

Ⅲ. 분과별 논제 및 발표자

제 1 분과 A

원자로시스템기술(Reactor System Technology)

- 고온가스로기술(HTGR Technology)

좌 장 홍성덕(Sung Deok Hong), 김인구(In-Goo Kim)

발표장소 301A

일 정 | 5월 17일(목)

- 09:00** **CFD Analysis for a Hypothetical H₂ Explosion Accident between the H₂ Production Facility and the HTTR in JAEA**
H. S. Kang, S. B. Kim, and M. H. Kim(KAERI)
H. C. NO(KAIST)
- 09:20** **Key Technical Issues in Process and Intermediate Heat Exchangers for Nuclear Hydrogen Production System**
Jae-Won Park, Hyung-Jin Kim, Sung-Deok Hong, and Yongwan Kim(KAERI)
- 09:40** **Very High Temperature Helium Experimental Loop (HELP)**
Chan Soo Kim, Sung-Deok Hong, and YongWan Kim(KAERI)
- 10:00** **Temperature Effect on the Radiation-Corrective Gas Temperature Measurement**
Chan Soo Kim, Sung-Deok Hong, and YongWan Kim(KAERI)
- 10:20** **Progress in the Performance Verification of PCHE Type Na-CO₂ Heat Exchanger**
Jieun Kim, Soo Jae Kim, Eunho Kim, and Moo Hwan Kim(POSTECH)
J.E.Cha and S.O.Kim(KAERI)
- 10:40** **Coffee Break**
- 11:00** **VHTR Thermal Fluids PIRT Development Based on the Previous PIRTs Developed by Licensee and Regulatory Authority**
Su Hyun HWANG, Seong Su JEON, Soon Joon HONG, and Byung Chul LEE(FNC Tech.)
Chang Wook HUH and Chang Yong JIN(KINS)
- 11:20** **Design of Helium Brayton Cycle for Small Modular High Temperature Gas cooled Reactor**
Ahn. Yoonhan, Lee. Jekyoung, and Lee. Jeong Ik(KAIST)
- 11:40** **Porosity of Nuclear Gade Graphite**
Eung-Seon Kim, Ji-Seon Song, Sung-Deok Hong, and Yong-Wan Kim(KAERI)
- 12:00** **Simulation of Bunsen Reaction with Electro-dialysis for Efficient Phase Separation**
Jun Kyu Park, Shripad T. Revankar, and Jae Sung Lee(POSTECH)

제 1 분과 B

원자로시스템기술(Reactor System Technology)

- 고속로-I 기술(SFR-I Technology)

좌 장 정해웅(Hae-Yong Jeong), 장진욱(Jinwook Chang)

발표장소 301B

일 정 | 5. 17(목)

- 09:00 Whole Core Thermal-hydraulic Design of a Sodium Cooled Fast Reactor Considering the Gamma Energy Transport**
Sun Rock Choi, Min-Ho Back, Wonseok Park, and Sang-Ji Kim(KAERI)
- 09:20 Safety Evaluation of UCFR-1000 MWe with MATRA-LMR**
Han Seo, Sarah Kang, and In Cheol Bang(UNIST)
- 09:40 Determination of the Pipe Diameter and Length of a Sodium Experimental Installation for Single Phase Natural Convection Simulations**
Dongsup So and Yong Bum Lee(KAERI)
- 10:00 Natural Circulation Test of the KALIMER-600 Water Scaled Model**
JaeEun Cha and SeongO Kim(KAERI)
- 10:20 A Safety Function Evaluation of the Advanced Sodium-cooled Fast Reactor in a Loss of Heat Sink Accident**
Kwi Lim Lee, Kwi Seok Ha, Hae Yong Jeong, Won Pyo Chang, Seok Hun Kang, and ChiWoong Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Evaluation of Flow-guide Effects in a Sodium-cooled Pool Type Reactor**
Ji-Woong Han, Jae-Hyuk Eoh, Seong-O Kim, and Tae-Ho Lee(KAERI)
- 11:20 Multi-dimensional Approach of MARS-LMR for the Analysis of Phenix End-of-Life Natural Circulation Test**
Hae-Yong Jeong, Kwi-Seok Ha, Won-Pyo Chang, and Kwi-Lim Lee(KAERI)
- 11:40 Simulation of Phenix EOL Asymmetric Test**
Kwi-Seok Ha, Kwi-Lim Lee, Chi-Woong Choi, Seok-Hun Kang, Won-Pyo Chang, and Hae-Yong Jeong(KAERI)
- 12:00 Evaluation of Pressure Loss and Heat Transfer Correlations for Design of the Intermediate Heat Exchanger in a Sodium Cooled Fast Reactor**
Seok-Ki Choi, Seong-O Kim, and Tae-Ho Lee(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 1 분과 C

원자로시스템기술(Reactor System Technology) - Poster - 고온가스로기술(HTGR Technology)

좌 장 홍성덕(Sung Deok Hong), 김한곤(Han-Gon Kim)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

P01C01 GUI Program for the Calculation of Physicochemical Properties in VHTR-based SI Process

Youngjun Lee, Jiwoon Chang, Youngjoon Shin, Taehoon Lee, Kiyoun Lee, and Yongwan Kim(KAERI)
Jonghyeon Lee(CNU)

P01C02 High-temperature Elastic Structural Analysis on a Small-scale PHE Prototype

Keenam Song and S-D Hong(KAERI)
H-Y Park(AD solution)

P01C03 Evaluation of NGNP Design Certification Boundaries

Changwook HUH and Namduk SUH(KINS)

P01C04 Conjugated Heat Transfer Phenomena in a Obstacle Annulus of VHTR

Sung Nam Lee, Hong-Sik Lim, Nam-il Tak, and Jae Man Noh(KAERI)

P01C05 Safety Issues of VHTR RCCS Design

Chang-Yong Jin, Changwook Huh, and Namduk Suh(KINS)

P01C06 Irradiation-Induced Stress Build-up on Graphite in VHTR

Ji-Ho Kang and Nam-Il Tak(KAERI)

P01C07 Application of Network Analysis Method to VHTR Core

Jeong-Hun Lee, Su-Jong Yoon, and Goon-Cherl Park(SNU)

P01C08 He-water Boiling Tests with PCHE and its MARS Analysis

In Hun Kim and Hee Cheon NO(KAIST)

P01C09 Simulation of a VHTR/IHX-SI Process Coupling System

Jiwoon Chang, Youngjoon Shin, Taehoon Lee, Kiyoun Lee, Yongwan Kim(KAERI)
Cheong Youn(CNU)

제 1 분과 D

원자로시스템기술(Reactor System Technology) - Poster

- 규제 및 물냉각로 기술(Regulation & Water Reactor Technology)

