applied is the use of a blanket warmer. Evidence related to the application of blanket warmers to treat shivering in post-regional anesthesia patients is still limited, therefore, the author is interested in further reviewing the effectiveness of the use of blanket warmers for shivering patients in the form of a systematic review. **Objective :** To identify the effectiveness of blanket warmers against shivering in post-regional anesthesia patients based on evidence-based research. **Method :** This research is a literature study with the PRISMA approach. Systematic review using PICO. The search databases used are Google Scholar, Pub Med, Scince Direct, Wiley Online Library with the keywords blanket warmer, shivering, and regional anesthesia. **Result :** Based on 10 research articles reviewed, it was found that blanket warmers were shown to be effective in treating shivering in post-regional anesthesia patients. The intervention technique is applied using a warm blanket increasing the body temperature by an average of 15-25 minutes. The intervention group gained an average time faster compared to the control group. **Conclusion :** Blanket warmer interventions such as electric blanket warmer, water warmer blanket, blanket blower warmer, warm blanket significantly improve body temperature in shivering post regional anesthesia patients.

Keywords: blanket warmer, shivering, regional anesthesia



Early Detection of Sepsis in Neonates: A Systematic Review

Puji Lestari, Dian Ramawati

Background: Neonatal sepsis is a very serious problem and contributes to morbidity and mortality. Its signs and symptoms of infection are often not detected early; they are usually identified in severe sepsis. This surely complicates treatment and increases the incidence of death in neonates. Thus, it urgently needs an effective method or tool for its early detection to which early treatment measures can be taken and prevent the mortality in neonates due to the sepsis. **Methods:** Collecting articles from electronic databases including Pub Med, Science Direct, Ebsco Host, and Pro Quest. The articles taken are those published within the last 5 years. The keywords used in this systematic review are “Early Detection AND Sepsis AND Neonates” **Results:** Based on the 7 selected articles, there are several methods or tools used to early detect sepsis in neonates. They include SNAP II, SNAPPE II, SRC (Sepsis Risk Calculator), NICE guideline CG49, and laboratory results (neutrophil, platelet, thromboelastometry, procalcitonin, CRP, umbilical cord blood culture). **Conclusion:** Several methods and tools can be used to detect sepsis in neonates early. By applying one of them, the handling management of sepsis can be carried out quickly, precisely and efficiently.

Keywords: Early Detection, Sepsis, Neonates, Mortality"



mHEALTH INTERVENTION TO IMPROVE BREAST CANCER PREVENTION AND EARLY DETECTION : A LITERATURE REVIEW

Risyawanti Nur Fajriani, Mekar Dwi Anggraeni

Background: Breast cancer is the major non-communicable disease of Indonesian women. Early detection is the best strategy to reduce the adverse effects of breast cancer. Nowadays, mobile health intervention (mHealth) is well known as a health education media using a smartphone in order to improve people's knowledge about a specific area. Clinical evidence related to mhealth interventions that can improve the breast cancer early detection in the form of a literature review is still limited. Purpose: to provide an overview of effectiveness mHealth that has been tested in previous study to improve the prevention and early detection of breast cancer. Method: Research this is studies literature with approach PRISM. Overview systematic using PICO. Search database that used is Science Direct, Pubmed, DOAJ, Wiley Online Library, Sage, Cochrane with say key "breast cancer" and "early detection" or "screening" and "mhealth" or "mobile health" and "prevention" and "randomized control trial". Therefore, the authors are interested in discussing more deeply and evaluating further the effectiveness of the mHealth intervention in improving the prevention and early detection of breast cancer. Result: Of 11 articles study which in reviews, obtained that mhealth intervention is proven effective to improve the breast cancer's prevention and early detection. Interventions provided using smartphones in many forms of smartphone applications, short messages, and videos. The intervention could improve knowledge and compliance of breast cancer's prevention, early detection and breast self-examination skills. Keywords: breast cancer, early detection, mhealth, prevention Contact person: 081392084988



Bioinformatics Analysis of Active Compound of Sambiloto (*Andrographis paniculate*) PLANT AS ANTI-BREAST CANCER

