## **International Symposium on Advances**



## **Nuclear Engineering**

Oct 08 to 10, 2018

Organized by:

PIEAS

**Department of Nuclear Engineering** 

Pakistan Institute of Engineering and Applied Sciences Islamabad

| Monday 08 October, 2018               |  |  |  |  |
|---------------------------------------|--|--|--|--|
| 0830 –1030 Registration               |  |  |  |  |
| 1030 – 1045 <b>Tea Break</b>          |  | a Break  |  |  |
| 1045 – 1145 Plena                     |  | ry Session   |  |  |
| 1200 – 1300 Opening Ceremony          |  | ng Ceremony  |  |  |
| 1300 – 1400                           |  |  |  |  |
| Technical Session 1                   |  |  |  |  |
| Session Chair: Prof. Syed Shoaib Raza |  |  |  |  |
| 1400 – 1430                           | Professor Nahrul Khair<br>Bin Alang MD Rashid<br>(Key Note Speaker)            | Developing nuclear power infrastructure in Malaysia - a nuclear renaissance?                         |  |  |
| 1430 – 1500                           | Professor Raimon Pericas (Key Note Speaker)                                    | RELAP/SCDAPSIM Fukushima Related Activities  |  |  |
| 1500 – 1515                           | Junaid Faizan, Muhammad<br>Omair Khan, Muhammad<br>Ilyas                       | Simulation of Freon CHF Phenomena with RELAP 5 Mod 4 Computer Code                                   |  |  |
| 1515 – 1530                           | Muhammad Daniyal<br>Nauman, Muhammad Ilyas,<br>Khalid Waheed, Masroor<br>Ahmed | Design and thermal hydraulic analysis of an innovative steam generator for the next generation SMR's |  |  |
| 1530 – 1545                           | Hira Sharif, Memoona<br>Tariq, Said Kashif, Imama<br>Zaidi                     | Application of CFD in Risk Assessment  |  |  |
| 1545 – 1600                           | Ammar Ahmed, Ajmal<br>Shah, Kamran R. Qureshi                                  | CFD investigation of iodine removal efficiency in venturi scrubber                                   |  |  |

| Tuesday 09 October, 2018                                  |  |   |  |  |  |
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| Technical Session 2                                       |  |   |  |  |  |
| Session Chair: Professor Nahrul Khair Bin Alang MD Rashid |  |   |  |  |  |
| 0900 – 0930   | Professor Yunzhao Li<br>(Key Note Speaker)                                     | NECP-Bamboo: A PWR-core fuel management calculation code system   |  |  |  |
| 0930 – 1000   | Professor Zafarullah<br>Koreshi<br>(Key Note Speaker)                          | Variational Optimization With Multi-Group Neutron Diffusion Equations: A Two-Group Diffusion Model Validated With Monte Carlo                   |  |  |  |
| 1000 – 1015   | Bukhtiar Mohsina, Siraj-ul-<br>Islam Ahmad, Nadeem<br>Shaukat, Ahmad Shaheryar | Neutron Energy Spectrum Unfolding Using Stochastic Techniques   |  |  |  |
| 1015 – 1030   | Muhammad Qasim Awan,<br>Liangzhi Cao, Hongchun<br>Wu                           | Excess Reactivity Management in PWR loaded with Accident Tolerant Fully Ceramic Microencapsulated (AT-FCM) Fuel: Lattice Level Analysis         |  |  |  |
| 1030 – 1045   | Muhammad Waqas Tariq,<br>Muhammad Sohail,<br>Sikander Majid Mirza              | Calculation of Reactivity Temperature Coefficients for Potential LEU/ MEU Fuels of MNSR   |  |  |  |
| 1045 – 1100   | Zohaib Butt, Tariq<br>Mahmood, Rizwan ali                                      | Determination of Power Coefficient of Reactivity for a typical MTR using neutronics-Thermal Hydraulics Coupling and its Experimental Validation |  |  |  |
| 1100-1130   |  | Tea Break   |  |  |  |
|   | Techn  | ical Session 3  |  |  |  |
|   | Session Chair: Prof. Rafiziana Binti Kasmani                                   |   |  |  |  |
| 1130 – 1200   | Professor Azhar H. Malik<br>(Key Note Speaker)                                 | Compton Camera as an Imaging Tool for Weak Sources:<br>Challenges and Developments  |  |  |  |
| 1200 – 1215   | Dr. Irfan Younus   | Experimental study to capture aerosol particle released from NPP in severe accident situation   |  |  |  |
| 1215 – 1230   | Saqib Rehman, Khalid<br>Waheed, Naseem Irfan,<br>Masroor Ahmad                 | Experimentation investigation of radioactive iodine removal efficiency on pilot scale FCVS experimental setup                                   |  |  |  |
| 1230 – 1245   | Mahmood Ahmad,<br>Masroor Ahmad, Khalid<br>Waheed                              | Radiochemical Studies for Efficient Retention of Volatile Iodine in FCVS Scrubbing Solution   |  |  |  |
| 1245 – 1300   | <b>Suhail Ali</b> , Kamran R.<br>Qureshi, Khalid Waheed                        | Experimental Investigation of Aerosols Removal Efficiency Through Self-Priming Venturi Scrubber   |  |  |  |
| 1300-1400 Prayer Break/Lunch Break                        |  |   |  |  |  |