좌 장 허병길(Byung-Gil Huh), 지문학(Moon-Hak Jee)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P01D01 Preliminary Study of CANDU-6 Moderator System with the CUPID Code**
Sang Gi Park and Jae Jun Jeong(PNU)
Jae Ryong Lee and Hyoung Tae Kim(KAERI)
- P01D02 Feasibility Study of Technology-neutral Regulatory Framework for Fusion Power**
Jae Young Choi, Juhjung Lee, Tae Il Kim, and Soon Heung Chang(KAIST)
- P01D03 Assessment of Licensing Feasibility for Gen-IV Reactors in Korea**
Namduk SUH, Moohoon BAE, Changwonk HUH, and Andong SHIN(KINS)
- P01D04 Role of Regulatory Research for Gen-IV Reactor Development in Korea**
Namduk SUH, Moohoon BAE, Changwook HUH, and Andong SHIN(KINS)
- P01D05 Efficient Normal Mode Analysis of the Structures Using MOR Method**
Jinbok Choi and Jinho Lee(KINS)
- P01D06 Design Characteristics of the APR+ Containment Spray System**
Gyu Bong Doh, Jong Ha Park, and Jae Wang Chang(KEPCO E&C)
- P01D07 Subchannel Analysis of 12 by 12 FCM Fuel Assembly with Narrow Gap Width**
Hyuk Kwon, S.-J. Kim, K. W. Seo, J. H. Cha, D. H. Hwang, and W. J. Lee(KAERI)
- P01D08 Full-core Pin by Pin Subchannel Analysis of SMART**
Kyong-Won Seo and Dae-Hyun Hwang(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 1 분과 E

원자로시스템기술(Reactor System Technology) - Poster - 연구로 기술(Research Reactor Technology)

좌 장 김영기(Young Ki Kim), 우상익(Sangik Wu)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P01E01 Conceptual Design of I&C Architecture for a New Research Reactor**
Yong Suk Suh, Jae Kwan Park, Taek Kyu Kim, Sang Hoon Bae, Dane Baang, and Young Ki Kim(KAERI)
- P01E02 Design of the Graphite Reflectors in Research Reactors**
Jin Haeng Lee, Yeong-Garp Cho, Tae Kyu Kim, and Jong In Kim(KAERI)
- P01E03 Assembly-based Lattice Characteristics of U-7Mo and U₃Si₂ Plate Fuels for Research Reactor**
Chang Je Park, Gyuhong Roh, Haksung Kim, Heetaek Choi, and Byungchul Lee(KAERI)
- P01E04 Reactor Shutdown Mechanism by Top-mounted Hydraulic System**
Sanghaun Kim, Yeong-Garp Cho, Myoung-Hwan Choi, Jin Haeng Lee, Hyung Huh, and Jong-In Kim(KAERI)
- P01E05 Torque Audit and Visual Inspection of the In-pool Assembly for CNS in HANARO**
Jin-Won Shin, Sang-Ik Wu, Min-Su Kim, Jae-Sam Han, and Hyung-Kyoo Kim(KAERI)
- P01E06 Consideration on the Leak Rate of the Heavy Water System Equipment Room in the Research Reactor**
Jungwoon Choi, Dae Young Chi, and Juhyeon Yoon(KAERI)
- P01E07 Structural Integrity of the Stiffened Rectangular Plate in a Fluid**
Jong Min Lee, Jin Ho Oh, Shin Young Kwag, and Jeong Soo Ryu(KAERI)
- P01E08 Design of the Demineralized Water Make-up Line to Maintain the Normal Pool Water Level of the Reactor Pool in the Research Reactor**
Hyun-Gi Yoon, Jungwoon Choi, Juhyeon Yoon, and Dae-Young Chi(KAERI)

제 1 분과 F

원자로시스템기술(Reactor System Technology) - Poster - 고속로 기술(SFR Technology)

좌 장 김석훈(Seok-Hoon Kim), 어재혁(Jae Hyuk Eoh)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P01F01 Sensitivity Study on LOHS Analysis for a Demonstration SFR**
Won-Pyo Chang, Kwi-Seok Ha, Kwi-Lim Lee, Seok-Hun Kang, Chiwoong Choi, and Hae-Yong Jeong(KAERI)
- P01F02 Development of the MMS Model for KALIMER-600 Plant Dynamics Analysis**
Eui Kwang Kim, Yeong-il Kim, Do-Hee Hahn, and Tae-Ho Lee(KAERI)
- P01F03 Testing of Local Velocity Transducer Used at Sodium Thermal Hydraulic Test Facilities**
Tae-Joon Kim, Jae-Hyuk Eoh, In-Koo Hwang, Ji-Young Jeong, Jong-Man Kim, Yang-Bum Lee, and Yeong-il Kim(KAERI)
- P01F04 Multi-target Wastage Phenomena on Steam Generator Tubes during an SWR Event (II)**
Ji-Young Jeong, Jong-Man Kim, Tae-Joon Kim, Jae-Hyuk Eoh, Jong-Hyeun Choi, Ho-Yoon Nam, and Yong-Bum Lee(KAERI)
- P01F05 Development Perspective of Regulatory Audit Code System for SFR Nuclear Safety Evaluation**
Moo-Hoon BAE, Gil Soo LEE, Andong SHIN, and Namduk SUH(KINS)
- P01F06 Structural Design Concept for a SFR Demonstration Reactor of 600MWe Capacity**
Chang-Gyu Park, Young-Sang Joo, and Jong-Bum Kim(KAERI)
- P01F07 Analysis of Propagation and Radiation of Ao-mode Lamb Wave in a Layered Waveguide Plate by FEM Simulations**
Jin-Ho Bae, Young-Sang Joo, Ji-Woong Ham, and Jong-Bum Kim(KAERI)
- P01F08 Preliminary Assessment of a Debris Bed Cooling Performance for Demonstration Sodium-cooled Fast Reactor**
Chungho CHO, Chang-Gyu PARK, Hoon SONG, Younggyun KIM, Hae-Yong JEONG, and Jinwook CHANG(KAERI)
- P01F09 The Study of Turbine Characteristic for the Sodium-cooled Faster Reactor**
Tae Geun Yoo and Min Ki Kim(FNC Tech.)
Eui Kwang Kim(KAERI)
- P01F10 High Temperature FCG of G91 Steel for Different Frequencies**
Jong-Bum Kim, Chang-Gyu Park, and Hyeong-Yeon Lee(KAERI)
Jong-Hoon Lee and Bum-Joon Kim(SKKU)
- P01F11 Development of Design Method for a Finned-tube Sodium-to-Air Heat Exchanger in 600MWe Demonstration SFR**
Jae-Hyuk EOH, Sun-Rock CHOI, Hyeong-Yeon LEE, Ji-Woong HAN, and Tae-Ho LEE(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 1 분과 G

원자로시스템기술(Reactor System Technology)

- 연구로 및 고속로- II 기술(Research Reactor & SFR- II Technology)

좌 장 우상익(Sangik Wu), 허병길(Byung-Gil Huh)

발표장소 301B

일 정 | 5. 18(금)

