

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 2.00 PM – 3.45 PM

## Self-Regulation

|                   |  |
|-------------------|--|
| <b>Chair</b>      | Dr Mardhati Zainal Abidin  |
| <b>Host</b>       | Dr Khairiraihana   |
| <b>Co-Host</b>    | Mr Oladosu Temidayo Lekan (PG)   |
| 2.00 PM – 2.15 PM | Cleopatra Ong, Mike Bates<br><i>TÜV Rheinland</i><br><br>Improvise Process Hazard Analysis (PHA) In the “Self-Regulation” World  |
| 2.15 PM – 2.30 PM | Mohd Zaini Bin Mohd Zakaria, S. Yusoff, A. Abdul Ghani<br><i>PETRONAS</i><br><br>Managing Certificated Equipment through Integrity Assurance Work Process and Data Management System for Offshore-Self Regulation (OSR) Implementation in Malaysia             |
| 2.30 PM – 2.45 PM | Ir A Rahim Baharuddin, Nor Arinee binti Mat Saaud<br><i>PETRONAS</i><br><br>Self-Regulated Towards Loss Prevention: Worksite Capability & Readiness Assessment tools Case Study  |
| 2.45 PM – 3.00 PM | Shuhaily Bin Yusoff, Ir Hambali Chik, Wan Abdullah Wan Hamat<br><i>PETRONAS</i><br><br>Digitalization of Static Equipment Integrity Assessment towards Self-Regulation   |
| 3.00 PM – 3.15 PM | Choo Wei Lee, Muhammad Solihin bin Mohamed Amir, Muhammad Azmi bin Hamid, Syafudin Sujak<br><i>PETRONAS</i><br><br>Roadmap Towards Self-regulation for Plant Loss Prevention with Implementation of an Effective Inspection Program for Process Safety Element |
| 3.15 PM – 3.30 PM | Choo Wei Lee, Syafudin Sujak, M Shahril Atiqi M Sharip, Anis Amilah A Rahman<br><i>PETRONAS</i><br><br>Self-Regulations Readiness: Sustaining Loss Prevention Through Effective Data Management and Simulation Tools   |
| 3.30 PM – 3.45 PM | Zamri Wagiman<br><i>ARKEMA</i><br><br>Asset Integrity Management by Special Scheme Inspection Committee  |

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 2.00 PM – 3.45 PM

## Data Analytics & Digitalisation (1)

|                   |  |
|-------------------|--|
| <b>Chair</b>      | Dr Dzulkarnain Zaini   |
| <b>Host</b>       | Dr Bhajan Lal  |
| <b>Co-Host</b>    | Mr Asher Ahmed Malik (PG)  |
| 2.00 PM – 2.15 PM | M Nazri B Ahmad, Naila Rusma Bt Idris, Koi Swee Ling,<br><i>PETRONAS</i><br><br>Predictive Analytics for 3rd Party Threat & Geohazard (PrAn3rdGeo)   |
| 2.15 PM – 2.30 PM | Boon Chong Choo, Mus'ab Abdul Razak<br><i>Universiti Putra Malaysia (UPM)</i><br><br>A Review on Supervised Machine Learning for Accident Risk Analysis in Malaysia  |
| 2.30 PM – 2.45 PM | Baiju Karun, V.R. Renjith, Sudheep Elayidom<br><i>University of Science and Technology (CUSAT), Keralat</i><br><br>Application of Fuzzy Logic and Machine Learning Techniques to Improve Inherently Safer Design in Process Safety Management: A Brief Study |
| 2.45 PM – 3.00 PM | Raja Fernaliz Raja Harris, Muhammad Naiem Naqiuddin<br><i>EXS Synergy Sdn Bhd</i><br><br>A Data Driven Approach in Revolutionizing the Management of Explosion Risk in Energy Facilities   |
| 3.00 PM – 3.15 PM | Mohd Hilmi Bin Zainal Abidin, Safari Bin Saad<br><i>PETRONAS</i><br><br>PETRONAS Flange Management Tools (FMT)   |
| 3.15 PM – 3.30 PM | Ting Kang Lung, Ting Ding Sie, M Faizal Fakruddin<br><i>PETRONAS</i><br><br>Process Safety Incident Prevention Through Predictive Seismic Assessment for an LNG Plant in Malaysia  |