Sarmoko

Breast cancer is a prevalent cancer among women, however the pharmacological treatment is not selective. The solution is to search active compounds contained in medicinal plants. It has been claimed that *Andrographis paniculate* has anticancer effects on metabolic signaling, cell proliferation, and apoptosis. This research attempts to identify potential anticancer molecular targets and binding energy of compounds in *A. paniculate*. Data were retrieved using the STITCH, STRING, Swiss, and NCBI databases. KEGG pathway and drug association for 644 genes were analysed to search gene ontology, using web gestalt and Cytoscape. The top 10 hub genes were determined, two of them were MAPK and AKT1. MAPK3 and AKT1 were then employed as docking receptors. Pymol was used to calculate RMSD in the validation process. Autodock was used to calculate bond energy, while Biovia was used for visualization. The MAPK3 and AKT1 can function as docking receptors, with obtained RMSD MAPK3 of 0.427 and AKT1 of 0.552. Compound 18 has the lowest bond energy and was absent from hydrogen bonding in the MAPK3, but present in the AKT1. Compound 18 is the most promising kinase pathway-active compound to investigate.



Effect of Moringa Leaves on High Density Lipoprotein (HDL) levels

Saryono Saryono, Desiyani Nani, Atikah Proverawati, Sarmoko Sarmoko

Hypercholesterolemia often occurs and was detected when cholesterol levels exceed normal levels. Hypercholesterolemia is often accompanied by a decrease in HDL levels. Efforts to lower cholesterol levels take a long time so that long-term use of chemical drugs will cause adverse side effects for the body. This study aims to prove the effect of Moringa leaves on HDL levels. This research is an experimental research with pre and post test design with control group design. Wistar white rats were grouped into 6 groups, namely: G1 healthy control, G2 negative control, G3 treatment at a dose of 200 mg/kgBW, G4 treatment at a dose of 300 mg/kgBW and G5 a treatment at a dose of 400 mg/kgBW and G6 a positive control. G2-G6 will be induced by high fat diet (HFD) before treatment. The results showed that the administration of Moringa leaf steeping was able to increase HDL levels. Moringa leaves contain various active substances that can act as antioxidants and anti-inflammatory. The most effective dose of infusion of Moringa leaves to increase HDL levels is 300 mg/kgBW.

Keywords: Moringa leaves, antiatherosclerosis, HDL"



The Effect of Celery Ethanol Extract on Proteinuria in Unilateral Ureter Obstruction Rat Model

Shafira Audy Prameswari, Yoana Rizki Deviriandra, Ariadne Hapsari Putri Taufik, Rizky Aliyah Putri, Athaya Helia Untari, Afifah Afifah

Chronic kidney disease (CKD) is a condition of decreased kidney function that occurs for more than three months. Proteinuria is one of the markers of impaired kidney function, especially in the renal filtration process. Unilateral ureter obstruction causes impaired kidney function, including the filtration process. Celery (*Apium graveolens* L.) contains phenolic compounds that can prevent the decrease of kidney function. This study aims to determine the effect of celery ethanol extract on proteinuria in the UUO rat model. This study was an experimental study with a post-test only with control group design. A total of 25 rats were assigned to 5 groups. Group 1: sham control, 2: negative control (UUO), 3: UUO and were given 125 mg/kgBW celery ethanol extract, 4: UUO and were given 250 mg/kgBW celery ethanol extract and 5: UUO and were given 500 mg/kgBW celery ethanol extract. The treatment of celery ethanol extract was given for 14 days. Urine samples were taken on the 15th day for examination of proteinuria. The results were analyzed by the Oneway ANOVA test and showed a significant difference between the control group and the treatment groups ($p < 0.05$). A dose of 250mg/kgBW is the most effective dose of celery ethanol extract in this study.