- 09:00 Study on Engineered Safety Features of a Research Reactor**
Kyoungwoo Seo, Namgyun Jeong, Young-Chul Park, Dae-Young Chi, and Juhyeon Yoon(KAERI)
- 09:20 Experimental Study on Size Effect of Siphon-breaking Hole in the Real-scaled Reactor Pool**
Soon Ho Kang, Ho Seon Ahn, Ji Min Kim, and Moo Hwan Kim(POSTECH)
Kwon-Yeong Lee, Kyoungwoo Seo, and Dae Young Chi(KAERI)
- 09:40 Prediction Model Development for Siphon Break Phenomena in a Research Reactor**
Kwon-Yeong Lee, Kyoungwoo Seo, Dae Young Chi, and Juhyeon Yoon(KAERI)
- 10:00 Design Concept of Fluid System for 600MWe Grade SFR**
S.O. Kim, T.H.Lee, J.H. Eoh, S.K. Choi, E.K. Kim, J.W. Han, Y.I.Kim, and Dohee.Hahn(KAERI)
- 10:20 Conceptual Design of a Helical Steam Generator with 750 MWt for an SFR**
Ho-Yun Nam, Jong-Bum Kim, Yong-Bum Lee, and Ji-Young Jeong(KAERI)
- 10:40 Coffee Break**
- 11:00 Review of the Conceptual Design for In-vessel Fuel Handling Machines in SFR**
S. H. Kim and G. H. Koo(KAERI)
- 11:20 The Effect of Ni Nano Particles on the Chemical Activity of Liquid Sodium**
Gunyeop Park, Soo Jae Kim, Ho Seon Ahn, and Moo Hwan Kim(POSTECH)
- 11:40 Conceptual Design of Fuel Building of SFR Demonstration Reactor Developed in KAERI**
Lee. Jae-Han, Kim. Jong-Bum, and Koo. Gyeong-Hoi(KAERI)
- 12:00 Development of Under-sodium Visualization Program for In-service Inspection of In-vessel Structures in a Sodium-cooled Fast Reactor**
Young-Sang Joo, Jin-Ho Bae, Chang-Gyu Park, and Jong-Bum Kim(KAERI)

제 1 분과 H

원자로시스템기술(Reactor System Technology)

- 물냉각로 기술(Water Reactor Technology)

좌 장 이보욱(Bo Wook Rhee), 김궁구(Keung-koo Kim)

발표장소 301A

일 정 | 5. 18(금)

- 09:00 Derivation of the Scaling Criteria for a Small Scale CANDU Moderator Test Facility**
Bo Wook Rhee and Hyoung Tae Kim(KAERI)
- 09:20 Numerical Study of Thermal-hydraulics in CANDU-typed Moderator**
Jae Ryong Lee, Han Young Yoon, and Hyoung Tae Kim(KAERI)
Jae Jun Jeong(PNU)
- 09:40 Numerical Analysis of CANDU-6 Moderator System Using Open FOAM**
Se-Myong Chang(KNU)
Hyoung Tae Kim(KAERI)
- 10:00 A Simple Fully Passive Safety Option for SMART SBLOCA**
Won Jae Lee(KAERI)
- 10:20 Design Assessment and Transient Simulation of an Integral Reactor, REX-10, Using TAPINS Code**
Yeon-Gun Lee and Goon-Cherl Park(SNU)
- 10:40 Coffee Break**
- 11:00 A Scaling Study of the Natural Circulation Flow of the Ex-vessel Core Catcher Cooling System of a 1400 MWe PWR for Designing a Scale-down Test Facility**
Bo.W. Rhee, K.S. Ha, R.J. Park, and J.H. Song(KAERI)
- 11:20 Analysis of Combined Ocean Thermal Energy Conversion Using Waste Heat from NPPs**
Hyeonmin Kim, Jeong-tae Cho, and Gyunyoung Heo(KHU)
Hoon Jung(KEPCO RI)
- 11:40 Shakedown Analysis for the Hydraulic Nut Device of Reactor Vessel**
Kyu Wan Kim, Jong Min Kim, Sung Ho Park, and Taek Sang Choi(KEPCO E&C)

Ⅲ. 분과별 논제 및 발표자

제 2 분과 A

핵자료, 원자로물리 및 계산과학
(Nuclear Data, Reactor Physics and Computational Science)
- 산업 응용(Industrial Applications)

좌 장 차균호(Kyoon Ho Cha), 이덕중(Deokjung Lee)

발표장소 401A

일 정 | 5. 17(목)

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| 09:00 | Evaluation of Reactor Physics Characteristics for the Modified CANDU6 Fuel
Young Ae Kim and Dong Hwan Park(KHNP CRI) |
| 09:20 | Time-average Calculation Using FEM in a CANDU Reactor
Eun Hyun Ryu, Joo Hwan Park, Yong Man Song, and Lee Chung Chan(KAERI)
Hyung Jin Shim(SNU) |
| 09:40 | Impacts of U-238 Thermal Movement on Safety Parameters of CANDU-6
Yonghee Kim and Donny Hartanto(KAIST) |
| 10:00 | Feasibility Study of Recriticality Monitoring by Noise Analysis Method
Chidong Kong and Deokjung Lee(UNIST)
Eunki Lee(KHNP CRI) |
| 10:20 | Sensitivity Analysis of Vanadium Self-powered Neutron Detector under Varied Geometries of Emitter and Insulator
Kyoon-Ho Cha, Seong-Man Bae, and Chan-Kook Moon(KHNP CRI) |
| 10:40 | Coffee Break |
| 11:00 | A Study on Criticality Safety Parameters of New Fuel Storage Rack Design
Joon Gi Ahn and Hyeong Heon Kim(KEPCO E&C) |
| 11:20 | Comparison of Calculated Value by the Core Design ASTRA Code with Measured Data
Ji-Eun Jung and Sung-Tae Yang(KHNP CRI) |
| 11:40 | Experience of Axial Offset Anomaly (AOA) Risk Assessment for Reload Core after Steam Generator Replacement
Sun-Kwan Hong, Eui-Seung Ryu, and Chan-Kook Moon(KHNP CRI) |
| 12:00 | An Idea of 20% Test of the Initial Core Reactor Physics
Yang Sung-Tae, Roh Kyung-Ho, and Jung Ji-Eun(KHNP CRI) |
| 12:20 | Performance Evaluation of Neutron Radiography Facility at Kyung Hee University Reactor, AGN-201K
Jong-Min Choi and Myung-Hyun Kim(KHU) |

제 2 분과 B

핵자료, 원자로물리 및 계산과학 (Nuclear Data, Reactor Physics and Computational Science) - 신형로 및 미래 시스템(Advanced Reactors and Future Systems)

좌 장 조창근(Chang Keun Jo), 김용희(Yonghee Kim)

발표장소 304

일 정 | 5. 17(목)

