



PROCEEDING

ICONETSI

International Conference on Engineering and Information Technology for Sustainable Industry **2020**

28 - 29 September 2020

SGU Alam Sutera Campus, Prominence Tower,
Jalan Jalur Sutera Barat no. 15, Tangerang, Indonesia





**The Association for Computing Machinery
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MESSAGE FROM RECTOR

Swiss German University (SGU) has been established for 20 years. As a university committed to striving for quality education, SGU organizes its annual event, the International Conference on Innovation, Entrepreneurship and Technology – ICONIET to give a platform for researchers, practitioners, government officials to present and discuss their works. The ICONIET 2020 consists of two sub-conferences, namely “International Conference on Engineering and Information Technology for Sustainable Industry 2020 (ICONETSI)” on Monday & Tuesday, 28-29 September 2020 and “International Conference on Global Innovation and Trend in Economy (INCOGITE 2020)” on Thursday, 5 November 2020.

The conference has the same theme as the 20th anniversary of SGU, “Transforming Digitally, Empowering Globally”. Digital transformation is a must. It connects technology specialists across all sectors and fields in order to meet business needs and market requirements. It builds innovation and high-tech know-how to assist business initiatives or to upgrade technology for future growth. SGU has also participated in education for empowering communities globally. By lifting up individuals within communities, SGU encourages and supports sustainable community and economic development. Good quality of education and research will generate technology, innovation and entrepreneurship which will eventually improve quality of life and the prosperity of societies, nations and the world as a whole.

This year, the ICONIET is conducted in the midst of pandemic Covid-19 and hence, will be fully virtual using video conferencing. I’d like to take this opportunity to welcome all honorable guests, speakers, presenters and participants, who have come not only from Indonesia, but also from different countries such as Germany, Japan, Malaysia, the United States, Singapore, Egypt and Taiwan.

I’d like to personally thank the Committee of ICONIET 2020, including the committee of ICONETSI and INCOGITE 2020, who have put their utmost efforts into organizing this event. I wish to express my gratitude to the Ministry of Research, Technology and BRIN for their continuous support to our research. I would also like to thank SGU's University partners, the South Westphalia University of Applied Sciences and the University of Applied Sciences Jena in Germany, as well as the International Management Institute (IMI) in Switzerland.

We do hope that the conference will be beneficial and mind-opening for all participating parties. Let us use this event to exchange ideas and to extend our networking virtually, with the aim of empowering the wider global community.

Respectfully yours,

Dr. rer. nat. Filiana Santoso
Rector of Swiss German University



MESSAGE FROM CONFERENCE CHAIR

I would like to welcome you to the 2020 1st International Conference on Engineering and Information Technology for Sustainable Industry, Tangerang, Indonesia. ICONETSI 2020 provides a scientific platform for both local and international researchers, engineers and technologists who work in all aspects of Engineering and Information Technology for Sustainable Industry to exchange their latest research results. In addition to the contributed papers, internationally well-known experts are also invited to deliver keynote and plenary speeches at ICONETSI 2020. We are honored to have the distinguished keynote speakers: Prof. Bambang PS Brodjonegoro, Ph.D of the Minister of Research and Technology – BRIN, INDONESIA; and also Prof. Dr. Engg. Koichi Murata of Nihon University, Japan; Prof. Dr. Eng. Agus Purwanto of Universitas Sebelas Maret, Indonesia; Assoc. Prof. Dr. Waseem Haider of Central Michigan University, USA; Dr. Anto Satriyo Nugroho of Agency for Assessment and Application of Technology – BPPT, Indonesia; Assoc. Prof. Yudi Fernando PhD M.LogM of Universiti Malaysia Pahang, Malaysia; and Dr. Charles Lim, BSc., MSc. of Swiss German University, Indonesia as our invited speakers.

The conference is organized as a set of tracks in Sustainable Energy and Environment, Production and Operation Management, Logistics and Supply Chain, Ergonomic and Human Factors, Automation, Mechatronics and Robotics, Cyber Security and AI, and Software Engineering.

