



# ICSEEA 2014 Program

## Bandung, Indonesia, 14 – 15 October 2014

### 1<sup>st</sup> Day, Tuesday, 14 October 2014

Time	Session
07:30-09:00	1 <sup>st</sup> day registration
<b>Opening Ceremony</b>	
08:45-09:00	Inaugural Session
09:00-09:10	Greeting from Chairman of ICSEEA 2014
09:10-09:25	Greeting and conference opening from Chairman of LIPI
<b>Plenary Program I (Presentation from Keynote Speakers)</b>	
09:25-09:50	<b>Prof. Freddy Permana Zen</b> <i>Expert Staff for Energy and Advanced Material and Senior Advisor to The Indonesian Minister of Research and Technology</i>
09:50-10:00	Morning tea and poster viewing
<b>Plenary Program II (Presentation from Keynote Speakers)</b>	
10:00-12:30	<b>1. Prof. David Greenwood</b> Jaguar Land Rover Chair, Advanced Propulsion Systems, WMG, University of Warwick, United Kingdom <i>"Green Mobility and the Technology Challenges to Deliver it"</i>
	<b>2. Prof. Ocktaeck Lim</b> School of Mechanical and Automotive Engineering, University of Ulsan, Rep. of Korea <i>"The Promotion Policy of Clean and Low-Carbon Vehicle in Korea"</i>
	<b>3. Dr. Larissa Lorenz</b> Technology and innovation analyst, Bauhaus Luftfahrte.V., Munich, Germany <i>"Enablers for Sustainable Growth in Future Transport Systems"</i>
	<b>4. Ir. Tanudji D</b> VP Operation & Project Management Gas Directorate, PT Pertamina (Persero), Indonesia <i>"Gas for Green Mobility: Continuous Contribution in Providing New and Renewable Energy for Transportation in Indonesia"</i>
	<b>5. Ir. Eko Yuniarto, MM.</b> General Manager UBP Kamojang, PT Indonesia Power, Indonesia <i>"Geothermal as sustainable energy" *</i>
12:30-13:30	Lunch and poster viewing
<b>Parallel Program I</b>	
13:30-15:00	Oral Presentation Session I – 6 paper presentations in each of parallel room
15:00-15:30	Afternoon tea
<b>Parallel Program II</b>	
15:30-17:00	Oral Presentation Session II – 6 paper presentations in each of parallel room
17:00-17:30	Closing Ceremony



## ICSEEA 2014 Program

Bandung, Indonesia, 14 – 15 October 2014

### 2<sup>nd</sup> Day, Wednesday, 15 October 2014

Time	Session
06:30-07:30	2 <sup>nd</sup> day registration
Field Trip	
07:30-12:00	Visit to Sustainable Energy Power Plant – UBP Kamojang, Garut, West Java, Indonesia
12:00-13:00	Lunch
13:00-15:30	Visit to tourism sites
15:30-16:00	Closing and announcements



## Oral Presentation Session

Tuesday, 14 October 2014

Time	Room A	Room B	Room C	Room D
<b>13:30 – 15:00</b>	<b>Oral Session I</b>			
	IC14-101	IC14-501	IC14-552	IC14-601
	IC14-102	IC14-502	IC14-553	IC14-602
	IC14-106	IC14-504	IC14-554	IC14-603
	IC14-112	IC14-505	IC14-555	IC14-605
	IC14-201	IC14-506	IC14-557	IC14-652
	IC14-203	IC14-509	IC14-558	IC14-703

Time	<b>Oral Session II</b>			
<b>15:30 – 17:00</b>				
	IC14-204	IC14-510	IC14-559	IC14-751
	IC14-205	IC14-511	IC14-560	IC14-852
	IC14-206	IC14-515	IC14-561	IC14-853
	IC14-301	IC14-516	IC14-562	IC14-856
	IC14-303	IC14-517	IC14-564	IC14-901
	IC14-305	IC14-851	IC14-607	IC14-902

- Oral Presentation time allocation
  - o 1 minute preparation and moderator's opening
  - o 10 minutes oral presentation
  - o 3 minutes question and answer
  - o 1 minute transition time
- Windows based computers and LCD projectors are provided for Oral Session.
- Presenters are required to give softcopy of their presentations to the organizing committee before the Session begins.



## Poster Presentation Session

Tuesday, 14 October 2014

Time	Poster Area "Ramayana Ballroom"
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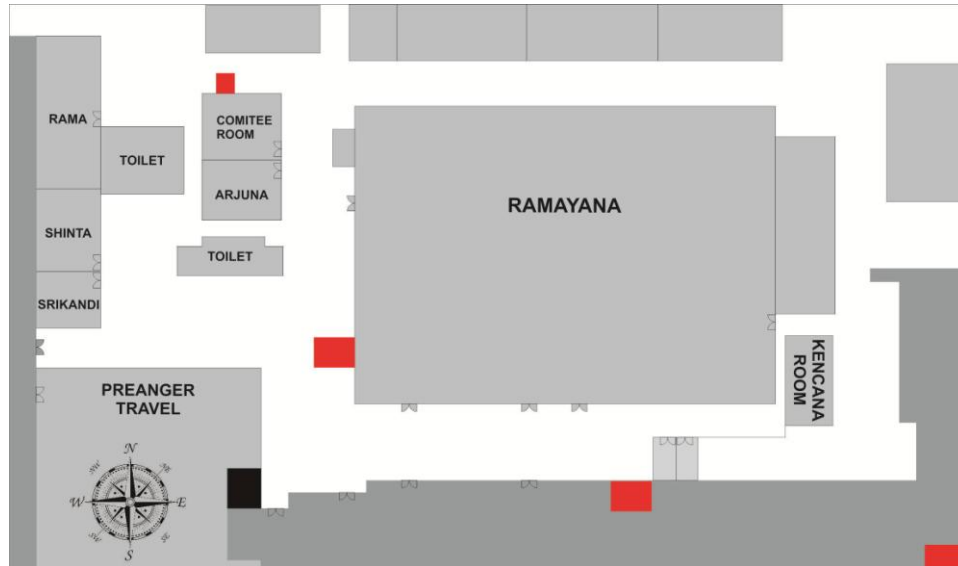
09:50 – 10:00	Poster session I			
	IC14-103	IC14-207	IC14-513	IC14-606
	IC14-104	IC14-302	IC14-514	IC14-651
	IC14-105	IC14-304	IC14-551	IC14-701
	IC14-107	IC14-401	IC14-556	IC14-702
	IC14-108	IC14-402	IC14-563	IC14-704
	IC14-109	IC14-403	IC14-565	IC14-855
	IC14-110	IC14-503	IC14-566	IC14-857
	IC14-111	IC14-507	IC14-567	IC14-858
	IC14-113	IC14-508	IC14-568	
	IC14-202	IC14-512	IC14-604	