- 09:00 Design of Ultra-long Cycle Fast Reactor with PWR Spent Fuel**
Tae Woo Tak and Deokjung Lee(UNIST)
- 09:20 A Physics Characteristics Evaluation of a Fuel Assembly Loaded with LEU FCM Fuel in a LWR**
Chang Keun Jo, Jae Man Noh, Jongwha Chang, and Won Jae Lee(KAERI)
F. Venneri(USNC)
- 09:40 A Development of Monte Carlo Evaluation Method with Particle Sampling Technique for Pebble Bed Reactor**
Song Hyun KIM, Ji Sun SEO, Byung Hee WON, Hong-Chul KIM, and Jong Kyung KIM(HYU)
- 10:00 Monte-carlo Simulation of Particle Beam Irradiation for Fusion First-wall**
Yong-Kyo Lee and Myung-Hyun Kim(KHU)
- 10:20 Analysis on Radioactive Waste Transmutation at a Clean Fusion-fission Hybrid Reactor**
M. Tariq Siddique and Myung-Hyun Kim(KHU)
- 10:40 Coffee Break**
- 11:00 Preliminary Conceptual Design for a Prototype Experimental Sodium-cooled Fast Reactor**
Hee-Hun Lee and Myung-Hyun Kim(KHU)
- 11:20 Reutilization of PWR Spent Fuel in a Small Breed-and-Burn Fast Reactor**
Donny Hartanto and Yonghee Kim(KAIST)
- 11:40 Effect of Reflector Material on the Neutronic Characteristics of the Small Sodium-cooled Fast Reactor**
Sunghwan Yun, Min-ho Baek, Jaewoon Yoo, and Sang Ji Kim(KAERI)
- 12:00 Generation of Few-group Cross-sections by MCNP5 and Their Comparison with Deterministic Code for the Small Sodium-cooled Fast Reactor**
Sunghwan Yun, Jaewoon Yoo, and Sang Ji Kim(KAERI)
Yonghee Kim(KAIST)
- 12:20 Impacts of the Fission Products and Control Rods Position on the KALIMER-600 Sodium Void Worth**
Pham Nhu Viet HA, Jaewoon YOO, Min-Ho BAEK, and Sang-Ji KIM(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 2 분과 C

핵자료, 원자로물리 및 계산과학 - Poster (Nuclear Data, Reactor Physics and Computational Science)

좌 장 정창준(Chang Joon JEONG), 구본승(Bon-Seung Koo)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P02C01 Comparative Analysis of Single and Dual Irradiation Pass of Deep Burn High Temperature Reactor Scenario**
Chang Joon Jeong, Chang Keun Jo, and Jae Man Noh(KAERI)
- P02C02 Preliminary Study for Few Group Constants Generation by a Whole Core Monte Carlo Calculation**
Ho Jin Park, Jin Young Cho, and Jae Seung Song(KAERI)
Hyung Jin Shim(SNU)
- P02C03 Preliminary Uncertainty Analysis for SMART Digital Core Protection and Monitoring System**
Bon-Seung Koo, Wang-Kee In, and Dae-Hyun Hwang(KAERI)
- P02C04 The Neutron Total Cross-section Measurement of ^{56}Fe and ^{57}Fe by Using Japan Proton Accelerator Research Complex Facility**
Eunae Kim, Valery Shvetsov, and Moo-Hyun Cho(POSTECH)
Won Namkung(PAL)
Kwangsoo Kim, Sung-Chul Yang, Manwoo Lee, and Guinyun Kim(KNU)
Kyoungrak Yi, Hongyub Choi, and Tae Ik Ro(DAU)
Motoharu Mizumoto, Tatsuya Katabuchi, and Masayuki Igashira(TIT)
- P02C05 Development of Uncertainty Analysis Method for SMART Digital Core Protection and Monitoring System**
Bon-Seung Koo, Wang-Kee In, and Dae-Hyun Hwang(KAERI)
- P02C06 Operator Decomposition Framework for Perturbation Theory**
Hany S. Abdel-Khalik, Congjian Wang, and Youngsuk Bang(NCSU)
- P02C07 MCNP Analysis to Develop the Unified LWR Spent Fuel Attribute Tester**
Ki Hyun KIM and Jae Bum PARK(KINAC)

제 2 분과 D

핵자료, 원자로물리 및 계산과학 (Nuclear Data, Reactor Physics and Computational Science) - 방법론 및 검증(Methods and Benchmarks)

좌 장 심형진(Hyung Jin Shim), 길충섭(Choong-Sup Gil)

발표장소 401A

일 정 | 5. 18(금)

- 09:00 Development of CAD-based Geometry Processing Module for a Monte Carlo Particle Transport Analysis Code**
Sung Hoon Choi, Min Su Kwark, and Hyung Jin Shim(SNU)
- 09:20 Hybrid Deterministic-Monte Carlo Methods for Neutral Particle Transport**
Deokjung Lee(UNIST)
- 09:40 A Two-block Decomposition Method for Efficient and Accurate Depletion Calculations**
Yoonhee Lee and Nam Zin Cho(KAIST)
- 10:00 The Effects of the Equivalent Mass Technique in the Criticality Benchmark Problems with Unstructured Tetrahedral Mesh**
Jong Woon Kim, Do Heon Kim, and Young-Ouk Lee(KAERI)
Ser Gi Hong(KHU)
- 10:20 Multi-surrogate Modeling for Computational Cost Reduction**
Youngsuk Bang and Hany S. Abdel-Khalik(NCSU)
- 10:40 Coffee Break**
- 11:00 Determination of Intermediate Resonance Parameter with RMET21 for nTRACER**
Muhammad Sohail and Myung-Hyun Kim(KHU)
- 11:20 Implementation and Verification of Quadratic Depletion Method in Direct Whole Core Calculation Code nTRACER**
Jung Yeon-sang and Joo Han-gyu(SNU)
Park Sang-weon(KEPCO NF)
- 11:40 Incorporation of Resonance Upscattering and Intra-pellet Power Profile in Direct Whole Core Calculation**
Lim Chang-hyun, Jung Yeon-sang, and Joo Han-gyu(SNU)
- 12:00 Source Expansion Nodal Solution of SP3 Equation with P1 Coarse Mesh Finite Difference Formulation**
Jeong Hui-jeong, Lee Dong-wook, and Joo Han-gyu(SNU)
- 12:20 Benchmarks on the Doppler Reactivity Coefficients for the Library Generation Procedure by Conserving Self-shielded Cross Sections**
Aung Tharn Daing and Myung-Hyun Kim(KHU)
Han-Gyu Joo(SNU)

