

Ⅲ. 분과별 논제 및 발표자

제 1 분과 A

원자로시스템기술 (Nuclear Reactor System Technology)

좌 장 정해웅(Hae-Yong Jeong), 권영민(Young-Min Kwon)

발표장소 다이아몬드 I

일 정 | 5. 28(금)

- 09:00 Influence of Pool Modeling in the Analysis of Asymmetrical Test in Phenix Reactor**
Hae-Yong Jeong, Kwi-Seok Ha, Young-Min Kwon, Won-Pyo Chang, Su-Dong Suk, and Kwi-Lim Lee(KAERI)
- 09:20 Safety Evaluation of Pre-Conceptual Designs of Advanced Burner Reactors**
Young-Min KWON, Chang-Gyu PARK, Chung-Ho CHO, Hoon SONG, Eui-Kwang KIM, and Sang-Ji KIM(KAERI)
- 09:40 Structural Design Comparison of Sodium-cooled Fast Reactors Developed in KAERI**
Lee, Jae-Han, Park, Chang-Gyu, and Kim, Jong-Bum(KAERI)
- 10:00 The Design of the Annular Linear Induction EM Pump with a Sodium Flowrate of 35 kg/sec**
Hee Reyoung Kim, Tae Ho Lee, and Yong Bum Lee(KAERI)
- 10:20 Performance Tests of Ultrasonic Waveguide Sensor Module for Under-Sodium Visualization of a Sodium-cooled Fast Reactor**
Young-Sang Joo, Jin-Ho Bae, Chang-Gyu Park, and Jong-Bum Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Development of a Unit-Cell Based Multi-dimensional Heat Conduction Model for a Prismatic Fuel Block**
Nam-il Tak, Min-Hwan Kim, and Hong-Sik Lim(KAERI)
- 11:20 CFD Validation with a Multi-Block Experiment to Evaluate the Core Bypass Flow in VHTR**
Su-Jong Yoon, Jeong-Hun Lee, and Goon-Cherl Park(SNU)
Min-Hwan Kim(KAERI)
- 11:40 Thermal Stress Assessment of Graphite Fuel Blocks in a Very High Temperature Reactor Core**
Ji-Ho Kang, Nam-il Tak, and Min-Hwan Kim(KAERI)
- 12:00 Overpressure Predictions by the MEM and the Baker-strehlow-Tang Blast Curves for the SRI H₂ Explosion Test in the Open Space**
H.S.Kang, S.B.Kim, and M.H.Kim(KAERI)
H.C.No(KAIST)
- 12:20 An Analysis of the Secondary Cooling System Repair Status after the Initial Operation of HANARO**
Young-Chul Park(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 1 분과 B

원자로시스템기술 - Poster (Nuclear Reactor System Technology)

좌 장 정용훈(Jeong, Yong Hoon), 이정익(Jeong Ik Lee)

발표장소 : 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P01B01 Introduction of Measuring Instruments Used at Sodium Thermal Hydraulic Test Facilities in KAERI**
Tae-Joon Kim, Tae-Ho Lee, In-Koo Hwang, Ji-Young Jeong, Jong-Hyeun Choi, Jong-Man Kim, Byoung-Hae Choi, Yong-Bum Lee, and Yeong-il Kim(KAERI)
- P01B02 Analysis of Local Recirculation Flow under Sub-channel Blockage Accident**
Won-Pyo Chang, Young-Min Kwon, Ki-Suk Ha, and Hae-Yong Jeong(KAERI)
- P01B03 Effect of Molten Steel on CDA Energetics**
S.D.Suk and H.Y.Jeong(KAERI)
- P01B04 Long-term Cooling Capability of KALIMER-600 PDRC**
Kwi-Seok Ha, Young-Min Kwon, Won-Pyo Chang, Kwi-Lim Lee, and Hae-Young Jeong(KAERI)
- P01B05 An Automatic Approach to the Stabilization Condition in a H₂x Distillation Simulation**
Jiwoon Chang, Youngjoon Shin, Kiyoun Lee, Yongwan Kim, and Jonghwa Chang(KAERI)
Cheung Youn(CNU)
- P01B06 A Scoping Analysis of the Performance Test Loop of PDRC with the MARS-LMR Code**
Kwi Lim Lee, Kwi Suk Ha, and Hae-Yong Jeong(KAERI)
- P01B07 Passive Safety Characteristics of the 1200MWe GEN-IV Sodium-Cooled Fast Reactor**
Young-Min KWON, Kwi-Lim LEE, Kwi-Seok HA, Hae-Yong JEONG, and Won-Pyo CHANG(KAERI)
- P01B08 Development of a Water Scaled Model for the Thermal Hydraulic Study of 600MWe-SFR**
J.E.Cha, S.H.Lee, S.O.Kim, and Y.I.Kim(KAERI)
- P01B09 Power Control Logic Evaluation of RRS for SMART**
Yu-Lim Jeon, Han-Ok Kang, Seong-Wook Lee, and Cheon-Tae Park(KAERI)
- P01B10 Core Thermal-Hydraulic Conceptual Design for the Advanced SFR Design Concepts**
Chungho Cho, Jinwook Chang, Jae-Woon Yoo, Hoon Song, Sun-Rock Choi, Won-Seok Park, and Sang-Ji Kim(KAERI)
- P01B11 Investigation of a Wastage Effect by a Potential CO₂ Ingress in a Supercritical CO₂ Power Conversion System of an SFR**
Jae Hyuk EOH, Ji-Young JEONG, Jong-Man KIM, and Seong-O KIM(KAERI)
Hee Cheon NO(KAIST)

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- P01B12 Analytical Study for Development of Cold Trap Design Technology**
Jong-Hyeun Choi, Byoung-Hae Choi, Jong-Man Kim, Ji-Young Jeong, Byung-Ho Kim, and Yong-Bum Lee(KAERI)
- P01B13 Improvements of Physical Models in TRITGO Code for Tritium Behavior Analysis in VHTR**
Jun Soo Yoo, Nam-il Tak, and Hong Sik Lim(KAERI)
- P01B14 Design of System Heat Balance in 600 MWe Sodium-cooled Fast Reactor**
Ji-Woong Han, Jae-Hyuk Eoh, Eui-Kwang Kim, and Seong-O Kim(KAERI)
- P01B15 Preconceptual Component Arrangement for a Pool-type Sodium-cooled Fast Reactor of 1200MWe Capacity**
Chang-Gyu PARK, Jae-Han LEE, and Jong-Bum KIM(KAERI)
- P01B16 Decay Heat Impact on the Maximum Transient Fuel Temperature of the Various TRU Compositions in a Deep-Burn MHR Core**
Ji Su Jun, Hong Sik Lim, and Chang Keun Jo(KAERI)
Francesco Venneri(LT U.S.A)
- P01B17 Computational Assessment of Bypass Flow in a Multi-Block Air Test**
Min-Hwan Kim, Hong-Sik Lim, and Nam-il Tak(KAERI)
- P01B18 Wastage Behavior of Modified 9Cr-1Mo Steel Tube Material by Sodium-Water Reaction (II)**
Ji-Young Jeong, Jong-Mam Kim, Tae-Joon Kim, Jong-Hyeun Choi, Byung-Ho Kim, and Yong-bum Lee(KAERI)
Nam-Cook Park(JNU)
- P01B19 Proactive Role of Regulation for SMART Design Certification**
Namduk Suh and Changwook HUH(KINS)
- P01B20 Structural Evaluations of the Reactor Vessel Head at Elevated Temperature**
S.H.Kim, G.H.Koo, and J.B.Kim(KAERI)
- P01B21 Design of a Visualization System of Flow Boiling in a Vertical Tube with a Sulfuric Acid**
DongUn Seo and G.C.Park(SNU)
C.S.Kim, S.D.Hong, and Y.W.Kim(KAERI)
- P01B22 Core Performance on Nuclear Data Libraries for a 600 MWe TRU Burner**
Hoon Song, Jae Woon Yoo, and Sang Ji Kim(KAERI)
- P01B23 Core Design Optimization for a 600 MWe TRU Burner Reactor**
Hoon Song, Won Seok Park, and Sang Ji Kim(KAERI)
- P01B24 Preliminary Drop Time Analysis of a Control Rod Using CFD Code**
Myoung Hwan Choi, Jin Seok Park, and Won Jae Lee(KAERI)
Jun Hong Park(SEST)
- P01B25 Ultrasonic Beam Radiation of an A_0 Leaky Lamb Wave in a Plate Waveguide Sensor**
Jin-Ho Bae, Young-Sang Joo, and Jong-Bum Kim(KAERI)
Hui-Nam Rhee(SCU)
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- P01B26 Implementation of Aerosol Transport and Resuspension Models into the GAMMA+ Code for the Safety Analysis of a VHTR**
Churl Yoon, Nam-il Tak, and Hong Sik Lim(KAERI)
- P01B27 Test of Emergency Cooling Water Injection for the HANARO Fuel Test Loop**
S.K. Park and S.H.Ahn(KAERI)
- P01B28 Evaluation of Restrainer's Influence on Stacked Block Structure**
Woo-Seok Choi, Dong-Ok Kim, Jae-Man Noh, and Yong Wan Kim(KAERI)
- P01B29 Operating Temperatures and Flow Rates during Partial Load Operation for the Modular Plant Design of KALIMER**
Eui Kwang Kim and Seong-O Kim(KAERI)
- P01B30 Thermal Hydraulic Analysis of Liquid Metal Reactor Subchannel**
Sung H. Jang and Kune Y. Suh(SNU)
- P01B31 Computational Thermofluid Dynamics in Rod Bundles of Liquid Metal Reactor**
Kyun K. Kim and Kune Y. Suh(SNU)

제 2 분과 A

원자로물리 및 계산과학(Reactor Physics and Computational Science) - 원자로물리(Reactor Physics)

좌 장 김명현(Myung-Hyun KIM), 노재만(Jae Man Noh)

발표장소 에메랄드

일 정 | 5. 27(목)

- 09:00 Subcriticality Measurement of AGN-201K Reactor Using the Modified Neutron Source Multiplication Method**
Min-Ho BAEK and Myung-Hyun KIM(KHU)
- 09:20 Monte Carlo Depletion with Critical Spectrum for Assembly Group Constant Generation**
Ho Jin Park, Han Gyu Joo, Hyung Jin Shim, and Chang Hyo Kim(SNU)
- 09:40 KARMA 1.1 Benchmark Calculations for the B&W Critical Experiments with ENDF/B-VI R8 and ENDF/B-VII R0**
Kyung-Hoon Lee, Kang-Seog Kim, Ser-Gi Hong, and Jae-Seung Song(KAERI)
- 10:00 Deep-Burn MHR Neutronic Analysis with a SiC-Gettered TRU Kernel**
Chang Keun Jo and Jae Man Noh(KAERI)
Yonghee Kim(UNIST)
F. Venneri(LT, USA)
- 10:20 Development and Verification of the HELIOS/CAPP Code System**
Hyun Chul Lee, Chang Keun Jo, and Jae Man Noh(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 2 분과 B

원자로물리 및 계산과학 - Poster (Reactor Physics and Computational Science)

좌 장 장중화(Jonghwa Chang), 우승웅(Seung-Woong Woo)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P02B01 Development of Sensitivity Analysis Code for Fast Reactor Application by Using Perturbation Theory**
Jaewoon Yoo, Jinwook Jang, and Sang-Ji Kim(KAERI)
- P02B02 Benchmark of WIMS-AECL against MCNP4B for Reactivity Prediction of Infinite CANDU Lattices of 37-element Fuel Bundles**
Won Young Kim, Gyu Hong Roh, and Joo Hwan Park(KAERI)
- P02B03 An Evaluation of Relative Pebble Flow Velocity in Pebble Bed Core**
Song Hyun Kim, Hong-Chul Kim, and Jong Kyung Kim(HYU)
Jae Man NOH(KAERI)
- P02B04 Analysis of Wolsong-1 SDS1 Effectiveness with Stuck-In Shutoff Rod Core Configurations**
Hyung-Jin Kim, Young-Suk Jung, and Seong-Soo Choi(ACT)
Sung-Min Kim(KHNP)
- P02B05 Studies on Particle Behavior and Kinetics during Hydride Reaction of ZrCo**
Sei-Hun Yun, Ka Young Park, Seungyon Cho, Min Ho Chang, Hyun-Goo Kang, and Ki Jung Jung(NFRI)
Hongsuk Chung, and Dae Seo Koo(KAERI)
Kyu-Min Song(KEPRI)
Duk Jin Kim(KOCEN)
- P02B06 Uncertainty Evaluation for SMART Synthesized Power Distribution**
Jin-Young Cho, Chung-Chan Lee, Jae-Seung Song, and Kyo-Youn Kim(KAERI)
- P02B07 Neutron Beam Evaluation for NRF in AGN-201K Reactor Using MCNP Simulation**
Jong-Min Choi and Myung-Hyun Kim(KHU)
- P02B08 Search for Optimum Subgroup Levels for Minimizing Errors in Resonance Shielded Cross Sections**
Kyong Seop Lee, Gwan Young Kim, and Han Gyu Joo(SNU)
- P02B09 Benchmark Calculations of WIMS-IST/RFSP-IST Code Using Phase-B Test at Wolsong Unit 2**
Geun-Suk Choi, GyuHong Roh, and Joo-Hwan Park(KAERI)
- P02B10 Defect Model for the Oxygen Potential of Hypo-stoichiometric Urania Doped with Lutetium at 1473K**
Seonggi Jeong, Soyoung Kim, and Kwangheon Park(KHU)