13:00 – 13:30	Poster session II
	Poster list are the same as Poster Session I

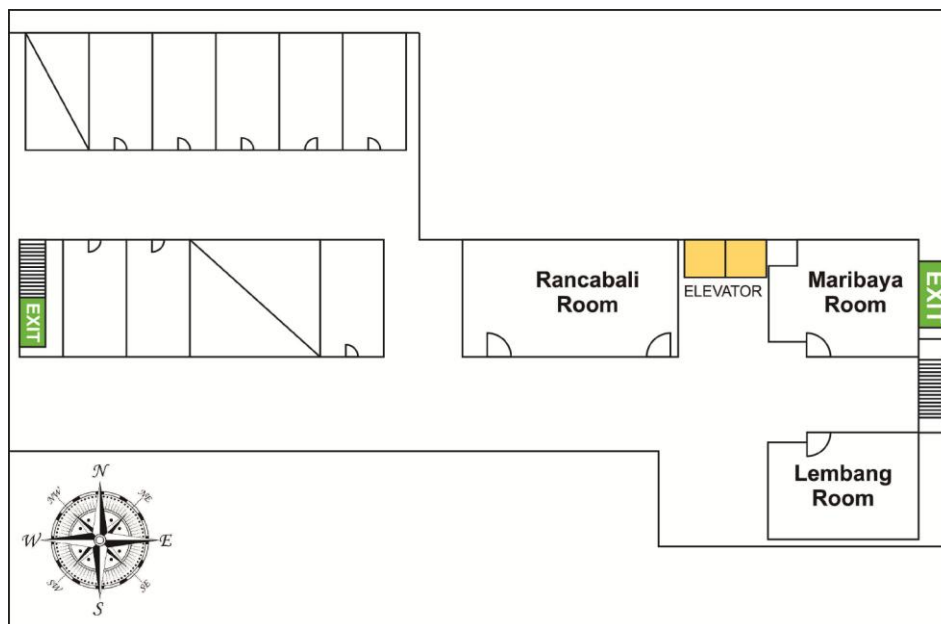
- Space of 1m x 2m is provided for each A1 sized poster.
- Presenters are required to set the posters in designated area before the first session begins and remove them after the last session ends.
- Presenters are suggested to be available next to their posters during the scheduled poster sessions.

## Floor Plan

### 1<sup>st</sup> Floor



### 3<sup>rd</sup> Floor



- Final location for each of oral presentation room A, B, C, and D will be announced at the conference event.
- For further information, please contact ICSEEA secretariat desk located in Khrisna Room at the 1st Floor, south to the Ramayana Ballrom.

## Paper Description

Code	Description
IC14-101	<p><b>Electric Bike Based on Hydrogen Fuel Cell System [SPFC- 400 W]</b></p> <p>Imam Djunaedi <sup>a</sup>, Haifa Wahyu <sup>a</sup></p> <p><sup>a</sup>Research Centre for Physics, Indonesian Institute of Sciences, IDN</p>
IC14-102	<p><b>Wireless Power Transmission for EV Battery Charging</b></p> <p>Ganesha Tri Chandrasa <sup>a</sup>, Soni S Wirawan <sup>a</sup>, Oo A Rosyid <sup>a</sup>, Nelly Malik L <sup>a</sup>, Imam Suhaerie <sup>a</sup></p> <p><sup>a</sup>Balai Besar Teknologi Energi (B2TE), BPP Teknologi, Gedung Kluster Energi, IDN</p>
IC14-103	<p><b>Design of CAN Bus for Research Applications Purpose Hybrid Electric Vehicle using ARM Microcontroller</b></p> <p>Kristian Ismail <sup>a</sup>, Aam Muharam <sup>a</sup>, Mulia Pratama <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-104	<p><b>Vehicle Dynamics for Improvement of Accuracy Firing a Shot in the Weapon Arm Using a Half Car Model</b></p> <p>Aditya Sukma Nugraha <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-105	<p><b>Controlling of Unmanned Ground Vehicle (UGV) via 4 Channel RC</b></p> <p>Hendri Maja Saputra <sup>a</sup>, Midriem Mirdanies <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-106	<p><b>Solar Powered Public Electric Vehicle Charging Station</b></p> <p>Yohanes Sumaryo <sup>a</sup></p> <p><sup>a</sup>Depok, IDN</p>
IC14-107	<p><b>Electric Vehicle Mobile Charging Station Dispatch Algorithm</b></p> <p>Tinton Dwi Atmaja <sup>a</sup>, Midriem Mirdanies <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-108	<p><b>A Novel Development of Level 2 Smart Charging Station for Hybrid Electric Vehicle</b></p> <p>Aam Muharam <sup>a</sup>, Sunarto Kaleg <sup>a</sup>, Abdul Hapid <sup>a</sup>, Muhammad Redho Kurnia <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-109	<p><b>Calculation Geometry and Kinematic to Design Steering Axis to Angle Turn of the Electric Golf Car</b></p> <p>Muhammad Khristamto <sup>a</sup>, Achmad Praptidjanto <sup>a</sup>, Sunarto Kaleg <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-110	<p><b>Electric Vehicle Conversion System Based on Performance Requirements</b></p> <p>Sunarto Kaleg <sup>a</sup>, Abdul Hapid <sup>a</sup>, M. Redho Kurnia <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>