Ⅲ. 분과별 논제 및 발표자

제 3 분과 A

방사성폐기물관리(Radioactive Waste Management)-Poster

좌 장 연제원(Jei-Won Yeon), 정해룡(Haeryong Jung)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P03A01 Covalent Bond Formation of Uranium Ions in a LiCl-KCl Eutectic Melt at 450°C: Spectroscopic Evidence from Their UV-VIS Spectra**
Young-Hwan Cho, Sang-Eun Bae, Seung-Yong Oh, Jong-Yun Kim, Kyuseok Song, and Jei-Won Yeon(KAERI)
- P03A02 Conditioning of Spent Sealed Sources in Singapore**
Dae-Seok Hong, Il-Sik Kang, Kyung-Duk Jang, and Jong-Sik Shon(KAERI)
- P03A03 U(VI) Interactions with Partially Fe(III)- or Ti(IV)-Coated Silica**
Hee-Jung Im, Kyoung Kyun Park, and Euo Chang Jung(KAERI)
- P03A04 Microbial Gas Generation and Implications of Low- and Intermediate- Level Radioactive Waste (L/ILW) Disposal in Korea**
G.H. Kim, J.M. Park, and A.J. Francis(POSTECH)
- P03A05 Treatment of Spent Air Filters by Repackaging and Decontamination of Frames**
Il Sik Kang, Tae Kuk Kim, Dae Seok Hong, Won Hyuk Jang, Kyung Kil Kwak, Bum Chul Lee, and Woo Seog Ryu(KAERI)
- P03A06 A Code Development Framework for Material Flow in a Nuclear Reprocessing Facility**
Hyo Jik Lee and Won IL Ko(KAERI)
- P03A07 The Sorption of Selenite onto Ca-Bentonite**
S. S. Kim, J. H. Min, M. H. Baik, and G. N. Kim(KAERI)
- P03A08 Synthesis of Novel Mesoporous Silica Materials with Hierarchical Pore Structures**
Suk Bon Yoon, Wang-Kyu Choi, Byung-Seon Choi, and Jei-Kwon Moon(KAERI)
- P03A09 Simulation of Radionuclide Transport in the Engineered Barrier System of a Geological Repository**
Won-Jin Cho, Jin-Sub Kim, Changsoo Lee, and Heui-Joo Cho(KAERI)
- P03A10 Analysis of Gas Vent System in Overseas LILW Disposal Facilities**
Juyub Kim and Juyoul Kim(FNC Tech.)
Haeryong Jung and Jae-Chul Ha(KRMC)
- P03A11 Plan of Concrete Decontamination Plant Construction of Practical Size**
Wan-Suk Kim, Gye-Nam Kim, Selulg-Soo Kim, Hye-Min Park, Jei-Kwon Moon(KAERI)
- P03A12 Sorption Behavior of Radionuclide Iodine on Organic and Inorganic Sorbents**
Minkyong Kim, Seeun Chang, Sungwook Choung, and Wooyong Um(POSTECH)

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- P03A13 Wavelengths Effect on Mass Ablation of Laser Decontamination on Aluminum Surface**
Sun-Hee Jung, Hui-Jun Won, Byung-Seon Choi, Chong-Hun Jung and Jei-Kwon Moon(KAERI)
- P03A14 Thermal Treatment for Radioactive HEPA Filter Media Generated from Nuclear Facilities**
In-Ho Yoon, Wang-Kyu Choi, Suk-Chol Lee, Byung-Youn Min, Hee-Chul Yang, Kun-Woo Lee, and Jei-Kwon Moon(KAERI)
- P03A15 Weathering Effects on Technetium Leachability from Ceramicrete Waste Form**
Jongkwon Choi, Syazwani Mohd Fadzil, and Wooyong Um(POSTECH)
- P03A16 General Approach of Spent Fuel Integrity Evaluation for Transportation and Dry Storage**
So Young Kim, Seong Ki Lee, Byeong Soon Choi, Ki Sung Choi, and Chae Joan Lim(KEPCO NF)
- P03A17 Development of Movable Apparatus for Radioactive Noble Gases Removing**
Kyung Lee, Byung-Cheon An, Jae-Ok Yu, Seung-Ki Hong, and Gi-Won Seo(DS SCIENCE INC.,)
- P03A18 Decommissioning Work Modeling System for Nuclear Facility Decommissioning Design**
S.K. Park, W.H Cho, Y.D. Choi, and J.K Moon(KAERI)
- P03A19 The Dose Assessment in the Vault Test Case of Near-surface Disposal Facility for Drinking Water Scenario**
TaeHyoung Kim, ByungSeon Choi, and JeiKwon Moon(KAERI)
JaeWoo Park(JNU)
- P03A20 Safety in Design on Pyroprocess Facilities**
Gil-Sung You, Seong-In Moon, Won-Myung Choung, and Jeong-Hoe Ku(KAERI)
- P03A21 The Improvement of Pilot-scale Electrokinetic for Radioactive Soil Decontamination**
Hye-Min Park, Gye-Nam Kim, Wan-Suk Kim, and Jai-Kwon Moon(KAERI)
- P03A22 ASOURCE: Source Term Analysis Tool for Advanced Fuel Cycle**
Dong-Keun Cho, DongHak Kook, Jongwon Choi, Heui-Joo Choi, and JongTae Jeong(KAERI)
- P03A23 Decommissioning Support System, Using RFID and USN**
W. H. Cho, S. K. Park, Y. D. Choi, K. I. Lee, and J. K. Moon(KAERI)
- P03A24 On-line Process Monitoring of Water Content in Powder Samples**
Yong Suk Choi, Jong-Yun Kim, Jei-Won Yeon, and Kyuseok Song(KAERI)
- P03A25 Method for Making a Pellet-type LiCl-KCl-UCl_3 SALT**
M.S.WOO, H.J.JIN, H.S.LEE, and J.G.KIM.(KAERI)
- P03A26 Volume Reduction of Decommissioning Waste in KAERI**
D.S. Hwang, K.W.Lee, K.H. Cheong, and J.K. Moon(KAERI)
- P03A27 Schema Definition of a Pyroprocess System Engineering**
Hee Seong Park, Won Il Ko, and Han Soo Lee(KAERI)
- P03A28 Development of the Electrowinning Technology for TRU Recovery in Pyroprocessing**
Do-Hee Ahn, Seungwoo Paek, Joon-Bo Shim, Kwang-Rag Kim, Tack-Jin Kim, Jae-Hoo Jung, and Gha-Young Kim(KAERI)
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Ⅲ. 분과별 논제 및 발표자

제 3분과 B

방사성폐기물관리(Radioactive Waste Management)

좌 장 연제원(Jei-Won Yeon), 정해룡(Haeryong Jung)

발표장소 402A

일 정 | 5. 18(금)

- 09:00 Long-term Performance of Silo Concrete in Low- and Intermediate-Level Waste (LILW) Disposal Facility**
Haeryong Jung, Kijung Kwon, Seung-hyun Lee, Sung-Bok Lee, and Yi-Yeong Jeong(KRMC)
Eui-Sik Yoon(KINS)
Do-Gyeum Kim(KICT)
- 09:20 A Probabilistic Consideration on Nuclide Releases from a Pyro-processed Waste Repository**
Youn-Myoung Lee and Jongtae Jeong(KAERI)
- 09:40 Immobilization of ⁹⁹Tc(Re) Using Iron-phosphate Glasses**
Jong Heo, Kai Xu, Wooyong Um, and Pavel Hrna(POSTECH)
- 10:00 Cutting Technology for Decommissioning of the Reactor Pressure Vessels in Nuclear Power Plants**
KwaneSeong Jeong, GeunHo Kim, JeiKwon Moon, and ByungSeon Choi(KAERI)
- 10:20 A Cold Spray Coating Technique for Manufacturing a Disposal Canister**
Heui-Joo Choi, Minsoo Lee, and Jongwon Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Study on the Electrochemical Behavior of Iodide at Platinum Electrode in Potassium Chlorate Solution**
Sang-Hyuk Jung, Jei-Won Yeon, and Kyuseok Song(KAERI)
- 11:20 Mathematical Modeling of Conversion Kinetics during Vitrification of Nuclear Waste**
Richard Pokorny(ICT)
David A. Pierce, Jaehun Chun, and Pavel Hrna(PNNL)
- 11:40 Development of Tritium Transport Package for ITER SDS Supply**
Sanghoon Lee, Min-Soo Lee, Ju-Chan Lee, Woo-Seok Choi, and Ki-Seog Seo(KAERI)
- 12:00 TRLFS Studies on Indirect Determination of U(IV) in Biological Samples Containing Mixed U(IV/VI) Species**
Wansik Cha, Seung-Yeop Lee, Hye-Ryun Cho, Euo Chang Jung, and Min-Hoon Baik(KAERI)
- 12:20 Oxidation of Carbon Steel under Gamma Radiation Conditions**
K. Daub, J.J. Noel, and J.C. Wren(UWO)
Jei-Won Yeon(KAERI)

