

# SCHEDULE

**FIRST DAY: November 13, 2007**

07.30-08.15 Registration

08.15-08.45 Opening Ceremony

## **09.00-10.30 PLENARY SESSION 1 - Chairman: Sunarko and Topan Setiadipura**

P1.1 Activities in TOKYO TECH Center of Excellence Innovative Nuclear Energy System (COE-INES) / *Hiroshi Sekimoto (Tokyo Tech-Japan)*

P1.2 Opportunities, Challenges and Common Design Objectives for Innovative SMRs / *V.V. Kuznetsov (IAEA)*

10.30-11.00 Break

## **11.00-12.30 PARALLEL SESSION A1 (Computation 1) Chairman: Heru Suhartanto and Rizal Kurniadi**

A1.1 Neutronic Aspect of Subcritical Assembly for Mo-99 Production (SAMOP) Reactor/ *Topan Setiadipura (BATAN-Indonesia)*

A1.2 Simulation of Neutron Generating Target Cooling System with Finite Element Method (FEM / *Elfrida Saragi (BATAN-Indonesia)*

A1.3 Pattern Recognition of Material Creep and Fatigue Used in Nuclear Power Plant / *Mike Susmikanti (BATAN –Indonesia)*

A.1.4 Simultaneous Selection of Beam Directions for Treatment Planning and for Image Reconstruction / *Rena Widita (ITB-Indonesia)*

12.30-13.30 Break

## **13.30-15.30 PARALEL SESSION A2 (Computation 2 / Instrumentation) Chairman: Novitrian and Khairina Ns**

A2.1 Multistep Runge-Kutta Methods for solving DAEs / *Heru Suhartanto (Univ.Indonesia - Indonesian) - INVITED*

A2.2 Development of Activity Analysis for Surveillance in Nuclear Facilities / *R.B. Wahyu (BATAN-Indonesia)*

A2.3 Development of Anomaly Diagnosis Method Using Neuro-Expert for PWR Monitoring System / *Muh. Subekti (BATAN-Indonesia)*

A2.4 Dynamic Transient Analysis of the Structure Based on the Finite Element with the Normal Mode Method / *Utaja (BATAN-Indonesia)*

15.30-16.00 Break

**16.00-17.30 PARALLEL SESSION A3 (Computation 3)-  
Chairman: Suwardi and Imam Taufiq**

- A3.1 Thermal Performance Analysis of Novel UO<sub>2</sub> Pellet Containing Tungsten Matrix for Pressurized Water Reactor / *Suwardi (BATAN-Indonesia)*
- A3.2 Improving Computational Efficiency Using Brute Force Method in Uncertainty/Sensitivity Analysis / *Muhammad Hendayun (BATAN-Indonesia)*

**11.00-12.30 PARALLEL SESSION B1 (Innovative Nuclear Energy System)  
Chairman: P.D. Krishnani and Yoichiro Shimazu**

- B1.1 Status and Prospect of Development of Lead-Alloy-Cooled Fast Reactor / *Minoru Takahashi (Tokyo Tech-Japan) - INVITED*
- B1.2 The Influence of Mass Flow Rate on Power Fluctuations in a Fluidized Bed Nuclear Reactor: a Space-dependent Dynamics Perspective / *Alexander Agung (Gajah Mada Univ-Indonesia)*
- B1.3 Development of Integrated Simulation Code System of PWR for Education Purpose / *Syeilendra Pramuditya (ITB-Indonesia)*

*12.30-13.30 Break*

**13.30-15.30 PARALLEL SESSION B2 (Innovative Energy System 2)  
Chairman - V.V. Kuznetsov and Muhammad Hendayun**

- B2.1 Recent Research Activities on CANDLE Burnup / *Hiroshi Sekimoto (Tokyo Tech-Japan) - INVITED*
- B2.2 Development of Advanced Nuclear Energy Systems in India / *P.D. Krishnani (BARC-India) - INVITED*
- B2.3 Education of Nuclear Reactor Engineering in Project Based Learning / *Yoichiro Shimazu (Hokkaido Univ.-Japan) - INVITED*
- B2.4 Neutronic and Natural Circulation Aspect of Thorium Battery (ThoBatt), a Long Life Small PWR with (Th,U) Fuel / *Topan Setiadipura (BATAN-Indonesia)*