In this first event of ICONETSI 2020, we have received 125 paper submissions from Germany, Japan, Taiwan, Singapore, Egypt and Indonesia. To ensure the high quality of papers in ICONETSI 2020, each submission is reviewed by no less than three reviewers through a blind review process. In addition, we also carefully check the similarity rating to avoid plagiarism, and the writing format according to the conference proceedings template for each submission. After a careful review process, the program committee accepted 76 high quality full papers for presentation in ICONETSI 2020.

The successful organization of ICONETSI 2020 has required strong support from Indonesia Honeynet Project, Industrial Engineering Higher Education Organizing Cooperation Agency (BKSTI), Pusat Unggulan Iptek (PUI) Baterai Lithium Universitas Sebelas Maret, and Indonesian Association for Pattern Recognition (INAPR).

Most of all, I thank you, the participants, for enriching this conference by your presence. I am thankful to the conference organizing committee members, the track chairs, the session chairs, and the numerous volunteers, without whose generous contributions, this conference would not have set a record number of presentations and number of participants, higher than our expectation, especially considering some difficulties that happened during the Covid-19 pandemic. We truly believe the participants will find the discussion fruitful, and will enjoy the opportunity of setting up future collaborations.

Warm Regards,
Assoc. Prof. Dr. Tanika D Sofianti
ICONETSI 2020 General Chair

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Keynote Speaker

Prof. Bambang Permadi Soemantri Brodjonegoro, Ph.D

Minister of Research and Technology - The National Research and
 Innovation Agency of the Republic of Indonesia



Short Biography:

Prof. Bambang Permadi Soemantri Brodjonegoro, Ph.D is the Minister of Research and Technology and Head of the National Research and Innovation Agency of the Republic of Indonesia. Previously, he was the Minister of National Development Planning of the Republic of Indonesia from 2016 to 2019 and also the Minister of Finance from 2014 until 2016. He has also worked in various roles in the Ministry of Finance.

The opportunities to contribute as the Minister of Research and Technology, Minister of National Development Planning, and Minister of Finance have established Prof. Brodjonegoro's career in integrating Indonesia's research, technology, innovation, development planning, financing, and economic stabilization. Prof. Brodjonegoro earned his Ph.D in Urban and Regional Planning from the University of Illinois at Urbana–Champaign, United States in 1997. Afterward, he started his academic career as a lecturer in Universitas Indonesia and became Dean of the faculty of economics, Universitas Indonesia from 2005 to 2009. His research mostly focuses on Economics. He has also been actively involved in various local and international organizations and Indonesian companies, including being the director-general of the Islamic Research and Training Institute (IRTI), Islamic Development Bank Group, Jeddah, The Kingdom of Saudi Arabia in 2010. He was also awarded several honor and awards, including Bintang Maha Putra Utama from President of Indonesia and Bintang Bhayangkara Utama from the Indonesian National Police.





Invited Speaker 1

On the Role of Industrial Engineering in the COVID-19 Era

Prof. Dr. Eng. Koichi Murata

Nihon University, Japan.



Abstract:

The purpose of this study is to consider the role of industrial engineering in the era of COVID-19. This paper is divided into three parts. Firstly, the history of industrial engineering is reviewed to confirm the richness and compensation of life brought by the division of labor. The second part describes the exchange that should be paired with the division of labor, and what it is likely to be, and then explains that the integration of the division of labor and its exchange is a future issue for humanity. The third part, regarding the touch strategy that is the first step of exchange, reviews the concept of visual management, which is a precedent case, and tries to systematize the three touch strategies that were tried in the early stages of the spread of COVID-19 in Japan. The results obtained from this survey show that it is important for industrial engineering, which has been trying to understand management resources from various perspectives, to engage not only in the division of labor, but also in their exchange. Also, in an era where environmental destruction and digitalization are progressing at a speed that humanity does not notice, the findings can be considered as a problem in order to produce human resource workers whose value is higher than ever.