Code	Description
IC14-111	<p><b>Practical Application of Electric Vehicle Retrofitting: Toyota Kijang 1996 Case Study</b></p> <p>Sunarto Kaleg<sup>a</sup>, Naili Huda<sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-112	<p><b>Analysis of Range Extender Electric Vehicle Performance Using Vehicle Simulator</b></p> <p>Bambang Wahono<sup>a</sup>, Widodo Budi Santoso<sup>a</sup>, Arifin Nur<sup>a</sup>, Amin<sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-113	<p><b>Energy Storage System using Battery and Ultracapacitor on Mobile Charging Station for EV</b></p> <p>Tinton Dwi Atmaja<sup>a</sup>, Amin<sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-201	<p><b>Compressed Natural Gas (CNG) Into Spark Ignition (SI) Engine</b></p> <p>Musthafah M.T.<sup>a</sup>, M.S. Ali<sup>a</sup>, M.A. Salim<sup>a</sup>, Rosli A. Bakar<sup>b</sup>, A.M. Fudhail<sup>a</sup>, M.Z. Hassan<sup>c</sup>, Abdul Muhaimin M.S.<sup>a</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka, MYS <sup>b</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS <sup>c</sup>Faculty of Engineering Technology, Universiti Teknikal Malaysia Melaka, MYS</p>
IC14-202	<p><b>An Experimental Study on the Effects of Water Heater on the Performance and Emission Characteristics of SI Engine Fuelled with CNG</b></p> <p>Yanunadri Putrasari<sup>a</sup>, Achmad Praptijanto<sup>a</sup>, Arifin Nur<sup>a</sup>, Bambang Wahono<sup>a</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN</p>
IC14-203	<p><b>Electrostatic Precipitator Device for Reduce of Diesel Engine Particulate Matter</b></p> <p>Agung Sudrajad<sup>a</sup>, Ahmad Fitri Yusof<sup>b</sup></p> <p><sup>a</sup>Faculty of Engineering, Sultan Ageng Tirtayasa, IDN <sup>b</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS</p>
IC14-204	<p><b>Design of Single Acting Pulley Actuator (SAPA) Continuously Variable Transmission (CVT)</b></p> <p>Nur Cholish<sup>a</sup>, Sugeng Ariyono<sup>b</sup>, Gigih Priyandoko<sup>c</sup></p> <p><sup>a</sup>National Institut of Science &amp; Technology (ISTN), IDN <sup>b</sup>Semarang State Polytechnic (Polines), IDN <sup>c</sup>Universiti Malaysia Pahang, MYS</p>
IC14-205	<p><b>A Numerical Investigation about the EGR Effect Under the Condition of Boost Pressure on HCCI Autoignition</b></p> <p>Chunghwan Oh<sup>a</sup>, Narankhuu Jamsran<sup>a</sup>, Ocktaeck Lim<sup>b</sup></p> <p><sup>a</sup>Graduate of Mechanical Engineering, University of Ulsan, KOR <sup>b</sup>School of Mechanical Engineering, University of Ulsan, KOR</p>
IC14-206	<p><b>Thermodynamic Cycle Evaluation of Rhombic Drive Beta-Configuration Stirling Engine</b></p> <p>Mohd Farid Zainudin<sup>a</sup>, Rosli Abu Bakar<sup>a</sup>, Gan Leong Ming<sup>a</sup>, Tanti Ali<sup>a</sup>, Billy Anak Sup<sup>a</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS</p>



