

## PROGRAM RUNDOWN

### DAY 1 – November 6, 2024

Time (WIB)	Description
07.30- 08.30	Registration
08.30 – 09.00	Opening Hotel Safety Induction Indonesian National Anthem Video Profile of Universitas Pertamina
09.00-09.25	Welcoming Speech <ul style="list-style-type: none"> <li>▪ Chairperson of ICOSEID 2024 Dr. Eng. Sri Hastuty (Universitas Pertamina)</li> <li>▪ Rector of Universitas Pertamina - Prof. Dr. Ir. Wawan Gunawan A. Kadir, MS</li> </ul>
09.25 – 09.30	Official Opening Ceremony
09.30– 09.40	Art Performance
09.40 – 09.50	Photo Session
09.50 – 10.00	Coffee Break
10.00-10.15	Speech by the President Director of Pertamina Foundation Agus Mashud S. Asngari
10.15-11.00	Keynote Speech Prof. Shuo-Yan Chou (National University of Science and Technology, Taiwan)
11.00 – 11.45	Keynote Speech Prof. Iman Kartolaksiono Reksowardojo (Universitas Pertamina, Indonesia)
11.45-12.00	Appreciation for Keynote Speakers and Photo Session
12.00 - 13.30	Lunch Break
13.30 – 16.00	Conference Parallel Session (I)

## DAY 2 - November 7, 2024

Time (WIB)	Description
07.30 - 08.15	Registration
08.15 - 08.30	Opening by MC
08.30 - 09.15	Keynote Speech Dr. Junjuda Unruangsri (Chulalongkorn University, Thailand)
09.15 - 10.00	Keynote Speech Oki Muraza, Ph.D (Senior Vice President, Research & Technology Innovation, PT. Pertamina (Persero))
10.00 - 10.15	Appreciation for Keynote Speakers, Photo Session
10.15 - 10.30	Coffee break
10.30 - 11.30	Panel Discussion: Success Story of Green Chemistry Implementation Ecolab and GreenLabs (Industrial Perspective)
11.30 - 11.45	Appreciation for Keynote Speakers, Photo Session
11.45 - 12.00	Technical Speech Computer-Aided for Research and Development CADIT
12.00 - 13.30	Lunch Break
13.30 - 16.30	Conference Parallel Session (II)
16.30 - 17.00	Coffee Break
17.00 - 17.30	Appreciation Ceremony Announcement of Best Presenters and Best Papers Closing Ceremony

## Parallel Session Schedule (Offline) – Day 1 (November 6<sup>th</sup>, 2024)

Sub-Theme: Sustainable Environment, City, and Industry			
Moderator: Dr. Eng. Mega Mutiara Sari			
Room: Papandayan			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.50	72	<b>Invited Speaker:</b> The Utilization of Solar Pumping For Pressurized Irrigation In Dryland Farming Estate of Upland Rice In Tulang Bawang Barat	Wahyu Gendam Prakoso
13.50 - 14.10	40	<b>Invited Speaker:</b> Life Cycle Sustainability Assessment toward Eco-Industrial Park Development of Jababeka Industrial Estate	Yosef Barita Sar Manik, Ph.D.
14.10 - 14.25	29	Transnational Education Facility as Engines of Sustainable Development in Jababeka Industrial City	Selly Veronica
14.25 - 14.40	58	Ergonomic Innovations in Last-Mile Delivery: The Case for Electric Cargo Bikes in Urban Mobility	Ismail Alif Siregar
14.40 – 14.55	62	The challenge of Integrating Mobile Scavengers into the Formal Sector in South Tangerang, Indonesia	Ruby Silica Putri
14.55 - 15.10	80	Oil Spill Detection to Protect the Marine Ecosystem In Karawang Waters	Mohamad Mahfudz
15.10 - 15.25		Coffee break	
15.25 - 15.40	87	Green Practices in Business: A Systematic Review in Enhancing Environmental and Economic Sustainability	Ronny Trian Surbakti
15.40 – 15.55	89	A review of Integrating Sustainability into Project Portfolio Governance across Organization in Oil Refinery Industry at VUCA Environment	Ridha Satria
15.55 - 16.10	95	Understanding the Role of Environmental Concern on Solar Photovoltaic Adoption: A Systematic Review	Nanang Kurniawan
16.10 - 16.25	124	System Dynamic Analysis Of GRDP In Social Activity Sector	Theodorik Rizal Manik