Short Biography:

Koichi Murata is the head of operations & production management laboratory and a professor at the Department of Industrial Engineering and Management, College of Industrial Technology, Nihon University. He previously worked in industry as an industrial engineer at the flagship factory of Murata Manufacturing Co., Ltd., which is a global leader mainly in the manufacturing of electronic components. His research interests include operations & production management, kaizen, lean management, visual management, technology transfer, knowledge management, sustainable supply chain and others. Dr. Murata has published articles in international academic journals such as International Journal of Production Research, Sustainability, Journal of the Operations Research Society of Japan, and others. He was interviewed for NHK and the Associated Press (AP) about the prospects for the manufacturing industry.





Invited Speaker 2

Honeynet Threat Sharing – One step closer to Cyber Situational Awareness

Dr. Charles Lim, BSc., MSc., CTIA, CHFI, EDRP, ECSA, ECSP, ECIH, CEH, CEI
Swiss German University; Indonesia Honeynet Project



Abstract:

As organizations are digitally transforming their business, they are encountering security risks to slow down their intent. A collection of honeypots, i.e. honeynet, are often deployed in their infrastructure to detect the early cyber security attacks into the infrastructure, allowing the organization to be more aware of the emerging threats. Organizations may forge to stay relevant, timely and accurate in assessing these threats when they are willing to share these threats to the community of interest, providing the first step to cyber situational awareness.

Short Biography:

Charles Lim is a Cyber Security Researcher and Lecturer at Swiss German University, an independent researcher who works closely with Badan Siber dan Sandi Negara (BSSN) and a professional IT security related consultant and trainer. He is one of the recipients of the 2019 ISIF Asia Network Operations Research Grants and 2020 Internet Operations Research Grants. He also holds a few security professional certifications in the area of incident response, threat intelligence and security analyst, from ECCOUNCIL. He has a Doctorate degree in Electrical Engineering from Universitas Indonesia, Master of Science in Electrical Engineering from University of Hawaii, USA and his research includes Malware Analysis, Digital Forensics, Cloud Security, and IT Security Architecture. He is actively involved with many cyber security communities, such as Indonesia Honeynet Project (IHP), ACAD CSIRT (Academy Computer Security Incident Response Team), Indonesia Digital Forensics Association (AFDI), and others.





Invited Speaker 3

Recent Trends in 3D Printing

Assoc. Prof. Dr. Waseem Haider

Central Michigan University, USA



Abstract:

Additive manufacturing or 3D printing of metals is emerging and rapidly growing manufacturing technique from prototyping to large production runs. This process involves the fusion of metal powder bed by selectively melting above the melting temperature and building layers on top of each other. The imminent advantages of producing complex geometries, unprecedented manufacturing flexibility, product customization and at the same time economically viable process makes it a potentially disruptive technology for different industrial applications. The huge interest of industries for adapting this technology also brought the attention of research community to work in this area with full potential. The changed melting and solidification dynamics during additive manufacturing, results into striking differences in the microstructural evolution in comparison to the one obtained through conventional casting process. The microstructure variation strongly impacts the other structural properties of the material, e.g. mechanical, electrochemical etc. and this provides different avenues for the research community. Our group is working to elucidate the electrochemical response and the nature of passive oxide film formed on the additively manufactured 316L stainless steel for varying applications (biomedical, petrochemical and food industries).

Short Biography:

Dr. Waseem Haider is a tenured associate professor at School of Engineering and Technology, Central Michigan University, USA. He earned his PhD in Mechanical Engineering from Florida International University in 2010. He got a post-doctoral fellowship in materials science and engineering at Pennsylvania State University. Afterwards, he joined orthopedic research labs as a research scientist at State University of New York. Soon after that, he joined University of Texas as tenure track assistant professor where he served for three years. Dr. Haider’s research focuses on Materials Science and Biomedical Engineering with special emphasis on Biomedical Materials Surface Chemistry, Electrochemistry, Bulk Metallic Glasses, and Nanomaterials. His research is supported by National Science Foundation and Department of Defense.