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- P02B11 Generation of Multigroup Cross Section Library with Different Energy Group Structures**
Chang Hyun Lim, Gwan Young Kim, and Han Gyu Joo(SNU)
- P02B12 Development of GPU Based Parallel Computing Module for Solving Pressure Equation in the CUPID Component Thermo-Fluid Analysis Codes**
Jin Pyo Lee and Han Gyu Joo(SNU)
- P02B13 Engineering Feasibility of Low Boron Core Design for OPR-1000**
Aung Tharn Daing and Myung-Hyun Kim(KHU)
- P02B14 Evaluation of the Power Coefficient of CANDU Reactor Using Two-Dimensional Lattice Calculations**
Gyuhong Roh and Joo-Hwan Park(KAERI)
Yonghee Kim(UNIST)
Nam Zin Cho(KAIST)
- P02B15 Development of Design Software for Weld Overlay of Pressurizer**
J. G. Byeon, J. B. Lee, and K. S. Park(DOOSAN)
- P02B16 Numerical Simulation of Load-Following Operation for APR1400 Using KISPAC-1D**
Yu Sun Choi, Eun Ki Lee, and Moon Gyu Park(KEPRI)
Man Gyun Na(CSU)

Ⅲ. 분과별 논제 및 발표자

제 2 분과C

원자로물리 및 계산과학(Reactor Physics and Computational Science)
- 중성자 수송 해석 방법론(Neutron Transport Analysis Methodology)

좌 장 김용희(Yonghee KIM), 김강석(Kang-Seog KIM)

발표장소 에메랄드

일 정 | 5. 28(금)

- 09:00 A New Procedure for Resonance Integral Table with Pre-Adjusted Resonance Interference Effect for Transport Lattice Codes**
Kang-Seog Kim and Ser Gi Hong(KAERI)
- 09:20 Decomposition of Resonance Fixed Source Equation for MOC Calculation**
Jin-Young Cho, Kyo-Youn Kim, and Hyun-Chul Lee(KAERI)
- 09:40 Cellular Neural Network Method for Critical Slab with Albedo Boundary Condition**
A. Pirouzmand and K. Hadad(Shiraz Univ.)
K. Y. Suh(SNU)
- 10:00 Extension of Analytic Function Expansion Nodal (AFEN) Method for Multigroup Simplified P_3 (SP_3) Equations**
Bumhee Cho and Nam Zin Cho(KAIST)
- 10:20 Linear Discontinuous Expansion Method Using the Subcell Balances for Unstructured Geometry S_N Transport**
Ser Gi Hong, Jong Woon Kim, Young Ouk Lee, and Kyo Youn Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Parallelization with Ordered Sweep and Domain Decomposition in 2D and 3D S_N Method**
Yos P. Sitompul and Nam Zin Cho(KAIST)
- 11:20 Improvement of a Stochastic Model Applied to Mono-energetic Space-time Nuclear Reactor Kinetics**
Pham Nhu Viet HA and Jong Kyung KIM(HYU)
- 11:40 Efficient and Accurate Calculation of Burnup Problems with Short-Lived Nuclides by a Krylov Subspace Method with the Newton Divided Difference**
Yoon Hee Lee and Nam Zin Cho(KAIST)

제 3 분과 A

방사성폐기물관리 (Radioactive Waste Management)

좌 장 윤종일(Yun Jong-Il), 이연명(Youn-Myoung Lee)

발표장소 오펜

일 정 | 5. 28(금)

- 09:00 Spectro-electrochemical Studies of Europium and Uranium Ions in LiCl-KCl Eutectic**
Sang Eun Bae, Yong Joon Park, Young Hwan Cho, and Kyuseok Song(KAERI)
- 09:20 Preparation and Characterization of Ni-Fe-B Mixed Oxide for the Development of CRUD Analysis System Using a Laser Induced Breakdown Spectroscopy**
Sang-Hyuk Jung, Jei-Won Yeon, Jaesik Hwang, Eui-Chang Jung, and Kyuseok Song(KAERI)
- 09:40 Estimation of Hydrazine Decomposition on Measuring the High-Temperature pH in Hydrazine/ETA Solutions at 553 K**
Jaesik Hwang, Jei-Won Yeon, Myung Hee Yun, and Kyuseok Song(KAERI)
Sang-ill Lee(CBNU)
- 10:00 Electronic Absorption Spectra of U(III) and U(IV) in LiCl-KCl at 450 °C**
Young-Hwan Cho, Sang-Eun Bae, Yong-Joon Park, Hong-Joo Ahn, and Kyuseok Song(KAERI)
- 10:20 Studies on Ternary Complex Formation of U(VI)-salicylate by Using Time-resolved Fluorescence Spectroscopy**
W. Cha, H. R. Cho, K. K. Park, W. H. Kim, and E.C. Jung(KAERI)
- 10:40 Coffee Break**
- 11:00 Chemical Interaction between U(VI) and Eu(III) Ions on a Silica Surface**
K. K. Park, W. Cha, H. R. Cho, H. J. Im, and E. C. Jung(KAERI)
- 11:20 TRLFS Study of U(VI) at Variable Temperatures**
J.-Y. Lee and J.-I. Yun(KAIST)

Ⅲ. 분과별 논제 및 발표자

제 3분과 B

방사성폐기물관리-Poster (Radioactive Waste Management)

좌 장 정중헌(Jung Chong Hun), 정의창(E. C. Jung)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00~15:00

- P03B01 Accelerated Design and Fabrication of a Mobile Drum Vent System for TRU Retrieval Activities in Hanford 200 West Area Low Level Burial Ground Trenches**
Terry Wickland, Heather Klebba, and Luke Anderson(NFT)
- P03B02 Improvement of Pilot -Size Electro-Kinetic-Remediation Equipment of Cobalt and Cesium Contaminated Soil**
Seung-Soo Lee, Gyu-Nam Kim, Dong-Bin Shon, Gi-Won Lee, Woon-Su Jung, and Jin-Ho Park(KAERI)
- P03B03 Reactivity of Ceramic Coating Materials with Uranium and Uranium Trichloride**
Sung Ho Lee, Choon Ho Cho, Yoon Sang Lee, Han Soo Lee, and Jeong-Guk Kim(KAERI)
- P03B04 Full-scale Simulation of a Dry Storage Cask by Computational Fluid Dynamics**
Seung Hun Yoo, Hyeun Min Kim, and Hee Cheon NO(KAIST)
- P03B05 A Nuclide Release Model for a Deep Well Scenario near a Repository**
Youn-Myoung Lee(KAERI)
- P03B06 Tritium Metering, Assay, Recovery and Storage(T-MARS) at KEPRI Tritium Lab.**
S. H. Shon, K. M. Song, W. Shon, K. W. Lee, and B. W. Ko(KEPRI)
- P03B07 Removal of Uranium from Radioactive Concrete Using Washing Technology**
Gyu-Nam Kim, Wang-Kyu Choi, Byung-Youn Min, Hee-Chul Yang, Sang-Min Kim, Min-Woo Lee, Kune-Woo Lee, and Un-Soo Chung(KAERI)
- P03B08 Analysis on Volatility of Rhenium and Iodine Trapping Filters Using a TG/DSC Apparatus**
Jae Hwan Yang, Chang Je Park, Sang Ho Na, and Kweon Ho Kang(KAERI)
- P03B09 Development of Decontamination Technology for Separating Radioactive Constituents from Contaminated Concrete Waste**
B. Y. Min, G. N. Kim, G. W. Lee, W. K. Choi, and U. S. Jung(KAERI)
- P03B10 Thermal Shielding of the Shock Absorber to a Seal of a Hot-cell Cask**
K. S. Bang, J. C. Lee, K. Y. Kim, C. S. Seo, and K. S. Seo(KAERI)
- P03B11 Apparatus for Removing Remaining Adhesives of Filter**
Il Sik Kang, Tae Kuk Kim, Dae Seok Hong, Young Yong Ji, and Woo Seog Ryu(KAERI)
- P03B12 Laser Ablation of Type 304 Stainless Steel Contaminated with Co²⁺, Cs⁺ and Eu³⁺ Ions at 532 nm**
Hui-Jun Won, Byambatseren Baigalmaa, Jei-Kwon Moon, Chong-Hun Jung, and Kune-Woo Lee(KAERI)

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- P03B13 Cost Comparison of Direct Disposal vs. Pyro-processing and DUPIC in Korea**
Jewhan Lee and Soon Heung Chang(KAIST)
- P03B14 Implementation of Waste Tracking System for LLW & MLW**
Y. S. Won, K. H. Lee, and H. J. Kim(ACT)
K. H. Lee(KHNP)
- P03B15 Particle Collection from Laser Decontamination**
Chong Hun Jung, H. J. Won, J. K. Moon, B. Baigalmaa, and C. K. Kim(KAERI)
- P03B16 Radiological Decontamination Strippable Coatings Using PVA and PVP Based Core-shell Polymeric Scintillation Materials**
Ho-Sang Hwang, Bum-Kyoung Seo, and Kune-Woo Lee(KAERI)
- P03B17 Regeneration of Ce(III) in Sulfuric-cerium Decontamination Spent Solution**
Jung-Joon LEE, Byeong-IL YANG, Jei-kwon MOON, and Kune-Woo LEE(KAERI)
- P03B18 Spacing Sensitivity Analysis of HLW Intermediate Storage Facility**
Bum-Soo Youn and Kwangho Lee(KEPRI)
- P03B19 Investigation on the Stability of Aluminosilicate Colloids by Various Analytical Tools**
Kirana Y. Putri, D. H. Lee, and J. I. Yun(KAIST)
- P03B20 Redox Behavior of $\text{Fe}^{2+}/\text{Fe}^{3+}$ Redox Couple by Absorption Spectroscopy and Measurement**
J. Y. Oh, S. Park and J. I. Yun(KAIST)
- P03B21 Spectroscopic Speciation of Iron Using Complexing Agents**
S. Park, J. Y. Oh, and J. I. Yun(KAIST)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 A

핵연료 및 원자력 재료(Nuclear Fuel and Materials)

- 구조재 I (Structural Materials I)

좌 장 황성식(Hwang Seong-Sik), 권준현(Kwon Junhyun)

발표장소 루비 I

일 정 | 5. 27(목)

[Invited Paper]

- 09:00 Multiscale Modeling Methods for Predicting the Irradiation Hardening of Reactor Pressure Vessel Steels**
Kwon Junhyun(KAERI)
- 09:40 PWSCC of Alloy 600 Components and its Countermeasures in PWRs**
Seong Sik Hwang, Sung Woo Kim, Jangyul Park, and Hong Pyo Kim(KAERI)
- 10:00 PWSCC Crack Tip Observation of Alloy 600**
Yun Soo Lim, Hong Pyo Kim, Hai Dong Cho, and Han Hee Lee(KAERI)
- 10:20 Relationship between Residual Stress of Dissimilar Metal Welding and Stress Corrosion Cracking of Alloy 600 Nozzle in Bottom Mounted Instrumentation of PWR**
Sung-Woo Kim and Hong-Pyo Kim(KAERI)
Jae-Uk Jeong(SKKU)
Yoon-Suk Chang(KHU)
- 10:40 Coffee Break**
- 11:00 Study on the Fabrication of the Stress Corrosion Crack by Vapor Pressure in the Alloy 600 Pipe**
Jae-Seong Kim, Ju-seon An, Woong-Ki Hwang, and Bo-Young Lee(KAU)
- 11:20 TEM Study on the Proton Irradiated Type 316 Stainless Steel**
Yun Soo Lim, Seong Sik Hwang, Hong Pyo Kim, and Hai Dong Cho(KAERI)
- 11:40 Creep and Creep Crack Growth Behaviors for SMAW Weldments of Gr. 91 Steel**
Woo-Gon Kim, Song-Nan Yin, Ji-Yeon Park, Sung-Deok Hong, and Yong-Wan Kim(KAERI)
Jae-Young Park(PKNU)
- 12:00 Characterization of Strength and Fracture Toughness of Nuclear Graphite Using Subsize Specimen**
Ji Hyun Yoon(KAERI)
Thak Sang Byun, Joe. P. Strizak, and Lance. L. Snead(ORNL)

제 4 분과 B

핵연료 및 원자력 재료(Nuclear Fuel and Materials)

- 핵연료 및 피복관(Fuel and The Cladding)

좌 장 이주석(Joosuk Lee), 김희문(Heemoon Kim)

발표장소 루비III

일 정 | 5. 27(목)

[Invited Paper]

- 09:00 Development of New Fuel Technologies in Korea**
Kwang Heon Park(KHU)
- 09:40 Effects of Thermal Conductivity Degradation of UO_2 Fuel on Safety Margins**
Joosuk Lee, Wonjoon Nah, Sungsik Kang, and Swengwoong Woo(KINS)
- 10:00 Analysis of Breakaway Oxidation Behavior of Zr Claddings after LOCA Simulation Test**
Hyun-Gil Kim, Il-Hyun Kim, Byung-Kwan Choi, Jeong-Yong Park, and Yong-Hwan Jeong(KAERI)
- 10:20 Development of Measurement Technique for Thermal Diffusivity of Oxide Fuel in Hot-Laboratory**
Heemoon Kim, Dae-Gyu Park, Sang-Ho Na, Chang-Je Park, Kweon Ho Kang, Byung Ok Yoo, Sang Youl Baek, Seung Je Baik, and Sang Bok Ahn(KAERI)
- 10:40 Coffee Break**
- 11:00 Fabrication of Sintered Annular Fuel Pellet**
Young Woo Rhee, Dong Joo Kim, Jong Hun Kim, Jae Ho Yang, Keon Sik Kim, Ki Won Kang, and Kun Woo Song(KAERI)
- 11:20 Effect of Fluorine on the Breakaway Oxidation Properties of Zr-alloy**
S. Y. Park, D. J. Park, J. Y. Park, and Y. H. Jeong(KAERI)
K. W. Lee and S. I. Hong(CNU)
- 11:40 Microstructural Analysis and XPS Investigation of Nodular Oxides Formed on Zircaloy-4**
Dong Jun Park, Jeong Yong Park, Byoung Kwon Choi, and Yong Hwan Jeong(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 C

핵연료 및 원자력 재료(Nuclear Fuel and Materials) - Poster

- 재료 조사효과 및 조사시험 기술(Radiation Effects and Technology)

