

## Oral Presentation (Dewan Persidangan Universiti)

### Topic: Energy Production and Energy Conversion

| Time                                                                                             | Paper ID         | Title                                                                                                      | Authors                                                                     |
|--------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Session A1 (Session Chairman: Prof. Kim Choon Ng, Session Co-Chairman: Dr. How Heoy Geok)</b> |                  |                                                                                                            |                                                                             |
| 11.00am                                                                                          | RAISER2019-ID-13 | Experimental Study on Pyrolysis Characteristics of Woody Biomass at Low- Temperature                       | Toshiyuki Katsumi, Satoshi Kadowaki                                         |
| 11.15am                                                                                          | RAISER2019-ID-16 | A Model Identifying Factors Affecting the Sustainable use of Solar Dryers: A Case Study                    | Ali Mostafaeipour, Mojgan Zarezade, A. Joshuva                              |
| 11.30am                                                                                          | RAISER2019-ID-12 | Exploiting the Steam Exergy of Throttling Valve in Boosting Potable Water Production of MEDAD Hybrid Cycle | Doskhan Yaybraiymkul, Muhammad Wakil Shahzad, Kim Choon Ng                  |
| 11.45am                                                                                          | RAISER2019-ID-18 | Turbulence Modelling of a Helical Savonius Wind Turbine Operating at Low Reynolds Number                   | Ahmad Zakaria, Mohd Shahrul Nizam Ibrahim                                   |
| 12.00pm                                                                                          | RAISER2019-ID-25 | Combustion Stability Analysis of Liquid Biofuels using Acoustic Signals                                    | Ibrahim Idris Enagi, Khaled Ali Al-Attab, Zainal Alimuddin Zainal Alauddin. |
| 12.15pm                                                                                          | RAISER2019-ID-22 | Treatment of Electrical and Electronic Waste to Reduce Environmental Issue                                 | Samsudin Anis, Nur Qudus, Adhi Kusumastuti                                  |
| 12.30pm                                                                                          | RAISER2019-ID-06 | Design and Analysis of A Vortex Induced Vibration Based Oscillating Free Stream Energy Converter           | Ratan Kumar Das, Muhammad Taharat Galib , Prasanjit Das                     |
| 12.45pm                                                                                          | RAISER2019-ID-09 | Concept Analysis of Airborn Wind Energy System (AWES) Pumping Kite (PK)                                    | Mehrad Zolfaghari, Farhood Azarsina                                         |
| <b>Lunch</b>                                                                                     |                  |                                                                                                            |                                                                             |

| Session B1 (Session Chairman: Prof. Ali Mostafaeipour, Session Co-Chairman: Dr. Ng Fei Chong)           |                  |                                                                                                                          |                                                                                                                             |
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| 2.00pm                                                                                                  | RAISER2019-ID-64 | Tar Removal from Gasification/Pyrolysis by Emulsion Liquid Membrane: A Short Overview                                    | Adhi Kusumastuti, Samsudin Anis, Nur Qudus, Widi Astuti                                                                     |
| 2.15pm                                                                                                  | RAISER2019-ID-45 | Spontaneous polarization and Piezoelectric Tensor of Polyvinylidene Fluoride (PVDF) in $\alpha$ and $\beta$ Phases.      | Dibya Prakash Rai                                                                                                           |
| 2.30pm                                                                                                  | RAISER2019-ID-24 | Design and Performance Analysis of a Biomass Fueled Mono-tube Boiler for Humid Air Turbine Cycle                         | Nood Badshah, Khaled Ali Al-Attab, Zainal Alimuddin Zainal Alauddin.                                                        |
| 2.45pm                                                                                                  | RAISER2019-ID-15 | Experimental Investigation on a Desiccant Silica Bed for Dehumidification                                                | Pravinth Balthazar, Mohd Azmi Bin Ismail, Mohammad Nazmi Bin Mohammad Nasir, Hussin Bin Mamat, Muhammad Iftishah Bin Ramdan |
| 3.00pm                                                                                                  | RAISER2019-ID-65 | Methodology for Modified Whale Optimization Algorithm for Solving Appliances Scheduling Problem                          | Mohd Faizal Omar, Noorhadila Mohd Bakeri, Mohd Nasrun Mohd Nawi                                                             |
| 3.15pm                                                                                                  | RAISER2019-ID-34 | Electrochemical properties of si film electrodes containing cu nanorod current collector                                 | Han-gyeol Lee, Sang-Hui Park, Gyu-Bong Cho, Kwon-Koo Cho, Hyo-Jun Ahn, Tae-Hyun Nam, Ki-Won Kim                             |
| 3.30pm                                                                                                  | RAISER2019-ID-35 | Silicon embedded Polyacrylonitrile(PAN) composite electrodes for lithium ion batteries                                   | Sang-Hui Park, Han-gyeol Lee, Gyu-Bong Cho, Kwon-Koo Cho, Hyo-Jun Ahn, Tae-Hyun Nam, Ki-Won Kim                             |
| 3.45pm                                                                                                  | RAISER2019-ID-66 | Enhancing Optimization Solution for Facility Layout Problem with Thermal Comfort                                         | Noorhadila Mohd Bakeri, Mohd Faizal Omar, Mohd Nasrun Mohd Nawi                                                             |
| Afternoon Tea Break                                                                                     |                  |                                                                                                                          |                                                                                                                             |
| Session C1 (Session Chairman: Dr. Samsudin Anis, Session Co-Chairman: Dr. Mohd. Sharizal bin Abd. Aziz) |                  |                                                                                                                          |                                                                                                                             |
| 4.30pm                                                                                                  | RAISER2019-ID-48 | The Improvement of energy efficiency for refrigeration system in Thailand convenience store by digital scroll compressor | Piyanut Saengsikhiao, Juntakan Taweekun, Kittinan Maliwan, Somchai Sae-ung, Thanansak Theppaya                              |
| 4.45pm                                                                                                  | RAISER2019-ID-60 | Computational of Nonlinear Thermoelectric Effects with Adaptive Methods                                                  | Aizuddin Mohamed, Razi Abdul-Rahman                                                                                         |