제 4 분과 A

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 핵연료 해석 및 기술현안(Fuel Analysis & Technical Issues)

좌 장 이주석(Joosuk Lee), 김원주(Weon-Ju Kim)

발표장소 303A

일 정 | 5. 17(목)

- 09:00 Evaluation of Nonlinear Finite Element Module for the Simulation of Pellet and Cladding Mechanical Interaction**
Hyo Chan Kim, Yong Sik Yang, Dae Ho Kim, Je Geon Bang, Sun Ki Kim, Jae Yong Kim, and Yang Hyun Koo(KAERI)
Young Doo Kwon(KNU)
- 09:20 Characterization of Fuel Rod Uncertainty for Safety Analysis**
Joosuk Lee and Swengwoong Woo(KINS)
- 09:40 Effect of Crossflow in Prediction of Oxide Thickness by Single Channel Fuel Performance Codes**
Andong Shin, Hyedong Jeong, Joosuk Lee, and Swengwoong Woo(KINS)
- 10:00 Prediction of Fuel Cladding Performance for Ultra-long Cycle Fast Reactor Application**
Ju-Ang Jung, Sang Hun Shin, Jong Jin Kim, Kyung Joon Choi, and Ji Hyun Kim(UNIST)
- 10:20 Fuel Arraying and Rod Dimensioning of FCM Replacement Fuel for LWRs**
Kang-Hee Lee, Chang-Hwan Shin, Yong-Sik Yang, Heung-Seok Kang, Jae-Yong Kim, Yang-Hyun Koo, and Won-Jae Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Material Issues for the Application of SiC Composites to LWR Fuel Cladding**
Weon-Ju Kim, Daejong Kim, and Ji Yeon Park(KAERI)
- 11:20 Metal-ceramic Hybrid Fuel Cladding Tubes Aiming at Suppressed Hydrogen Release Properties**
Yang-Il Jung, Byoung-Kwon Choi, Hyun-Gil Kim, Dong-Jun Park, and Jeong-Yong Park (KAERI)
- 11:40 Surface Coating Technology on the Zirconium Base Alloy for High Temperature Application**
H.G. Kim, I.H. Kim, B.K. Choi, J.Y. Park, and Y.H. Koo(KAERI)
J.M. Kim(HBNU)
- 12:00 Fabrication and Characterization of TRISO Coated Particles with ZrC Barrier Layers**
Daejong Kim, Weon-Ju Kim, Ji Yeon Park, and Moon Seong Cho(KAERI)
Jaeman Ko(CNU)
- 12:20 The Current Status of Accident-tolerance Enhanced Breakthrough Fuel Design R&D in US after Fukushima Daiichi Accident**
Sung-Tae Yang, Ji-Eun Jung, and Kyung-Ho Roh(KHNP CRI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 B

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 원자력 구조재료- I (Nuclear Structural Materials-I)

좌 장 임연수(Yun Soo Lim), 김진원(Jinwon Kim)

발표장소 303B

일 정 | 5. 17(목)

- 09:00 Oxidation Behavior around PWSCC Crack Tips of Alloy 600**
Yun Soo Lim, Sung Sik Hwang, and Hong Pyo Kim(KAERI)
- 09:20 Comparison of the Segregation Behavior between Tempered Martensite and Tempered Bainite in Ni-Cr-Mo High Strength Low Alloy RPV Steel**
Sang Gyu Park, Min-Chul Kim, Hyung-Jun Kim, and Bong Sang Lee(KAERI)
- 09:40 In-situ Raman Spectroscopic Analysis of Interfaces of Ni-base Alloy/LAS Dissimilar Metal Weld**
Jong Jin Kim, Sang Hoon Shin, Ju Ang Jung, Kyoung Joon Choi, and Ji Hyun Kim(UNIST)
- 10:00 Investigation on the Effects of Denting Occurring in Alloy 600 SG Tubing on Environmental Parameters in Operating Nuclear Power Plants**
Joung Soo Kim, Myong Jin Kim, Hong Pyo Kim, and Sung Sik Hwang(KAERI)
- 10:20 Creep Behavior in Air and Helium Environments of Alloy 617**
Woo-Gon Kim, Gyeong-Geun Lee, Ji-Yeon Park, Sung-Deok Hong, and Yong-Wan Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Measurement and Evaluation of Fast Neutron Flux for Irradiation Test at HANARO**
Seong Woo Yang and Kee Nam Choo(KAERI)
Seung-Kyu Lee and Yong Kyun Kim(HYU)
- 11:20 Post-extrusion Heat Treatment Effects on Characteristics of 9Cr Nanostructured Ferritic Alloy**
Ji-Hyun Yoon, Suk-Hoon Kang, and Yongbok Lee(KAERI)
Thak S. Byun and David T. Hoelzer(ORNL)
- 11:40 Modeling of Irradiation Hardening in Reactor Pressure Vessel Steel Based on a Rate Theory**
Gyeong-Geun Lee, Yong-Bok Lee, and Junhyun Kwon(KAERI)
- 12:00 Observation of Behavior of Radiation Defect under Deformation in Ion-irradiated Material**
Hyung-Ha Jin, Sangchul Kwon, and Junhyun Kwon(KAERI)
- 12:20 Effect of Defect on the Dynamic Strain Aging Behavior of Low Carbon Ferritic Steels**
Jin Weon Kim and Sa Yong Lee(CSU)