The Effect of Electronic-Tindak Lanjut Tensiku (E-Titenku) Intervention Model on Coronary Heart Disease Prevention Knowledge

Sidik Awaludin

Cardiovascular disease is still a major global health problem. Hypertension is the most risk factor for the incidence of cardiovascular disease and increases the risk of death. Primary and secondary prevention efforts are needed by increasing patient awareness of identifying risk factors and carrying out preventive management. "Electronic-Tindak lanjut Tensiku", known as e-TITENKU, is a web and smartphone-based application designed to manage coronary heart disease prevention in patients with hypertension. The purpose of this study was to determine the effect of the e-TITENKU intervention model on knowledge of coronary heart disease prevention. This research design is true experiment pre and post control group design. The sample size is 120 respondents with primary hypertension in Banyumas Regency, Indonesia. The sampling technique used is simple random sampling. The inclusion criteria included respondents with primary hypertension, adults aged 40-65 years, cooperative and willing to be respondents, while the exclusion criteria were respondents experienced complications of other diseases due to hypertension. This research has passed the ethical test of the Ethics Committee of FIKES Jenderal Sudirman University No: 771/EC/KEPK/IV/2022. The results of the study were that the age of the respondents in the intervention group was 64.91 years old, the systolic blood pressure was 169 mmHg and the diastolic blood pressure was 97 mmHg. The characteristics of the respondents in the control group were the mean age of 65.98, the mean systolic blood pressure of 172 mmHg and the diastolic of 93 mmHg. The mean score of pre-intervention knowledge in the treatment group was 3.65, while in the control group was 3.43. While the mean score of knowledge after the intervention was 7.98 and the score of knowledge on the second measurement in the control group was 3.53. The e-TITENKU intervention model was able to increase the knowledge score of coronary heart disease prevention. This model can be used by nurses in hospital and community services.



Relationship Between Nutritional Status and Anemia in Linggasari's Spraying Farmers, Kembaran District, Banyumas Regency

Siti Munfiah, Yudhi Wibowo, Muhammad Zaenuri Syamsu Hidayat, Octavia Permata Sari, Diah Krisnansari

Background: Anemia is still a health problem in Indonesia and the world. Most of the studies on anemia were conducted on children and women, while on male farmers were rarely. Exposure to pesticides leads to disturbance in the organs that form red blood cells. This study aims to determine the relationship between nutritional status and anemia in Linggasari's Village spraying farmers. Methods: This is an analytic observational study with a cross-sectional design. The independent variable was the nutritional status of farmers, and the dependent variable was the incidence of anemia. The number of samples in this study was 30 farmers. The purposive sampling with the inclusion criteria was male, aged above 18 years, sprayed using synthetic pesticides, willing to be research subjects and maximum contact with pesticide two months before the study. Results: The prevalence of underweight, normal, overweight, and obesity among the farmers was 6.67%, 53.33%, 20%, and 20%, respectively. As many as 86,67% of farmers with normal hemoglobin levels and 13,33 % had anemia. Conclusion: There is no significant relationship between nutritional status and anemia in Linggasari's Village spraying farmers (p-value = 0.602).

Keywords: Anemia, Nutritional Status, Pesticides, Spraying Farmers"



Assessing the User Satisfaction on Covid-19 Vaccination Service in Indonesia

Siwi Prammatama Mars Mars Wijayanti

Purpose: The implementation of the Covid-19 vaccination is still being carried out in Indonesia to protect against SARS Cov-2 infection. However, the information about vaccination service satisfaction is still very limited. This study aims to assess how satisfied Covid-19 vaccination service users are in Indonesia. **Materials and Methods:** A cross-sectional study was conducted through an online survey in the third week of June 2022. People with a minimum age of 17 years, having received at least one Covid-19 vaccination, and residing in Indonesia were allowed to participate in this study. We used the SERVQUAL model as an instrument to measure satisfaction with Covid-19 vaccination services, measuring five aspects covering tangibility, responsiveness, reliability, assurance, and empathy. The analysis carried out included univariate analysis and bivariate test using Chi-Square statistical test. **Results:** A total of 509 respondents were included in this study. Findings of this study showed that there was not much of a difference between the satisfied (50.1%) and unsatisfied categories (49.9%). Of the 5 dimensions measured, the highest level of dissatisfaction is in the tangibility (48.7%), while the highest level of satisfaction is in the reliability (59.7%). We identify several variables which are correlated with user satisfaction such as vaccination location ($p.0,038$), provision of refreshment/reward/incentives ($p.0,001$), provide emergency contact post-vaccination ($p.0,000$) and observation time post-vaccination ($p.0,000$). **Conclusion:** Many respondents in this study are still dissatisfied with the Covid-19 vaccination services, so it is necessary for taking continues efforts to raise the standard of Covid-19 immunization services to increase customer satisfaction.