Invited Speaker 4

Engineering Design and Blockchain Technology for Sustainable Industry: A Circular Economy Perspective

Assoc. Prof. Yudi Fernando PhD M.LogM
Universiti Malaysia Pahang, Malaysia



Abstract:

The manufacturing industry is an essential sector, especially in developing countries, and significantly contributes to a nation's economy. These significant contributions are due to the availability of vendors with capabilities supporting low-cost production with quality materials. These significant contributions should not overlook other outputs from this industry as one of the largest emitters of greenhouse gasses, pollution, and waste that contribute to negative environmental impacts. These externalities are due to waste from the energy and material resources required to be processed into finished products. While the manufacturing industry has contributed enormously to wealth and job creation, thus improving quality of life, this is happening at the expense of delivering unsustainable amounts of solid waste and pollution. Due to many competing factors, the manufacturing industry is transforming from a linear economy model (make, use and discard) to a global circular economy in which the components of products are fed back to production after their service life. Yet, scanty evidence exists on how the manufacturing firms report on the success story of the remanufacturing process of leftover materials, return products and scrap. In the past, environmental concerns were mostly neglected in the manufacturing and supply chain processes. Circular economy, a term which used to be known as the remanufacturing of scrap, is an alternative method to counter this issue. The engineering redesign needs to be adopted with the proper integrity platform. Blockchain technology can be used to improve visibility, transparency and the accurate computation of the production and overall supply chain's carbon footprint. Blockchain technology has a high level of security and cannot be hacked. It can be used to support the integration of energy production, utilization, transmission, and storage so that every carbon footprint activity and carbon trading transaction can be tracked and no data can be manipulated. In regard to the importance of engineering design using circular economy concept and industrial revolution 4.0 enabler technology like blockchain, I will be presenting a remanufacturing model for sustainable industry that will assist the industry and academia to find alternative solutions to turn waste into value-added products.

Keywords: remanufacturing; design; circular economy; blockchain technology; industrial revolution 4.0; sustainability



Short Biography :

Yudi Fernando is an Associate Professor and holds a PhD. He is the Editor-in-Chief Industrial Management: An International Journal and Managing Editor of Journal of Governance and Integrity at the Faculty of Industrial Management, Universiti Malaysia Pahang. He is a Research Committee Chair and founding member of the Malaysian Association of Business and Management Scholars (MABMS). He is also a member of the Society of Logisticians, Malaysia/Pertubuhan Pakar Logistik Malaysia (LogM). Prof. Yudi is involved actively as the assessor for ABEST21 (Alliance of Business Education and Scholarship for Tomorrow) program-based accreditation system. His research interest is in the areas of sustainable supply chain; circular economy 4.0 and blockchain technology and he has supervised 9 PhDs, 11 ongoing, and more than 70 Master theses. His works can be found in the top tier journals such as: Journal of Cleaner Production, *Resources, Conservation & Recycling*, Sustainable Production and Consumption; tourism management International Journal of Information Management; Food Control, Journal of Energy Policy and others.





Invited Speaker 5

Biometrics Technology for Better Public Services

Dr. Eng. Anto Satriyo Nugroho

Center for Information and Communication Technology,
Agency for Assessment and Application of Technology (PTIK BPPT)



Abstract:

Kartu Tanda Penduduk Elektronik (KTP-el) is a National electronic ID card which is issued by the Indonesian government. The goal of KTP-el is to develop an accurate national population database, and ensure a single identity number (SIN) for the citizens. The unique identity of each citizen is verified using biometrics data: ten fingerprint scans, two iris scans and a face scan. More than 190 million citizens have had their biometrics data taken. The scale of biometrics data is the second largest biometrics data in the world after those collected by Unique Identification Authority of India (UIDAI). The data opens various applications such as biometrics authentication for banking, forensic identifications, and electronic voting. In this presentation, we will discuss several topics including biometrics testing of KTP-el Reader, the usage of KTP-el and biometrics for public services, and the future of biometrics data.