| Technical Session 4 Session Chair: Professor Dr. Zafarullah Koreshi |   |   |  |  |
|---|---|---|--|--|
| 1400 – 1430   | Dr. Jahangir A. Satti<br>(Key Note Speaker)                           | Implementation of linear accelerator based radio-<br>surgery for cranial treatments |  |  |
| 1430 – 1500   | Dr. Imtiaz Ahmad<br>(Key Note Speaker)                                | Nuclear Disarmament and Safeguards in the Global Non-<br>Proliferation Regime       |  |  |
| 1500 – 1515   | Dr. Hamid Saeed Raza  | A Review of Regulatory Frame Work for High Assay Low Enriched Uranium (HALEU) Fuel  |  |  |
| 1515 – 1530   | Dr. Javed Iqbal   | Time Limited Ageing Analysis of Reactor Containment                                 |  |  |
| 1530-1545   | Aurangzeb, Bashir Ahmed ,<br>M. Rizwan, G. B. Shah,<br>Azhar H. Malik | Development of Polymer Composite Materials for Gamma Shielding                      |  |  |
| 1545-1600   | Muhammad Rizwan,<br>Waqas Arshad, Azhar H.<br>Malik, Rizwan Ahmad     | Re-construction of Equivalent Disk Source using point source technique              |  |  |

| Wednesday 10 November, 2018                 |  |  |  |  |
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| Technical Session 5:                        |  |  |  |  |
| Session Chair: Professor Dr. Raimon Pericas |  |  |  |  |
| 0900 – 0930                                 | Professor Rafiziana Binti<br>Md. Kasmani<br>(Key Note Speaker)   | Nuclear Engineering Education in Malaysia: Opportunities and Challenges  |  |  |
| 0930 - 1000                                 | Professor Aman Ur<br>Rehman<br>(Key Note Speaker)                | Status of ATER Project   |  |  |
| 1000 – 1015                                 | Sehrish Shakir, Riaz Khan*,<br>Shahab Ud-Din Khan                | Microwave Assisted Plasma Studies on GLAST III<br>Tokamak  |  |  |
| 1015 – 1030                                 | <b>Shahab Ud-Din Khan,</b> Riaz<br>Khan*, Sehrish Shakir         | Steady state and transient analysis of novel design<br>Helium Cooled Ceramic Blanket (HCCB) system of China<br>Fusion Engineering Test Reactor (CFETR)                       |  |  |
| 1030 – 1045                                 | <b>Muhammad Waqas,</b> Sajjad<br>Tahir                           | Comparitive study of different types of transmission lines and their applications for charged storage devices for pulse comprasion and nanosecond discharges at high voltage |  |  |
| 1045 - 1100                                 | M. Sohail Azam, Azhar H.<br>Malik, Masroor Ahmad,<br>Adul Qayyum | Laser Based High Current Electron Sources  |  |  |
| 1100-1130 Tea Break                         |  |  |  |  |
| 1130-1300 Poster Session/Campus Tour        |  |  |  |  |

| 1300-1400 Prayer Break/Lunch Break |   |  |  |  |
|------------------------------------|---|--|--|--|
| Technical Session 6:               |   |  |  |  |
| Session Chair: Dr. Tariq Majeed    |   |  |  |  |
| 1400 – 1430                        | Professor Tariq Majeed<br>(Key Note Speaker)                                    | Nuclear Security Culture   |  |  |
| 1430 – 1445                        | <b>Ali Khalid,</b> Waseem<br>Siddique, Inam ul Haq                              | Numerical analysis of heat transfer augmentation in a two-pass trapezodial channel with wavy base corrugation  |  |  |
| 1445 – 1500                        | <b>Muhammad Zeeshan Bari,</b><br>Syed Shoaib Raza, Qaiser<br>Nadeem, Rizwan Ali | Analysis of Climate Change and Global Warming on<br>Dispersion of Airborne Radioactivity Released from a<br>Nuclear Reactor under Accidental Condition |  |  |
| 1500 – 1515                        | Manahil ali, Syed Mujtaba<br>Ul Hassan  | Facile fabrication of mesoporous alumina by hydrothermal approach for drug delivery  |  |  |
| 1515 – 1530                        | Muhammad Sheraz,<br>Nadeem Qaiser, Rizwan Ali                                   | Development of real-time emergency decision support system for nuclear power plant   |  |  |
| Closing Ceremony                   |   |  |  |  |