좌 장 주기남(Kee Nam Choo), 조만순(Man Soon Cho)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P04C01 Irradiation Examination Plan for Thermal Conductivity of Inconel-690 TT**
Daegy Park, Heemoon Kim, Seungje Baik, Kiha Kim, Sangbok Ahn, and Wooseok Ryu(KAERI)
- P04C02 Investigation on Compatibility of Structural Materials in Liquid Gallium Environments**
Sang Hun Shin, Jong Jin Kim, Jung Suk Park, In Cheol Bang, and Ji Hyun Kim(UNIST)
- P04C03 Ab-initio Calculation of Diffusion of Atomic Oxygen in Nickel**
Jong Jin Kim, Sang Hun Shin, Jung Suk Park, and Ji Hyun Kim(UNIST)
- P04C04 A Feasibility Study for an Irradiation of the SiC in the HANARO**
M. S. Cho, K. N. Choo, S. Y. Oh, Y. H. Kang, C. Y. Lee, and I. C. Lim(KAERI)
- P04C05 Automatic Inspection System for the Stay Cylinder Weld of the Steam Generator**
Sa-Hoe Lim, Chi-Seung Park, Chul-Hoon Park, Keum-Chong Joo, Hee-Chung Noh, and Kwang-Sik Yoon(UMI)
- P04C06 The First Irradiation (09M-02K Capsule) of Alloy 690 Steam Generator Tube Material of the SMART in HANARO**
K. N. Choo, M. S. Cho, J. S. Park, W. J. Lee, K. H. Lee, and I. C. Lim(KAERI)
- P04C07 Mechanical Tests Plan after Neutron Irradiation for SMART SG Tube Materials in a Hot Cell**
Sangbok Ahn, Seungjai Baik, Dosik Kim, Byungok Yoo, Yanghong Jung, Woongsub Song, Keenam Choo, Jinseok Park, Yongsun Lee, and Woo-seog Ryu(KAERI)
- P04C08 Multiscale Modeling for Predicting of Radiation Effects on Nuclear Materials**
Junhyun Kwon, Gyeong-Geun Lee, and Chansun Shin(KAERI)
- P04C09 CRUD Effect on Zry-4 Oxidation**
Yeonseung Kim and Kwangheon Park(KHU)
- P04C10 Heat Transfer Experiments for an LBE Capsule Development**
Y. H. Kang, S. Y. Chun, S. J. Park, M. S. Cho, and K. N. Choo(KAERI)
- P04C11 Stress Analysis of Fuel Rod under Axial Coolant Flow**
Hai-Lan Jin, Hyun-Seung Lee, and Young-Shin Lee(CNU)
Num-Kyu Park and Kyung-Rok Jeon(KNF)

제 4 분과 D

핵연료 및 원자력 재료(Nuclear Fuel and Materials) - Poster

- 구조 재료 평가(Evaluation of Structural Materials)

좌 장 박덕근(Duck-Gun Park), 김대환(Dae Whan Kim)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

P04D01 Fracture Characteristics of Nuclear Graphite IG-11

Seong Jin Lee, Young Shin Lee, Jae Hoon Kim, and Young Min Lee(CNU)

Young Hwan Kang, Kee Nam Choo, and Man Soon Cho(KAERI)

P04D02 Assessment of Material Degradation under High Temperature Impure Helium

Dong-Jin Kim, Gyeong Geun Lee, and Su Jin Jung(KAERI)

P04D03 Electrochemical Investigation of Passivity for Alloy 600 and Alloy 690 in Caustic Solutions

Dong-Jin Kim, Hyun Wook Kim, and Hong Pyo Kim(KAERI)

P04D04 Creep-Fatigue Behavior with Hold Type for High Cr Martensitic Steel

Dae Whan Kim and Sung-Deok Hong(KAERI)

P04D05 Effect of Double Tempering on the Microstructural and Mechanical Properties of ASTM Gr.92 Steel

Yeon-Keun Kim, C.-H. Han, J.-H. Baek, and C.-B. Lee(KAERI)

P04D06 Ductile-brittle Transition Behavior in Tempered Martensitic SA508 Gr.4N Ni-Mo-Cr Low Alloy Steels for Reactor Pressure Vessels

Ki-Hyoung Lee and Dang-Moon Wee(KAIST)

Min-Chul Kim and Bong-Sang Lee(KAERI)

P04D07 Comparison of the Microstructure & Segregation Behavior between SA508 Gr.3 & SA508 Gr.4N High Strength Low Alloy RPV Steel

Sang Gyu Park and Dang Moon Wee(KAIST)

Min-Chul Kim and Bong-Sang Lee(KAERI)

P04D08 Feasibility Test with a STS304 Tube of Eddy Current Test Using Bobbin Probe for SMART SG Tube Inspection

Yoon-Sang Lee, Hyun-Kyu Jung, Yun-hang Choung(KAERI)

P04D09 Differential Hall-sensor Pulsed Eddy Current Probe for the Detection of Wall thinning in an Insulated Stainless Steel Pipe

D. G. Park, Chandra. S. Angani, and Y. M. Cheong(KAERI)

C. G. Kim(CNU)

P04D10 Review of ASME-NH Design Materials for Creep-Fatigue

Gyeong-Hoi Koo and Jong-Bum Kim(KAERI)

P04D11 Fabrication of Composite Nickel Layers with Nano-sized Ferrites by Using SHS and Electroforming

Jong J. Lee, Young W. Moon, Kyung B. Lee, Seok C. Park, and Y. Choi(SMU)

제 4 분과 E

핵연료 및 원자력 재료(Nuclear Fuel and Materials) - Poster

- 핵연료 및 구조 I (Fuel & Structures I)

좌 장 김형규(Hyung-Kyu Kim), 윤경호(Kyung-Ho Yoon)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

P04E01 Changes in Material Properties of PyC Coating Layers by Neutron Irradiation in HTR Coated Particle Fuel: II. Change in Mechanical Properties

Young-Woo Lee, Young Min Kim, Woong Ki Kim, and Moon Sung Cho(KAERI)

P04E02 Measurement of Fission Gas Release with Additives in UO_2 at Low Burnup

Heemoon Kim, Sang-Ho Na, Chang-Je Park, Kweon Ho Kang, Man Soon Cho, Ki Ha Kim, Ung Sup Song, Gil Soo Kim, and San Bok Ahn(KAERI)

P04E03 Thermal Expansion Property of U-Zr Alloys and U-Zr-Ce Alloys as a Surrogate Metallic Fuel for SFR

Sun-Ki Kim, Jong-Tak Lee, Seok-Jin Oh, Young-Mo Ko, Ki-Hwan Kim, Youn-Myung Woo, and Chan-Bock Lee(KAERI)

P04E04 Resintering Test of Micro Structural Controlled UO_2 Annular Pellet

Dong-Joo Kim, Young Woo Rhee, Jong Hun Kim, Jae Ho Yang, Ki Won Kang, and Keon Sik Kim(KAERI)

P04E05 Interaction Barrier Effect of $Zr-ZrO_2$ Thin Film Deposited by Hydrothermal Deposition for Sodium-cooled Fast Reactor

Seung Hyun Jee, Young Bok Kim, and Young Soo Yoon(YSU)
Jun Hwan Kim(KAERI)

P04E06 Irradiation Test of Dual Cladding Fuel Rod by Using an Instrumented Fuel Capsule(09F-08K) at HANARO

Jaemin Sohn, Sungjae Park, Yoontaeg Shin, Mansoon Cho, Jongmyung Oh, Bonggoo Kim, Keenam Choo, and Kyehong Lee(KAERI)

P04E07 DNBR Analysis of a Dual-Cooled Annular Fuel for the OPR1000 Application

C. H. Shin, W. K. In, D. S. Oh, and T. H. Chun(KAERI)

P04E08 Dynamic Behavior of a Reinforced Fuel Rod Support with Wire-woven Structure

K. H. Yoon, H. K. Kim, J. Y. Kim, K. H. Lee, Y. H. Lee, and H. S. Kang(KAERI)

P04E09 A Modeling on Gas Pressure Buildup within a Coated Fuel Particle

Kim Young Min, Y. K. Kim, S. C. Oh, K. C. Jeong, W. K. Kim, Y. W. Lee, and M. S. Cho(KAERI)

P04E10 Hydrogen Effects on Creep Behaviors of Zr Alloy Nuclear Fuel Cladding under Dry Storage Condition

Sun-Ki Kim, Je-Geon Bang, Dae-Ho Kim, Ik-Sung Lim, Yong-Sik Yang, and Yang-Hyun Koo(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 F

핵연료 및 원자력 재료(Nuclear Fuel and Materials) - Poster - 핵연료 및 구조 II(Fuel & Structures II)

좌 장 양재호(Jae-Ho Yang), 김수성(Kim Soo-Sung)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P04F01 Conceptual Design of Shielded Experimental Table for Thermal Conductivity Tester**
Kwonpyo Hong, Dae-Gyu Park, Sang-Bok Ahn, and Woo-Seog Ryu(KAERI)
- P04F02 An Experiment on Specific Surface Area for Sintered Uranium Oxide with Additives of Nd_2O_3 and CeO_2**
C. J. Park, C. H. Kim, S. H. Na, J. H. Yang, K. H. Kang, and J. W. Lee(KAERI)
- P04F03 High Temperature Neutron Study on Aged Alloy 690**
Sungsoo Kim(KAERI)
- P04F04 Subsurface Deformation Behaviors of a Nuclear Fuel Rod under Elastically Deformable Contacts**
Young-Ho Lee and Hyung-Kyu Kim(KAERI)
- P04F05 Low Temperature and Rapid Sintering of UO_2 Fuel Pellet by Induction Heating**
Jae Ho Yang, Jong Hun Kim, Dong-Joo Kim, Ki Woo Kang, Young Woo Rhee, Keon Sik Kim, and Kun Woo Song(KAERI)
- P04F06 Spherical UO_2 Size and Microstructure on Broth Preparation Conditions**
Jeong Kyung Chai, Kim Yeon Ku, Oh Seung Chul, Kim Woong Ki, Kim Young Min, Lee Young Woo, and Cho Moon Seoung(KAERI)
- P04F07 Minimum Required Spring Force and In-grid Spring Analysis of Spacer Grids for Dual-Cooled Fuels**
JaeYong Kim, YoungHo Lee, KyungHo Yoon, and HyungKyu Kim(KAERI)
- P04F08 Basic Design of Structural Components of a Dual Cooled Fuel for OPR-1000**
Hyung-Kyu Kim, Jae-Yong Kim, Kyung-Ho Yoon, Young-Ho Lee, Kang-Hee Lee, Heung-Seok Kang, and Kun-Woo Song(KAERI)
- P04F09 Development of an End-plug Welding Technology for an Instrumented Fuel Irradiation Test**
Soo-Sung Kim, Chul-Yong Lee, Yoon-Taek Shin, and Kee-Nam Choo(KAERI)
- P04F10 Thermal Stress Analysis for the Plate Type Fuel Assembly**
Kang Soo Kim, Jeong Soo Ryu, Jin Ho Oh, Jong Min Lee, and Chung Young Lee(KAERI)

제 4 분과 G

핵연료 및 원자력 재료(Nuclear Fuel and Materials)

- 구조재 II (Structural Materials II)

좌 장 김영석(Young Suk Kim), 정명조(Myung Jo Jhung)

발표장소 루비 I

일 정 | 5. 28(금)

- 09:00 Unloading Effect on Delayed Hydride Cracking in Zirconium Alloys**
Young Suk Kim and Sung Soo Kim(KAERI)
- 09:20 Evaluation of a Ductility after High Temperature Oxidation with the Three-Point Bend Test in Zirconium Alloys**
Yang-Il Jung, Sang-Yoon Park, Jeong-Yong Park, and Yong-Hwan Jeong(KAERI)
- 09:40 Creep Analysis of Zr-1.1Nb-0.05Cu Alloy Using Stress Relaxation Data**
Yong-Nam Seol, Yang-Il Jung, Byoung-Kwon Choi, Jeong-Yong Park, and Yong-Hwan Jeong(KAERI)
Sun-Ig Hong(CNU)
- 10:00 Mechanical Strength of Zirconium Alloys with the Nb, Fe, and O Content**
Il-Hyun Kim, Hyun-Gil Kim, Jeong-Yong Park, Byung-Kwan Choi, and Yong-Hwan Jeong(KAERI)
Sun-Jin Kim(HYU)
- 10:20 A Study on Analytical Evaluation of Environmental Qualification Class 1E Cable for Yonggwang Unit 1&2**
Keug-Jin Bhang(KHNP)
Sung-Young Kim(SDD)
Jin-Weon Kim(CSU)
- 10:40 Coffee Break**
- 11:00 Dynamic Characteristics of Mechanical Components due to Earthquake**
Myung Jo Jhung and Yong Ho Ryu(KINS)
- 11:20 Diametral Creep Prediction of the Pressure Tubes in CANDU Reactors Using a Genetic Optimized Linear Model**
Sung Han Lee, Young Gyu No, and Man Gyun Na(CSU)
Jae Yong Lee(KEPRI)
Changheui Jang and Donghoon Kim(KAIST)
- 11:40 Numerical Evaluation of Bending Load Effect on the Failure Pressure of Wall-Thinned Pipe Bends**
Jin Weon Kim and Se Hoon Jang(CSU)
Oon Young Jeong(KHNP)
- 12:00 Assessment of Feeder Wall Thinning of Wolsong Nuclear Power Plants**
Hansub Chung(KEPRI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과H

핵연료 및 원자력 재료(Nuclear Fuel and Materials)

- 핵연료 및 구조(Fuel and Structures)

좌 장 백중혁(Jong-Hyuk Baek), 권상철(Sang Chul Kwon)

발표장소 루비 II

일 정 | 5. 28(금)