# PARALLEL TECHNICAL SESSIONS

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## Risk & Integrity Management (1)

|                   |   |
|-------------------|---|
| <b>Chair</b>      | Dr Azizul Buang   |
| <b>Host</b>       | Dr Madiyah Omar   |
| <b>Co-Host</b>    | TBC   |
| 2.00 PM – 2.15 PM | Cengiz Dirik, Dayang Radiah Awang Biak, Mus'ab Bin Abdul Razak, Nik Nor Liyana Nik Ibrahim<br><i>Universiti Putra Malaysia (UPM)</i><br><br>Failure Probability and Reliability Prediction of Unloading Arm in an LNG Marine Terminal |
| 2.15 PM – 2.30 PM | Mohd Fadly Adnan, Mohd Ashraf Mohd Ibrahim<br><i>PETRONAS</i><br><br>Revisiting Hazards of Liquid Nitrogen Storage  |
| 2.30 PM – 2.45 PM | Mohd Ashraf Mohd Ibrahim, Noor Izma Ismail<br><i>PETRONAS</i><br><br>Mindfulness of Pressure Relief System Limitations  |
| 2.45 PM – 3.00 PM | Zalina Harun<br><i>PETRONAS</i><br><br>Systematic Determination of a Tank Rupture Root Cause Using Dynamic Simulation Application   |
| 3.00 PM – 3.15 PM | Mohan Anantharaman, Rabiul Islam, Vikram Garaniya, Faisal Khan<br><i>Australian Maritime College, University of Tasmania</i><br><br>Efficiency, safety, and reliability analysis of turbocharging in a large container vessel         |
| 3.15 PM – 3.30 PM | Er. Chan Keng Yong<br><i>AcuTech Consulting Pte. Ltd.</i><br><br>Quantitative Risk Assessment (QRA) study for Dangerous Goods Warehousing & Storage Facility  |

## PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 2.00 PM – 3.45 PM

### Other Process Safety Area

|                   |  |
|-------------------|--|
| <b>Chair</b>      | AP Dr M Moniruzzaman   |
| <b>Host</b>       | Dr Nurul Ekmi Rabat  |
| <b>Co-Host</b>    | Dr Kee Kok Eng   |
| 2.00 PM – 2.15 PM | Mohamad Suffian Ahmad, Aqbal Hafeez Ariffin, Ahmad Saife Salleh, Wahida Ameer Batcha, Maslina Musa<br><i>MIROS</i><br><br>Compliance of Occupational Safety and Health Industry Code of Practice for Express and Excursion Bus   |
| 2.15 PM – 2.30 PM | Farahzila M Sahat, Marina Mosir<br><i>PETRONAS</i><br><br>Application of an Accurate Crude and Condensate Assay Synthesis Methodology In Reducing Major Design Change Within Revamp Project Phases   |
| 2.30 PM – 2.45 PM | Marina Mosir<br><i>PETRONAS</i><br><br>Innovated Single Column Scheme for Heavy Condensate Recovery  |
| 2.45 PM – 3.00 PM | Mohd Azril Ahmad, Faizah Md Yasin<br><i>Universiti Putra Malaysia (UPM)</i><br><br>Evaluation of Occupational Safety and Health (OSH) Compliance Among Ice Industry Operating Using Ammonia Ice Refrigeration System in Selangor   |
| 3.00 PM – 3.15 PM | Ali Ameen Karmally, Thar Mohammed Badri Albadri, Faiz Ahmed<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Thermal Barrier Coatings Preventive Maintenance and safety enhancement Using X-Band Microwave Non-Destructive Evaluation: A Case Study of Boron Carbide |
| 3.15 PM – 3.30 PM | Fasilit Aramide Sanusi<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Migrant Worker and Sustainable Job Continuity: The Role of Wellbeing and Work Life Balance   |
| 3.30 PM – 3.45 PM | Grace Amabel Tabaaza, Dzulkarnain B Zainal, Bhajan Lal<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Toxicological Issues of Conventional Gas Hydrate Inhibitors  |