Short Biography:

Anto Satriyo Nugroho works for the Center of Information & Communication Technology, Agency for the Assessment & Application of Technology (PTIK BPPT), Indonesia. He completed his B.Eng. (1995), M.Eng. (2000) and Dr.Eng. (2003) in Electrical and Computer Engineering from Nagoya Institute of Technology, Japan. From 2003 to 2007, he was working as visiting professor at School of Life System Science & Technology, Chukyo University, Japan. His research interest is on pattern recognition and computer vision with applied field of interest in Multimodal biometrics Identification and Computer Aided Diagnosis for Malaria Detection. He is the 1st president of Indonesian Association for Pattern Recognition (INAPR), and an Indonesian Governing Board member of International Association of Pattern Recognition (IAPR). Dr. Anto Satriyo Nugroho is a member of IEEE, Indonesian Association for Pattern Recognition (INAPR), Indonesian Association for Computational Linguistics (INACL) and Indonesian Society of Soft Computing.



Invited Speaker 6

Recent Progress of Lithium Ion Battery for Electric Vehicles

Prof. Dr. Eng. Agus Purwanto, ST. MT

Lithium Battery Research and Technology Centre,
Universitas Sebelas Maret, Surakarta, Indonesia



Abstract:

At the end of 2019, the Nobel prize in chemistry was awarded for the advancement of Li-ion batteries considering its discovery promotes the current technology and lifestyle. Li-ion batteries (LIBs) are considered as a vital and predominant power source for various wireless and portable electronics, and have even been applied to high performance Electric Vehicles, especially BEV and HEV. It is predicted by 2030, the largest Li-ion Batteries market will be electric vehicles, mainly cars. As it progressed, current problems found during the development of LIBs were addressed and needed to be overcome such as performance, cost, weight and size. However, cell chemistry and thermal management became the main focus. Cell chemistry considers not only the electrochemical performance, but also its availability to avoid material shortage in the future. It appears that LiFePO_4 and graphite system was selected due to its safety properties. However, future trends tend to use nickel rich cathode and silicon-graphite anode for high voltage (up to 5 V) and high energy density batteries. However, high energy density results in high thermal runaway risk, thus making thermal management and failure mechanisms equally as important as cell chemistry. Failure mechanisms of LIBs have been extensively studied. From the material level, challenges such as undesired side reaction, particle breakage and passivation and metal dissolution are often found. However, the current technology of morphology control, nano-layer coatings and structural modification can be used to solve these problems. At the cell level, extensive safety tests, i.e. a mechanical test, thermal test and electrical abuse test are necessary to assure the safety of LIB cells for EVs. With good battery cell design, safety issues can still emerge due to the use of liquid electrolyte which is often flammable and unstable at elevated voltage and temperature. This phenomenon has initiated the development of solid electrolytes for high safety all-solid-state batteries (ASSB). In conclusion, LIBs bring numerous advantages for civilization, however, during worldwide EV application, intrinsic and extrinsic challenges still remain under investigation. With excellent efforts, high safety electric vehicles will undoubtedly be achieved in the near future.

Short Biography:

Agus Purwanto is recognized as an Indonesian developer of Lithium Ion Batteries (LIBs) and the leader of the Centre of Excellence for Electrical Energy Storage Technology

(CEFEEST) Universitas Sebelas Maret. His current work is developing LIBs active material and design. He is the author of over 100 scientific papers, co-inventor of 14 inventions and a Professor in Chemical Engineering.

Agus Purwanto was born in Sragen, Indonesia in 1975 and currently lives with his family in Solo. He obtained his bachelor and master degree in Chemical Engineering from Institut Teknologi 10th November 1998 and 2002 respectively, and his Doctoral degree from Hiroshima University. He is taking a faculty position in the Chemical Engineering Department of Universitas Sebelas Maret.

