International Conference of Advanced Research on Renewable Energy for Universal Sustainability 22-24 JUNE 2021 KUALA LUMPUR, MALAYSIA

CONFERENCE AGENDA

ARUS 2()21

Venue: Cisco Webex Meeting

| 8.30 am - 8.45 am Opening Session Welcome Remarks Chair Welcome Remarks Ts. Dr. Mohamad Zaki Hassan 8.45 am - 9.00 am Officiating Address 9.00 am - 9.10 am Prof. Ts. Dr. Abd Latif Saleh, Pro Vice-Chancellor UTM Kuala Lumpur Campus 9.00 am - 9.10 am Video Montage 9.15 am - 10.00 am Plenary Speaker Professor Dr. Yasuyuki Ikegami, Saga University 70.15: Dr. Abu Bakar Jaafar, Research Fellow and Innovation Professor Dr. Yasuyuki Ikegami, Saga University 10.00 am - 10.45 am Professor Dato' Ir. Dr. Abu Bakar Jaafar, Research Fellow and Former Director, UTM Ocean Thermal Energy Centre (OTEC) & Faculty Member of UTM Perdana Centre, Razak Faculty of Technology & Informatics 10.45 am - 11.00 am Photo Session 11.00 am - 11.30 am Invited Speaker 1: Ahmad Hadi Mohamed Rashidi, NAHRIM 11.30 am - 1.10 pm Presentation Session 1 11.30 am - 1.10 pm Presentation Session 1 11.10 pm - 2:00 pm Break 2:00 pm - 2.15 pm Industry Highlight Sifu Trademark 2:15 pm - 5.15 pm Presentation Session 2 | | 22 JUNE 2021 |
|--|---------------------|---|
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| 1.10 pm – 2:00 pm Break 2:00 pm – 2.15 pm Industry Highlight Sifu Trademark | 11.00 am – 11.30 am | |
| 2:00 pm – 2.15 pm Sifu Trademark | 11.30 am – 1.10 pm | Presentation Session 1 |
| 2:00 pm – 2.15 pm Sifu Trademark | 1.10 pm – 2:00 pm | Break |
| Sifu Trademark | 2:00 pm – 2.15 pm | Industry Highlight |
| 2:15 pm – 5.15 pm Presentation Session 2 | | Sifu Trademark |
| | 2:15 pm – 5.15 pm | Presentation Session 2 |

*Presentation Session: Please refer to specific tentative for details



| 23 JUNE 2021 | |
|---------------------|---|
| 8.30 am – 10.30 am | Presentation Session 3 |
| | Invited Speaker 2: Ir. Noraziah Binti Muda, TNB Research Sdn Bhd |
| 10.30 am – 11.00 am | Topic: The Role of Renewable Energy And Carbon Capture And Utilisation In The Pathway Towards Decarbonisation Of Energy Industry |
| 11.00 am 1.00 am | Parallel Session 4A |
| 11.00 am – 1.00 pm | Parallel Session 4B |
| 1.00 pm – 2.00 pm | Break |
| 2.00 pm – 2.15 pm | Industry Highlight |
| 2.00 pm - 2.13 pm | Naglus Industries Sdn Bhd |
| | Special Session |
| 2.15 pm – 4.45 pm | SS1: SATREPS-OTEC Malaysia |
| | SS2: Webinar on Renewable and Bio-Energy (TNBR) |
| 4.45 pm – 5.00 pm | Closing Ceremony & Awards Ceremony |
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*Presentation Session: Please refer to specific tentative for details

ARUS 2 2 2 1

PRESENTATION SESSION 1

22 June 2021

Virtual Room 1 Green Sustainability and Innovation Chairperson Ts. Dr. Nurul Aini Bani