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 3.55 PM – 5.45 PM

## Risk & Integrity Management (2)

|                   |   |
|-------------------|---|
| <b>Chair</b>      | AP Dr M Azmi B Bustam @ Khalil  |
| <b>Host</b>       | Dr Noraini A Ghani  |
| <b>Co-Host</b>    | Mr Asher Ahmed Malik (PG)   |
| 3.55 PM – 4.10 PM | Mohamed Shaik Fareed, Muzzahhir M Hadzir, M Shahrizal PKM Seeni Mohd<br><i>PETRONAS</i><br><br>Underground Closed Drain Pipe Leaks  |
| 4.10 PM – 4.25 PM | Christian Hariady Girsang, Mohamad Razi B Mansoor, Muhammad Nur Abid B Mohamad Shahrar<br><i>PETRONAS</i><br><br>Managing Dynamic Challenges and Realities in Pipeline Integrity Management and Assurance   |
| 4.25 PM – 4.40 PM | Nur Aliah Fatin Mohd Nizam Ong, Mohd Zahirasri Mohd Tohir, Mays Mahmood Mutlak, Muhammad Adnan Sadiq, Rozita Omar, Mohamad Syazarudin Md Said<br><i>Universiti Putra Malaysia (UPM)</i><br><br>BowTie Analysis of Rooftop Grid-Connected Photovoltaic Systems |
| 4.40 PM – 4.55 PM | I Wayan Eka Putra, M Fauzi Badaruddin, Tan Chin Chien and Norliza Salihin<br><i>PETRONAS</i><br><br>Avoidance of Recurrence of Lost of Product Containment for Offshore Pipeline and Riser Through Flow Assurance and Materials Selection                     |
| 4.55 PM – 5.10 PM | Syahrizad Mohd Yunus, Choo Wei Lee, Syafudin Sujak<br><i>PETRONAS</i><br><br>Prevention Loss of Containment Using Data Analytical Onsite Corrosion Testing Approach for Integrity Evaluation of 9% Nickel Plate LNG Storage Tank                              |
| 5.10 PM – 5.30 PM | Syed Muhammad Mujtaba, Tamiru Alemu Lemma<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Gas Pipeline Safety Management System Based on Neural Network  |

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 3.55 PM – 5.45 PM

## Fire & Explosion

|                   |  |
|-------------------|--|
| <b>Chair</b>      | Dr Dzulkarnain Zaini   |
| <b>Host</b>       | Mr Oladosu Temidayo Lekan (PG)   |
| <b>Co-Host</b>    | TBC  |
| 3.55 PM – 4.10 PM | Shinji Shibano<br><i>ALTAIR</i><br><br>Fire Extinguishing and Fire Smoke Behaviour Simulation with Computational Fluid Dynamics (CFD)  |
| 4.10 PM – 4.25 PM | Azmir Adnan, Ahmad Nazmi Muhaidin<br><i>PETRONAS</i><br><br>Conversion of Electrical Apparatus from Explosive Gas Combustible Atmospheres to Dust Atmospheres Classification type – A PETRONAS Chemicals Polyethylene’s Experience |
| 4.25 PM – 4.40 PM | M Faizal M Sharin<br><i>PETRONAS</i><br><br>Principles of Design in Balancing Fire Safety Needs with Sustainable Development Using Risk-based Approach   |
| 4.40 PM – 4.55 PM | Ahmad Yathasya Ahmad Khairi<br><i>PETRONAS</i><br><br>Fire & Explosion Strategy Optimisation for Ageing Offshore Facilities  |
| 4.55 PM – 5.10 PM | Nur Shahidah Ab Aziz, Rafiziana Md.Kasmani<br>Universiti Teknologi MARA (UiTM)<br><br>Experimental Analysis on the Radiant Heat Flux of Horizontal Impinging Jet Flames  |
| 5.10 PM – 5.30 PM | Hasnolizar Zakaria, Associate Prof. Dr. Masdi Muhammad<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Decision-Making Analysis of Post-Fire and Explosion Aftermath Assessment   |
| 5.30 PM – 5.45 PM | Abd Shukor Mahat, Abdul Mutalib Ismail, Mohd Fakhru Farhan Mohd<br><i>PETRONAS</i><br><br>Comparison of NFPA 497 and EI Part 15 in the Application of Hazardous Area Classification Study  |