- 09:00 Diffusion Behavior between the Rare Earth Element and Ferritic-Martensitic Steel**
Jun Hwan Kim, Jong Hyuk Baek, Byoung Oon Lee, and Chan Bock Lee(KAERI)
Young Soo Yoon(YSU)
- 09:20 High-temperature Softening of ASTM Gr.92 Steel for a SFR Fuel Cladding**
Jong-Hyuk Baek, Y.-G. Kim, C.-H. Han, J.-H. Kim, and C.-B. Lee(KAERI)
- 09:40 A Fatigue Analysis Method for Grid Spring with Impact Force**
Kyoung Joo Kim, Kyong Bo Eom, and Kyeong Lak Jeon(KNF)
Jea Hoon Kim(CNU)
- 10:00 A Contact Force Prediction Method for Nuclear Fuel Rod Supported by Multiple Spacers**
Nam-Gyu Park, Jung-Min Suh, and Keong-Lak Jeon(KNF)
- 10:20 Measurement of Weight of Kernels in a Simulated Cylindrical Compact for HTGR Using X-ray Computed Tomography**
Woong Ki Kim, Young Woo Lee, Young Min Kim, Yeon Ku Kim, Seung Chul Oh, Kyung Chai Jeong, Moon Sung Cho, Hyo Jin Cho, and Eun Jung Shin(KAERI)
- 10:40 Coffee Break**
- 11:00 Development of Cold Pilgering Die and Mandrel for HIPER Dashpot Tube**
Ki Bum Park, In Kyu Kim, Soo Won Park, Chan Hyun Park, and Sun Doo Kim(KNF)
- 11:20 Helium Pressure Effect on Cavity Growth Rate in Irradiated Metals**
Sang Chul Kwon, Eal Hyung Lee, and Jun Hyun Kwon(KAERI)

제 5 분과 A

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 송철화(Chul-Hwa SONG), 이재영(Lee Jae Young)

발표장소 휘닉스볼룸 I

일 정 | 5. 27(목)

- 09:00 Two-Dimensional Void Profile Measurement in DYNAS Having 2D Slab Test Section**
D. J. Euh, S. Kim, B. D. Kim, W. M. Park, B. J. Yun, C. H. Song, and K. D. Kim(KAERI)
J. H. Bae and J. Y. Lee(HGU)
- 09:20 Pool Boiling Experimental Study for Enhancing Boiling Heat Transfer on Modified Surfaces.**
Hang Jin Jo, Ho Seon Ahn, Soon Ho Kang, and Moo Hwan Kim(POSTECH)
- 09:40 Effect of the Reynolds Number on the Friction Loss Coefficient in a Micro Gap**
Ho-Yun Nam, Jae-Sik Lee, Byoung-Hae Choi, Byung-Ho Kim, and Yong-Bum Lee(KAERI)
- 10:00 Investigation of Thermal Conductivity of Nanofluids with Liquid Gallium as a Base Fluid for Nuclear Applications**
Seung Won Lee, Sung Dae Park, Sarah Kang, In Cheol Bang, and Ji Hyun Kim(UNIST)
- 10:20 Effect of Water-based Nanofluids on Reflood Heat Transfer in a Hot Vertical Tube**
Se-Young Chun, Seung-Tae Lee, and Chul-Hwa Song(KAERI)
In-Cheol Bang(SEE)
- 10:40 Coffee Break**
- 11:00 Heat Transfer Characteristics of the Supercritical CO₂ Flowing in a Vertical Annular Channel**
Tae Ho YOO, Yoon Yeong BAE, and Hwan Yeol KIM(KAERI)
- 11:20 Highly-Enhanced CHF of Nanofluids Containing Graphene and Graphene-Oxide Nanosheets without Improved Surface Wettability**
Sung Dae Park, Seung Won Lee, Sarah Kang, In Cheol Bang, Ji Hyun Kim, and Hyun Seok Shin(UNIST)
Dong Won Lee(KAERI)
- 11:40 Visual Obvervation of Bubble Departure Characteristics in the Nano-Particle Coated Heating Surface**
Won-Soek Han, Shin Yoo, and Jae-Young Lee(HGU)
- 12:00 Bubble Lift-off Diameter & Frequency in a Vertical Subcooled Boiling Flow**
In-Cheol Chu, Seungtae Lee, Young Il Cho, and Chul-Hwa Song(KAERI)
- 12:20 Observation of Boiling Structures on a Horizontal Heating Surface Using a Total Reflection Technique**
In-Cheol Chu and Chul-Hwa Song(KAERI)
Hee Cheon NO(KAIST)

Ⅲ. 분과별 논제 및 발표자

제 5분과 B

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 김신(Sin KIM), 정지환(Jeong Ji Hwan)

발표장소 휘닉스볼룸 II

일 정 | 5. 27(목)

- 09:00 Droplet Measurement in a 6°x6 Rod Bundle Geometry for a Reflood Heat Transfer Test**
H. K. Cho, S. Cho, Y. J. Youn, and C. H. Song(KAERI)
- 09:20 Thermal Stratification Phenomena in a Simulated IRWST During a TLOFW Accident**
C. K. Park, T. S. Kwon, and C. H. Song(KAERI)
- 09:40 Experimental Study on Annular-flow-induced Vibrations of a Simply-supported Tube in a Finite-length Loose Gap Support**
Heung Seok KANG(KAERI)
Njuki W. Mureithi and Michel J. Pettegrew(Ecole Polytechnique)
- 10:00 Vibration Analysis and Experiment for a Scale-down Model of APR+ Reactor Barrel**
Heung Seok KANG, K. H. LEE, T. S. Kwon, and C. H. SONG(KAERI)
- 10:20 Thermal Hydraulic Characteristics of the Steam Generators at the ATLAS Facility**
Yeon-Sik Kim, Nam-Hyun Choi, Bok-Deuk kim, Kyeong-Ho Min, Sung-Jae Lee, and Ki-Yong Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Effect of Core Bypass Flow During 6 Inch Cold Leg SBLOCA Test with the ATLAS**
Seok Cho, Ki-Yong Choi, Hyun-Sik Park, Kyoung-Ho Kang, Yeon-Sik Kim, Nam-Hyun Choi, Bok-Duk Kim, and Won-Pil Baek(KAERI)
- 11:20 Localization of the Hot Spot in the Gap of Pebble Bed of Very High Temperature Gas Cooled Reactor(VHTGR)**
Sa-Ya Lee, Sung-Je Hong, and Jae-Young Lee(HGU)
- 11:40 Testing Supercritical Carbon Dioxide Flowing Up Vertical Tube**
Byung J. Lee and Kune Y. Suh(SNU)
- 12:00 Localization of Ultra High Pressure and Temperature Using Methylene Blue Oscillation under Pressure Radiation**
Sung-Je Hong, Jung-Uen Kim, Joo-Han Bae, and Jae-Young Lee(HGU)
- 12:20 3-Dimensional Fluid Dynamics Analysis of Bypass Flow in Sub-channel with Crept Pressure Tube by Aged CANDU Reactor**
Tae Kwang Eom, Sung Je Hong, and Jae Young Lee(HGU)

제 5 분과 C

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 설광원(Kwang-Won SEUL), 박찬억(Chan-Eok Park)

발표장소 휘닉스볼룸 III

일 정 | 5. 27(목)

- 09:00 Verification of the SPACE Code Using Conceptual Test Problems**
Myung Taek Oh, Chan Eok Park, and Gyu Cheon Lee(KOPEC)
- 09:20 An Improved Numerical Scheme to Calculate the Pressure Gradient on Unstructured Meshes for Two-Phase Flows**
Heedong Lee(KAIST)
Jae Jun Jeong, Hyoung kyu Cho, and Han Young Yoon(KAERI)
- 09:40 Staggered Mesh for the SPACE Code and its Application to the System Construction**
Chan Eok Park, Sang Yong Lee, and Eun Kee Kim(KOPEC)
- 10:00 Advanced Wall Boiling Model with Wide Range Applicability for the Subcooled Boiling Flow and its Application into the CFD Code**
B. J. Yun, and C.-H. Song(KAERI)
A. Splawski and S. Lo(CD-Adapco)
- 10:20 Fundamental Validation of the SPACE code: Basic Hydraulics**
Byoung Jae Kim, Moon Kyu Hwang, Kyoung Doo Kim, and Seung Wook Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 A Brief Review on the Baer-Nunziato Type Multi-pressure Multi-fluid Models**
Sang Yong Lee, Chan Eok Park, and Gyu Cheon Lee(KOPEC)
- 11:20 Development of Two-Dimensional Void Profile Measurement Technique Using Impedance**
J. H. Bae and J. Y. Lee(HGU)
D. J. Euh, S. Kim, B. D. Kim, W. M. Park, B. J. Yun, C. -H. Song, and K. D. Kim(KAERI)
- 11:40 CFD Calculation of Turbulent and Thermal Mixing in a T-Junction: OECD/NEA Sponsored CFD Benchmark Exercise**
Dong Gu Kang, Kwang Won Seul, and Yong Ho Ryu(KINS)
- 12:00 Simulation of the Downcomer Boiling Test with the Component Thermal Hydraulic Analysis Code CUPID**
H. K. Cho, B. J. Yun, I. K. Park, and J. J. Jeong(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 D

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 설광원(Kwang-Won SEUL), 이재영(LEE Jae Young)

발표장소 휴닉스볼룸Ⅲ 앞 로비

일 정 | 5. 27(목) 13:00-15:00

- P05D01 CHF Enhancement in Flow Boiling using Al_2O_3 Nano-Fluid and Al_2O_3 Nano-Particle Deposited Tube**
Tae Il Kim, T. H. Chun, and S. H. Chang(KAIST)
- P05D02 Transport of Local Two-Phase Parameters in Vertical Air/Water Flow for Bubbly and Slug Flow Regime**
D. J. Euh, V. T. Nguyen, B. J. Yun, and C. -H. Song(KAERI)
- P05D03 Experimental Observation of Air/Water Multi-Dimensional Flow in a SLAB Geometry Using PIV Technique**
S. Kim, D. J. Euh, B. D. Kim, B. J. Yun, C. -H. Song, and K. D. Kim(KAERI)
- P05D04 Preliminary Experimental Evaluation of Natural Convection Loop for Liquid Gallium**
Sarah Kang, Seung Won Lee, Sung Dae Park, In Cheol Bang, and Ji Hyun Kim(UNIST)
- P05D05 Hydraulic Test for Sump Strainer of ECCS Recirculation**
Jun Seok Park and Sang-Nyung Kim(KHU)
- P05D06 A CFD Simulation of a 1/5-Scale Steam Generator Simulator**
Hwang Bae, Dongjin Euh, Byungsoo Shin, Yungjoo Ko, and Tae Soon Kwon(KAERI)
- P05D07 Design Concept of a 1/5-Scale Core Simulator**
Hwang Bae, Dongjin Euh, Byungsoo Shin, Yungjoo Ko, and Tae-Soon Kwon(KAERI)
- P05D08 A CFD Simulation for a Design of Core Flow Simulator for SMART**
Yung Joo Ko, Hwang Bae, Dong Jin Euh, and Tae Soon Kwon(KAERI)
- P05D09 Investigation of Characteristics of Impinging Jet for 1/5-Scale ECC Injection**
Byung Soo Shin, Yung Joo Ko, Hwang Bae, and Tae Soon Kwon(KAERI)
- P05D10 1/5-Scale Air Water Test for ECC Bypass**
Byung Soo Shin, Hwang Bae, Yung Joo Ko, and Tae Soon Kwon(KAERI)
- P05D11 Development of a Measurement Technique for Droplets During Reflood**
Byoung Jae Kim, Hyung Kyu Cho, and Sang Ki Moon(KAERI)

제 5 분과 E

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 이성재(Lee Seong Jae), 권태순(Tae-Soon Kwon)

발표장소 휴닉스볼룸 III 앞 로비

일 정 | 5. 27(목) 13:00-15:00

- P05E01 Performance Comparison of Deflector and DVI+ Duct**
Tae-Soon Kwon, Seungtae Lee, and Chul-Hwa Song(KAERI)
- P05E02 Experimental Study on Flooding Phenomenon**
Yong Jin Kim(KAIST)
- P05E03 A Preliminary Study on the Propagation of RCP Pressure Perturbation into Reactor Vessel Downcomer**
In-Cheol Chu, Jung Taek Kim, Tae Soon Kwon, and Chul-Hwa Song(KAERI)
- P05E04 Experimental Study of ECC Duct Bypass for Development of an Advanced DVI+**
Seungtae Lee, Young Jung Yun, Dongjin Euh, and Tae-Soon Kwon(KAERI)
- P05E05 Measurement of the Superheated Steam Temperature in a Post-CHF Dispersed Droplet Flow Regime**
Seok Cho, Sang-Ki Moon, Hyung-Kyu Cho, Young-Jung Yun, Jeong-Kuk Park, Chul-Hwa Song, and Won-Pil Baek(KAERI)
- P05E06 3D Analysis of Cooling Performance with Loss of Offsite Power Using GOTIHIC Code**
Kyemin Oh and Gyunyoung Heo(KHU)
Insik Na(ACT Co., Ltd.)
Yujung Choi(KHNP)
- P05E07 Fretting Wear Experiments between the Same Alloy 690 Materials for Conservative Wear Evaluation of Steam Generator Tube**
Jeong-Keun Lee and Chi-Yong Park(KEPRI)
- P05E08 Establishment of Advanced Technique for the Prediction of pH in the Sump Solution**
Hee Cheol Kim and Sang-Nyung Kim(KHU)
- P05E09 Development of Generalized Correlation Equation for the Local Wall Shear Stress**
Yu Mi Jeon, Jun Ho Bae, and Joo Hwan Park(KAERI)
- P05E10 Experimental Validation of the PRHRS Model in the TASS/SMR-S Code**
Kyungmin Kang, Soo Hyung Yang, Young-Jong Chung, and Won-Jae Lee(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 F

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 정재준(Jae-Joon JEONG), 반창환(Chang-Hwan Ban)

발표장소 휴닉스볼룸Ⅲ 앞 로비

일 정 | 5. 27(목) 13:00-15:00

P05F01 Preliminary CFD Analyses on Debris Transport to ECCS Sump in Recirculation Mode for CANDU Type Plant, in Korea

Byung Il KWON, Jong Uk KIM, and Jae Seon CHO(FNC Tech.,)
Tae Keun PARK(KOPEC)
Sang Won LEE and Hyeong Taek KIM(KHNP)

P05F02 The Prediction of TASS/SMR-S Code for the Natural Circulation at VISTA Facility

InJoon Hwang, Soo-Hyung Yang, Soo-Hyung Kim, Young-Jong Chung, and Won-Jae Lee(KAERI)

P05F03 Discharged Mass and Enthalpy in LOCA for CANDU NPP

Kim Yun Ho and Choi Hoon(KEPRI)

P05F04 A Comparision on Application of MARS and RELAP5 to KINS Realistic Evaluation Methodology

Byung Gil Huh, Dong Gu Kang, Deog-Yeon Oh, Young Seok Bang, and Sweng Woong Woo(KINS)

P05F05 Study on Optimized Safety System Modeling for Small-scale Passive Reactor

Yun Sik Sung, Sung Won Lim, Yong Won Choi, and Un Chul Lee(SNU)

P05F06 Analysis on Critical Heat Flux under Heaving Condition in Marine Reactor Using RETRAN-3D/INT

Min-Hee Kim and Goon-Cherl Park(SNU)

P05F07 Conceptional Design about the Passive Containment Cooling System using Multi-pod Heat pipe

Seung-Won Han and Sang-Nyung Kim(KHU)

P05F08 Feasibility Study on the Rod Ejection Simulation with Point Kinetics Model

Chansu Jang, Jungwon Sun, and Kilsup Um(KNF)

P05F09 PCTTRAN/KSNP1000-A PC-Based Simulator for KSNP1000

Li-Chi Cliff Po(MST)
Juyoul Kim(FNC Tech.)