Co-chair

Dr. Hazilah Mad Kaidi

| Agenda |
|--------|
|--------|

| Time | Author(s) | Paper Title |
|----------|---|--|
| 11:30 am | Nor Azirah Mohd Fohimi*; Mohd Mahadzir Mohammud; Muhammad Arif Ab Hamid Pahmi; Ariffatul Amirah Hairun Anuar | Nitrogen Gas Adsorption Filter (NgAF) to Enhance Producer Gas Quality |
| 11.50 am | Mee San Kiu* | The Readiness of IoT Enabled Smart Buildings in Malaysia |
| 12.10 pm | Bismiazan Abd. Razak* | Integrated Environmental Solutions-Virtual Environment (IES-VE) Software Accuracy Investigation on Naturally Ventilated Royal Malaysian Police (RMP) Lockup's Thermal Performance Simulation |
| 12:30 pm | Md Fauzan Kamal bin Mohd Yapandi*; Famiza Abd Latif | Effect of Mixing Temperature in the Development of Green Polypropylene – Coal Bottom Ash Composite Slab |
| 12.50 pm | Muhammad Zaki Bin Abd Manaf*; Mohd Farid Mohamed; Wardah Fatimah Mohammad Yusoff; Khairul Azhar Mat Sulaiman | The Effect of Mosque Main Roof Design Toward Thermal Comfort at The Prayer Hall Based On Natural Ventilation Approach |

ARUS 2()21

PRESENTATION SESSION 2

22 June 2021

Virtual Room 2 Green Sustainability and Innovation Chairperson Dr. Mohd. Nabil Bin. Muhtazaruddin Co-chair

Dr. Sa'ardin Abdul Aziz

Agenda

| Time | Author(s) | Paper Title |
|---------|--|---|
| 2:15 pm | Firdaus Muhammad Sukki*; Haroon Farooq; Siti Hawa Abu Bakar; Jorge Alfredo Ardila-Rey; Nazmi Sellami; Ciaran Kilpatrick; Mohd Nabil Bin Muhtazaruddin; Nurul Aini Bani; Muhammad Zulkipli | Modelling of a Static Concentrating Photovoltaic Using MATLAB |
| 2:35 pm | W Q Wee*; Lan Ching Sim; K H Leong: P Saravanan | Synthesis And Characterization of Copper Vanadate Quantum Dots / Nanostructured Zinc Oxide |
| 2.55 pm | Siti Aisyah Razali | Numerical Studies of Fluid Flow and Heat Transfer in Microchannel Heat Sink with Trapezoid Cavities, Ribs and Secondary Channel |
| 3.15 pm | Ivan Komarov; Olga Zlyvko; Andrey Vegera; Bulat Makhmutov; Ivan A Shcherbatov* | Research And Development of High Efficiency Low Emission Combined Cycle Power Plant Arrangements |
| 3:35 pm | Ivan Komarov; Sergey Osipov; Ivan A Shcherbatov*; Bulat Makhmutov; Ilya Kaplanovich | Research And Development of a Coal-Fired Steam Turbine Power Plant Using Oxygen-Rich Air as Oxidizer |
| 3:55 pm | Ivan Komarov; Andrey Rogalev; Daria Kharlamova; Vladimir Naumov*; Sophia Shabalova | Comparative analysis of the efficiency of using hydrogen and steam methane reforming storage at combined cycle gas turbine for cogeneration |
| 4:15 pm | Ghadeer Albalawneh*; Muhammad M. Ramli; Mohd Mohammad Zain: Zaliman Sauli | The influence of selenium amount added into the graphite box during the selenization of solution deposited CIGSe thin films |

ARUS 2 21

PRESENTATION SESSION 3

23 JUNE 2021

Virtual Room 1 Green Sustainability and Innovation Chairperson Ts. Dr. Suraini Mohd Sam Co-chair

Dr. Rohayah Che Amat

| Agenda | | |
|----------|---|---|
| Time | Author(s) | Paper Title |
| 8:30 am | Shi-Han Loo* | Passive Design of Buildings: A Review of Configuration Features for Natural Ventilation and Daylighting |
| 8:50 am | Nor Afifah Basri; Rafieza Rosli; Nurlyana Omar* | Atmospheric Trajectory Analysis of Cesium- 137 from Proposed Nuclear Power Plant Site in Bangka Island, Indonesia |
| 9.10 am | Mohd Zaki Bin Zainal Abidin*; Fazlena Hamzah; Miradatul Najwa Mohd Rodhi; Nurul Aimi Ghazali | Assessing Biofouling in Ocean Thermal Energy Conversion (OTEC) Power Plant – A Review Paper |
| 9.30 am | Mohamad Hilmi Hisyamuddin Mohamad Rosdi*; Nor Azwin Ahad | The Effect of Corn Stalk Fiber Loading on Tensile Properties and Absorption Ability on Polybutadiene Adipate Terephalate Matrix (PBAT) |
| 9:50 am | Fazarizul Hashidi Muhamad Pauzi*; Mohd Yusof Md Daud; Ahmad Yusri Mohamed | Towards the Introduction of Element that Contribute to the LRT Operation Sustainability through Technology based Ancillary Revenue |
| 10.10 am | Nura Muaz Muhammad* | Effect Of Corrugated Minichannel Variable Width on Entropy Generation for Convective Heat Transfer of Alpha-Alumina- Water Nanofluid |