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 3.55 PM – 5.45 PM

## Human Factor

|                   |   |
|-------------------|---|
| <b>Chair</b>      | Dr Azizul Buang   |
| <b>Host</b>       | Mr Tanweer Hussain (PG)   |
| <b>Co-Host</b>    | TBC   |
| 3.55 PM – 4.10 PM | Er. Premkumar. S<br><i>ALARP Process Safety Solutions Consult Pte. Ltd.</i><br><br>Human Factors and Process Safety   |
| 4.10 PM – 4.25 PM | Gehad Mohammed Ahmed Naji, Ahmad Shahrul Nizam Isha , Muhammad Shoaib Saleem , Osama Sharafaddin , Muhammad Ajmal , Ebrahim AA Ghaleb<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>The Important of Safety Culture with Safety Performance Measures |
| 4.25 PM – 4.40 PM | Nabilah Aliyah Ahmad Naim, Rozita Omar, Nik Nor Liyana Nik Ibrahim<br><i>Universiti Putra Malaysia (UPM)</i><br><br>Emergency Preparedness & Response in Palm Oil Mill and Investigation on the Employees Emergency Preparedness Knowledge & Attitude       |
| 4.40 PM – 4.55 PM | Hasan Mahbub Tusher, Salman Nazir, Steven Mallam, Risza Rusli, Anne Kari Botnmark<br><i>University of South-Eastern Norway</i><br><br>Non-technical skills for reducing accidents in European process industry  |

# PARALLEL TECHNICAL SESSIONS

Date: 22 Nov 2021 | Time: 3.55 PM – 5.45 PM

## Process Safety Management

|                   |   |
|-------------------|---|
| <b>Chair</b>      | Prof Faiz Ahmad   |
| <b>Host</b>       | Dr Nurul Ekmi Rabat   |
| <b>Co-Host</b>    | Ms Kalpani Rasangika Ambagaha Hewage Dona (PG)  |
| 3.55 PM – 4.10 PM | Roselan B Mohamed-Ahmad, Nasyita Bt Osman<br><i>PETRONAS</i><br><br>Managing Process Safety Effectively through Proactive Emergency Response Management   |
| 4.10 PM – 4.25 PM | Md. Abu Toha, Rabeya Akter , Md. Salah Uddin<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Paradigm of Sustainable Process Safety Management for Industrial Revolution 4.0: A Circular Economy and Sustainability Perspective  |
| 4.25 PM – 4.40 PM | Zainudin Ismail<br><i>PETRONAS</i><br><br>Process Safety Governance during Design and Execution for Projects or Plants  |
| 4.40 PM – 4.55 PM | Muhammad Ajmal Muhammad Ajmal, Ahmad Shahrul Nizam Isha, Shahrina Md Nordin, Saba Rasheed, Al-Bara Abdulrahman Al-Mekhlafi, Gehad Mohammad Ahmad Naji<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Safety Management and Safety Outcomes in Oil and Gas Industry in Malaysia: Safety Compliance as a Mediator |
| 4.55 PM – 5.10 PM | Mohd Shazman Zulkipli, Assoc Prof Datin Ir Dr Siti Aslina Husain<br><i>Universiti Putra Malaysia (UPM)</i><br><br>Assessment of Process Safety Management and Health, Safety, and Environment Management System Compliance for Plug and Abandonment Activities in the Malaysian Oil and Gas Industry                  |