Code	Description
IC14-207	<p><b>A parametric study on diesel fueled HCCI engine combustion using a CFD simulation</b></p> <p>Widodo Budi Santoso<sup>a</sup>, Witantyo<sup>b</sup>, Alam E. Putra<sup>b</sup>, Sutikno<sup>b</sup></p> <p><sup>a</sup>Indonesian Institute of Sciences, Bandung 40135, IDN <sup>b</sup>Mechanical Engineering Dept., Institut Teknologi Sepuluh Nopember, Surabaya 60117, IDN</p>
IC14-301	<p><b>Prospect of Iran Natural Gas Export Projects</b></p> <p>Hedayat Omidvar<sup>a</sup></p> <p><sup>a</sup>Research &amp; Technology Dept., National Iranian Gas Company, IRN</p>
IC14-302	<p><b>Sonochemistry Approach to Reducing Biodiesel Reaction Time from Jatropha Curcas Oil by Clamp on Tubular Reactor</b></p> <p>Achmad Praptijanto<sup>a,b</sup>, Egi Agustian<sup>a,c</sup>, Yanuandri Putrasari<sup>a,b</sup>, Darwin Sebayang<sup>a</sup>, Anika Zafiah M.Rus<sup>a</sup>, Sulaiman Hasan<sup>a</sup>, Pudji Untoro<sup>d</sup></p> <p><sup>a</sup>Faculty of Mechanical and Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia (UTHM), MYS <sup>b</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN <sup>c</sup>Research Center of Chemistry, Indonesian Institute of Sciences, IDN <sup>d</sup>Center for Technology of Nuclear Industry Materials, Indonesia Nuclear Energy Agency, IDN</p>
IC14-303	<p><b>Performance Characteristic of Indirect Diesel Engine Fuelled with Diesel-Bioethanol using Uniplot Software</b></p> <p>Arifin Nur<sup>a</sup>, Y. Putrasari<sup>a</sup>, W.B. Santoso<sup>a</sup>, Tony Kosasih<sup>b</sup>, I.K. Reksowardojo<sup>b</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN <sup>b</sup>Combustion Engine Propulsion Laboratory, Institut Teknologi Bandung, IDN</p>
IC14-304	<p><b>Effect of Ethanol Percentage for Diesel Engine Performance using Virtual Engine Simulation Tool</b></p> <p>Achmad Praptijanto<sup>a</sup>, Aam Muharam<sup>a</sup>, Arifin Nur<sup>a</sup>, Yanuandri Putrasari<sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-305	<p><b>Experimental Investigation of HHO Gas Generation from Water as Renewable Energy Source</b></p> <p>Asaad Z Abdulameer<sup>a</sup>, Yanuar Z. Arief<sup>a</sup>, Zuraimy Adzis<sup>a</sup>, M. Abu Bakar Sidik<sup>a,b</sup>, Nor A Muhamad<sup>a</sup></p> <p><sup>a</sup>Institute of High Voltage &amp; High Current (IVAT), Universiti Teknologi Malaysia, MYS <sup>b</sup>Department of Electrical Engineering, Faculty of Engineering, University of Sriwijaya, IDN</p>
IC14-401	<p><b>Mechatronics Implementation of Guided Systems for Public Transportation (Buses)</b></p> <p>Hendri Maja Saputra<sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-402	<p><b>Angkot Design Modification; Based on Conversion from Conventional Engine to Electric Drive</b></p> <p>Muhammad Redho Kurnia<sup>a</sup>, Abdul Hapid<sup>a</sup>, Sunarto Kaleg<sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-403	<p><b>Passenger Interior Design of Executive Mobile Meeting Microbus</b></p> <p>Muhammad Redho Kurnia<sup>a</sup>, Sunarto Kaleg<sup>a</sup>, Abdul Hapid<sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>





Code	Description
IC14-501	<p><b>Performance of a Recirculation Type ICDC Solar Dryer</b></p> <p>Yefri Chan <sup>a</sup>, Nining Dyah <sup>a</sup>, Kamaruddin Abdullah <sup>a</sup></p> <p><sup>a</sup>Mechanical Engineering Department, Darma Persada University, IDN</p>
IC14-502	<p><b>XRD analysis and Grain size of CuIn<sub>x</sub>Ga<sub>1-x</sub>Se<sub>2</sub> films</b></p> <p>A. I. Al- Bassam <sup>a</sup>, A.M.EL-Nggar <sup>a</sup></p> <p><sup>a</sup>Physics &amp; Astronomy Department, King Saud University, SAU</p>
IC14-503	<p><b>Astronomy Algorithm Simulation for Two Degrees of Freedom of Solar Tracking Mechanism using C Language</b></p> <p>Midriem Mirdanies <sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-504	<p><b>Cr/α-Cr<sub>2</sub>O<sub>3</sub> Monodispersed Meso-Spherical Particles for Mid-Temperature Solar Absorber Application</b></p> <p>S. Khamlich <sup>a,b</sup>, M. Maaza <sup>a,b</sup></p> <p><sup>a</sup>College of Graduate Studies, University of South Africa, ZAF <sup>b</sup>Nanosciences African Network (NANOAFNET), iThemba LABS-National Research Foundation, ZAF</p>
IC14-505	<p><b>Solar Drying for Seaweeds</b></p> <p>Kamaruddin A. <sup>a</sup>, Aep S.Uyun <sup>a</sup>, Herman Noer R. <sup>a</sup>, Eri Suherman <sup>a</sup></p> <p><sup>a</sup>The Graduate School, Darma Persada University, IDN</p>
IC14-506	<p><b>Maximum Power Point Tracking for Photovoltaic using Incremental Conductance Method</b></p> <p>Ratna Ika Putri <sup>a</sup>, Sapto Wibowo <sup>b</sup>, Muhamad Rifa'i <sup>a</sup></p> <p><sup>a</sup>Department of Electronic Engineering, State Polytechnic of Malang, IDN <sup>b</sup>Department of Electrical Engineering, State Polytechnic of Malang, IDN</p>
IC14-507	<p><b>Fabrication of Dye-Sensitized Solar Cells With Spray Coated Carbon Nanotube (CNT) Based Counter Electrodes</b></p> <p>Slamet Widodo <sup>a</sup>, Goib Wiranto <sup>a</sup>, and Mirza Nur Hidayat <sup>a</sup></p> <p><sup>a</sup>Research Centre for Electronics and Telecommunication, Indonesian Institute of Sciences, IDN</p>
IC14-508	<p><b>Crystallographic Parameters and Band Gap Measurement of Polycrystalline CuIn<sub>1-x</sub>GaxSe<sub>2</sub> Films</b></p> <p>A. I. Al- Bassam <sup>a</sup>, A.M.EL-Nggar <sup>a</sup></p> <p><sup>a</sup>Physics &amp; Astronomy Department, King Saud University, SAU</p>
IC14-509	<p><b>Effect of Rim Angle To The Flux Distribution Diameter In Solar Parabolic Dish Collector</b></p> <p>Billy Anak Sup <sup>a</sup>, M. Farid Zainudin <sup>a</sup>, Tanti Zanariah Shamsir Ali <sup>a</sup>, R.A. Bakar <sup>a</sup>, Gan Leong Ming <sup>a</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS</p>
IC14-510	<p><b>Fuzzy Logic-Based Voltage Controlling Of Mini Solar Electric Power Plant as an Electrical Energy Reserve for Notebook</b></p> <p>Ilhami Fajri <sup>a</sup>, Refdinal Nazir <sup>b</sup></p> <p><sup>a</sup>Omexom Indonesia, IDN <sup>b</sup>Andalas University, IDN</p>