Innovation adoption of "Elsimil" application for preventing of the Stunting cases in Banyumas Regency

Slamet Rosyadi

This study aims to examine the process of adopting the "Elsimil" application innovation (Electronic Ready for Marriage, Ready to Pregnant) from the BKKBN. The research location is in Cilongok District, which has the most stunting villages in Banyumas Regency. The research targets are Village Family Planning Cadres who are members of the Village Assistance Team (TPK) and prospective brides who are married in 2022. The research approach is descriptive qualitative. The data were taken from interviews by telephone and Whats Apps (WA) which were then analyzed using an interactive method. The results showed that not all informants both from Village Family Planning Cadres and prospective brides and grooms used the application due to a number of obstacles such as: difficulty downloading, unclear guidelines, lack of assistance, lack of companions, lack of socialization, lack of cooperation with other parties and signal interference in several locations.



Relationship of Family Support to Compliance with Hypertension Patients Performing Routine Blood Pressure Control at Kemranjen I Public Health Center

Surya Bakti, Endang Triyanto

The prevalence of hypertension problems continues to increase every year, and this will have an impact on all aspects of both individuals, families, communities to state conditions. Someone diagnosed with hypertension needs to do routine care, one of which is checking blood pressure to prevent uncontrolled blood pressure and cause complications. The occurrence of complications will require more expenditure, so this needs to get social support from the family. The researcher aims to determine the relationship between family support and compliance with hypertension patients in routine blood pressure control. The research design used cross-sectional. The sample used was 43 hypertensive patients who controlled blood pressure at the Kemranjen I Health Center. The research instrument used a questionnaire and visit observation sheets. The results of the analysis showed that there were 81% of hypertensive patients aged 60 to 70 years, 71.4% were women. Patients get family support and are obedient in carrying out routine blood pressure control by 26 respondents (61.90%). Bivariate analysis found that family support was associated with adherence to routine blood pressure control in hypertensive patients in the Kemranjen I Public Health Center (p -value $0.043 < \alpha$ -value 0.05). Families need to provide a good support system so that patients carry out medical therapy regularly so that they have controlled blood pressure and prevent complications. Families need to provide a good support system so that patients carry out medical therapy regularly so that they have controlled blood pressure and prevent complications.

Keywords : Family Support, Compliance, Hypertension



The Effect of Telenursing on Adherence to Antiretroviral Therapy of People Living With Hiv (Plwh): A Systematic Review

Taryanto

Aim: Several interventions have been developed to curb the menace of the disease, such as antiretroviral therapy (ART), the level of adherence remains low. The aim of this literature review was to synthesize the effect of telenursing interventions on adherence to antiretroviral therapy of People Living With HIV (PLWH) based on the available primary research. **Methods:** Using a systematic review design. A search of seven databases Science Direct, SAGE Journals, EBSCOHost, PubMed, Scopus, ProQuest, and Willey Online was conducted. Reviewed studies were as follows: articles published from January 2018 to August 2022, with full text in English, featuring randomized controlled trials (RCTs), and patient with a diagnosis of HIV/AIDS, and interventions that can improve medication adherence. Articles were selected according to PRISMA guidelines. A thematic synthesis framework was applied in this review. **Results:** Twelve primary studies were included and synthesized. The analytical interventions were: Telenursing with the method individuals make it easier for patients to undergo the guidance process, treatment, counseling and evaluate treatment. Use telenursing is considered effective, simple, cheap and affordable for every individual patient with HIV/AIDS. **Conclusion:** With the high penetration rates of telenursing, this interventions for PLWH have become more popular. To date, the evidence on the effectiveness telenursing interventions to promote medication adherence in PLWH has been preliminary and the clinical evidence about viral suppression has been minimal.