## Oral Presentation (Seminar Room A)

### Topic: Renewable and sustainable resources

| Time                                                                                                                                    | Paper ID         | Title                                                                                                                                                     | Authors                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Session A2 (Session Chairman: Prof. Zainal Alimuddin Bin Zainal Alauddin, Session Co-Chairman: Dr. Mohd. Sharizal bin Abd. Aziz)</b> |                  |                                                                                                                                                           |                                                                                          |
| 11.00am                                                                                                                                 | RAISER2019-ID-07 | On the Correlation bewteen Main Charateristics of Fuel-Efficient Driving and Safe Driving                                                                 | Yong Ren Tan, Abdul Yamin Saad                                                           |
| 11.15am                                                                                                                                 | RAISER2019-ID-08 | The Potential of Solar Energy for Domestic and Commerical Buildings in Malaysia                                                                           | Chee Kar Wei, Abdul Yamin Saad                                                           |
| 11.30am                                                                                                                                 | RAISER2019-ID-14 | Calorific Values of Dried Branches of Coconut Plant at Different Moisture Contents                                                                        | Mohammad Ali Basunia, Muhammad Hamzi Bin Haji Zaini                                      |
| 11.45am                                                                                                                                 | RAISER2019-ID-19 | Numerical Performance Study for the Buoy Shape of Point Absorber Wave Energy Converters                                                                   | Wan Ching Tan, Keng Wai Chan, Bee Mun Oon, How Tion Puay, Yi Leang Lim                   |
| 12.00pm                                                                                                                                 | RAISER2019-ID-21 | Investigation of the Corrosion Metals in Non-Edible Biodiesel Fuel                                                                                        | Heoy Geok How, Justine Wei Sze Hwang, Yew Heng Teoh, Hun Guan Chuah                      |
| 12.15pm                                                                                                                                 | RAISER2019-ID-26 | Optimization of The Through-The-Road Parallel Hydraulic Hybrid Drive Train                                                                                | Muhammad Iftishah Ramdan, Khairul Anuar Idris, Yeoh Ying Heng, Muhammad Syahir Mahyuddin |
| 12.30pm                                                                                                                                 | RAISER2019-ID-61 | Present Initiatives, Challenges and Future Strategies for Practising Sustainable Energy in ASEAN Countries: A Case Study in Japan and Singapore Countries | S. Thanam Subramaniam, Siti Norafiza Binti Faisal Tiong                                  |
| 12.45pm                                                                                                                                 | RAISER2019-ID-32 | Thermocatalytic Treatment for TAR Removal with NI/AC Catalysts                                                                                            | Bakhrul Ulum, Juntakan Taweekun, Abul Kalam Azad                                         |
| <b>Lunch</b>                                                                                                                            |                  |                                                                                                                                                           |                                                                                          |