ARUS 2 2 2 1

PARALLEL SESSION 4A

23 JUNE 2021

Virtual Room 1 Energy Sustainability and Innovation Chairperson Assoc. Prof. Dr. Mohd Yusof Md. Daud Co-chair

Dr. Sumiaty Ambran

Agenda

| Time | Author(s) | Paper Title |
|----------|--|---|
| 11:00 am | Ridoan Karim; Firdaus Muhammad Sukki*; Mohd Nabil Bin Muhtazaruddin; Jorge Alfredo Ardila-Rey | Utilizing SWOT Analysis for The Energy Research: A Methodological Experience |
| 11:20 am | Ghazali Bin Harun; Shamsul Sarip*; Hazilah Mad Kaidi; Abdul Yasser Abdul Fatah; Noorlizawati A Rahim | Wind, Hydro and Solar Energy Challenges for Technical Vocational and Training (TVET) Electrical Entrepreneur in Malaysia: A Review |
| 11.40 am | Nurudin Bin Habeed Mohammad Abdul Settar; Shamsul Sarip*; Hazilah Mad Kaidi | Computational Fluid Dynamics Models of Wells Turbine for Oscillating Water Column System |
| 12.00 pm | Zinnirah Wellun*; Wardah Fatimah Mohammad Yusoff; Mohd Farid Mohamed; Khairul Azhar Mat Sulaiman; Mohammad Rasidi Rasani | Field Measurement of Indoor Environment of a Room with Single Sided Sliding Glass Opening |
| 12:20 pm | Ku Nur Afrina Ku Azman Shah; Mohd Zamri Mohd Yusop; Jafri Mohd Rohani*; Nor Akmal Fadil; Mohd Faizal Hassan; Mohd Fairus Mohd Yasin; Natrah Kamaruzaman; Engku Mohd Nazim Engku Abu Bakar; Syahrullail Samion; Yazid Yahya; Norhuda Abdul Manaf; Budi Hartono; Tuyen Nguyen-Duc; Abdul Samad Ahmad; Ashaari Ramli | Solar And Biomass Potential of Renewable Energy in Selected Asean Countries and Japan |
| 12:40 pm | Syamimi Saadon* | Organic Rankine Cycle (ORC) as waste heat recovery system for micro- cogeneration: a Preliminary Study |



PARALLEL SESSION 4B

23 JUNE 2021

Virtual Room 2 Energy Sustainability and Innovation & OSH Chairperson

Dr. Mohd Khairulanwar Mohd Dahuri

Co-chair

Dr. Abdul Yasser Abd Fatah

| Agenda | | |
|----------|---|--|
| Time | Author(s) | Paper Title |
| 11:00 am | Sazalina Zakaria*; Radin Diana R.Ahmad | Stochastic Type-2 Fuzzy Modelling on GHG Emission Prediction for Gas-Fired Power Plant |
| 11:20 am | Afiq Ariffin* | Generic Review on the Potentials Of Nuclear-Renewable Hybrid System for Sustainable Power Production in Malaysia |
| 11.40 am | Siti Sarah Aliah* | Optimization Of Pyrolysis Process Parameter of Char Production from Empty Fruit Bunch Solid Waste |
| 12.00 pm | Nor'Ain Abd Rahman*; Mohd Ferdaus Md Nor; Norashikin Mahmud | Prevention & Mitigation in Managing Chemical Accidents in Malaysia |
| 12:20 pm | Siti Hafizah Zakaria*; Rafizah Musa; Samira Albati Kamaruddin | Risk Assessment and Roles of Stakeholders for Frame Scaffolding Procedures in Construction Projects |
| 12.40 pm | Nurul Syifaa Mohamad; Norliza Mohamed; Suriani Mohd Sam; Norulhusna Ahmad; Hazilah Mad Kaidi | Awareness of the Safe Work Practice in Chemical Handling and Storage of Cleaning Activities for Office Building |