# PARALLEL TECHNICAL SESSIONS

Date: 23 Nov 2021 | Time: 2.00 PM – 4.30 PM

## Risk & Integrity Management (3)

|                   |   |
|-------------------|---|
| <b>Chair</b>      | AP Dr Haslinda Zabiri   |
| <b>Host</b>       | AP Dr Yeong Yin Fong  |
| <b>Co-Host</b>    | Mr Oladosu Temidayo Lekan (PG)  |
| 2.00 PM – 2.15 PM | <p>Awaluddin Berwanto, Ahmad Razali Yaakob, Mohd Syafiq Husni Ahmad Zawawi<br/><i>PETRONAS</i></p> <p>An Optimisation of Underwater Inspection Via Risk Based Inspection Methodology for PETRONAS Subsea Asset</p>  |
| 2.15 PM – 2.30 PM | <p>Ir. Safari Saad, Ir. Alzakri Ekhwan, Syed Hafiz Al-Idrus<br/><i>PETRONAS</i></p> <p>Digitalization of Bolted Flange Joint Integrity (BFJI) Program towards Hydrocarbon Leak Free Operation</p>   |
| 2.30 PM – 2.45 PM | <p>Zainudin Ismail<br/><i>PETRONAS</i></p> <p>Technical Review in Managing Project Conflict in a Petrochemical Facility. A Review of High-Pressure Air Fin Coolers Integrity, which Turned Uncertainty to Zero Risk</p>   |
| 2.45 PM – 3.00 PM | <p>W Nurhusna Hasnan; Ir M Zaid Kamardin<br/><i>PETRONAS</i></p> <p>Groupwide Level Strategy and Intervention to Reduce Loss of Primary Containment (LOPC) due to Piping Corrosion</p>  |
| 3.00 PM – 3.15 PM | <p>M Fikri Hashim, Wida Nabila Haswin<br/><i>PETRONAS</i></p> <p>Subsea System Condition Performance Monitoring for PETRONAS Subsea Asset</p>   |
| 3.15 PM – 3.30 PM | <p>Duolin Sha, Chaoqun Wang, Wei Liang<br/><i>China University of Petroleum (Beijing)</i></p> <p>Pipeline defect classification method based on Complete Ensemble Empirical Mode Decomposition (CEEMD) and Fuzzy C-Means</p>  |
| 3.30 PM – 3.45 PM | <p>M Harris Mohammad<br/><i>PETRONAS</i></p> <p>Failure Analysis of Radiant Tube in Ethylene Furnace</p>  |
| 3.45 PM – 4.00 PM | <p>Larasati Dena Putri Sudewo, Anggraini Ratih Kumaraningrum, Hotmatua Daulay, Azmi Mohd Sharif, Heri Hermansyah<br/><i>University of Indonesia</i></p> <p>Comparative Risk Analysis of the Impact of Highway Construction on Underground and Above Ground Gas Pipeline</p> |

4.00 PM – 4.15 PM

Syifa Khairun Nisa  
*Universitas Pertamina*

Major Environmental (MEI) and Pollution Incident (MPI) Identification  
Using Environmental Identification (ENVID) For the Case Of FLNG  
Conceptual Study