P05F10 Post-Test Analysis of PKL G3.1 Test using MARS-KS

Seung Wook Lee and Bub Dong Chung(KAERI)

P05F11 Analytical Prediction of Turbulent Friction Factor for a Subchannel Consisting of a Rod Bundle

Jun Ho Bae and Joo-Hwan Park(KAERI)

제 5 분과 G

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 안승훈(Seung-Hoon Ahn), 김경두(Kim Kyung Doo)

발표장소 휘닉스볼룸 III 앞 로비

일 정 | 5. 27(목) 13:00-15:00

P05G01 Preliminary Analysis for the SMART Over-Pressure Protection

Sook Kwan Kim and Suk Ku Sim(En2t Inc.,)

Suhn Choi and Kyoo Hwan Bae(KAERI)

P05G02 Preliminary Analysis for the SMART LTOP(Low Temperature Over-Pressure Protection)

Sook Kwan Kim and Suk Ku Sim(En2t Inc.,)

Suhn Choi and Kyoo Hwan Bae(KAERI)

P05G03 Preliminary System Response Analysis of Rod Ejection Accident for APR1000

Yo-Han Kim and Sang-Jun Ha(KEPRI)

P05G04 Analysis of the SMART's Increased Heat Removal Transients by the Secondary System

In Sub Jun, Soo Hyung Kim, Kyoo Hwan Bae, and Suhn Choi(KAERI)

P05G05 Evaluation of Safety Margin for OPR1000 LBLOCA According to the Guidance of SMAP of NEA/CSNI

Soon Joon Hong, Su Hyun Hwang, Seong Soo Jeon, and Byung Chul Lee(FNC Tech.)

Ju Yeop Park(KINS)

P05G06 Accuracy Improvement of SPACE Code Using the Optimization for CHF Subroutine

Chang-Keun Yang, Yo-Han Kim, Jong-Eun Park, and Sang-Jun Ha(KEPRI)

P05G07 Development and Validation of Pressure Tube Deformation and Subcooled Boiling Models of the MARS Code for Safety Analyses of the Wolsong NPP's

Churl Yoon and Bub Dong Chung(KAERI)

Seunghoon Ahn(KINS)

P05G08 The Similarity Analysis of the VISTA Thermal-Hydraulic Integral Test Loop for a Small-Break LOCA of the SMART Design

Hyun-Sik Park, Rae-Joon Park, Sang-Ki Moon, Hwang Bae, and Sung-Jae Yi(KAERI)

Doo-Hyuk Kang and Jae-Seung Suh(SENTECH)

Yeon-Sik Cho(ENESYS)

P05G09 Performance Evaluation of Annular Fuel in OPR-1000 Plant During a Main Steam Line Break Accident

Hyoung Tae Kim, Kyoo Hwan Bae, Tae Hyun Chun, and Wang Kee In(KAERI)

P05G10 Sensitivity Studies on a 100% Break of the DVI Nozzle of ATLAS using MARS Code

Seyun Kim, Bum-Soo Youn, and Sang-Jun Ha(KEPRI)

P05G11 Moderator Circulation Simulation for 35% Reactor Inlet Header Break in the Wolsong Nuclear Power Plant

Hyoungh Tae Kim and Joo Hwan Park(KAERI)

제 5 분과 H

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 홍성완(Seong-Wan Hong), 김형택(H. T. Kim)

발표장소 휘닉스볼룸 III 앞 로비

일 정 | 5. 27(목) 13:00-15:00

- P05H01 Creep Rupture Analysis of Reactor Coolant System Boundary during a Total Loss of Feed Water Transient**
Rae-Joon Park and Seong-Wan Hong(KAERI)
- P05H02 Preliminary Analysis of Severe Accident Progression Initiated from Small Break LOCA of a SMART Reactor**
Youngho Jin, Jong-Hwa Park, and Dong-Ha Kim(KAERI)
Seong-Won Cho(KORTIC)
- P05H03 Numerical Analysis of Molten Corium Dispersion during Hypothetical High-Pressure Accidents in APR1400 Nuclear Power Plant**
Jongtae Kim, Kwang Soon Ha, Sang-Baik Kim, and Hee-dong Kim(KAERI)
Jae-Sik Jeong(KOPEC)
- P05H04 An Evaluation of the Steam Explosion Model of MC3D Code**
Ik Kyu Park, Jong Hwan Kim, and Seong Wan Hong(KAERI)
- P05H05 Validation of Numerical Schemes in a Thermal-Hydraulic Analysis Code for a Natural Convection Heat Transfer of a Molten Pool**
Jongtae Kim, Kwang Soon Ha, Hwan Yeol Kim, Rae-Joon Park, and Jin Ho Song(KAERI)
- P05H06 Development of the Preliminary MELCOR1.8.6 Model for the SMART Severe Accident Analysis**
Jaecheol Kim and Gunhyo Jung(FNC Tech.)
Hanchul Kim(KINS)
- P05H07 Uncertainty Analysis of the Molten Corium-Concrete Interaction during Severe Accidents in Typical PWR**
Soo Yong Park and Kwang Il Ahn(KAERI)
- P05H08 Computational Aid of CANDU Reactor Severe Accident Management Strategies for Containment Integrity**
Young Choi, D. H. Kim, S. D. Kim, S. Y. Park, and Y. H. Jin(KAERI)
- P05H09 Results of OECD-NEA THAI Test HM-2 Benchmark Study with MELCOR Code**
Jung-Jae Lee, Han-Chul Kim, and Key-Yong Sung(KINS)
- P05H10 APR1400 Containment Simulation with CONTAIN Code**
Moonkyu Hwang and Bub Dong Chung(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 I

원자력열수력 및 안전 - Poster (Thermal Hydraulics and Safety)

좌 장 이창주(Chang-Ju Lee), 한상훈(Sang Hoon Han)

발표장소 휘닉스볼룸Ⅲ 앞 로비

일 정 | 5. 27(목) 13:00-15:00

- P05I01 Estimation of Common Cause Failure Parameters for Emergency Service Water System Pump of Kori Unit 2**
Dae Il Kang, Mee Jung Hwang, Sang Hoon Han, and Jin Hee Park(KAERI)
- P05I02 Sensitivity Analyses of Core Damage Frequency on the Design Alternatives for SFR-600 Conceptual Design**
Tae Woon Kim, Sang Hoon Han, and Hae-Yong Jeong(KAERI)
- P05I03 Technical Considerations for the Systems Analysis in SMART PSA**
NamChul Cho and Chang-Ju Lee(KINS)
- P05I04 A Proposed Approach for Enhancing Design Safety Assurance of Future Plants**
Kju-Myeong Oh, Sang-Kyu Ahn, and Chang-Ju Lee(KINS)
Inn Seock Kim(ISSA Tech.)
- P05I05 Study on LOCA Frequency and Contribution to Risk of Nuclear Power Plant**
Seong Soo Choi, Dong Sik Jin, and Poong Oh Kim(ACT Co.,Ltd.)
Inn Seock Kim(ISSA Tech.)
- P05I06 A Study on the Regulatory Requirement of Event Frequency Change by Facility Improvement and Modification in Wolsong Unit 1**
Kilyoo Kim and Jinhee Park(KAERI)
- P05I07 Comparison between Heinrich's Law and the Number of Events in Domestic Nuclear Power Plants**
Sun Yeong Choi and Joon-Eon Yang(KAERI)
- P05I08 Assessment of In-Core Damage for Feeder Stagnation Break in CANDU**
Jong Yeob Jung and Joo Hwan Park(KAERI)
- P05I09 Analysis of Worldwide Regulatory Framework for On-Line Maintenance**
Sang-Kyu AHN, Kyu-Myung OH, and Chang-Ju Lee(KINS)
- P05I10 Design of Nanoparticle Engineered Safety Injection Tank**
Myoung-suk Kang, Changhyun Jee, Sangjun Park, and Gyunyoung Heo(KHU)
In Choel Bang(UNIST)
- P05I11 Application of a New Approach for Estimating LOCA and SGTR Frequencies**
Ho-Jun Jeon, Ji-Yong Oh, and Moon-Goo Chi(KHNP)

제 5 분과 J

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 정법동(Chung Bub Dong), 정영중(Y. J. Chung)

발표장소 휘닉스볼룸 I

일 정 | 5. 28(금)

- 09:00 An Evaluation of the Unexpected Trip Limits Using the Quality Control Approach**
Hyun-woo Lee and Moosung Jae(HYU)
Kilyoo Kim(KAERI)
- 09:20 Thermal Field of Moderator Circulation in CANDU-6 Reactor**
Tae Kwang Eom, Sung Je Hong, and Jae Young Lee(HGU)
- 09:40 Evaluation of MARS Code on CHF with Fluid-to-Fluid Method Under Inlet Flow Fluctuation**
Jin S. Hwang, Jong W. Kim, and Goon C. Park(SNU)
- 10:00 Simulation of UPTF Test 20 by Using MARS Multi-Dimensional Component**
Sung Won Bae and Bub Dong Chung(KAERI)
- 10:20 Transport Characteristics of Representative Debris in a Open Channel**
Kyung Sik Choi and Ji Hwan Joeng(PNU)
Joo Yeop Park(KINS)
- 10:40 Coffee Break**
- 11:00 MARS Transient Analyzer for Dual Reactor Unit Producing 2000 MWe**
Kyoung M. Kang and Kune Y. Suh(SNU)
- 11:20 Experimental Validation of a Thermal-hydraulic Analysis Code for REX-10**
Yeon-Gun Lee, Jong-Won Kim, and Goon-Cherl Park(SNU)
- 11:40 Preliminary Test for Constitutive Models of CAP**
Yeon Joon Choo, Soon Joon Hong, Su Hyun Hwang, Keo Hyung Lee, Min Ki Kim, and Byung Chul Lee(FNC Tech.)
Sang Jun Ha and Hoon Choi(KEPRI)
- 12:00 Upwind Scheme and Local Head Model in CAP**
Soon Joon Hong, Su Hyun Hwang, Yeon Joon Choo, Keo Hyung Lee, Min Ki Kim, and Byung Chul Lee(FNC Tech.)
Sang Jun Ha and Hoon Choi(KEPRI)

Ⅲ. 분과별 논제 및 발표자

제5분과K

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 방광현(Bang Kwang Hyun), 김상백(Kim Sang-Baek)

발표장소 휘닉스볼룸 II

일 정 | 5. 28(금)

- 09:00 An Integral Effect Test Program for SMART Design using the VISTA ITL Facility**
Hyun-Sik Park, Ki-Yong Choi, Seok Cho, Yeon-Sik Kim, Nam-Hyun Choi, Kyoung-Ho Min, Yong-Chul Shin, Young-Il Cho, and Sung-Jae Yi(KAERI)
- 09:20 Design of Steam Generator for SMART ITL**
Hwang Bae, Hyun-Sik Park, Sung-Jae Yi, and Sang-Ki Moon(KAERI)
- 09:40 Construction of Experimental Facility for SMART Flow Mixing Header Assembly**
Jong-Soo Choi, Jong-Won Kim, and Goon-Cherl Park(SNU)
Young-In Kim(KAERI)
- 10:00 Systematic Application of the AtomCARE Real-time Plant Information to support Severe Accident Response Activities**
Do Sam Kim and Key Yong Sung(KINS)
Kwang-IL Ahn(KAERI)
- 10:20 The Effect of External Vessel Cooling for a 2 Inch LOCA Severe Accident Scenario at SMART with MIDAS/SMR**
Jong-Hwa Park, Dong-Ha Kim, Young-Jong Chung, and Sunhee Park(KAERI)
Seong-Won Cho(KORTIC)
- 10:40 Coffee Break**
- 11:00 Current Status of the OECD-SERENA Project for the Resolution of Ex-Vessel Steam Explosion Risks**
S. W. Hong, J. H. Kim, B. T. Min, I. K. Park, K. S. Ha, S. H. Hong, J. H. Song, and H. D. Kim(KAERI)
- 11:20 Inherent Characteristics of Belated Core Damage Progression During an SBO at the SMART Plant**
Dong Ha Kim, Jong Hwa Park, Sunhee Park, and Young Jong Chung(KAERI)
Seong Won Cho(KORTIC)
- 11:40 CFD Modeling of Melt Spreading on the Reactor Cavity Floor**
Wan-Sik Yeon and Kwang-Hyun Bang(HHU)
Youngjo Choi and Jaegon Lee(KHNP)