Code	Description
IC14-511	<p><b>Pre-Installation Design Simulation Tool for Grid-Connected Photovoltaic System using Iterative Methods</b></p> <p>Nur Dalilah Nordin <sup>a</sup>, Hasimah Abd Rahman <sup>a</sup></p> <p><sup>a</sup>Centre of Electrical Energy Systems, Universiti Teknologi Malaysia, MYS</p>
IC14-512	<p><b>The Electricity Power Potency Estimation from Hot Spring in Indonesia with Temperature 70-80°C using Organic Rankine Cycle</b></p> <p>Ghalya Pikra <sup>a</sup>, Nur Rohmah <sup>a</sup>, Rakhmad Indra Pramana <sup>a</sup>, Andri Joko Purwanto<sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-513	<p><b>The Effect of Plate Spacing in The Design of Plate Heat Exchanger (PHE) as an Organic Rankine Cycle (ORC) Condenser for Low Temperature Heat Source</b></p> <p>Nur Rohmah <sup>a</sup>, Ghalya Pikra <sup>a</sup>, Andri Joko Purwanto <sup>a</sup>, Rakhmad Indra Pramana <sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-514	<p><b>Process Manufacture Rotor Radial Turbo-Expander for Small Scale Organic Rankine Cycles using Selective Laser Melting Machine</b></p> <p>Maulana Arifin <sup>a</sup>, Bambang Wahono <sup>a</sup>, Endro Junianto <sup>a</sup>, Ari Darmawan Pasek <sup>b</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN <sup>b</sup>Faculty of Mechanical and Aerospace Engineering – Institute Technology of Bandung, IDN</p>
IC14-515	<p><b>Optimization of Component Sizing for Solar Water Pumping System Applications in Rural Areas</b></p> <p>Igib Prasetyaningsari <sup>a</sup>, Momon Sadiyatmo <sup>b</sup>, Ahmad Agus Setiawan <sup>a</sup>, Kutut Suryoratomo <sup>a</sup></p> <p><sup>a</sup>Department of Engineering Physics, Faculty of Engineering, Universitas Gadjah Mada, IDN <sup>b</sup>Ministry of Research and Technology, IDN</p>
IC14-516	<p><b>Optimization Active and Reactive Power Flow for PV Connected to Grid System using Newton Raphson Method</b></p> <p>Refdinal Nazir <sup>a</sup>, Kiki Kanada <sup>b</sup>, Syafii <sup>a</sup>, Prima Coveria <sup>a</sup></p> <p><sup>a</sup>Andalas University, IDN <sup>b</sup>International Batam University, IDN</p>
IC14-517	<p><b>Study on Thermal-Fluid Effect of Thermal Energy Storage Tank Design in Solar Energy Applications</b></p> <p>Tanti Ali <sup>a</sup>, Rosli Abu Bakar <sup>a</sup>, Billy Anak Sup <sup>a</sup>, Mohd Farid Zainudin <sup>a</sup>, Gan Leong Ming <sup>a</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS</p>
IC14-551	<p><b>Economic Analysis of Cow Manure Biogas Power Generation in Small Scale Ranch</b></p> <p>Arini Wresta <sup>a</sup>, Dian Andriani <sup>a</sup>, Aep Saepudin <sup>a</sup>, Henny Sudibyo <sup>a</sup></p> <p><sup>a</sup>Research Center of Mechatronic and Electrical Power, Indonesian Institute of Sciences, IDN</p>
IC14-552	<p><b>Methane Gas Potential Of Coal As National Alternative Energy Reserves In Indonesia</b></p> <p>La Ode Marzujriban <sup>a</sup>, Rahmat Hidayat <sup>a</sup></p> <p><sup>a</sup>Geophysics Study Program, Physics Department, Hasanuddin University, IDN</p>