### Parallel Session Schedule (Offline) – Day 1 (November 6<sup>th</sup>, 2024)

Sub-Theme: Sustainable Logistic & Supply Chain Management			
Moderator: Yelita A. Iskandar, M.T.			
Room: Galunggung			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.45	46	Implementing MRP (Material Requirement Planning) for managing raw material inventory in a plastic blown film company (Case Study: PT ABC)	R B Seno Wulung
13.45 - 14.00	48	Dynamic System Modeling of Sustainability in Supply Chain Management of Plasma and Inti Palm Oil Plantations	Nur Afni A Kutanga
14.00 - 14.15	50	Modelling of Refrigerated Container Loading Problem for Managing Physical Internet Container	Zara Safira Ramadhani
14.15 - 14.30	76	Transportation and Distribution of Ammunition and Explosives in the Loading and Unloading Process of Indonesian Navy Warships (KRI) at Ammunition Storage Depots: Improving Safety Risk Strategies	NUNIK ENDAH SULISTYAWATI
14.30 - 14.45	86	Internet of Things (IoT) Implementation in Agricultural Supply Chain: A Literature Review and Research Agenda	Hanif Zaidan Sinaga
14.45 - 15.00	96	Demand Characteristics-Based Inventory Management: Spare Part Control Policy for Aging Rotating Equipment Case Study: Gas Compressor and Gas Engine in State-Owned Oil and Gas Company	Marthen Sarungngu
15.00 - 15.15		Coffee Break	
15.15 - 15.30	128	Cluster First Route Second Approach for Fuel Distribution in Central Surabaya Area	M Sandy Nur Hanifa Syifa
15.30 - 15.45	139	Digitalization of Asset Health Management for Oil-Filled Transformer in LNG Plant (Study Case: Badak LNG)	Yoga Dwi Utomo
15.45 - 16.00	140	Sensitivity analysis for the value chain of some potential small-scale LNG cases in Indonesia	M. Hilman Nasrun
16.00 - 16.15	33	The Impact of Lean Tools and Waste Analysis on The Improvement of Process Cycle Efficiency and Manufacturing Lead Time of Pipe Sleeve Fabrication: A Case Study	(Mohamad Fajar Natawijaya)

### Parallel Session Schedule (Offline) – Day 1 (November 6<sup>th</sup>, 2024)

Sub-Theme: Automation and Diagnostics for Enhanced Industrial Efficiency			
Moderator: Dr. Arie Sukma Jaya, S.T., M.Eng., IPM.			
Room: Malabar			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.45	11	A Reliable Approach for Batik Pattern Classification using Vision Transformer (ViT) Model	Iksan Bukhori
13.45 - 14.00	19	Identification Of Cavitation In Centrifugal Pump Using Vibration Analysis Method In Hydro Cracking Complex (Hcc) Area	Dimas Arya Dhipa
14.00 - 14.15	20	Resolving High Vibration Issues in Centrifugal Pumps: A Case Study in Vibration Analysis	M. Fadillah Jonia Putra
14.15 - 14.30	47	Diagnosing Induction Motor Fault Based on ReliefF Feature Selection Algorithm and Support Vector Machine Model	Felly Anta
14.30 - 14.45	49	Combination of Discriminant Analysis and Minimum Redundancy Maximum Relevance for Induction Motor Fault Diagnosis Using Stator Current Signals	Kurniawan Dwi Yulianto
14.45 - 15.00	57	Sloshing and Stress Analysis of an API 620 Tank Under Seismic Excitation Based on SNI 03-1726-2019: Numerical Evaluation of Code Provisions	Aldarifa Putri Nabilah
15.00 - 15.15		Coffee Break	
15.15 - 15.30	59	Mobile Robot Selection Using AHP MOORA and Simulation Modelling for Material Handling Automation	Athina Ratum
15.30 - 15.45	73	Transformer-LSTM Deep Learning Model for Winding Temperature Prediction in Induction Motors in the Oil and Gas Industry: Enhancing Maintenance Strategies	Joko Supriyono
15.45 - 16.00	92	Anomaly Detection for Carbon Capture Storage Facility using Markov Switching Models	Mochamad Arief Hidayat
16.00 - 16.15	94	Design Implementation of an Automated Guided Vehicle (AGV) System using Arduino Microcontroller and Radio Frequency (RF) Technology	Joni Welman Simatupang and Muhammad Rahman