| Session B2 (Session Chairman: Assoc. Prof. Toshiyuki Katsumi, Session Co-Chairman: Dr. Hasnida Ab-Samat)         |                  |                                                                                                                                   |                                                                                                                             |
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| 2.00pm                                                                                                           | RAISER2019-ID-42 | Feasibility Study of a 50 MW Wind Farm Project in Pakistan                                                                        | Haseeb Yaqoob, Yew Heng Teoh, Muhammad Ahmad Jamil, Zia Ud Din, Mehtab Ul Hassan, Mussadiq Jamil, Heoy Geok How             |
| 2.15pm                                                                                                           | RAISER2019-ID-43 | Analytical Study of Performance and Emission Characteristics of a Palm Biodiesel Fueled Engine Using Response Surface Methodology | Yew Heng Teoh, Balakrishnan Navaneetha Krishnan, Heoy Geok How, Shangeetha Ganesan, Kok Hwa Yu, Hishammudin Afifi Bin Huspi |
| 2.30pm                                                                                                           | RAISER2019-ID-20 | Empirical Modelling of Einstein Absorption Refrigeration System                                                                   | Keng Wai Chan, Yi Leang Lim                                                                                                 |
| 2.45pm                                                                                                           | RAISER2019-ID-50 | Performance Analysis of Electric Vehicle Powertrain System With Two-Speed Transmission                                            | F.Zainuri, D. A. Sumarsono, M. Adhitya, R. Siregar, S. Prasetyo, G.Heryana, Nazaruddin                                      |
| 3.00pm                                                                                                           | RAISER2019-ID-05 | Virtual Flow Meter with Energy Balance Method                                                                                     | Nofirman Firdaus, Bambang Teguh Prasetyo, Hasnida Ab-Samat, Prayudi                                                         |
| 3.15pm                                                                                                           | RAISER2019-ID-31 | Development of an Improved Hybrid Back propagation ANN for Low Wind speed prediction and Wind Energy Evaluation                   | Salisu Muhammad Lawan, Wan Azlan Wan Zainal Abidin, M. Y. Hoto                                                              |
| 3.30pm                                                                                                           | RAISER2019-ID-51 | Time-series Wind Data Analysis of Southern Thailand                                                                               | Ismail Kamdar, Juntakan Taweekun                                                                                            |
| 3.45pm                                                                                                           | RAISER2019-ID-52 | Wnd Energy Data Analysis in Eastern Thailand                                                                                      | Watchara Saeheng, Juntakan Taweekun                                                                                         |
| Afternoon Tea Break                                                                                              |                  |                                                                                                                                   |                                                                                                                             |
| Session C2 Session B2 (Session Chairman: Dr. Khaled Ali Mohammad Al-Attab , Session Co-Chairman: Dr. Yu Kok Hwa) |                  |                                                                                                                                   |                                                                                                                             |
| 4.30pm                                                                                                           | RAISER2019-ID-53 | Analysis of vacuum insulaiton panels to reduce fuel consumption in cold storage trucks                                            | Assadawut Issaro, Juntakan Taweekun, Wiriya Thongruang                                                                      |
| 4.45pm                                                                                                           | RAISER2019-ID-54 | Time-series Wind Data Analysis of Northern Thailand                                                                               | Tariq Khan, Juntakan Taweekun                                                                                               |