Agus Purwanto has collaborated with many organizations and industries such as Indonesian Endowment Fund for Education (LPDP), Indonesian Institute of Science (LIPI), the National Nuclear Energy Agency (BATAN), PT Pertamina and Toyota. Agus Purwanto has received multiple awards including: Outstanding Lecturers of Universitas Sebelas Maret (2011), Academic Leader in Technology by Ministry of Research and Technology and Higher Education (2017), and Science and Technology Award by ITSF (2020).



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- POM-07 Technopreneurship & Innovation System: A Comparative Study Analysis for E-Trike Development in Indonesia
Bekti Nugrahadi, Wahyudi Sutopo and Muhammad Hisjam
- POM-08 Technopreneurship & Innovation System: Comparative Analysis of Technology Development of Salt Derivative Products in Indonesia
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- POM-09 Developing E-Learning for Educational Robotic Arm Training
Jessica Florencia, Tanika D. Sofianti and Aditya T. Pratama
- POM-10 Project Management System Development for Improving Infinitigroup Project Performance
Akbar Hanief Damanik, Aditya Tirta Pratama and Setijo Awibowo
- POM-11 Importance of Internalization of Tacit Knowledge Sharing in Project Management Case in XYZ Finance
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- POM-12 Student Activities Recommendations to Achieve First Job Waiting Time Target of Graduates in Telkom University: Decision Tree Approach
Muhammad Rifansyah, Amelia Kurniawati and Nurdinintya Athari Supratman
- POM-13 Developing Digital Wallet Services in Indonesia: A Multigeneration Perspective
Arindy and Amalia Suzianti
- POM-14 Conceptual Model of Consumers Purchase Intention Towards Smart Retail: A Literature Review
Muriani Emelda Isharyani, Bertha Maya Sopha and Muh Arif Wibisono
- POM-15 Identifying Usability Risks for Mobile Application
Hotma Antoni Hutahaeon, Rajesri Govindaraju and Iman Sudirman
- POM-16 Establishing Organizational Culture to Prepare Faculty of Engineering of Diponegoro University to Face the Upcoming Higher Education Policy 4.0
Naniek Utami Handayani, Mochamad Agung Wibowo and Muhammad Arman Awwiby
- POM-17 The Use of Response Surface Method to Optimize the Ultrasound-assisted Extraction of Moringa Leaves
Olivia Bunga Pongtuluran and Amalia Suzianti
- POM-18 Effects of Project Foundation, Support, Personnel, and Process on Project Success with Process Flexibility as Moderating Variable
Win Sukardi, Ubud Salim, Ainur Rofiq and Ananda Hussein

CYBER SECURITY AND ARTIFICIAL INTELLIGENCE

- CSA-01 Design of Remote Biometrics Authentication System to Access Public Services from Remote Area
Rully Kusumajaya, Nurdianti Rizki Hapsari, Yuki Istianto, Anto Satriyo Nugroho and Gembong Satrio Wibowanto
- CSA-02 Botnet Detection Using DNS and HTTP Traffic Analysis
Agung Udiyono, Charles Lim and Lukas Lukas
- CSA-03 Mal-TScore: A Threat Score Framework Based on Static and Dynamic Analysis Features
Ali Suwanda, Charles Lim and Lukas Lukas
- CSA-04 Uncovering Malware Traits Using Hybrid Analysis
Reischaga Mohajit, Charles Lim and Yohanes Syailendra Kotualubun
- CSA-05 XT-Pot: eXposing Threat Category of Honeypot-based attacks
Ryandy Djap, Charles Lim and Kalpin Erlangga Silaen
- CSA-06 Prognostics Health Management (PHM) System for Power Transformer Using Kernel Extreme Learning Machine (K-ELM)
Muhammad Abdillah, Teguh Aryo Nugroho, Nita Indriani Pertiwi, Murman Dwi Prasetio, Awan Uji Krismanto, Herlambang Setiadi and Karar Mahmoud
- CSA-07 The Comparison of Some Version of Linear Vector Quantization (LVQ) for Vitamin and Mineral Deficiency Early Detection
Iwan Aang Soenandi and Nina Sevani
- CSA-08 Analysis of Hotspot Data for Drought Clustering Using K-Means Algorithm
Ekki Rizki Ramadhan, Edi Sutoyo, Ahmad Musnansyah and Halda Aditya Belgaman
- CSA-10 Optimization on Malaria Computer Aided Diagnostic System
Yulius Wibisono, Anto Satriyo Nugroho and Maulahikmah Galinium
- CSA-11 A Hybrid of Seasonal Autoregressive Integrated Moving Average (SARIMA) and Decision Tree for Drought Forecasting
Yasnita, Edi Sutoyo and Ahmad Musnansyah