# PARALLEL TECHNICAL SESSIONS

Date: 23 Nov 2021 | Time: 2.00 PM – 4.30 PM

## Risk & Integrity Management (4)

|                   |   |
|-------------------|---|
| <b>Chair</b>      | Dr Mazli Mustapha   |
| <b>Host</b>       | Dr Chew Thiam Leng  |
| <b>Co-Host</b>    | Mr Asher Ahmed Malik (PG)   |
| 2.00 PM – 2.15 PM | Farahzila Mohd Sahat<br><i>PETRONAS</i><br><br>Safety Function Enhancement at Amine Regeneration Unit with Multiple Rich Amine Producer for Unpredicted Process Upset   |
| 2.15 PM – 2.30 PM | Mohd Aizad Ahmad, Zulkifli Abdul Rashid, Mohd Fazril Irfan Ahmad Fuad, Iqbal Jamaludin, Arman Abdullah, Azil Bahari Alias<br><i>Universiti Teknologi MARA (UiTM)</i><br><br>Economic Loss Risk Assessment on Pressure Variation for Methanol Production |
| 2.30 PM – 2.45 PM | Ratih Luhuring Tyas, Deswandri, Dicky Tri Jatmiko, Prof. Dr. Heri Hermansyah<br><i>University of Indonesia</i><br><br>Visualizing Primary Cooling System Risks with Bow Tie Diagram for RSG GAS Operator Guidance                                       |
| 2.45 PM – 3.00 PM | Lim Wen Khai, Risza Rusli, Salman Nazir<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Offshore Coxswain Competency Evaluation Model (OC2EM) for Internal On- board Competency Monitoring and Assessment  |
| 3.00 PM – 3.15 PM | Ahmad Muzammil Idris<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>A risk-based methodology for optimum placement of flammable gas detectors using Computational Fluid Dynamics (CFD) and Mixed Integer Linear Programming (MILP)                |
| 3.15 PM – 3.30 PM | Ahmad Rizal Mohamed, Siti Aslina Hussain<br><i>PETRONAS</i><br><br>Novel Accident Causation Model and Investigation Technique for Complex Sociotechnical Systems  |
| 3.30 PM – 3.45 PM | Syed Malek Syed Muhammad, Razif Harun<br><i>Universiti Putra Malaysia (UPM)</i><br><br>Redesign Identification Criteria for Major Hazard Installation in Malaysia   |
| 3.45 PM – 4.00 PM | Sri Dewi Handayani<br><i>Universitas Pertamina</i><br><br>Identification of Environmental Critical Element on Subsea Facilities through Bow Tie Analysis with Qualitative Barrier Acceptance Criteria   |

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| 4.00 PM – 4.15 PM | Darmawan Ahmad Mukharror, Akhmad Munawir, Yosephine Devina, Heri Hermansyah<br><i>PT Keselamatan Proses Indonesia</i><br><br>Analysis the Most Effective Key Performance Indicators of Process Hazard Evaluation for Auditing Quantitative Risk Assessment Reports: Case Study in Indonesia Process Industries |
| 4.15 PM – 4.30 PM | Darmawan Ahmad Mukharror, Akhmad Munawir, Yosephine Devina, Heri Hermansyah<br><i>PT Keselamatan Proses Indonesia</i><br><br>Analysis of Individual Risk for Quality Assurance of Quantitative Risk Assessment: Case Study in Indonesia  |

# PARALLEL TECHNICAL SESSIONS

Date: 23 Nov 2021 | Time: 2.00 PM – 4.30 PM

## Other Process Safety Area (2)

|                   |   |
|-------------------|---|
| <b>Chair</b>      | Dr Tamiru Alimu Lemma   |
| <b>Host</b>       | Dr Nor Adilla Rashidi   |
| <b>Co-Host</b>    | Mr Tanweer Hussain (PG)   |
| 2.00 PM – 2.15 PM | Suresh G, Dr VR Renjith, Dr AB Bhasi<br><i>Cochin University of Science and Technology, India</i><br><br>Prioritisation Of Operations During Emergency Shutdown of a Crude Distillation Unit by Interval-Valued Intuitionistic Fuzzy Analytic Hierarchy Process |
| 2.15 PM – 2.30 PM | Jingyi Xiong, Wei Liang, Yu Ding, Junming Yao<br><i>China University of Petroleum (Beijing)</i><br><br>Research on Defect Detection in Bimetallic Clad Steel Tube Based on Pulse Eddy Current   |
| 2.30 PM – 2.45 PM | Rafeqah Raslan, Mimi H. Hassim, Nishanth G. Chemmangattuvalappil, Denny K.S. Ng<br><i>Universiti Teknologi MARA (UiTM)</i><br><br>Computer-aided Design of Optimal Paint Formulation with Low Safety and Health Risks   |
| 2.45 PM – 3.00 PM | Abdullah Sardar, Vikram Garaniya, Mohan Anantharman, Rouzbeh Abbassi, Faisal Khan<br><i>University of Tasmania</i><br><br>Comparison between Simulation and Conventional Training: Expanding the Concept of Simulator Fidelity                                  |
| 3.00 PM – 3.15 PM | Peiyuan Hu, Manhou Li<br><i>Hefei University of Technology</i><br><br>Gas-phase Barrier-induced Fire Performance and Thermal Analysis of Flame Spread over n-Butanol Surface  |
| 3.15 PM – 3.30 PM | Manhou Li, Guangzhao Han<br><i>Hefei University of Technology</i><br><br>Influence of Aspect Ratio on Flame Radiation of Rectangular Heptane Pool Fire  |
| 3.30 PM – 3.45 PM | Farah Syamim Anwar, Azleen Azna M K Hing, Hasnor H Hashim<br><i>PETRONAS</i><br><br>Application of Transient Digital Twin for Power Failure Study and Flare Design Capacity Analysis  |
| 3.45 PM – 4.00 PM | Ihtisham Ul Haq, Ali Qasim, Bhajan Lal, Dzulkarnain B Zaini<br><i>Universiti Teknologi PETRONAS (UTP)</i>   |