Code	Description
IC14-553	<p><b>Torrefaction of Indonesian Sugar-cane Bagasse to Improve Bio-syngas Quality for Gasification Process</b></p> <p>Daniyanto <sup>a,b</sup>, Sutidjan <sup>b</sup>, Deendarlianto <sup>c,d</sup>, and Arief Budiman <sup>b,d</sup></p> <p><sup>a</sup>Polytechnic of LPP - Plantation Training Institute, IDN  <sup>b</sup>Chemical Engineering Department, Gadjah Mada University, IDN  <sup>c</sup>Mechanical Engineering Department, Gadjah Mada University, IDN  <sup>d</sup>Center for Energy Studies, Gadjah Mada University, IDN</p>
IC14-554	<p><b>POME (Palm Oil Mill Effluent) – as an Alternative Energy Model to Increase Electrification Ratio in Remote Area in East Kalimantan</b></p> <p>M. Fathol Arifin <sup>a</sup>, Candra Agus Dwi Wahyudi <sup>a</sup>, Dodi Trianto <sup>a</sup></p> <p><sup>a</sup>PLN Balikpapan, IDN</p>
IC14-555	<p><b>Quantity and Quality of Castor Bean Oil for Bio-Diesel under Severe Conditions in Egypt</b></p> <p>Mehanna H.M. <sup>a</sup>, and Hussein M.M. <sup>a</sup></p> <p><sup>a</sup>Water Relations and Field Irrigation Dept., Agric. Div., National Research Center, EGY</p>
IC14-556	<p><b>A Review of Recycling of Human Excreta to Energy Through Biogas Generation: Indonesia Case</b></p> <p>Dian Andriani <sup>a</sup>, Arini Wresta <sup>a</sup>, Aep Saepudin <sup>a</sup>, Budi Prawara <sup>a</sup>, Don-Hee Park <sup>b</sup></p> <p><sup>a</sup>Research Center for Electrical Power and Mechatronics – Indonesian Institute of Sciences, IDN  <sup>b</sup>Interdisciplinary Program of Grad. School for Bioenergy &amp; Biomaterials, Chonnam National University, KOR</p>
IC14-557	<p><b>Bioethanol from Sorghum Seeds (<i>Sorghum bicolor</i>) with SSF Reaction Using Biocatalyst Co-immobilization Method of Glucoamylase and Yeast</b></p> <p>Dyartanti ER <sup>a</sup>, Margono <sup>a</sup>, Pranolo SH <sup>a</sup>, Setiani B <sup>a</sup>, Nurhayati A <sup>a</sup></p> <p><sup>a</sup>Chemical Engineering Departement Sebelas Maret University, IDN</p>
IC14-558	<p><b>The Potential of Nyamplung (<i>Calophyllum Inophyllum L.</i>) Seed Oil as Biodiesel Feedstock: Effect of Seed Moisture Content and Particle Size on Oil Yield</b></p> <p>Muhammad Fadhlullah <sup>a</sup>, Sri Nanan B. Widiyanto <sup>a</sup>, Elvi Restiawaty <sup>a</sup></p> <p><sup>a</sup>Bioengineering Department, School of Life Sciences and Technology, Bandung Institute of Technology, IDN</p>
IC14-559	<p><b>Comprehensive Evaluation of Integrated Energy Plantation Model of Palm Oil and Algae Based Biofuel for Sustainable Energy Production</b></p> <p>Nugroho Adi Sasongko <sup>a</sup>, Ryoza Noguchi <sup>b</sup></p> <p><sup>a</sup>Faculty of Life and Environmental Sciences, University of Tsukuba, JPN  <sup>b</sup>The Agency of Assessment and Application of Technology, IDN</p>
IC14-560	<p><b>Effect of Alkali Pretreatment and Enzymatic Saccharification on Bagasse Reducing Sugar for Bioethanol Production</b></p> <p>Kismurtono, M <sup>a</sup>, Sutikno <sup>b</sup></p> <p><sup>a</sup>Technical Implementation Unit for Development of Chemical Engineering Processes Gunung Kidul, IDN  <sup>b</sup>Lecturer of The Department of Agricultural Product technology, the University of Lampung, IDN</p>
IC14-561	<p><b>Design and Model Development of Circulating Fluidized Bed Reactor for Biomass Gasification</b></p> <p>Haifa Wahyu <sup>a</sup>, Imam Djunaedi <sup>a</sup>, M. Affendi <sup>a</sup>, Sugiyatno <sup>a</sup></p> <p><sup>a</sup>Research Centre fo Physics, Indonesian Institute of Sciences, IDN</p>



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IC14-562	<p><b>Life Cycle Assessment-based Environmental Impact Comparative Analysis of Composting and Electricity Generation from Solid Waste</b></p> <p>Ahmed Elwan <sup>a</sup>, Yanuar Z. Arief <sup>a</sup>, Zuraimy Adzis <sup>a</sup>, Nor Asiah Muhamad <sup>a</sup></p> <p><sup>a</sup><i>Institute of High Voltage &amp; High Current (IVAT), Universiti Teknologi Malaysia (UTM), MYS</i></p>
IC14-563	<p><b>Effect of Combining Chemical and Irradiation Pretreatment Process to Characteristic of Oil Palm's Empty Fruit Bunches</b></p> <p>Anis Kristiani <sup>a</sup>, Nurdin Effendi <sup>b</sup>, Yosi Aristiawan <sup>a</sup>, Fauzan Auli <sup>a</sup>, Yanni Sudiyani <sup>a</sup></p> <p><sup>a</sup><i>Research Centre for Chemistry, Indonesian Institute of Sciences, IDN</i> <sup>b</sup><i>Center of Nuclear Industry Material Technology – National Nuclear Energy Agency, IDN</i></p>
IC14-564	<p><b>Decolorization of Black Liquor Wastewater in Bioethanol Process from Oil Palm Empty Fruit Bunches</b></p> <p>Ajeng A Sari <sup>a</sup>, Hardianti R Lukman <sup>b</sup>, Hendris H Kurniawan <sup>a</sup>, M Nurdin <sup>b</sup>, Haznan Abimanyu <sup>a</sup></p> <p><sup>a</sup><i>Research Center for Chemistry, Indonesian Institute of Sciences, IDN</i> <sup>b</sup><i>Faculty of Mathematics and Science, University of Halu Oleo, IDN</i></p>
IC14-565	<p><b>The effect of Substrate loading on Simultaneous Saccharification and Fermentation Process for Bioethanol Production from Oil Palm Empty Fruit Bunches</b></p> <p>Eka Triwahyuni <sup>a</sup>, Muryanto <sup>a</sup>, Yanni Sudiyani <sup>a</sup>, Haznan Abimanyu <sup>a</sup></p> <p><sup>a</sup><i>Research Center for Chemistry, Indonesian Institute of Sciences, IDN</i></p>
IC14-566	<p><b>The SHF and SSF Processes using dry Yeast and Enzyme for Optimization Study of Bioethanol Production from Empty Fruit Bunch</b></p> <p>Deliana Dahnum <sup>a</sup>, Sri Octavia Tasum <sup>b</sup>, Eka Triwahyuni <sup>a</sup>, Muhammad Nurdin <sup>b</sup>, Haznan Abimanyu <sup>a</sup></p> <p><sup>a</sup><i>Research Center for Chemistry, Indonesian Institute of Sciences, IDN</i> <sup>b</sup><i>Faculty of Mathematics and Science, University of Halu Oleo, IDN</i></p>
IC14-567	<p><b>Reuse Black Liquor in Alkali Pretreatment for Bioethanol Production</b></p> <p>Muryanto <sup>a</sup>, Eka Triwahyuni <sup>a</sup>, Hendris Hendarsyah <sup>a</sup>, Haznan Abimanyu <sup>a</sup></p> <p><sup>a</sup><i>Research Center for Chemistry, Indonesian Institute of Sciences, IDN</i></p>
IC14-568	<p><b>Liquid Waste Plant Producer Palm as Biogas to Renewable Energy</b></p> <p>Hambali <sup>a</sup>, Rokhmat Hidayat <sup>a</sup>, Teuku Cut Mahmud Aziz <sup>a</sup></p> <p><sup>a</sup><i>Research Institutions and Devotion to the Public, Universitas Almuslim, Jl. Almuslim No 1. Matangglumpangdua Bireuen, Aceh, IDN</i></p>
IC14-601	<p><b>Optimization Design of Savonius Tandem Blade with Moving Plate Deflector for Hydrokinetic Turbine Rotor</b></p> <p>B. Wahyudi <sup>a</sup>, S. Soeparman <sup>b</sup>, H.W.M. Hoeijmakers <sup>c</sup></p> <p><sup>a</sup><i>State Polytechnic of Malang, IDN</i> <sup>b</sup><i>Brawijaya University, IDN</i> <sup>c</sup><i>University of Twente, NLD</i></p>