## Parallel Session Schedule (Online) – Day 1 (November 6<sup>th</sup>, 2024)

Sub-Theme: Advancements in Energy and Materials			
Moderator: Agung Nugroho, Ph.D			
Online Room - Kamojang			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.15 - 13.30	Signing in and online room allocation		
13.30 - 13.50	13	<b>Invited Speaker:</b> Exploring the Impact of Pressing Techniques on Mycelium-based Biocomposites	Koay Mei Hye
13.50 - 14.05	67	Characterization and Performance Study of PVDF-Graphene Oxide Membranes Fabricated Using Highspeed Homogenizer	Arifina Febriasari
14.05 - 14.20	68	The Effect of PETE, HDPE, and LDPE Type of Plastic Waste as Additive on Compression Strength and Temperature Resistance of Architectural Lightweight Bricks	Apif Miftahul Hajji
14.20 - 14.35	118	Synthesis of Activated Carbon Derived from Banana Peel for Application as a Catalyst Support in Fuel Cells	Adhe Paramita
14.35 - 14.50	120	Effects of liquid Fraction Recirculation during Microwave-Assisted Hydrothermal Carbonization on Properties of Coffee Parchment	RAUDAH
14.50 - 15.05	136	Performance of Dye-Sensitized Solar Cell (DSSC) Based on Black Glutinous Rice Extract and Banana Stem Activated Carbon at Various Dye pH	Viqry Pramananda
15.05 - 15.20	137	Indonesia's Energy Security Projection Towards 2060 Net Zero Emission Target	V. Tri Frebrina Harisetyawan
15.20 - 15.35	142	A New Approach in Corrosion Study Using DFT and Monte Carlo Simulation to Investigate the Synergistic Effects Natural Green Inhibitor Citrus Sinensis and Synthetic Benzotriazole on Low Carbon Steel	Abdul Mudjib Sulaiman Wahid
15.35 - 15.50	144	Effect of Extruder Temperature and Composition of PP, ABS, and Fiberglass on physical properties of Composite of 3d printing filament	Muhammad Farhan
15.50 - 16.05	154	Innovative Advanced Material Solutions for Integrated Safety Helmets in Mining	Nina Tania Lestari
16.05 - 16.20	85	Sustainable Biochar Production from Palm Kernel Shell through Slow Pyrolysis: A Life Cycle Assessment of its application as an Eco-Friendly Fertilizer	Muhamad Rhadia Rahman

## Parallel Session Schedule (Online) – Day 1 (November 6<sup>th</sup>, 2024)

Sub-Theme: Optimized Engineering Solutions for Sustainable Industrial Practices			
Moderator: Khusnun Widiyati, S.T., M.Eng., Ph.D.			
Online Room - Halimun			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.15 - 13.30	Signing in and online room allocation		
13.30 - 13.45	4	Design Optimization of Cold Air Intake (CAI) System with Butterfly Valve for Enhance Engine Performance and Efficiency: A Mitsubishi Lancer Evo VIII Study Addressing SDG 9.4 and 12	Intan Mahardika
13.45 - 14.00	10	Optimized Design for the Flaps Folder Fabrication of Carton Sealer Machine by Automation	Bayu Ardiansyah
14.00 - 14.15	23	Multifactorial contributors to the effectiveness of a mobile solar dryer	SITI NUR AMALINA MOHD HALIDI
14.15 - 14.30	24	Enhancing the Biological Efficiency of White Oyster Mushrooms Through Optimization of Light-Emitting Diodes using Response Surface Methodology	Hamid Yusoff
14.30 - 14.45	25	Thermodynamic Analysis of Steam Turbine Performance Before and After Overhaul Process at PT Geo Dipa Energi (PERSERO) Unit Patuha	Frisca Lovitasari
14.45 - 15.00	27	Prolonged Drying of Sponge: A Comparative Study of Natural Convection Solar Dryer and Open Sun Drying Techniques	HALIM BIN GHAFAR
15.00 - 15.15	110	Herbal Processing Machine Analysis with DEM Approach to Optimizing Mixing Process	Prof. Dr. Any Sutiadiningsih, M.Si.
15.15 - 15.30	112	Numerical Analysis of Soybean Grinding Machine to Evaluate Contact Behavior Loading Material Among Hooper and Roller Grinding	Susi Tri Umaroh, S.Pd., M.Pd.
15.30 - 15.45	113	Numerical Analysis Of The Effect Of Water Cooling Method On Temperature Distribution And Efficiency Of Photovoltaic	Mega Widiyas Putri
15.45 - 16.00	116	Airflow Inspection to Alacrity Device to Optimize Natural Cooling Reducing Heat Inside the Hardware	Dr. Nur Ahmad Arief, S.Pd., M.Pd.
16.00 - 16.15	60	Systematic Literature Review of Ice Slurry Compounds: Viscosity Characteristics, Heat Transfer and Applications	Muktar Sinaga
16.15 - 16.30	61	Planning of Power Capacity, Low Voltage Network and Electrical Installation in the Production of Refuse Derived Fuel Processing	Dwi Listiawati