일 정 | 5. 17(목) 13:00-15:00

- P04C01 Evaluation of Design Models of Process Equipments for Use in PRIDE: Remote Operability and Maintainability**
Kiho Kim, Sunghyun Kim, Seungnam Yu, Jongkwang Lee, Byungsuk Park, Jonghui Han, Ilje Cho, and Hansoo Lee(KAERI)
- P04C02 Influence of Dispersant(PAA) Injection into Secondary System in Nuclear Power Plant**
W. Y. Maeng, E. H. Lee, K. M. Kim, and J. W. Na(KAERI)
- P04C03 Fabrication of Preliminary Fuel Rods for SFR**
Sun-Ki Kim, Seok-Jin Oh, Young-Mo KO, Youn-Myung Woo, and Ki-Hwan Kim(KAERI)
- P04C04 The Qualification of Welding Procedure on DCF Test Rig Fabrication**
Chang-Young Joung, Sung-Ho Ahn, Jin-Tae Hong, Chul-Yong Lee, and Hwang-Young Jeong(KAERI)
- P04C05 Cleavage Fracture Toughness of SA508 Gr.4N High Strength Low Alloy Steel with Different Phase Fraction**
Ki-Hyoung Lee, Min-Chul Kim, Kwon-Jae Choi, and Bong-Sang Lee(KAERI)
- P04C06 Preliminary Study on the High Temperature Transport System for Molten Salt**
S. H. Lee, H. S. Lee, and J. G. Kim(KAERI)
- P04C07 Self Shielding in Nuclear Fissile Assay Using LSDS**
YongDeok Lee, Chang-Je Park, Geun-il Park, and Kee Chan Song(KAERI)
- P04C08 Calculation of Material Flow in Pyroprocessing**
S. K. Kim and W. I. Ko(KAERI)
- P04C09 Behavior of Xenon Diffusion in Irradiated UO_2 as Grain Size and Porosity**
Heemoon Kim, Dong-Ju Kim, Man Soon Cho, Keon Sik Kim, Seong Je Baik, and Sang Ryul Baek(KAERI)
Kwangheon Park(KHU)
Sung Ryul Kim(CBNU)
- P04C10 Measurement of Quasi-periodic Oscillating Flow Motion in Simulated Dual-cooled Annular Fuel Bundle**
Chi Young Lee, Chang Hwan Shin, Ju Yong Park, Dong Seok Oh, Tae Hyun Chun, and Wang Kee In(KAERI)
- P04C11 An Estimation of Gas Pressure in a UN-TRISO Coated Fuel Particle**
Young Min Kim, C. K. Jo, H. S. Lim, and W. J. Lee(KAERI)
- P04C12 Evaluation of Specimen Geometric Effect for Laser Flash Thermal Diffusivity Test**
Daegy Park, Heemoon Kim, Woongsub Song, Seungje Baik, Wooseok Ryu, Sangbok Ahn, and Youngsun Joo(KAERI)
- P04C13 The Thermal Conductivity Dependence on the Microstructure in Porous B₄C Absorber for Control Element Assembly**
Oh-Hyun Kwon, Hyun-Jun Kim, Hong-Jin Kim, and Jung-Cheol Shin(KEPCO NF)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 D

핵연료 및 원자력재료(Nuclear Fuel and Materials) - Poster

좌 장 박정용(Jeong-Yong Park), 양용식(Yong Sik Yang)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P04D01 An Experiment on the Carbonization of Fuel Compact Matrix Graphite for HTGR**
Young-Woo Lee, Joo Hyoung Kim, and Moon Sung Cho(KAERI)
- P04D02 A Study on Defect Energy in UO_2 Lattice Using ab Initio DFT**
Sungryul Kim and Yonguhn Kim(CBNU)
Heemoon Kim, Chang-je Park, Younggwon Jin, and Sangbok Ahn(KAERI)
Younsuk Yun(PSI)
Kwangheon Park(KHU)
- P04D03 A Comparative Study on the Formation Mechanism of Wear Scars during the Partial and Full Scale Fretting Wear Tests of Spacer Grids**
Young-Ho Lee, Chang-Hwan Shin, Dong-Seok Oh, and Heung-Seok Kang(KAERI)
- P04D04 First-principles Study of Chromium Effects on Oxygen Diffusion in Ni-Cr Binary Alloy**
Jong Jin Kim, Sang Hoon Shin, Ju Ang Jung, Kyoung Joon Choi, and Ji Hyun Kim(UNIST)
- P04D05 Fabrication of an Instrumented Fuel Rod Mock-up Using a Precise Drilling Machine**
Hwang-Young Jeong, Jintae Hong, Sung-Ho Ahn, and Chang-Young Joung(KAERI)
- P04D06 Microstructure Analysis on Beryllium Reflector Blocks of Research Reactors**
Suk Hoon Kang, Jinsung Jang, Yong-Hwan Jeong, Chang-Hee Han, Yang-Il Jung, and Tae Kyu Kim(KAERI)
Yong Seok Choi and Kyu Hwan Oh(SNU)
- P04D07 Air Oxidation Behavior of Zircaloy-4 at Transient Condition**
JI MIN LEE, JU SEONG KIM, and YONG SOO KIM(HYU)
- P04D08 Evaluation Indicators for Analysis of Nuclear Fuel Cycle Sustainability**
Yoon Hee Lee, Won Il Ko, and Hyo Yeon Choi(KAERI)
- P04D09 Economic Analysis of Several Nuclear Fuel Cycles**
Won Il Ko, Fanxing Gao, and Sung Ki Kim(KAERI)
- P04D10 Material Flows of Several Nuclear Fuel Cycles**
Fanxing Gao, Won Il Ko, and Sung Ki Kim(KAERI)
- P04D11 The Effect of Dissolved Hydrogen on the High Pressure Steam Oxidation of Zircaloy-4**
Seonggi Jeong and Kwangheon Park(KHU)
- P04D12 Thermochemical Study of Material Compatibility for Sodium Cooled Fast Breeder Reactor Application**
Ah Young Choi, Sang Hun Shin, and Ji Hyun Kim(UNIST)
- P04D13 High-temperature Metal Corrosion Tests for HI Decomposer**
Jin Young Choi, Young Soo Kim, In Jin Sah, and Hee Cheon NO(KAIST)
- P04D14 Improving the Thermal Conductivity of UO_2 Fuel with the Addition of Graphene**
Byoung-Jin Cho, Young-Jin Kim, and Dong-Seong Sohn(UNIST)

제 4 분과 E

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster

좌 장 김동진(Dong-Jin Kim), 류호진(Ho Jin Ryu)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

P04E01 Crud Specimens were Intensively Analyzed Using Shielded-EPMA

Y.H. Jung, S.J. Baik, B.O. Yoo, K.S. Kim, S.B. Ahn, and Y.S. Joo(KAERI)

P04E02 The Effects of Fuel Design on the Fuel Assembly Bow Characteristics in PWR

S. Y. Jeon, D. G. Ha, J. K. Park, K. B. Eom, and J. M. Suh(KEPCO NF)

P04E03 Kinetics of Zr-alloy Cladding Oxidation in the Mixture of Air and Steam at High Temperatures

Kyung Tae Kim, Kwangheon Park, and Joo Young Park(KHU)

P04E04 Formation of CRUD and the Effect of Zn on the CRUD Composition.

Jooyoung Park, Kwangheon Park, and Kyungtae Kim(KHU)

P04E05 Directional Analysis of Neutron and Photon Flux in LSDTS

KyoungYong Noh, Chang Je Park, YongDeok Lee, and Geun-Il Park(KAERI)

P04E06 Status of UO₂ Sphere Preparation Technology Development for HTGR Fuel in Korea

Jeong Kyung Chai, Eom Sung Ho, Kim Yeon Ku, and Cho Moon Seoung(KAERI)

P04E07 Coolant Condition Effect on the Fission Gas Release for CANDU Fuel

Jong Yeob Jung and Joo Hwan Park(KAERI)

P04E08 Effect of Resintering in Cr-doped UO₂ Pellets

Jang Soo Oh, Jae Ho Yang, Ik Hui Nam, Jong Hun Kim, Dong-Joo Kim, Young Woo Rhee, and Keon Sik Kim(KAERI)

P04E09 Effect of the Forming Conditions on the Compressive Strength of Fuel Elements for HTGR

Chung-yong Lee, Seung-jae Lee, Jung-min Suh, and Young-ho Jo(KEPCO NF)
Young-woo Lee(KAERI)