ARUS 2 2 1

International Conference of Advanced Research on Renewable Energy for Universal Sustainability 22-24 JUNE 2021 KUALA LUMPUR, MALAYSIA

SPECIAL SESSION 1

23 JUNE 2021

2.15 pm – 4.10 pm

Virtual Room 4 SATREPS-OTEC Malaysia Chairperson

Assoc. Prof. Ir. Dr Shamsul Sarip

Co-chair

Dr. Mohamed Azlan Suhot

Agenda

| Time | Speaker |
|---------------------|--|
| 02:15 pm - 02:30 pm | Opening Remark by Chairperson Assoc. Prof. Ir. Dr Shamsul Sarip |
| 02:30 pm - 02:50 pm | Title : Heat transfer performance test of a plate type heat exchanger for hybrid ocean thermal energy conversion system Speaker : Assist. Prof. Dr. Takeshi Yasunaga |
| 02:55 pm - 03:15 pm | Title : The Trend and Status of Energy Resources and Greenhouse Gas Emissions in the Malaysia Power Generation Mix Speaker : Assoc. Prof. Dr. Srithar Rajoo |
| 03:20 pm - 03:40 pm | Title : Fluid Flow and Heat Transfer Characteristics in the Rib- Cavity Microchannel Heat Sink Integrated with Secondary Channel Geometry Speaker : Assoc. Prof. Dr. Nor Azwadi Bin Che Sidik |
| 03:45 pm - 03:05 pm | Title : Where is the data ? Challenges and Prospective of Ocean Thermal Energy Conversion (OTEC) potential site assessment in Malaysia. Speaker : Assoc. Prof. Dr. Mohd Fadzil bin Mohd Akhir |
| 03:10 pm - 04:30 pm | Title : 10 MW Ocean Thermal Energy Centre (OTEC) using Rankine Cycle in Malaysia Speaker : Ts. Dr. Sathiabama A/p T Thirugnana |
| 04:30 pm -04:45 pm | Q&A session & Closing |



International Conference of Advanced Research on Renewable Energy for Universal Sustainability 22-24 JUNE 2021 KUALA LUMPUR, MALAYSIA

SPECIAL SESSION 2

23 JUNE 2021

2.15 pm – 4.30 pm

Virtual Room 3

Webinar on Renewable and Bio-Energy (TNBR)

Chairperson

Ts. Dr Nurul Aini Bani

Co-chair

Ts. Dr. Mohamad Zaki Hassan

Agenda

| Time | Speaker |
|---------------------|---|
| 02:15 pm - 02:30 pm | Opening Remark by Head of Unit Renewable Energy & Green Technology, TNB Research, Ir. Noraziah Muda |
| | Moderator: Mr. Muhammad Aiman Faiz bin Mohd Ilham |
| 02:30 pm - 03:10 pm | Cradle to Cradle: The Life of PV i. Solar PV System: Do We Let It Heat Up or Do We Cool It Down? Speaker: Ts Mohd Azimin Elias ii. Way Forward of Floating Solar in Malaysia Speaker: Ts Ridzuwan Mohd Jais iii. A Sharing of Solar PV Afterlife Journey Speaker: Ms. Nor Amirah Farhana Nawawi |
| 03:10 pm - 03:30 pm | Bio-CCU Approach in Malaysia: A Step Towards Greening Fossil Fuel Speaker: Ts Liyana Yahya |
| 03:30 pm - 03:50 pm | Enlivening Biogas Development through Circular Economy Model Speaker: Ts Nur Muhammad Afifi Zainal |
| 03:50 pm – 04:10 pm | Biomass: Fact or Fiction - Integration with Advanced Technologies for Sustainability Speaker: Ir. Dr. Lim Mook Tzeng |
| 04:10 pm -04:30 pm | Q&A session & Closing |