## Oral Presentation (Seminar Room B)

### Topic: Electronic packaging and thermofluids

| Time                                                                                                       | Paper ID         | Title                                                                                                                                      | Authors                                                                                                                 |
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| <b>Session A3 (Session Chairman: Asst. Prof. Juntakan Taweekun, Session Co-Chairman: Dr. Ng Fei Chong)</b> |                  |                                                                                                                                            |                                                                                                                         |
| 11.00am                                                                                                    | RAISER2019-ID-01 | Effects of gas area fraction on developing flow of shear thickening fluids in circular tube having superhydrophobic transverse grooves     | Han Wei Lee, Kok Hwa Yu, Yew Heng Teoh, Mohd Azmi Ismail                                                                |
| 11.15am                                                                                                    | RAISER2019-ID-02 | Heat Transfer Analysis of Diffusion Furnace for Wafer Annealing Process                                                                    | Siew Aun Tan, Mohd Zulkifly Abdullah and Kok Hwa Yu                                                                     |
| 11.30am                                                                                                    | RAISER2019-ID-49 | The Improvement of energy efficiency and environmentally friendly using R448A for R404A refrigeration system in Thailand convenience store | Piyanut Saengsikhiao, Juntakan Taweekun, Kittinan Maliwan, Somchai Sae-ung, Thanansak Theppaya                          |
| 11.45am                                                                                                    | RAISER2019-ID-63 | Development of environmentally-friendly and energy efficient refrigerant for medium temperature refrigeration systems                      | Piyanut Saengsikhiao, Pattana Rakkwamsuk, Chaloenporn Lertsatitthanakorn                                                |
| 12.00pm                                                                                                    | RAISER2019-ID-37 | Computational Simulation of Nanoparticles Addition in Lead- free Solder During Reflow Soldering-A Review                                   | Intan Norshalina binti Sahrudin, Mohd. Sharizal bin Abd. Aziz, Mohd. Zulkifly bin Abdullah, Mohd Arif Anuar Mohd Salleh |
| 12.15pm                                                                                                    | RAISER2019-ID-40 | Symmetrical unit-cell numerical approach for flip-chip underfill flow simulation                                                           | Fei Chong Ng, M. A. Fatah M. Mukhtar, Lun Hao Tung, Aizat Abas, M. Z. Abdullah                                          |
| 12.30pm                                                                                                    | RAISER2019-ID-41 | Effect of contact angle on meniscus evolution and contact line jump of underfill fluid flow in flip-chip encapsulation                     | Fei Chong Ng, Lun Hao Tung, M. A. Fatah M. Mukhtar, Aizat Abas, M. Z. Abdullah                                          |
| 12.45pm                                                                                                    | RAISER2019-ID-59 | Effect of Peak Temperature on SAC Nano-Reinforced Fillet Height                                                                            | M. A. Fatah M. Mukhtar, Aizat Abas, Fakhrozi Che Ani, A. A. Muhaimin Azaman                                             |
| <b>Lunch</b>                                                                                               |                  |                                                                                                                                            |                                                                                                                         |

| Session B3 (Session Chairman: Prof. Ahmad Zakaria, Session Co-Chairman: Dr. Yu Kok Hwa) |                  |                                                                                                                                                                                    |                                                                                                                           |
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| 2.00pm                                                                                  | RAISER2019-ID-55 | The Effect of Gas Area Fraction and Reynolds Number on Mixing Flow in Microchannel having Superhydrophobic Tranverse Grooves                                                       | Sak Jie Tan, Kok Hwa Yu, Eng Sam Yap, Yew Heng Teoh, Mohd Azmi Ismail                                                     |
| 2.15pm                                                                                  | RAISER2019-ID-56 | CFD HVAC Study of Modular Badminton Hall                                                                                                                                           | Mohd Azmi Ismail, Mohd Sabri Che Jamil                                                                                    |
| 2.30pm                                                                                  | RAISER2019-ID-17 | CFD Simulation on Ventilation of an Indoor Atrium Space                                                                                                                            | Nor Azirah Mohd Fohimi, Muhammad Hanif Asror, Rosniza Rabilah, Mohd Mahadzir Mohammad, Mohd Fauzi Ismail, Farid Nasir Ani |
| 2.45pm                                                                                  | RAISER2019-ID-03 | A Review of Shear Properties for Malaysian Tropical Timber in Structural Size                                                                                                      | Muhammad Bazli Faliq Mohd Puaad, Zakiah Ahmad, Adrina Rosseira Abu Talip, Nurul Faiizin Abdul Aziz, Mohd Hanafie Yasin    |
| 3.00pm                                                                                  | RAISER2019-ID-57 | Numerical Study of Heat Transfer Characteristics of Laminar Nanofluids Flow in Oblique Finned Microchannel Heat Sink with Varying Based Fluid and Volume Fraction of Nanoparticles | Ji Ying Choong, Kok Hwa Yu, Mohd Zulkifly Abdullah                                                                        |
| 3.15pm                                                                                  | RAISER2019-ID-58 | Simulation of 5G Mobile Electromagnetic Energy Effects on Human Head Tissues                                                                                                       | Ooi Zhi Kai, Nur Hidayah Mansor                                                                                           |
| 3.30pm                                                                                  | RAISER2019-ID-62 | Empirical viscosity modeling for SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> nanofluids using the response surface method                                                  | Faiza Mohamed Nasir, Mohd Zulkifly Abdullah, Mior Firdaus Mior Abdul Majid                                                |
| 3.45pm                                                                                  | RAISER2019-ID-47 | Investigation of Small Wind Turbine Noise as per IEC 61400-11 and AWEA 9.1 Standard                                                                                                | Khandaker Dahirul Islam, Juntakan Taweekun                                                                                |
| Afternoon Tea Break                                                                     |                  |                                                                                                                                                                                    |                                                                                                                           |