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|-------------------|---|
|                   | A Review of Environmental Issues Concerning Conventional Gas Hydrate Inhibitors   |
| 4.00 PM – 4.15 PM | Ainun. N. H, Dayang Radiah. A. B, Hamdan. M. Y, Ahmad. S. M. J, Valerio <i>Universiti Putra Malaysia (UPM)</i><br><br>Reliability, Availability, and Maintainability of Cement Manufacturing Facility |

# PARALLEL TECHNICAL SESSIONS

Date: 23 Nov 2021 | Time: 2.00 PM – 4.30 PM

## Data Analytics & Digitalisation (2)

|                   |  |
|-------------------|--|
| <b>Chair</b>      | Dr Syaza Izyani  |
| <b>Host</b>       | Dr Azizul Buang  |
| <b>Co-Host</b>    | Ms Kalpani Rasangika Ambagaha Hewage Dona (PG)   |
| 2.00 PM – 2.15 PM | Benjamin Kueh Wei Bin, Nicholas Philip, Ngu Kie Ming, Kung Teck Kiong, Ng Lim Zheng<br><i>PETRONAS</i><br><br>Process Safety Management using Data Analytic & Digitalization   |
| 2.15 PM – 2.30 PM | Noorhidayah Hussein, Azleen Azna M Khairil Hing, Hasnor Hassaruddin Hashim<br><i>PETRONAS</i><br><br>Smart Furnace Analytics for Efficiency Monitoring And Optimisation  |
| 2.30 PM – 2.45 PM | Linyu Wu, Yifan Li, Wei Liang<br><i>China University of Petroleum (Beijing)</i><br><br>Intelligent diagnosis of natural gas pipeline defects based on variational mode decomposition (VMD) and deep belief network (DBN)           |
| 2.45 PM – 3.00 PM | M. Nuramzan Iftari, Andy Noorsaman Sommeng<br><i>Universitas Indonesia</i><br><br>Optimization of Risk-Based Inspection Planning to Minimise Losses using Machine Learning at PT PGN Tbk Gas Transmission Infrastructure           |
| 3.00 PM – 3.15 PM | Norsuzieanah Halil, Risza Rusli, Mardhati Zainal Abidin, Shahrulnizam Jamen, Faisal Khan<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>An integrated health risk assessment with control banding for nanomaterials exposure |
| 3.15 PM – 3.30 PM | Nurul Sa'adah Sulaiman, Henry Tan, Nur Amira binti Zakuan<br><i>Universiti Malaysia Pahang</i><br><br>Integration of Bayesian Network and Fuzzy AHP in probability analysis of oil and gas pipeline                                |
| 3.30 PM – 3.45 PM | Adeel ur Rehman, Dzulkarnain Zaini, Bhajan Lal<br><i>Universiti Teknologi PETRONAS (UTP)</i><br><br>Predictive Ecotoxicological Modeling on Ionic Liquids Using QSAR Techniques – Mini Review                                      |