제 5 분과 L

원자력열수력 및 안전 (Thermal Hydraulics and Safety)

좌 장 양준언(Yang Joon-Eon), 제무성(JAE, Moosung)

발표장소 휘닉스볼룸III

일 정 | 5. 28(금)

- 09:00 Preliminary Human Reliability Issues in Reviewing SMART PSA**
Chang-Ju Lee and Cheol Sheen(KINS)
- 09:20 Uncertainty Analysis Methods for Probabilistic Seismic Risk Analysis of NPP**
Jung Han Kim, In-Kil Choi, and Jin-Hee Park(KAERI)
- 09:40 Room Temperature Heat-up Test of RHR Pump Room upon Loss of Room Cooling in Kori Unit-2**
Jinhee Park, Churl Yoon, Ho Gon Lim, and Sang Hoon Han(KAERI)
- 10:00 Verification of Fault Tree Models with RBDGG Methodology**
Man Cheol Kim(KAERI)
- 10:20 Feasibility Study on Domestic Application of Risk-informed Changes to 10 CFR 50.46**
Seong Soo Choi, Inn Seock Kim, and Dong Sik Jin(ACT Co.,Ltd.)
Chun Woo Lee, Kwang Man Jin, and Seong Taek Hyun(KHNP)
- 10:40 Coffee Break**
- 11:00 Importance Determination Process Considering the Severity and the Opportunity**
Mi-Ro Seo and Hyeon-Jong Jeong(KEPRI)
- 11:20 Re-evaluation of Shin-Kori 1&2 CDF without Quantification Errors**
Jongsoo Choi(KINS)
- 11:40 Assuring SMART Design Safety through Regulatory PSA Model**
Yong Suk Lee(FNC)
Inn Seock Kim(ISSA Tech.)
Namchul Cho and Chang-Ju Lee(KINS)
- 12:00 Improved Features in a PSA Software AIMS-PSA**
Sang Hoon HAN, Seung Won LEE, Seung-Cheol JANG, Ho-Gon LIM, and Joon-Eon YANG(KAERI)
- 12:20 Fire Propagation Tracing Model in the Explicit Treatment of Events of Fire PSA**
Ho-Gon Lim, Sang-Hoon Han, and Jun-Eon Yang(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 6분과 A

방사선 이용 및 방호 (Radiation Utilization and Protection)

좌 장 황원태(Hwang Won Tae), 이갑복(G. B. Lee)

발표장소 토파즈 II

일 정 | 5. 27(목)

- 09:00 Impulse Response in Various Scanning Geometries for Digital Tomosynthesis**
JeeYoung Kim, Hanbean Youn, Min Kook Cho, and Ho Kyung Kim(PNU)
- 09:20 A Rapid and Simple Automation of [I-123]mIBG for Clinic Application**
Chi Hoon Yi, Sang Jin Han, Hyun Park, Byung Soo Kim, Gi Jeong Cheon, and Jung Young Kim(KIRAMS)
- 09:40 Premature Senescence Induced by Ionizing Radiation Requires AKT Activity and Reactive Oxygen Species in Glioma**
Je-Jung Lee, Bong Cho Kim, Hee-Jung Yoo, and Jae-Seon Lee(KIRAMS)
- 10:00 Determination of Thermal Neutron Flux Distribution**
N. S. Jung, J. H. Kim, B. G. Park, and H. D. Choi(SNU)
- 10:20 Review on Metabolism and Dosimetry of Tritium**
Tae Young Kong, Hee Geun Kim, Woo Tae Jeong, and Seok Tae Kim(KEPRI)
- 10:40 Coffee Break**
- 11:00 Calculation of Radiation Exposure Dose to Workers during Replacement of PWR Steam Generator by Using RESRAD-BUILD Code**
Suwon Choi, Sanghwa Shin, and Jooho Whang(KHU)
- 11:20 Signal and Noise Characteristics in Radiation-damaged CMOS Detector**
Jong Chul Han, Seungman Yun, Chang HwY Lim, and Ho Kyung Kim(PNU)
- 11:40 Neutron Monitor Prototype for Measurement of Cosmic Ray**
Doh Yun Jang, Jeong Soo Kang, Byoung Hwi Kang, and Yong Kyun Kim(HYU)
- 12:00 Progress on the Development of (n,γ)⁹⁹Mo/^{99m}Tc Generator, an Alternative of Conventional Generator**
Jun Sig Lee, Seung-Rag Choi, Seong-Su Nam, Ul-Jae Park, Kwang-Jae Son, Kang-Hyuk Choi, and Sun-Ju Choi(KAERI)
- 12:20 Detection Efficiency of a Compton Suppression HPGe Spectrometer Using Experimental Validated Monte Carlo Simulation**
Hoang Sy Minh Tuan, Gwang Min Sun, and Yong Sam Chung(KAERI)

제 6 분과 B

방사선 이용 및 방호 - Poster (Radiation Utilization and Protection)

좌 장 김인규(Kim In Gyu), 송규민(Song, Kyu-Min)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

P06B01 The Characteristics of Human Antibody Targeting the Epidermal Growth Factor Receptor in Vivo for Radioimmunotherapy in a Small Animal Model

Eun Jung Kim, Tae Hyun Choi, Byoung Soo Kim, and Gi Jeong Cheon(KIRAMS)
Kwang-Won Hong, Ki Hwan Chang, Yong Won Shin, Kyung Hwan Ryoo, Yong Nam Shin, and Se-Ho Kim
(Green Cross)

P06B02 Assessment of Absorbed Dose in Persons Close to the Patients during ¹⁹²Ir Brachytherapy for Cervical Cancer

JooYoung Jung and SeSik Kang(CUP)

P06B03 Assessment of Genotoxicity of Ionizing Radiation Using Tradescantia-Comet Assay

Min Han, Tae Ho Ryu, Kyung Man Hyun, and Jin Kyu Kim(KAERI)
Nad a Wilhelmoiva(IEB)

P06B04 Altered Cross-Linking of HSP27 by Zerumbone as a Novel Strategy for Overcoming HSP27-Mediated Resistance

Seohyun Choi, Yoon-Jin Lee, Hae-June Lee, and Yun-Sil Lee(KIRAMS)
Joon Kim(KU)
Woo Duck Seo(NICS)
Joo-Won Nam, Yoo Jin Lee, and Eun-Kyung Seo(Ewha Womans Univ.)

P06B05 Reciprocal Regulation between DNA-PKcs and Snail1 Conferring Genomic Instability

Haeng Ran Seo, Hae-June Lee, Yeung Bae Jin, Sangwoo Bae, and Yun-Sil Lee(KIRAMS)
Nam Hee Kim, Hyun Sil Kim, Hyung Wook Nam, and Jong In Yook(YSU)

P06B06 Experiment Study on the X-ray Attenuation by Tissue-Equivalent Matter

Seung-Hee Lee, Ki-Man Lee, and Eun-Hee Kim(SNU)

P06B07 Feasibility Study of Flexible Flat-panel X-ray Detectors for Digital Radiography

Okla Joe, SeungMan Yun, and Ho Kyung Kim(PNU)

P06B08 Identificaiton of Secreted Proteins from Ionizing Radiation-Induced Senescent MCF7 Cells Using Comparative Preteomics

Na-Kyung Han, Han-Na Kim, Mi-Na Hong, Sumin Park, and Jae-Seon Lee(KIRAMS)
Seong-Gil Chi(KU)

P06B09 IM-1662 Attenuates Radiation-Induced Fibroblast Differentiation through Restoration of TGF- β type III Receptor

Sarah Park, Ji-Yeon Ahn, Mi-Hyoung Kim, Min-Jin Lim, Saeloom Lee, Yeon-Sook Yun, and Jie-Young Song(KIRAMS)

Ⅲ. 분과별 논제 및 발표자

제 6 분과 C

방사선 이용 및 방호 - Poster (Radiation Utilization and Protection)

좌 장 김희령(Hee Reyoung Kim), 김진성(Kim Jinsung)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P06C01 Effect of Phantom Geometry on Measured Prompt Gamma Distribution for 150 MeV Proton Beam**
Chul Hee Min, Han Rim Lee, and Chan Hyeong Kim(HYU)
- P06C02 Pollution Sources for indoor PM2.5 at the Platform in Subway Station Using a Positive Matrix Factorization and an Instrumental Neutron Activation Analysis**
Jong-Myoung Lim, Jong-Hwa Moon, and Yong-Sam Chung(KAERI)
Jin-Hong Lee(CNU)
- P06C03 A Preliminary Study on the Shielding Analysis for Lead Slowing Down Time Spectrometer (LSDTS) System**
K. Y. Noh, C. J. Park, Y. D. Lee, and J. W. Lee(KAERI)
- P06C04 K-BIOTA: A Computer Program for Assessing Radiation Doses to Non-human Species**
Dong-Kwon Keum, In Jun, Kwang-Muk Lim, and Yong-Ho Choi(KAERI)
- P06C05 Measurements of the Efficiency of Ion Exchange Resin Used in HANARO Primary Coolant Purification System**
Myoung-Seop Kim, Hee-Gon Kim, and Choong-Sung LEE(KAERI)
- P06C06 Fast Neutron Radiation Monitor Using Polycrystal Composite Stilbene**
Byoung Hwi Kang, Doh yun Jang, Seung Kyu Lee, and Yong Kyun Kim(HYU)
- P06C07 Numerical Simulation of Groundwater Flow at Kori Nuclear Power Plant Site**
Wook Sohn and Soon-whan Sohn(KEPRI)
Chul-min Chon and Kue-youn Kim(KIGAM)
- P06C08 Radiation Dose Measurement Using Chemical Dosimeters**
Min-Sun Lee and Eun-Hee Kim(SNU)
Yuri Kim and Bumsoo Han(EB Tech)
- P06C09 Optimization of Imaging Geometry in x-ray Microtomography System**
Sunyoung Jang, HanBean Youn, and Ho Kyung Kim(PNU)

제 7 분과 A

양자공학 및 핵융합기술 (Quantum Engineering and Nuclear Fusion)

좌 장 장지호(Ji Ho Jang), 이동원(Dong Won Lee)

발표장소 다이아몬드 II

일 정 | 5. 28(금)

- 09:00** **Code Validation for MHD Pressure Drop with Benchmark Problems and Theoretical Comparison.**
Seolha Kim, Moohwan Kim, and Chiwoong Choi(POSTECH)
Dong Won Lee(KAERI)
- 09:20** **Current Status on the Korean Test Blanket Module Development for Testing in the ITER**
Dong Won Lee, Suk Kwon Kim, Young Dug Bae, Jae Sung Yoon, and Ki Sok Jung(KAERI)
- 09:40** **Low Temperature RF Test of Two-cell SRF Prototype Cavity for PEFP**
Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- 10:00** **Development of EPICS Input Output Controller and User Interface for the PEFP Low Level RF Control System**
Young-Gi Song, Han-Sung Kim, Kyung-Tae Seol, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- 10:20** **Performance Improvement of the LLRF Control System for the PEFP 100MeV Accelerator**
K. T. Seol, H. J. Kwon, H. S. Kim, Y. G. Song, and Y. S. Cho(KAERI)
- 10:40** **Coffee Break**
- 11:00** **Analysis on Beam Position Signal of PEFP 20 MeV Proton Linac**
Kyungjean Min, Jin Seok Hong, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 7 분과 B

양자공학 및 핵융합기술 - Poster (Quantum Engineering and Nuclear Fusion)

좌 장 조용섭(Yong Sub Cho), 홍봉근(Bong Guen Hong)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P07B01 Laser-based Apparatus for Measuring the Elastic Constants of Materials**
Seung-Kyu Park, Sung-Hoon Baik, Yong-Moo Cheong, Hyun-Kyu Jung, and Byung-Heon Cha(KAERI)
- P07B02 Lattice Design of a Medical Synchrotron**
Ji-Ho Jang, Yong-Sub Cho, and Hyeok-Jung Kwon(KAERI)
Yong-Yung Lee(BNL)
- P07B03 The Fabrication of Prototype Target Stack and Preliminary Thermal Analysis of the 100 MeV Isotope Production Facilities at PEPF**
Sang-pil Yoon, In-Seok Hong, and Yong-sub Cho(KAERI)
- P07B04 Traffic Reducing and Monitoring for the PEPF Control Network**
Eun-Mi An, Young-Gi Song, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B05 Test of the 20-MeV Proton Accelerator Using Modulator**
Hyeok-Jung Kwon, Han-Sung Kim, Daeil Kim, Kyung-Tae Seol, Young-Gi Song, Ji-Ho Jang, and Yong-Sub Cho(KAERI)
- P07B06 Power Rating Measurement of the Voltage Divider Resistors for the Klystron Modulating Anode**
Dae-Il Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B07 Electric Power System Protection of PEPF**
Kyeong-Jun Mun, Jun Yeon Kim, G. P. Jeon, J. S. Cho, Yi-Sub Min, Jungmin Nam, and Sung-Sik Park(KAERI)
- P07B08 Radiation Safety Design for the Target Rooms of the Beam Application Research Building of PEPF**
Jun Yeon Kim, G. P. Jeon, Yi-Sub Min, Kyeong-Jun Mun, and Jeong Hee Jo(KAERI)
- P07B09 The Exhaust System Configuration of Controlled Area in the Proton Accelerator Research Center by Accelerator Operation Mode**
G. P. Jeon, J. Y. Kim, Y. S. Min, K. J. Mun, J. S. Cho, J. M. Nam, S. S. Park, H. G. Joo, and J. H. Jo(KAERI)
- P07B10 The Design of Shielding for Target Room of the Proton Accelerator Research Center**
Y. S. Min, G. P. Jeon, K. J. Mun, J. Nam, J. S. Cho, and Jun Yeon Kim(KAERI)
- P07B11 Civil Engineering Works Status of the Proton Accelerator Research Center in PEPF - Site and Access Road Earthwork**
Jung Min Nam, G. P Jeon, Yi-Sub Min, Sung Sik Park, Jin Sam Cho, Kyeong-Jun Mun, and Jun Yeon Kim(KAERI)