SOFTWARE ENGINEERING

- SEN-01 An Online Catering Marketplace Business Plan: Kunyahku.id
Veronica Natasha, I Eng Kho and Maulahikmah Galinium
- SEN-02 User Experience (UX) Evaluation of Online Marketplace for Beauty Care Services (Case Study: KERENAJA)
Arvan Halim, Kho I Eng and James Purnama
- SEN-03 Business Analysis and Design of Online Marketplace for Beauty Care Services
Victor Saputra, Kho I Eng and James Purnama
- SEN-04 Development of NodeJS based Backend System with Multiple Storefronts for Batik Online Store
George William, Randy Anthony and James Purnama
- SEN-05 Distance-Measurement-Decision-Making Backend System Using NodeJS
Leonardo Theoson, Randy Anthony and James Purnama
- SEN-06 Backend Development of Online Marketplace for Male Beauty Care Services
Ivan Arnoldi Rahardja, Maulahikmah Galinium and Randy Anthony

- SEN-07 Manage Assurance for Continuous Improvement Strategy in Rural Internet Service Case Study
Mohammad Amin Soetomo, Eka Budiarto, Nugroho Wibisono and Marzuki Marzuki

AUTOMATION, MECHATRONICS AND ROBOTICS

- AMR-01 Op-Amp Based LC Oscillator with Minimum Components for Wireless Communications
Dodi Garinto and Ary Syahriar
- AMR-02 Gain Optimization for Cutting Tests on CNC Machine Using the Ballbar Method with CMM Machine Measurements
Muhammad Rangga Hadisiswoyo, Danny Mokhammad Gandana and Nasril
- AMR-03 Thermostat Influence Simulation During Warm-up Period in SI-Engine Cooling System
Elroy Fkp Tarigan, Ary Syahriar and Yohanes Climacus Utama
- AMR-04 Analysis and Simulation of Short Shot Defects in Plastic Injection Molding at Multi Cavities
Eko Ari Wibowo, Ary Syahriar and Agung Kaswadi
- AMR-05 An HiL-Approach for Factory Acceptance Testing of Gravimetric Dosing Systems
Dominik Aufderheide
- AMR-06 An Improved Design of Multiband Patch Antenna at 26 GHz for 5G Mobile
Dichi Syahbana, Suci Rahmatia and Putri Wulandari

LOGISTICS AND SUPPLY CHAIN

- LSC-01 Mapping of Telkom University Roadshow Location Using Geographic Information System
Ramadhani Kurniawan, Amelia Kurniawati and Afrin Fauzya Rizana
- LSC-02 New Product Development with Kano Model to Supports Supply Chain Performance of Jewelry Industry in Indonesia
Jennifer - and Markus Hartono
- LSC-03 Designing Vendor Selection System Using Intuitionistic Fuzzy TOPSIS and Entropy Weighting Method in Oil and Gas Industry
Silmi Kaaffah, Ari Yanuar Ridwan and Nia Novitasari
- LSC-04 Usability Evaluation of “Inventory Information System” Design of Disaster Management in Yogyakarta Province - Indonesia
Naniek Utami Handayani, Wina Dara Kusuma, Diana Puspita Sari, Zainal Fanani Rosyada and Yusuf Widharto
- LSC-05 Demand Forecasting for Drinking Water Products to Reduce Gap Between Estimation and Realization of Demand Using Artificial Neural Network (ANN) Methods in PT. XYZ
Rizka Cahya Syafitri, Ari Yanuar Ridwan and Nia Novitasari
- LSC-06 Prioritizing Criteria for Dwell Time Efficiency in Port Logistic Process
Oki Sunardi and Yenny Yunita Somakila
- LSC-07 Laundry System Optimization on an In-flight Service Company
Nada Nisrina Amri, Tanika Dewi Sofianti and Adhiguna Mahendra