### Parallel Session Schedule (Offline) – Day 2 (November 7<sup>th</sup>, 2024)

Sub-Theme: Integrative Solutions for Sustainable Energy and Infrastructure Resilience			
Moderator: Dr. Nonni Soraya Sambudi, M.Sc.			
Room: Papandayan			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.45	35	The Influence of Different Initial Relative Densities and Ambient Temperature Ranges on MICP Treatment Using Direct-Mixing Injection Method	Aulia Afifatuz Zulfah
13.45 - 14.00	36	Experimental Analysis of Bio-cementation Effectiveness on Silica Sand with Varying Initial Water Content	Sifra Dovanka Trista Wewengkang
14.00 - 14.15	78	Dynamic Simulation of Slope Stability in the Zero Point Area of Ciliwung	Helmi SR Pamungkas
14.15 - 14.30	130	Analysis of Road Deterioration on National Road 12 Kemang-Bogor Using Bina Marga and Dirgolaksono & Mochtar Methods to Determine Appropriate Road Improvements	Adita AU Utami
14.30 - 14.45	135	Assessment of Offshore Pipeline Integrity Under Anchor-Induced Dents using Finite Element Modeling	Arianta
14.45 - 15.00		Coffee Break	
15.00 - 15.15	138	Development of a Conceptual Framework for 'BEST: Bridge E-Maintenance Smart Tools' – An Integrated System Combining Knowledge Management and Digital Twin Technology	Naufal Budi Laksono
15.15 - 15.30	155	Forensic Engineering For Offshore Pipeline Accident Investigation	Ahmad Taufik, M.Eng, Ph.D, CMRP
15.30 - 15.45	82	Assessing the Sustainability Status and Sustainable Settlement Development in Periurban of Jabodetabek Metropolitan Area	Janthy T Hidayat



### Parallel Session Schedule (Offline) – Day 2 (November 7<sup>th</sup>, 2024)

Sub-Theme: Engineering Innovations: From Power Systems to Human-Centric Design			
Moderator: Dr. Fayza Yulia, S.T., M.T.			
Room: Galunggung			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.45	8	Powertrain and Integration Analysis of a Small Converted Electric MPV	Ghany Heryana
13.45 - 14.00	15	Static and Dynamic Stability Performance in a Two-Legged Wheeled Self-Balancing Robot Platform	Fathan Maulana Akbar
14.00 - 14.15	16	Design Of HVAC System With Analysis Of Thermal Cooling Load And Air Duct Size In Theater Building	Putu Mega Dana
14.15 - 14.30	18	Analysis of Steam Turbine Generator Overhaul for Efficiency Enhancement at The Power Plant Center of Refinery Unit	Nur Annisa Bahar
14.30 - 14.45	22	Strategic Innovation: Exploring Digital Transformation and Ambidexterity in the Automotive Components Industry	Mohamad Zaki Azizi
14.45 - 15.00		Coffee Break	
15.00 - 15.15	39	Efficiency of Buoyancy Force Generation in a Pump-Based Buoyancy Engine for a Small-Scale Underwater Glider	Yusuf Arindyatama Putra
15.15 - 15.30	61	Planning of Power Capacity, Low Voltage Network and Electrical Installation in the Production of Refuse Derived Fuel Processing	Dwi Listiawati
15.30 - 15.45	74	Design of an Ergonomic Cooking Table Based on REBA and RULA Analysis to Reduce the Risk of Musculoskeletal Injuries for Operators at PT XYZ	Luq Luq Fathyah Salim
15.45 - 16.00	79	Design and Implementation of Electrical Usage Monitoring Device Base on Internet of Things in Industry	Mochamad Yunus

### Parallel Session Schedule (Offline) – Day 2 (November 7<sup>th</sup>, 2024)

Sub-Theme: Material and Green Process Engineering			
Moderator: Agung Nugroho, Ph.D.			
Room: Malabar			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.30 - 13.45	37	Simulation of Hydrogen Gas Production from Oil Palm Empty Fruit Bunch (OPEFB) Combined with Carbon Capture Based on Aspen Plus Software	Albie Yusuf Gautama
13.45 - 14.00	100	Optimizing Co-firing Ratio of RDF MSW and Coal in a Fluidized Bed Reactor	I Made Agus MA Putrawan
14.00 - 14.15	101	Characterization of Municipal Solid Waste as an Energy Source in the Gasification Process	I Made Agus MA Putrawan
14.15 - 14.30	129	Outage Management to enhance plant performance and improve reliability of Coal-Fired Power Plants	Abdullah Agus Salim Chamid
14.30 - 14.45	145	Extraction of Gelatin from Mackerel Bone ( <i>Restrellinger brachysoma</i> )	Eduardus Budi Nursanto
14.45 - 15.00		Coffee Break	
15.00 - 15.15	146	Mechanical Properties of Biocomposites from Epoxy Resin Reinforced with Sisal Fiber and Teakwood Sawdust	Dr. Yose Fachmi Buys
15.15 - 15.30	147	Mechanical Properties of Water Hyacinth Fiber and Teakwood Sawdust Reinforced Epoxy Biocomposites	Dr. Yose Fachmi Buys
15.30 - 15.45	108	Electrochemical Enhancement of Pitting Corrosion Resistance of Stainless Steel 201 using Citric Acid	Sri Hastuty
15.45 - 16.00	123	Strength Analysis and Remaining Life Estimation of Storage Tank based on API 650 & 653	Purwo Kadarno