*15.30-16.00 : Break*

**16.00-17.30 PARALLEL SESSION B3 (Innovative Nuclear Energy System 3 and Energy Policy). Chairman - Hiroshi Sekimoto and Syeilendra Pramuditya**

- B3.1 An Advanced Energy System Using Small Nuclear Reactor as an Energy Source / *Yasuyoshi Kato (Tokyo Tech-Japan) - INVITED*
- B3.2 Feasibility Analysis of Nuclear Energy System for Developing Countries Which Can Utilize Natural Uranium/Thorium Efficiently without Embedded Enrichment plant nor Reprocessing Plants / *Zaki Su'ud (ITB-Indonesia)*
- B3.3 Long-Term Load Forecasting on the Java-Madura-Bali Electricity System Using Artificial Neural Network Method / *Arief Heru K. (Univ. Indonesia – BATAN –Indonesia)*

**11.00-12.30 PARALLEL SESSION C1 (Fuel Cycle and Transmutation (Reactor)).  
Chairman - Akio Minato and Ismail**

C1.1 Design Study of Full Scale Accelerator Driven Transmutation System (ADTS) for Transmuting High Level Waste of MA/Pu From PWR Spent Fuel / *Marsodi (BATAN-Indonesia)*

C1.2 Breeding Capability of Uranium and Thorium Fuel Cycles for Water Cooled Reactors / *Sidik Permana (Tokyo Tech, Japan)*

*12.30-13.30 Break*

**13.30-15.30 PARALLEL SESSION C2 (Fuel Cycle and Nuclear Data)  
Chairman - Marsodi and Sidik Permana**

C2.1 Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR / *Dr. P.D. Krishnani (BARC-India) - INVITED*

C2.2 Scenario for Thorium Fuel Cycle with Free  $^{233}\text{U}$  in BWR / *Dr. Abdul Waris (ITB-Indonesia) - INVITED*

C2.3 Extended Wood-Saxon Potential for Determination of Fission Cross-Section of  $^{232}\text{Th}$  with Neutron Energy Range 1-200 MEV / *Rizal Kurniadi (ITB-Indonesia)*

C2.4 High Level Waste Confining in BWR with Thorium Fuel / *Abdul Waris (ITB - Indonesia)*

*15.30-16.00 : Break*

**16.00-17.30 PARALLEL SESSION C3 (Innovative Nuclear Energy System)-  
Chairman - Sidik Permana**

C3.1 Design Study of Long Life Pb-Bi Cooled Reactors with Natural Uranium as Fuel Cycle Input Using Radial Fuel Shuffling Strategy, *Rida Siti NM (ITB- Indonesia)*

C3.2 Design Study of the HTTR with Lead – Bismuth Coolant Use Uranium and Thorium Fuel, *Deby Mardiansah , Ratu Fenny Muldiani, Zaki Su'ud / Deby Mardiansah (ITB-Indonesia)*

C3.3 Development of Three Dimensional Accident Analysis Code for Pb-Bi Cooled Tank type Fast Reactors / *Yanti Yulianti (ITB, Unila – Indonesia)*

**11.00-12.30 PARALLEL SESSION D1 (Material). Chairman - Alexander Agung**

D1.1 The Prospect of Neutron Scattering in the 21<sup>st</sup> Century: A powerful Tool for Materials Research / *Evvy Kartini (BATAN-Indonesia) - INVITED*

D1.2 Corrosion Resistance of Alloy-Sputtering-Coated Steels and High Chromium Steels in Pb-Bi at Transient Temperature Conditions / *Abu Khalid R (Tokyo Tech - Japan)*

D1.3 New Synthesis Method of the Mg<sub>2</sub>Ni Compound by Using Mechanical Alloying for Hydrogen Storage / *Hadi Suwarno(BATAN-Indonesia)*