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- P07B12 Beam Current Increase and Cathode Lifetime Improvement of KOTRON-13 Ion Source**
W. K. LEE, S. K. CHAE, J. Y. SONG, G. S. IM, B. O. CHO(Sammach)
- P07B13 Preliminary PbLi Melting Experiment for Developing the PbLi Loop in KAERI**
Ki-Sok Jung, Dong-Won Lee, Jae-Sung Yoon, Suk-Kwon Kim, Bong-Guen Hong, and Young-Duk Bae(KAERI)
- P07B14 Status of Conceptual Design Progress for ITER Sector Sub-assembly Tools**
Nam Kyoung, Park Hyunki, and Kim Dongjin(NFRI)
Lee Jaehyuk and Kim Kyungkyu(SFA)
Im Kihak and Robert Shaw(ITER)
- P07B15 High Heat Flux Test of the ITER FW Semi-prototype Mockups**
Young-Dug BAE, Dong-Won Lee, Suk-Kwon KIM, and Jae-Sung YOON(KAERI)
Bong-Guen HONG(CBNU)
- P07B16 Hydriding and Dehydriding Performance of a Tray-Type Hydrogen Isotope Storage Bed**
Dongyou Chung, Doyeon Jeong, Daeseo Koo, and Hongsuk Chung(KAERI)
Kyu-Min Song(KEPRI)
Min Ho Chang, Hyun-Goo Kang, Sei-Hun Yun, and Seungyon Cho(NFRI)
- P07B17 ZrCo Powderization Characteristics in a Tray-Type Metal Hydride Bed**
Doyeon Jeong, Hongsuk Chung, Dongyou Chung, and Daeseo Koo(KAERI)
- P07B18 Development of a Liquid Breeder Loop for ITER TBM**
Jae Sung Yoon, Dong-Won Lee, Young-Duk Bae, and Suk-Kwon Kim(KAERI)
- P07B19 Temperature Variation of ZrCo Hydride due to Hydrogen Absorption in a Rectangular Tray-Type Bed**
Daeseo Koo, Dongyou Chung, Doyeon Jeong, and Hongsuk Chung(KAERI)
- P07B20 High Heat Flux Test with 80x80 Be/Cu/SS Standard Mockups for ITER First Wall Semi-Prototype**
Suk-Kwon Kim, Seung-Jae Lee, Dong Won Lee, Young-Dug Bae, H. K. Jung, Y. I. Jung, J. Y. Park, and Y. H. Jeong(KAERI)
- P07B21 Development of the Control and Acquisition Program for the Charge Exchange Spectroscopy System on the KSTAR**
Hyung-Ho Lee, Won-Ha Ko, Dongcheol Seo, Seungtae Oh, and Myeun Kwon(NFRI)
- P07B22 Study on Characteristics of Constricted DC Plasma Using Particle-In-Cell Simulator**
Jong Gap Jo, Yeong-Shin Park, and Yong-Seok Hwang(SNU)
- P07B23 Current status on the Fabrication Technology Development for ITER Blanket First Wall in Korea**
Dong Won Lee, Young Dug Bae, and Suk Kwon Kim(KAERI)
- P07B24 The Rapid Nitriding of Al Alloys with the Controlling of Plasma Power Density and Pretreatments**
Hyun Jun Park and Kyoung Il Moon(KITECH)
Jae Seung Lee and Yoon Choi(A-Tech System)
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Ⅲ. 분과별 논제 및 발표자

제 8 분과 A

원자력발전소 건설 및 운영 (Nuclear Power Plant Construction and Operation)

좌 장 정대율(Chung Dae-yul), 백용락(Paek Yong Lak)

발표장소 토포즈III

일 정 | 5. 27(목)

- 09:00 The Study on Environmental Fatigue Behavior of Low Alloy Steel and Stainless Steel Pipes Using the Simplified Plant Transients**
One Yoo, M. S. Song, I. Y. Kim, and S. H. Park(KOPEC)
B. S. Lee(KAERI)
- 09:20 Investigation on Circumferential Variation of Residual Stresses in Dissimilar Welds of Small Bore Penetration Nozzle**
Jong Sung Kim and Joong Hyun Seo(SCNU)
- 09:40 Cause of Dynamic Strain Aging in Fe-Cr-Ni Alloys**
Sung Soo Kim, Dae Whan Kim, and Young Suk Kim(KAERI)
- 10:00 An Enhancement of Campaign Posters for Human Error Prevention in NPPs**
Yong-Hee Lee and Yonghee Lee(KAERI)
Soon-Il Kwon(KHNP)
- 10:20 Improvement Status of the Emergency Operating Procedures for Wolsong CANDU-6 Plants**
Hee Soo Bae, Seong Soo Choi, and Tae Kyoon Kwon(ACT)
Won Sun Kim, Seok Dong Lee, and Kyu Soo Jang(KHNP)
- 10:40 Coffee Break**
- 11:00 Standardization of the WPS and Development of the Welding Process Management System for Nuclear Power Plants**
Hong Seok Cho, Jang Wook Lee, Ki Hyun Cho, and Sang Hoon Choi(KPS)
- 11:20 Approach for Risk Informed Circuit Analysis in Fire Hazard Analysis**
Hyuntae Yim(KMET)
- 11:40 Establishment and Pilot Implementation of Screening Criteria for On-Line Maintenance**
Hee Seung Chang, Dong Un Yeom, and Jung Wun Kim(KHNP)

제 8 분과 B

원자력발전소 건설 및 운영 - Poster (Nuclear Power Plant Construction and Operation)

좌 장 박진호(Park Jin-Ho), 정광희(Jeong Kwang-Hee)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P08B01 Performance Comparison of Automated Ultrasonic Testing Systems**
Chan Hee Cho, Hee Jong Lee, Min Woo Nam, Hyun Joo Yoo, Seung Han Yang, and Kee Il Guon(KEPRI)
- P08B02 Development of the Analysis Methods for Eddy Current Signal of D-probe**
Kyung Mo Kim, Myung Sik Choi, Do Haeng Hur, Jung Ho Han, and Deok Hyun Lee(KAERI)
- P08B03 Visual Inspection of the Flow Distribution Plates of Ulchin NPP #3 SG**
Woo-tae Jeong and Seok-tae Kim(KEPRI)
Seok-chul Kang and Young-kug Kim(Sae-An)
- P08B04 Experiments on Steam Generator Cleaning by Ultrasonic Means**
Woo-tae Jeong and Seok-tae Kim(KEPRI)
Ju-kwon Oh and Sang-jung Yoon(Sae-An)
- P08B05 Development of Phased Array Ultrasonic Testing Procedure for NPP Class 1 Piping Welds**
Byung-Sik Yoon, Seung-Han Yang, Yong-Sik Kim, and Hee-Jong Lee(KEPRI)
- P08B06 Application of Substructure Techniques to Systematically Integrated Reactor Components**
Jong Sung Kim and Yong Ho Ryu(SCNU)
Kyung Hun Oh and Kang Woo Lee(PRISM)
Myung Jo Jhung(KINS)
- P08B07 Indenting Test Result According to the Accelerated Aging Time Variation Using Cable Indenting Mini-Robot**
Kyung-Nam Jang, Jong-Soeg Kim, Sun-Chul Jeong, and Kyung-Heum Park(KEPRI)
- P08B08 Development of Multichannel Eddy Current Testing Instrument**
Hee Jong Lee, Chan Hee Cho, Min Woo Nam, Yoon Byung Sik, and Yoo Hyun Joo(KEPRI)
- P08B09 Characteristics Testing of the ECT Bobbin Probe for S/G Tube Inspection**
Min Woo Nam, Hee Jong Lee, Chan Hee Cho, and Hyun Joo Yoo(KEPRI)

Ⅲ. 분과별 논제 및 발표자

제 8 분과 C

원자력발전소 건설 및 운영 - Poster (Nuclear Power Plant Construction and Operation)

좌 장 김종석(Kim Jong-Seog), 이종호(Lee Jong-Ho)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P08C01 Condition Based and Risk Informed Management for Power Plant Efficiency**
Changhyun Jee and Gyunyoung Heo(KHU)
- P08C02 A Study on Performance Evaluation of Safety-Related Protective Coating for Yonggwang Unit 1&2**
Sung-Young Kim and Young-Bum Kim(SDD)
Won-Sang Lee(KHNP)
- P08C03 Development Methodology of Improved Standard Technical Specification for Wolsong CANDU-6 Nuclear Power Plants**
Seong Soo Choi, Jae Won Lim, and Cheon Hwey Cho(ACT)
- P08C04 A Study on the Approach to Quality Management in Construction of Nuclear Power Plants**
Panupong Pingish(KAIST)
Kwang Sik Choi(KINS)
- P08C05 Development of a Seismic Analysis Model for SMART**
S. S. Cho, J. W. Lee, D. O. Kim, T. W. Kim, and J. S. Park(KAERI)
- P08C06 Development on the Methodology of Debris DB Construction for ECCS Strainer Capacity Assessment**
Sung Myung Lee and Won Seok Kim(BHI)
Sang Il Lee(SDD)
Chang Hyun Kim(KHNP)
- P08C07 Investigation of Maintenance Rule Program's Suitability as a Performance Monitoring Tool for Surveillance Test Interval Extension of RPS/ESFAS**
Jin Woo Hyun and Sang Dae Lee(KHNP)
- P08C08 A Study on the Effect of Core Safety due to Power Uprate**
Byung-ho Jung and Soong-Pyoung Kim(CSU)

제 8 분과 D

원자력발전소 건설 및 운영 - Poster (Nuclear Power Plant Construction and Operation)

좌 장 엄학기(Youm Hag-Ki), 정우태(Jeong Woo Tae)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P08D01 Characteristics on Stable Suspensions of Iron Oxide Powder**
E. H. Lee, S. H. Kim, K. M. Kim, J. W. Na, B. S. Choi, and W. Y. Maeng(KAERI)
- P08D02 Seismic Adequacy Verification of Safe Shutdown Equipment in Wolsong Unit 1**
Kwang-Ho Joo(KHNP)
- P08D03 Evaluation of Corrosion Behavior with Various Corrosion Inhibitors in Closed Cooling Water System**
Hyo-Dong Yeon, Sangyun Kim, Eun-Hee Lee, Byung-Seon Choi, and Wan-Young Maeng(KAERI)
Ho-Yeon Yang(KHNP)
- P08D04 The Comparison of System 1000 Analysis and Type Testing for Neoprene Gasket Environmental Qualification**
Kyung-Heum Park, Jong-Seok Kim, Sun-Chul Jeong, Kyung-Nam Jang, and Sung-Phil Hwang(KEPRI)
- P08D05 Probabilistic Models for Chloride-Induced Reinforcement Corrosion in Nuclear Power Plant Concrete Structures**
Young-Sun Choun and In Kil Choi(KAERI)
- P08D06 Study for Improvement of OIT Accuracy for Aging Evaluation of Organic Material**
Jong-Seog Kim, Sun-Chul Jeong, Kyung-Heum Park, and Kyung-Nam Jang(KEPRI)
- P08D07 Fundamental Study to Manufacture Thermal Fatigue Crack of SA106 Grade B.**
Woong-Gi Hwang, Sang-Yun Lee, Jae-Seong Kim, and Bo-Young Lee(KAU)
- P08D08 The Study on the Fracture Characteristic for the Nuclear Structural Material Using Acoustic Emission**
Jonghyun Kim, Jihye Hwang, Kyungwon Lee, Jaesung Kim, and Boyoung Lee(KAU)

Ⅲ. 분과별 논제 및 발표자

제 8 분과 E

원자력발전소 건설 및 운영 (Nuclear Power Plant Construction and Operation)

좌 장 김낙철(Kim Nak-Cheol), 양준영(Yang Jun-Young)

발표장소 토파즈III

일 정 | 5. 28(금)

- 09:00 The Development on Evaluation Response Spectrum for the Seismic Risk Evaluation of a Nuclear Waste Repository**
Kyoung-Mi Lee, Min-Kyu Kim, and Hyun-Me Rhee(KAERI)
- 09:20 Reduction of the Kinetic Energy of Potential CEDM Missile**
Tae Kyo Kang, In Yong Kim, and Taek Sang Choi(KOPEC)
- 09:40 Structural Parameter Identification of a Containment Using Dynamic Response Measurements**
Sanghyun Choi and Daehyork Kim(KNRC)
Sooyong Park and Keunhoo Jung(KMU)
Chang-Hun Hyun, Moon-Soo Kim, and Sang-Yun Kim(KINS)
- 10:00 Seismic Analysis Conditions of APR1000**
J.B.Jang and Y.Lee(KEPRI)
Y.S.Jang(KOPEC)
- 10:20 Tsunami Hazard Evaluation for the East Coast of Korea by using Empirical Data**
Min Kyu Kim and In-Kil Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Seismic Performance Evaluation of Electrical Cabinet**
Junhee Park, Minkyu Kim, and Inkil Choi(KAERI)
- 11:20 Fragility Analysis of Steel Moment Frames with Various Seismic Connections Subjected to Sudden Loss of a Column**
Junhee Park and Minkyu Kim(KAERI)
Jinkoo Kim(SKKU)
- 11:40 A Study on the Percentile Calculation Method of Seismic Hazard**
Hyun-Me Rhee, Jeong-Moon Seo, In-Kil Choi, and Min-Kyu Kim(KAERI)