The Role of Mindfulness on Work Stress in Emergency Room Nurses : A Literatur Rieview

Triyanto , Ridlwan Kamaludin

Introduction: Emergency room is a medical room for patients who need quick and immediate help. One of health worker who plays an essential role in first aid for emergency patients is a nurse. Nurses play a role in conducting assessments to determine priority actions to get patient needs when they first come to the Emergency Room (Habibi Soola et al. 2022). Stress is a condition in which a person is under pressure beyond their adaptation ability. Prolonged stress will affect health, well-being, and daily activities (Surachman & Almeida 2018). Handling work stress can be done in various ways according to the triggering factor. Good stress coping can be trained with a psychological approach, such as mindfulness technique (Bekelepi & Martin 2022; Kunzler et al. 2020). Methods: Literature search was carried out using several database, including PubMed, Google Scholar, and Scient Direct. The keywords used are "Work Stress OR occupational stress OR job stress", "Emergency department", "Nurse" AND "Mindfulness Based Stress Reduction". The search results obtained articles with details, PubMed (n=291), Google Scholar (n=13), and Scient Direct (n=401). Results: The search results from various literatures obtained a total of 705 articles, then through a series of selections, 28 match the criteria. These articles are publications from 2012 – 2022. The results of the article review show that 18 out of 24 articles state that the level of work stress in emergency room nurses is at the middle to upper level. There are 16 articles stated high levels of work stress and 2 other articles stated moderate work stress. Two articles did not measure the level of job stress, and the other two articles stated that low job stress was associated with good stress coping by nurses. Work stress that is not handled properly can cause social dysfunction and somatic disorders (de la Cruz et al. 2020). Conclusion: Nurses who work in the emergency room (IGD) have a high level of stress associated with a large workload. Work stress that is not handled properly can lead to social dysfunction and somatic disorders. Mindfulness-based stress reduction therapy is known to effectively in reducing the level of anxiety, work fatigue, and work stress in nurses. Direct application or online is safe to give, because it does not have significant difference in effectiveness.

Keywords: Work Stress , Occupational Stress, Job Stress, Emergency Department, Nurse, Mindfulness Based Stress Reduction."



Improved Triage Result Accuracy Using Digital Triage App: A Systematic Review

Umar Akhsani

Background: Triage in the ER is an important mechanism in the process of handling crises and disasters. Inaccuracies in determining triage results have an impact on the prospects for life expectancy and patient morbidity. One effort that can be done is to create an algorithm that is compiled through a computer system and is realized in the form of desktop-based applications, web services and mobile applications on smartphones. Clinical evidence related to the use of digital triage applications is still very limited. Objective: to provide an overview of the effectiveness of digital triage applications in increasing the accuracy of triage results based on evidence based research. Method: This research is a literature study with a PRISMA approach. Systematic review using PICO. The search databases used are Google Scholar, PubMed, Cochrane and Wiley Online Library with keywords triage, digital, desktop, application and accuracy. Critical appraisal of journals using The Joanna Briggs Institute (JBI). Results: Based on the 7 research articles reviewed, it was found that the use of digital triage applications is quite easy to implement, appropriate in accordance with current technological developments and has proven to be effective in increasing the accuracy of triage results. The weakness is not all hospitals use a same database in their hospital information system so that some applications cannot be integrated. Some literature also reports that respondents take longer in time to use digital triage applications than the manual version. Conclusion: Digital triage applications such as TRIAGIST, Major Trauma Triage Tool and ESI Triage significantly increase the accuracy of triage results for triage officers.