*12.30-13.50 Break*

**13.30-15.30 PARALLEL SESSION D2 (Material). Chairman - M. A. Shafii**

D2.1 Structural Model of Superionic Conducting Glasses by a Reverse Monte Carlo Analysis / *Evvy Kartini (BATAN-Indonesia)*

D2.2 Application of Euler Lagrange Method in Spatial Estimation of Pollutant in Advection Dominant Condition / *Sunarko (ITB,BATAN – Indonesia)*

D2.3 Influence of  $\beta$ -Quenching on the Microstructure and Microhardness of Zr-Nb Alloys / *Djoko Hadi Prayitno (BATAN-Indonesia)*

*15.30-16.00 Break*

**16.00-17.20 PARALLEL SESSION D3 (Energy Policy)  
Chairman - Peng Hong Liem and Muhammad Hendayun**

D3.1 State Responsibility in Respect of Nuclear Activities / *Yanti Fristikawati (Univ. Atmajaya Catholic - Indonesia)*

D3.2 Simulation to Attain Optimal Composition of Power Plant Technology in Java-Madura-Bali up to year of 2026 / *Ronald Winardi (BATAN-Indonesia)*

D3.3 Optimum Solution Expectation on Sumatra Electricity Expansion Planning Beyond 2030 Using WASP-IV Package / *Edwaren Liun (BATAN-Indonesia)*

D3.4 Load Pattern and the Implication in the Electricity Expansion Planning with Nuclear Option / *Suparman (BATAN-Indonesia)*

D3.5 Environmental Impacts Assessment of Java's Electricity Generation Using SimPacts Model / *Edwaren Liun (BATAN-Indonesia)*

**BANQUET: 19.00-20.30**

**SECOND DAY: November 14, 2007**

**08.30-10.30 PARALLEL SESSION A4 (Computation), Chairman - Tagor M. Sembiring**

A4.1 Influence to the Calculation Result of Reactor Characteristics by the Simplification of the ADS Analysis System / *Shinya Ishida (JAEA - Japan)*

A4.2 Affect of Reflectors on Criticality Parameters of Homogeneous System of Uranyl Nitrate Solution / *Tegas Sutondo (BATAN-Indonesia)*

*10.30-11.00 Break*

**11.00-12.30 PARALLEL SESSION A5 (Computation/instrumentation)  
Chairman - Mike Susmikanti and Tagor Malem Sembiring**

A5.1 Improvement of Treatment Planning System at JAEA (JCDS) for Boron Neutron Capture Therapy / *Hiroaki Kumada-Liem Peng Hong (JAEA-Japan)*

A5.2 A Computation and Database Development for Fast Neutron Activation Analysis / *Slamet Santosa (BATAN-Indonesia)*

*12.30-13.30 Break*

### **08.30-10.30 PARALLEL SESSION B4 (Innovative Nuclear Energy System)**

**Chairman - Kazuaki Matsui and Abdul Waris**

- B4.1 A Symbiotic System of Large Fast Breeder Reactor and Small-Sized, Long Life, Thorium Satellite Reactors - General Introduction / *Peng Hong Liem (Tokyo Tech - Japan)*
- B4.2 A Symbiotic System of Large Fast Breeder Reactors and Small-Sized, Long Life, Thorium Satellite Reactors – Performance Optimization / *Ismail N.A (Tokyo Tech - Japan)*
- B4.3 Advanced SPINNORs Concept and the Prospect of their Deployment in Remote Area / *Zaki Su'ud (ITB-Indonesia)*
- B4.4 Study of Parallel Burnup Calculation on Multi PC/*Imam Taufiq (ITB, Andalas Univ-Indonesia)*
- B4.5 Design Study of Long Life HTGR based of Thorium Cycle (General Characteristic)/*Ferhat azis (BATAN-Indonesia)*

*10.30-11.00 Break*

### **11.00-12.30 PARALLEL SESSION B5 (Innovative Nuclear Energy System)**

**Chairman - Yasuyoshi Kato and Alexander Agung**

- B5.1 Design Study and Analysis of Pb-Bi Cooled Fast Reactor for Hydrogen Production / *Epung S. Bahrum (ITB,BATAN-Indonesia)*
- B5.2 Study of Thorium Characteristic on Supercritical Water Reactor (SCWR)/*Bambang Joko S (ITB-Indonesia)*