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IC14-602	<p><b>The Design Of Micro hydro Power Plants On Board By Utilizing The Ship Main Engine Cooling Water</b></p> <p>Danny Faturachman <sup>a</sup>, Radityo Nur Rahman <sup>a</sup>, Muswar Muslim <sup>a</sup>, Agung Sudrajad <sup>b</sup></p> <p><sup>a</sup>Darma Persada University, IDN <sup>b</sup>Faculty of Engineering, Sultan Ageng Tirtayasa, IDN</p>
IC14-603	<p><b>Design Optimization of Axial Hydraulic Turbine for Very Low Head Application</b></p> <p>Abdul Muis <sup>a,b</sup>, Priyono Sutikno <sup>a</sup>, Aryadi Soewono <sup>a</sup>, Firman Hartono <sup>a</sup></p> <p><sup>a</sup>Bandung Institute of Technology, IDN <sup>b</sup>Tadulako University, IDN</p>
IC14-604	<p><b>Integrated Spatial Planning and Identification of Hydroelectric Power Plant Potential of Mahakam River Basin East Kalimantan Indonesia</b></p> <p>Yuliana Susilowati <sup>a</sup>, Pudji Irasari <sup>b</sup>, Anjar Susatyo <sup>b</sup></p> <p><sup>a</sup>Research Center for Geotechnology, Indonesian Institute of Sciences, IDN <sup>b</sup>Research Center for Electrical Power and Mechatronic, Indonesian Institute of Sciences, IDN</p>
IC14-605	<p><b>Experimental Study for the Single-Stage and Double-Stage Two-Bladed Savonius Micro-Sized Turbine for Rain Water Harvesting (RWH) System</b></p> <p>Norzanah Rosmin <sup>a</sup>, Ahmad Safwan Jauhari <sup>b</sup>, Aede Hatib Mustaamal <sup>c</sup>, Faridah Husin <sup>a</sup>, Mohammad Yusri Hassan <sup>a</sup></p> <p><sup>a</sup>Centre of Electrical Energy Systems (CEES), Universiti Teknologi Malaysia (UTM), MYS <sup>b</sup>Faculty of Electrical Engineering (FKE), Universiti Teknologi Malaysia (UTM), MYS <sup>c</sup>Faculty of Education (FP), Universiti Teknologi Malaysia (UTM), MYS</p>
IC14-606	<p><b>Preparation of 5 % wt. Epoxy Resin Bonded Magnet Ndfeb and Application for Small Electric Generator</b></p> <p>Muljadi <sup>a</sup>, Priyo Sardjono <sup>a</sup>, Suprapedi <sup>a</sup></p> <p><sup>a</sup>Research Center for Physics, Indonesian Institute of Sciences, IDN</p>
IC14-607	<p><b>Development of Programmable Logic-Controller for Peat Water Treatment based AOP+RO</b></p> <p>Arjon Turnip <sup>a</sup>, Sutrisno Salomo Hutagalung <sup>b</sup></p> <p><sup>a</sup>Technical Implementation Unit for Instrumentation Development, LIPI, IDN <sup>b</sup>Center for Research and Development of Calibration, Instrumentation, and Metrology, LIPI, IDN</p>
IC14-651	<p><b>Roof mounted micro-wind turbine for power generation in coastal housing in Semarang, Indonesia</b></p> <p>Dany Perwita Sari <sup>a</sup></p> <p><sup>a</sup>Research Center for Biomaterials, Indonesian Institute of Sciences, IDN</p>
IC14-652	<p><b>An Experimental Study on the Performance of Savonius Wind Turbines Related with the Number of Blades</b></p> <p>Frederikus Wenehenubun <sup>a</sup>, Andy Saputra and Hadi Sutanto <sup>b</sup></p> <p><sup>a</sup>Department of Mechanical Engineering, Atma Jaya Catholic University, IDN</p>