Keywords: Triage Application mobile, Emergency Triage, Desktop Triage, Digital Triage"



Role of Visiting Patient Application to Reduce Anxiety, Stress and Depression in Brain Tumor Patients in the Meranti Care Room, Prof. Dr. Margono Soekarjo purwokerto

Wahyudin, Alfi Muntafiah, Arfi Nurul Hidayah

Background: Being treated in a hospital can cause anxiety, stress, and depression, this affecting the acceleration of the patient's recovery. Wisdom and reward education by adding spiritual knowledge is considered a potential strategy to reduce patients' anxiety, stress, and depression. This research aims to determine the influence of wisdom education and patient rewards on feelings of anxiety, stress, and depression through the visiting patient application. Research Method: Quantitative research using a quasi-experimental pre-post test design involving 19 patients. Research subjects are divided into two groups: group 1 application visiting patient and group 2 is not given treatment. Data collection using the dass 42 Indonesian questionnaire version that has been validated. Statistical analysis using SPSS to find out the difference in the influence of treatment using the T-Test and Wilcoxon test with a significant value of $p < 0.05$. Results: The results of the research show that there is a change in anxiety with the intervention $p=0.000$, there is a change in stress with the intervention $p= 0.003$, and there is a change in depression with the intervention $p=0.001$. In conclusion, the visiting patient application plays a role in reducing the patient's anxiety, stress, and depression levels through the patient's spiritual approach through the visiting patient application.

Keywords: application, anxiety, stress, depression, visiting patient



Physical Exercise Intervention to Reduce the Severity of Restless Leg Syndrome in Hemodialized Patients : Literature Review

Wasis Dwi Hartanto

Restless Leg Syndrome (RLS) is a sensory-motor problem characterized by an uncomfortable and unpleasant feeling that causes a strong and irresistible urge to move the legs, often during periods of inactivity during sleep. Several non-pharmacological therapies that can be used to reduce the symptoms of RLS in hemodialysis patients are cool dialysate therapy, Physical Exercise Therapy (PET), reflexology, and aromatherapy massage. This literature review aims to determine the effect of PET in reducing the level of RLS symptoms in patients undergoing hemodialysis including the type of movement, duration of exercise and frequency. Data were collected from the electronic database PUBMED, Science Direct, Proquest, Ebscohost, CNBI and e-resources with a total of 522 articles. Articles are limited to English language criteria and experimental designs within the last 10 years. Based on the 7 selected articles, it was found the type of movement that can be applied to patients with RLS include stretching exercises and aerobic exercises. Meanwhile, the most appropriate duration of PET is 30-40 minutes and the most appropriate frequency of TAK is 3. times per week. The most widely used instrument to assess the degree of RLS is the International Restless Legs Syndrome Severity Scale (IRLS). In conclusion, PET is effective to reduce RLS in patient undergoing hemodialysis. The most effective factors of PET include type of movement, duration of exercise and frequency of exercise."



Knowledge toward Diabetic Wound Care Management and Related Factors : A Cross-Sectional Study in Nurses

Yunita Sari

Nurses should have good knowledge of diabetic wound care management so that they can deliver high quality wound care management to the patients. However, the study that assessed the nurses' knowledge of diabetic wound care management is still a little. Therefore, the purpose of this study was to investigate the knowledge of nurses toward diabetic wound care management and related factors. The design is a cross-sectional study. The samples were 512 nurses working in hospitals in Central Java. a Chi-square test and multivariate logistic regression analysis were used for data analysis. The results show that 39.6% of nurses still have low knowledge related to diabetic wound care management. The lowest knowledge of nurses is about the characteristics of ischemic ulcer, and the modern therapy for diabetic ulcer management. The factors related to diabetic wound care management were nurse position and working ward. Findings show that many nurses still have low knowledge of diabetic ulcer care management. It is suggested that hospitals should provide wound care training for nurses to improve their knowledge of diabetic wound care management.



Nurses' Perceived Barriers to the Prevention of Pressure Injury and Related Factors

Yunita Sari

The incidence of pressure injury (PI) in Indonesia is high. Therefore, Indonesian nurses should take measures to prevent PI from developing. Considering the high incidence of PI in Indonesia, there could be some barriers faced by Indonesian nurses in performing prevention of PI. However, to date, no study has assessed the perceived barriers and factors associated with the perceived barriers of PI in Indonesian nurses. Therefore, this study aimed to assess perceived barriers to prevention of PI and associated factors in Indonesian nurses. A total of 521 nurses from three general hospitals in Central Java Province, Indonesia, participated in the study. A pressure injury prevention barriers questionnaire was used to assess perceived barriers of prevention of PI. A multivariate logistic regression model was used to analyze factors associated with the perceived barriers. The two most commonly perceived barriers among nurses were a lack of preventive devices such as special mattresses, cushions, and skin care products, and a lack of training courses related to prevention of PI. Associated factors emerging from the results were working experience (AOR =1.74, 95%CI :1.06,2.85; 0.029) and working unit (AOR =2.73, 95%CI :1.39, 5.35; 0.003). Based on our study, nursing administrators should design programs to improve prevention of PI in hospital settings.