- LSC-08 Optimization Model Supply Chain Network Design Determine Location-
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Suryati Suryati, Wahyudi Sutopo and Muhammad Hisjam
- LSC-09 Determination of the Charging Station Facility Location-Allocation Model
by Considering the Closest Distance: Case Study in Solo City
Bekti Nugrahadi, Wahyudi Sutopo and Muhammad Hisjam
- LSC-10 Designing Strategies for Inbound Logistics Performance Indicator
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- LSC-11 Designing an Optimization Model to Reduce Logistics Outbound Costs in
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Syahla Putri and Inaki Maulida Hakim
- LSC-12 Supply Chain Improvement in a Local Toy Manufacturing Company by a
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Yeremia Kevin Ongkowijoyo, Aditya Tirta Pratama and Tanika Dewi Sofianti
- LSC-13 Antibiotic Inventory Policy Design for Minimizing Total Inventory Costs in
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SUSTAINABLE ENERGY AND ENVIRONMENT

- SEE-01 Beyond Socio-Technical Innovation: Lesson Learned from Jatropa Fuel
Development in Indonesia
Yuti Ariani Fatimah
- SEE-02 Bioethanol Production from Oil Palm Fronds Biomass Waste Review
Nathalie Gloria, Evita Herawati Legowo and Irvan Setiadi Kartawiria
- SEE-03 Simple Vertical Axis Wind Turbine for Low Wind Speed
Dena Hendriana, Eka Budiarto and Arko Djajadi
- SEE-04 Experimental Testbed for Solar PV-Battery Hybrid System
Dena Hendriana, Erikson Sinaga and Arko Djajadi
- SEE-05 Effect of Zn, Cu and Mg doping on the structural characteristic of
LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂ (NMC622)
*Ahmad Jihad, Affiano Akbar Nur Pratama, Cornelius Satria Yudha, Mintarsih
Rahmawati, Hendri Widiyandari and Agus Purwanto*
- SEE-06 Fabrication of High Performance 18650-Type NCA/Graphite Cylindrical
Cells
*Hafid Khusyaeri, Cornelius Satria Yudha, Mintarsih Rahmawati, Dewi Pratiwi,
Endah Retno Dyartanti and Agus Purwanto*
- SEE-07 Heat Treatment Strategy to Improve the Structural Characteristic and
Electrochemical Performance of LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂ Cathode Material
*Reynaldi Virgiawan Rifki Pradana, Valiana Mugi Rahayu, Cornelius Satria
Yudha, Mintarsih Rahmawati, Adrian Nur and Agus Purwanto*
- SEE-08 Synthesis of Zinc Oxide (ZnO) from Zinc Based-Fertilizer as Potential and
Low-Cost Anode Material for Lithium Ion Batteries
*Cornelius Satria Yudha, Mintarsih Rahmawati, Arif Jumari, Anjas Prasetya
Hutama and Agus Purwanto*

- SEE-09 Strategic Energy Management Model in A Cement Plant in Indonesia
Agustinus Hariadidp and Cokorda Prapti Mahandari
- SEE-10 Analysis of Gravitational Vortex Turbine Performance
Dede Lia Zariatn, Tri Murniati and Dwi Antoro
- SEE-11 Comparative Analysis of Innovation Process in Batik Wastewater
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- SEE-12 Determination of The Location Allocation for Recycling and Collection
Centers of Batik Wastewater Treatment Equipment
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- SEE-13 Study on The Potential Application of Water Hyacinth as an Organic
Corrosion Inhibitor
*Daniel Pradipta Juniardi, Diah Indriani Widiputri and Irvan Setiadi
Kartawiria*