*12.30-13.30 Break*

### **08.30-10.30 PARALLEL SESSION C4 (Nuclear Education and Related Topics)**

**Chairman - Abu Khalid and Hadi Suwarno**

- C4.1 Application of Small Reactor 4S / *Akio Minato (CRIEPI-Tokyo Tech, Japan) - INVITED*
- C4.2 Co-Evolution of Nuclear Technology and Society-Nuclear Social Responsibility and Education / *Naoki Yamano (Tokyo Tech - Japan) - INVITED*
- C4.3 Nuclear Education System in Indonesia for Improving Public Acceptance / *Ekki Kurniawan(Indonesia)*
- C4.4 The Role of Nuclear Engineering Education in University Level to Support the First Nuclear Power Plant in Indonesia: A Lesson from Korea / *Khairul Hudaya (Seoul National Univ-ROK)*
- C4.5 Energy Technology Vision 2100 and Japan Nuclear Energy National Plan / *Kazuaki Matsui (Inst. of Applied Energy, Tokyo Tech – Japan) – INVITED*

*10.30-11.00 Break*

### **11.00-12.30 PARALLEL SESSION C5 (Nuclear Physics)**

**Chairman - Naoki Yamano and Edwaren Liun**

- C5.1 Calculation of Energy Dependent Level Density Parameter Using Extended Wood-Saxon Potential / *Rizal Kurniadi (ITB-Indonesia)*
- C5.2 Calculation of Isotopic Fission-Yield of  $^{233}\text{U}$  and  $^{232}\text{Th}$  for Fast Energy Spectrum / *Abdul Waris (ITB - Indonesia)*

C5.3 Shell Correction with Strutinskys Model / *Adam Al Fatih (ITB – Indonesia)*

C5.4 Single Particle Level Density Calculation Using Extended Wood Saxon Potential / *Rizal Kurniadi (ITB-Indonesia)*

*12.30-13.30 Break*

**08.30-10.30 PARALLEL SESSION D4 (Structural and Fluid Analysis);  
Chairman - Muh. Subekti**

D4.1 Study on Advanced Micro-Disk Gas Turbine System Using Hydrogen Fuel Produced by Very High Temperature Nuclear Reactor / *Sri Sudadiyo (BATAN-Indonesia)*

*10.30-11.00 Break*

**11.00-12.30 PARALLEL SESSION D5 (Radiation & Medical Physics)  
Chairman: Evvy Kartini**

D5.1 Simulation of Radioactive Release in Muria Peninsula Using Hysplit Model / *Sudjatmi K. Alfa(BATAN-Indonesia)*

D5.2 Corrosion Study of Steels in Liquid Lead-Bismuth Cooled Nuclear Reactors by Computer Simulation / *Alan Maulana (ITB,BATAN-Indonesia)*

D5.3 Development of Cell Homogenization Code Using General Geometry Approach / *M.A. Shafii (ITB, UNAND – Indonesia)*

D5.4 Design Study on Medium Size 700 MWt Lead-Bismuth Cooled Fast Reactor (LFR) with Metallic Fuel (U-Pu-10Zr) / *Andri Wahyudi (ITB-Indonesia)*

*12.30-13.30 Break*

**13.30-15.15 PANEL DISCUSSION (Nuclear Education Current Situation and Path Forward). Chairman - Khairul Hudaya**

*Hiroshi Sekimoto (Tokyo Tech-Japan)*

*Y. Shimazu (Hokkaido Univ. – Japan)*

*P.D. Krishnani (BARC-India)*

*Zaki Su'ud (ITB-Indonesia)*

*Alexander Agung (Gajah Mada Univ. - Indonesia)*

*15.15 – 15.45 Break*

**15.45-16.30 PLENARY SESSION - Chairman: Zaki Su'ud**

P2.1 The Status of Nuclear Energy Program in Indonesia / *Hudi Hastowo (BATAN-Indonesia)*

*16.30-17.00 Closing Ceremony*