Interventions to Improve Quality of Life People Living with Hiv/Aids: A Systematic Review

Zunaidi Ahmad

Aim: To identify and evaluate intervention that can improve quality of life people living with HIV/AIDS. **Methods:** Using a systematic review design. A search of seven databases Science Direct, SAGE Journals, EBSCOHost, PubMed, Scopus, ProQuest, and Willey Online was conducted. Reviewed studies were as follows: articles published from January 2018 to August 2022, with full text in English, featuring randomized controlled trials (RCTs), and patient with a diagnosis of HIV/AIDS, and interventions that can improve quality of life. **Results:** Thirteen articles were reviewed in this study. Types of intervention to improve quality of life is Teleeducation, Telemonitoring, Yoga, Cognitive Behavioral Therapy, Social Casework, Community-Based Navigator Intervention, Empowerment Intervention, Educational Intervention, Counseling, Act Healthy (Supportive Counseling and Life Steps), Physical Exercise, Social Supports, and Problem Solving Therapy For Adherence And Depression (PST AD). **Conclusion:** A variety of choices intervention to improve quality of life of people living with HIV/AIDS. Collaboration across multiple disciplines and professions has been proven to contribute to the success of the intervention.



Juridical Analysis of Article 12 Letter (a) in Law Regarding Notary Positions Against Notaries Who Are Declared Bankrupt

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Notaries, in practice, may be subject to bankruptcy arrangements in the Bankruptcy Law and Suspension of Debt Payment Obligations. Bankrupt notaries are also subject to Article 12 letter (a) of the Notary Position Act, which states that a notary can be dishonourably dismissed from his position because he is declared bankrupt based on a court decision that has permanent legal force. The Bankruptcy Law states that legal subjects who have completed the bankruptcy process can apply for legal remedies to restore their good name as debtors and their authority to control and manage their assets. At the same time, the Notary Position Law does not explain whether a bankruptcy notary whose bankruptcy period has finished can file legal efforts to restore his position as a notary public official. This study aims to identify and analyze the regulation of justice in the Law on Notary Positions for notaries who are declared bankrupt by court decisions and to analyze the rehabilitation efforts of notaries who have completed their bankruptcy to restore their status as public officials. The type of research used in this thesis is normative legal research using a statute Approach, an analytical approach, a conceptual approach, and an analysis using a qualitative descriptive method. This study uses secondary data consisting of primary legal materials and secondary legal materials. The results of this research show that the subject of bankruptcy in the Bankruptcy Act is only a legal subject of a person and a legal subject of a legal entity so that a notary as a public official cannot be declared bankrupt. Bankruptcy only applies to debtors, so liability for bankruptcy only applies to the legal subject (the debtor), not the notary position. Disrespectful dismissal of a Notary from his position on the grounds of bankruptcy does not provide justice for the notary because the essence of bankruptcy is temporary, and rehabilitation efforts are open. In contrast, in the Law on Notary Positions, the dismissal is permanent, with no legal action to return the notary to his position. A Notary who has been dishonourably dismissed based on Article 12 letter (a) of the Notary Position Act has at least several legal remedies that a notary can take to restore his position, namely: first, legal efforts to cancel the bankruptcy decision against the notary, second, a request for cancellation a decision letter for dishonourable dismissal of a notary at the State Administrative Court, third, submit a request for a re-appointment of a notary or a change in a decision on a dismissal of a notary dishonourably to the Minister as the body that regulates, appoints, and dismisses a notary.

Keywords: Notary, bankrupt, justice