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IC14-701	<p><b>Timing Series Connection Technique to Collecting Power from Microbial Fuel Cell Using Capacitor</b></p> <p>Kristian Ismail <sup>a</sup>, Diana Rahayuningwulan <sup>b</sup></p> <p><sup>a</sup>Research Centre for Electrical Power and Mechatronics, Indonesian Institute of Sciences, IDN <sup>b</sup>Research Centre for Chemistry, Indonesian Institute of Sciences, IDN</p>
IC14-702	<p><b>Performance of Polymer Electrolyte Membrane Fuel Cell during Cyclic Activation Process</b></p> <p>Yuyun Irmawati <sup>a</sup>, Indriyati <sup>a</sup></p> <p><sup>a</sup>Research Centre for Physics, Indonesian Institute of Sciences, IDN</p>
IC14-703	<p><b>Hydrogen Absorption Capacity of Fe-Ti-Al Alloy Prepared by High Energy Ball Milling</b></p> <p>Hadi Suwarno <sup>a</sup>, Slameto Wiryolukito <sup>b</sup>, Martinus D. Kurnia Dewa <sup>b</sup></p> <p><sup>a</sup>Center for Technology of Nuclear Fuel, Badan Tenaga Nuklir Nasional, IDN <sup>b</sup>Laboratory of Metallurgy and Materials Engineering, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, IDN</p>
IC14-704	<p><b>Role of Thickness on the Ionic Conductivity of Fuelcell Membrane Prepared with Supramolecular Structure</b></p> <p>Sunit Hendrana<sup>a</sup>, Elsy Chaldun<sup>a</sup>, Sri Pudjiastuti<sup>a</sup>, Achmad Rochliadi<sup>b</sup>, M. Arief Handono Priyo<sup>b</sup></p> <p><sup>a</sup>Research Centre for Physics, Indonesian Institute of Sciences, IDN <sup>b</sup>Department of Chemistry, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, IDN</p>
IC14-751	<p><b>Green's Function Approach for Optimal Estimation of a Regional Tidal Model</b></p> <p>Agustinus Ribal <sup>a</sup>, Takuji Waseda <sup>a</sup>, Keiji Kiyomatsu <sup>a</sup></p> <p><sup>a</sup>Waseda Laboratory, Department of Ocean Technology Policy and Environment, The University of Tokyo, JPN</p>
IC14-851	<p><b>Analysis of Dominants' Factors of National Renewable Energy Strategy</b></p> <p>Bambang Sugiyono Agus Purwono <sup>a</sup>, Rahbini <sup>a</sup>, Ubud Salim <sup>b</sup>, Djuwahir <sup>b</sup>, Solimun <sup>b</sup></p> <p><sup>a</sup>Mechanical Engineering Department, State Polytechnics of Malang, IDN <sup>b</sup>Faculty of Business and Economic, University of Brawijaya, IDN</p>
IC14-852	<p><b>Improving Indonesia Built Environment Without Escalating Its CO<sub>2</sub> Emissions</b></p> <p>Tri Harso Karyono <sup>a</sup></p> <p><sup>a</sup>School of Architecture, Tanri Abeng University, IDN</p>
IC14-853	<p><b>Prediction Concentrations Distributions of Flammable Refrigerant's (R-290 and R-32) into the Room Caused By Leakage Air Conditioning Unit (AC)</b></p> <p>Rizki Muliawan <sup>a</sup>, Ari Darmawan Pasek <sup>a,b</sup></p> <p><sup>a</sup>Institut Teknologi Bandung, IDN <sup>b</sup>Thermodynamics Laboratory-Industrial Engineering Research Center, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, IDN</p>
IC14-855	<p><b>Long-term Electricity Demand Forecasting of Sumatera System Based on Electricity Consumption Intensity and Indonesia Population Projection 2010-2035</b></p> <p>Suhono<sup>a</sup>, Sarjiya<sup>a</sup></p> <p><sup>a</sup>Department of Electrical Engineering &amp; Information Technology, Gadjah Mada University, IDN</p>



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IC14-856	<p><b>The Effect of Cutting Parameters on Power Demand during Machining of Aluminum Alloy</b></p> <p>Rusdi Nur <sup>ab</sup>, Asmeati <sup>c</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering Universiti Teknologi Malaysia, MYS <sup>b</sup>Study Program of Mechanical Engineering, State Polytechnic of Ujung Pandang, IDN <sup>c</sup>Study Program of Mechanical Engineering, Fajar University, IDN</p>
IC14-857	<p><b>Computational Analysis of Thermal Building in a No-Uniform Thermal Environment</b></p> <p>Norfadzilah Jusoh <sup>a</sup>, Rosli Abu Bakar <sup>a</sup>, Ahmad Rasdan Ismail <sup>b</sup>, Tanti Zanariah Shamshir Ali <sup>a</sup></p> <p><sup>a</sup>Faculty of Mechanical Engineering, Universiti Malaysia Pahang, MYS <sup>b</sup>Faculty of Creative Technology and Heritage, Universiti Malaysia Kelantan, MYS</p>
IC14-858	<p><b>Potential Electrical Energy Savings in Malaysia Dairy Manufacturing Industry of Medium Enterprises</b></p> <p>Muhamad, N. A. <sup>a</sup>, Lee Yun Phing <sup>a</sup>, Arief, Y.Z <sup>a</sup></p> <p><sup>a</sup>Institute of High Voltage and High Current (IVAT), Faculty of Electrical Engineering (FKE), Universiti Teknologi Malaysia (UTM), MYS</p>
IC14-901	<p><b>High Reliability of MEMS Packaged Capacitive Pressure Sensor Employing 3C-Sic for High Temperature</b></p> <p>Noraini Marsi <sup>a</sup>, Burhanuddin Yeop Majlis <sup>a</sup>, Azrul Azlan Hamzah <sup>a</sup>, Faisal Mohd-Yasin <sup>b</sup></p> <p><sup>a</sup>Institute of Miroengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia, MYS <sup>b</sup>Queensland Micro- and Nanotechnology Center (QMNC), Griffith University, AUS</p>
IC14-902	<p><b>Comparison of FRP Strengthened RC Beam Tested Under Uniform Load with The Eccentric Load</b></p> <p>Muhammad Imran <sup>a</sup>, Nasir Shafiq <sup>a</sup>, Ibrisam Akbar <sup>a</sup></p> <p><sup>a</sup>Universiti Teknologi PETRONAS, MYS</p>