## Parallel Session Schedule (Online) – Day 2 (November 7<sup>th</sup>, 2024)

Sub-Theme: Sustainable Practices in Construction and Disaster Risk Management			
Moderator: Nurulbaiti Listyendah Zahra, S.T., M.T.			
Online Room – Kamojang			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.15 - 13.30	Signing in and online room allocation		
13.30 - 13.45	44	The effect of using ground granulated blast furnace slag (GGBFS) as a partial substitute for Portland cement in fiber concrete	AMALIA
13.45 - 14.00	54	Crashworthiness Analysis of High-Speed Train Trailer Structure in Indonesia	Muh Luqman Khakim
14.00 - 14.15	63	Effect of Storage Time on Asphalt Modified by KKK60 Pre-vulcanized Latex	Derry Wiliyanda Nasution
14.15 - 14.30	69	The Application of Base Isolation System as Earthquake Resisting Technology on Mulya Medika Hospital, Samarinda	Aditya Yudha Pratama
14.30 - 14.45	88	Analysis of Flood Vulnerability in Medan City Using the Analytical Hierarchy Process (AHP) Based on Geographic Information Systems (GIS)	Syarvina
14.45 - 15.00	106	Analysis of Drought Hazards in the Lake Toba Area	Robi Arianta Sembiring
15.00 - 15.15	156	Evaluation of Airflow and Thermal Comfort of an Automated Rapid Transit (ART) Through Predicted Mean Vote (PMV) and Predicted Percentage Dissatisfied (PPD)	Aina Balqis Azrin
15.15 - 15.30	121	Comparison Of Peak Flood Discharge At Automatic Water Level Recorder (Awlr) Salamsari Catchment	Pradipta Nandi Wardhana
15.30 - 15.45	51	Analyzing the Potential and Feasibility of Tidal Energy in the Capalulu Strait: Quantitative Methods and Energy Availability Analysis	Krismaya Dwi Hardianti
15.45 - 16.00	77	Identify the Importance of Renewable Tidal Power Generations and Challenges	Krismaya Dwi Hardianti

## Parallel Session Schedule (Online) – Day 2 (November 7<sup>th</sup>, 2024)

Sub-Theme: AI, Modeling, and Ergonomics in Practical Applications			
Moderator: Resista Vikaliana, S.Si., MM., Ph.D.			
Online Room - Halimun			
Time (GMT+7)	Abstract ID	Paper Title	Presenter
13.15 - 13.30		Signing in and online room allocation	
13.30 - 13.45	7	Human-Centered Design for AI Service Chatbots for Kampung Batik Cibuluh Website	Yusraini Muharni
13.45 - 14.00	93	Study on Suspension System Analysis of Electric Vehicles for Disabilities Through a FEM Modelling Approach	Wahyu Dwi Kurniawan
14.00 - 14.15	99	Optimizing Raw Chicken Delivery for a Fried Chicken Business Using K-Means Clustering and Heuristic Approaches to Solve the Vehicle Routing Problem	Said Muhammad Baisa
14.15 - 14.30	103	A Metaheuristic for the Heterogeneous Fixed Fleet Vehicle Routing Problem	Arif Imran
14.30 - 14.45	105	Modelling Study Of MUSAE Trainer with Parametric Modeling Approach and RULA Analysis to Investigate Human Ergonomic	Wijono Wijono
14.45 - 15.00	111	Technology Dissemination for Cooperative Economic Empowerment: A Case Study of 3P Machine Implementation in Sidoarjo	Andre Dwijanto Witjaksono
15.00 - 15.15	119	Human Posture Assessment and Safety Overview Related to Sansak Digital Based Simulation Modelling	Muamar Zainul Arif
15.15 - 15.30	132	Artificial Intelligence as a Productivity Tool for Human Resource Competency Development: A Systematic Literature Review	Risa Aisyah