제 9 분과 A

원자력정책, 인력 및 협력 (Nuclear Policy, Human Resources and Cooperation)

좌 장 장현섭(Jang Hyun-Sub), 이태준(LEE, Tae Joon)

발표장소 오펜

일 정 | 5. 27(목)

- 09:00** **Insights on the National Status of Nuclear Crisis Communication**
Chang-Ju Lee, Yeon-Hee Hah, and Kju-Myeng Oh(KINS)
- 09:20** **Review of Nuclear Regulation Using Principal-Agent Model**
Kwang Sik Choi, Young Eal Lee, and Yong Ho Ryu(KINS)
- 09:40** **Economic Valuation of Design Certificate of SMART by Using Real Option**
Man-ki Lee and Ji-hee Nam(KAERI)
Kiho Jeong(KNU)
- 10:00** **Reference Training System and Program for the Countries Introducing Nuclear Power**
Eui-Jin Lee, Youngmi Nam, and Kyong-Won Han(KAERI)
- 10:20** **The Procedure of Dispute Settlement in the Atomic Energy Cooperation Agreement**
Sangcheol Hyung(KINAC)
- 10:40** **Coffee Break**
- 11:00** **Expert Consideration on the Amendment to the INFCIRC/225**
Hosik Yoo, Sung-Woo Kwak, Sung-Soon Chang, and Hyung-Min Seo(KINAC)
- 11:20** **A User Requirement2 (UR2) Evaluation of Proliferation Resistance of a 600MWe TRU Burner using ORIGEN2.1**
In Ho Bae, Jaewoon Yoo, Hoon Song, and Sang Ji Kim(KAERI)
- 11:40** **Economic Contributions of Radioisotope Production Reactor in Korea**
Ji-hee Nam, Seung-su Kim, and Kee-Hwan Moon(KAERI)
- 12:00** **Legal Analysis of EPC Contract of the Nuclear Reactor in the Aspect of Nuclear Law**
D. S. Lee, W. S. Chung, S. W. Yun, and M. H. Yang(KAERI)
- 12:20** **A Strategy for the Korean ODA Model Development for Global Nuclear Safety**
Ingoo Kim, Sukho Lee, and Youngeal Lee(KINS)

Ⅲ. 분과별 논제 및 발표자

제 9 분과 B

원자력정책, 인력 및 협력 - Poster (Nuclear Policy, Human Resources and Cooperation)

좌 장 유동한(You Dong-Han), 정환삼(W. S. Chung)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P09B01 Development, Establishment and Maintenance of the Design Basis Threat for Korean Nuclear Facilities**
Jounghoon Lee and Hyungmin Seo(KINAC)
- P09B02 Status and Application of Spatial Information Technology as a Nuclear Verification Tool**
Jo, Seong Young and Shin, Jang Soo(KINAC)
- P09B03 Status of Methodology Development for the Evaluation of Proliferation Resistance**
YongDeok Lee, Won-il Ko, and Jung Won Lee(KAERI)
- P09B04 Development of Integrated Code for Risk Assessment (INCORIA)**
Sung Soon Jang, Hyung-Min Seo, and Hosik Yoo(KINAC)
- P09B05 A Review on the Needs of Independent Information Channel for Regulatory Body**
Hamid Saeed Raza(KAIST)
Kwang Sik Choi(KINS)
- P09B06 Lessons Learned in Preparation and Review of Safety Analysis Report of PUSPATI TRIGA Reactor in Malaysia**
Mazleha Maskin(KAIST)
Kwang Sik Choi(KINS)
- P09B07 Comparison of Regulatory Framework among Different Countries for Improving Regulatory Effectiveness in Malaysia**
Nik Mohd Faiz Bin Khairuddin(KAIST)
Kwang Sik Choi(KINS)
- P09B08 Competencies Setup for Nuclear Regulatory Staff in Thailand**
Panupong Pingish, Lopchai Siripiom, Pongpan Nakkaew, Theerapatt Manuwong, and Vichian Wongsamarn(OAEP)
- P09B09 Comparative Analysis of Regulatory Strategies for Assuring Safety in New Entrant Countries to Nuclear Power Program**
Mohammed Anwar Hossain(KAIST)
Kwang Sik Choi(KINS)
- P09B10 Performance Test for Magnetic Change Detection Sensor Using Test Bed of Physical Protection System**
Hyung-Min Seo(KINAC)

제 10 분과 A

원자력 계측제어 및 자동원격 (Nuclear I&C and Automatic Remote Systems)

좌 장 이용희(Yong Hee Lee), 최성남(Choi Seong Nam)

발표장소 토파즈 I

일 정 | 5. 27(목)

- 09:00 The-Abstraction-Hierarchy-based Mobile PC Display Design for NPP Maintenance**
In Kim, Bo Gyung Kim, and Poong Hyun Seong(KAIST)
Jun Su Ha(KINS)
- 09:20 Development of a HRA Method Based on Human Factor Issues for Advanced NPP**
Seung Woo Lee and Poong Hyun Seong(KAIST)
Jun Su Ha(KINS)
Jae Hyuk Park and Ja Kyung Kim(KOPEC)
- 09:40 Communication Error Analysis Method Based on CREAM**
Seung Min Lee and Poong Hyun Seong(KAIST)
Jun Su Ha(KINS)
- 10:00 Evaluation of Communication Quality Using Work Domain Analysis (WDA) Method in Nuclear Power Plant Control Rooms**
In Seok Jang and Poong Hyun Seong(KAIST)
Jin Kyun Park(KAERI)
- 10:20 A Critique on the Effectiveness of Current Human Reliability Analysis Approach for the Human-Machine Interface Design in Nuclear Power Plants**
Yong Hee Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Logic Alarm Cause Tracking System(LogACTs) for Wolsong 3&4**
J. T. Kim, I. K. Hwang, J. W. Lee, and J. C. Park(KAERI)
Y. G. Lee, S. T. Chun, and B. J. Kim(KHNP)
Sang Jung Lee(CNU)
Sung Pil Lyu(SMU)
- 11:20 A Study on the Job Stress Assessment in Nuclear Power Plants based on KOSS**
Seong-Hwan Hwang, Yong-Hee Lee, and Jung-Woon Lee(KAERI)
Sook-Hee Sung, Kwang-Hee Jung, and Yeon-Sub Jung(KHNP)
- 11:40 Monitoring Re-execution Condition of Continuous Action Step in Computerized Procedure System**
Yun Goo Kim and Sungjin Lee(KHNP)
- 12:00 Can Operator's Thought Be Inferred from Eye Movement Data?**
Jun Su Ha(KINS)
Poong Hyun Seong(KAIST)

Ⅲ. 분과별 논제 및 발표자

제 10 분과 B

원자력 계측제어 및 자동원격 - Poster (Nuclear I&C and Automatic Remote Systems)

좌 장 김재환(Jaewhan Kim), 하재홍(Jae Hong Ha)

발표장소 다이아몬드

일 정 | 5. 27(목) 13:00-15:00

- P10B01 Operation of a Domestic Interface Device for HANARO Control Rod**
Young-San Choi, Sang-Jin Kim, Jung-Hee Lee, and Hyung-Kyoo Kim(KAERI)
- P10B02 A Study on the Turbine Rolling Operation for Plant Start-up**
Jin-Oh Choi and Soong-Pyoung Kim(CSU)
- P10B03 Human Error Analysis for Operation Executions in Advanced Main Control Rooms**
Seung Jun Lee, Jae Whan Kim, and Hyung Gook Kang(KAERI)
- P10B04 The Safety Feature Test of QNX RTOS**
Jang Yeol Kim and Young Jun Lee(KAERI)
- P10B05 Basic Characteristics of Human Erroneous Actions during Test and Maintenance Activities Leading to Unplanned Reactor Trips**
Jaewhan Kim and Jinkyun Park(KAERI)
- P10B06 A Human Error Analysis Procedure for Identifying Potential Error Modes and Influencing Factors for Test and Maintenance Activities**
Jaewhan Kim and Jinkyun Park(KAERI)
- P10B07 A Delay Time Measurement of ULTRAS (Ultra-high Temperature Ultrasonic Response Analysis System) for a High Temperature Experiment**
Kil Mo Koo and Sang Baik Kim(KAERI)
- P10B08 Design Concept for Access Control System of PEFP**
Sung Sik Park, Jun Yeon Kim, Yi Sub Min, Kyeong-Jun Mun, Jin Sam Cho, Gye Po Jeon, Jung Min Nam, Hyeong Geun Ju, and Jeong Hee Jo(KAERI)
- P10B09 Hot Operation of FTL for PWR Fuels Irradiation**
Sung Ho Ahn, Chang Yong Joung, Jong Min Lee, Su Ki Park, Bong Sik Sim, and Guk Hoon Ahn(KAERI)
- P10B10 Detection of Leakage Using Data Reconciliation**
Sangjun Park and Gyunyoung Heo(KHU)
- P10B11 Feasibility Study of Power Uprate Using Ultrasonic Flow Meters in NPPs**
Taemi Kim and Gyunyoung Heo(KHU)
- P10B12 Pulsed Electromagnetic Thickness Evaluation of a Ferro-magnetic Plate**
Hyun-Kyu Jung and Yong-Moo Cheong(KAERI)

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- P10B13 Development of FPGA-Based Bistable Unit**
Yoon Hee Lee, See Chae Jeong, and Jae Hong Ha(KOPEC)
- P10B14 NuFTA: A CASE Tool for Automatic Software Fault Tree Analysis**
Sanghyun Yun, Dong-Ah Lee, and Junbeom Yoo(KU)
- P10B15 RCS Leak Rate Calculation with High Order Least Squares Method**
Jeong Hun Lee and Young Kyu Kang(FNC Tech.)
Yang Ki Kim(KHNP)
- P10B16 Standardization of Action Verbs Used in Emergency Operating Procedures of NPPs**
Tong-Il Jang, Yong-Hee Lee, and Jae-Chang Park(KAERI)
Yeon-Seop Jeong and Gang-Il Chu(KHNP)
- P10B17 Preliminary Performance Estimation of the PPCS of SMART**
Seong Wook Lee, Soo Hyung Kim, and Kyoo Hwan Bae(KAERI)
- P10B18 Analysis of Nuclear Waste Heat Transport Using STA System**
Hyeonmin Kim, Yongtae Kang, and Gyunyoung Heo(KHU)
- P10B19 Development of the Test Bed for Advanced RCS Unidentified Leakage Detection Techniques**
Soyoung Kim and Gyunyoung Heo(KHU)
- P10B20 Implementation of a Digital Mock-up for Remote Hot Cell Operations**
Hee Seong Park, Byung Suk Park, Sung Hyun Kim, Ki Ho Kim, and Ho Dong Kim(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 10 분과 C

원자력 계측제어 및 자동원격 (Nuclear I&C and Automatic Remote Systems)

좌 장 정연섭(Jung Yeonsub), 백승엽(Seung Yeop Paek)

발표장소 토포즈 I

일 정 | 5. 28(금)

- 09:00 Fault Tree Analysis with Temporal Gates and Model Checking Technique for Qualitative System Safety Analysis**
Kwang Yong Koh and Poong Hyun Seong(KAIST)
- 09:20 Improvement of Heat Power Supply Module**
Hyung-soo Lee, Jung-jin Park, Dae-jae Kim, and Deok-in Kim(Doosanheavy)
- 09:40 Evaluation of the Dynamic Velocity Effect for Steam Generator Wide Range Water Level**
Insoo Jeong, Kihaeng Nam, Jeonghoon Kim, and Jaehee Yun(KOPEC)
- 10:00 Compensation of Control Valves Nonlinearities in Flow Control Systems**
B. Halimi and Kune Y. Suh(SNU)
- 10:20 PPS Automatic Logic Test for SUN 1&2**
Woong Seock Choi, Sung Ho Kim, Sang Ku Nam, and Seung Min Baek(KOPEC)
Jang Gon Kim(KHNP)
- 10:40 Coffee Break**
- 11:00 A Quantitative Assessment Method for Trip Signal Generation Failures**
Seung Ki Shin and Poong Hyun Seong(KAIST)

제 10 분과 D

원자력 계측제어 및 자동원격 (Nuclear I&C and Automatic Remote Systems)

좌 장 허균영(Gyunyoung Heo), 이성욱(Sung-Uk Lee)

발표장소 토파즈 II

일 정 | 5. 28(금)

- 09:00 Design of Multi-absorber Detection System for Double-scattering Compton Camera to Improve Imaging Sensitivity**
Jin Hyung Park, Hee Seo, and Chan Hyeong Kim(HYU)
Ju Hahn Lee and Chun Sik Lee(CAU)
Jae Sung Lee(SNU)
- 09:20 Development of a Valve Actuation Simulator by Using the Interactive Control Features of the MARS Code**
Sung Won Bae, Hyung Kyu Cho, S. W. Lee, and K. D. Kim(KAERI)
Han Gi Lee and Yang Hwan Kim(KHNP)
- 09:40 Development of Turbine-leading Power Maneuvering Strategy for a Sodium-cooled Fast Reactor**
Seong-Hwan Seong, Han-Ok Kang, and Seong-O Kim(KAERI)
- 10:00 Simulation for Remote Operation for REX10 Nuclear Reactor**
Sim Won Lee, Dong Su Kim, and Man Gyun Na(CSU)
Yoon Joon Lee(JEJUNU)
Yeon-Gun Lee and Goon Cherl Park(SNU)
- 10:20 Spurious Activation of Digital Plant Protection System in Nuclear Power Plants**
M. Khalaquzzaman and Poong Hyun Seong(KAIST)
Hyun Gook Kang and Man Cheol Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Development of a Plant Health Index Monitor**
Gyunyoung Heo(KHU)
Sang Ha An(KAIST)
Ho Joon Seo(BNF Tech.)
Cho Kim(KOSEP)