P04E10 The Comparison of Microstructure between Air and Steam Oxidation of Zr Alloys at High-temperatures

Seonho Noh and Kwangheon Park(KHU)

P04E11 The Wear Behavior between Zirconium Alloy and Inconel under Water Condition Using Pin-on-disk Wear Tester

J. M. Park, N. G. Park, J. K. Park, and J. M. Suh(KEPCO NF)

P04E12 Effect of Hydrides on Mechanical Properties of Zirconium Alloy with Oxidation

Hoon Lee, Youngjun Kim, Juseong Kim, and Yongsoo Kim(HYU)

P04E13 Development of a Capsule for Irradiation Tests at Medium and High Temperatures

Man Soon Cho, Kee Nam Choo, Chul Yong Lee, Seong Woo Yang, Kyue Taek Shim, and Hwan-Sung Chung(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 F

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster

좌 장 김동진(Dong-Jin Kim), 류호진(Ho Jin Ryu)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P04F01 Development of an Integrated Crucible for the Salt Separation**
S. W. Kwon, K. M. Park, J. H. Jeong, H. S. Lee, and J. G. Kim(KAERI)
- P04F02 A Study on the Zircaloy Ring Tensile Test**
Juseong Kim, Youngjun Kim, and Yongsoo Kim(HYU)
- P04F03 Monte Carlo Simulation of Quantitative Electron Probe Microanalysis of the PWR Spent Fuel with a Pt Coating**
Hyoung-Mun Kwon, Hyung-Kwon Lee, Young-Zoon Son, and Yong-Bum Chun(KAERI)
- P04F04 Pressure Drop Analysis of Square Array Bundle Using CFD**
Jeong-hun Cha, Kyong-Won Seo, Hyuk Kwon, Seong-Jin Kim, and Dae-Hyun Hwang(KAERI)
- P04F05 Development of High-temperature Sodium Loop System for Materials Compatibility Test for Ultra-long Cycle Fast Reactor (UCFR)**
Sang Hun Shin, Jong Jin Kim, Ju Ang Jeong, Kyoung Joon Choi, Sang Il Choi, and Ji Hyun Kim(UNIST)
- P04F06 Cyclic Creep Behavior of Modified 9Cr-1Mo Steel at 600°C**
Woo-Gon Kim, Dae-Whan Kim, and Jinsung Jang(KAERI)
Jae-Young Park(PKNU)
- P04F07 12th Verification of the Charpy Impact Test Machine in IMEF**
Woo-Seog Ryu, Gil-Soo Kim, Yong-Sun Choo, and Sang-Bok Ahn(KAERI)
- P04F08 Ionic Liquid Electroplating Technology to Prevent Inter-diffusion between Metallic Fuel and Clad Material**
Kang-Soo Lee, Seung-Hyun Jee, and Young-Soo Yoon(Yonsei Univ.)
Jun-Hwan Kim and Jong-Hyuk Baek(KAERI)
- P04F09 Study on the Applicability of Electron Beam Welding Methods to Assembly a Fuel Compact and Al Cover Plate of Research Reactor Plate Type Fuel**
Hae-In Lee, Yoon-Sang Lee, Don-Dae Lee, Yong-Jin Jeong, Sun-Chil Kwon, Soo-Sung Kim, and Jong-Man Park(KAERI)
- P04F10 Simulation of a Steam Accumulator for the Development of Nuclear Equipment Performance Evaluation System**
Kyung Ha Ryu, Byung Duk Kim, Jae Hyoung Kim, Sang Ho Sohn, and Jin Wook Ko(KIMM)
Jae Hyun Cho(SNU)
- P04F11 The Effect of U₃O₈ Powder on the Sintered Density of UO₂ Pellet I. Oxidation Temperature**
C.M. Yang, G.D. Jung, M.J.Yoo, and J.R. Lee(KEPCO NF)
S.H. Na(KAERI)

P04F12 The Effect of U_3O_8 Powder on the Sintered Density of UO_2 Pellet II. Oxidation Time at 450°C
C.M. Yang, G.D.Jung, M.J.Yoo, and J.R. Lee(KEPCO NF)
S.H. Na(KAERI)

P04F13 Thermal Hydraulics Analysis of a Dual-cooled Annular Fuel with 18-month Cycle
ChangHwan Shin, ChiYoung Lee, DongSeok Oh, TaeHyun Chun, and Wang Kee In(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 4 분과 G

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 핵연료 소결체 및 피복관(Fuel & Cladding)

좌 장 백중혁(Jong Hyuk Baek), 양재호(Jae Ho Yang)

발표장소 303A

일 정 | 5. 18(금)

- 09:00 Surface Modification Technology of ODS Alloying Treatment by Using Laser Heat Source**
H.G. Kim, I.H. Kim, B.K. Choi, J.Y. Park, and Y.H. Koo(KAERI)
- 09:20 Quantitative Measurement of Displacement and Strain Fields in the ZrO₂ Layer during the Transition in Oxidation Kinetics**
Dong Jun Park, Byoung Kwon Choi, and Jeong Yong Park(KAERI)
- 09:40 Evolution of Helium Bubbles in ODS Steel**
Jinsung Jang, Suk Hoon Kang, Hyeong-Ha Jin, and Chang Hee Han(KAERI)
Yitao Yang and Chonghong Zhang(CAS)
- 10:00 Cladding Development Activities for SFR Fuel**
Jong-Hyuk Baek, Jun-Hwan Kim, Sung-Ho Kim, and Chan-Bock Lee(KAERI)
- 10:20 Compatibility Behavior of the Ferritic-Martensitic Steel Cladding under the Liquid Sodium Environment**
Jun Hwan Kim, Jong Hyuk Baek, Sung Ho Kim, and Chan Bock Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Fabrication of Mn-Al Doped UO₂ Annular Pellet with High Thermal Stability**
Dong-Joo Kim, Young Woo Rhee, Jae Ho Yang, Jang Soo Oh, Jong Hun Kim, Ik-Hui Nam, and Keon Sik Kim(KAERI)
- 11:20 Effect of Sintering Atmosphere on Grain Boundary Structure of Cr₂O₃ Doped UO₂ Pellets**
Jae Ho Yang, Dong-Joo Kim, Jang Soo Oh, Young Woo Rhee, Jong Hun Kim, Ik-Hui Nam, and Keon Sik Kim(KAERI)
- 11:40 Fabrication of Boron-containing Burnable Absorber Fuel Pellet**
Young Woo Rhee, Dong Joo Kim, Ik Hui Nam, Jong Hun Kim, Jang Soo Oh, Jae Ho Yang, and Keon-Sik Kim(KAERI)
- 12:00 Analyses on the U-Mo/Al Chemical Interaction and the Effects of Diffusion Barrier Coatings**
Ho Jin Ryu, Woo Jeong Kim, Woo Hyung Cho, Yong Jin Jeong, Yoon Sang Lee, Jong Man Park, and Chang Kyu Kim(KAERI)

제 4 분과 H

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 원자력 구조재료- II (Nuclear Structural Materials- II)

좌 장 김태규(Tae Kyu Kim), 허도행(Do Haeng Hur)

발표장소 303B

일 정 | 5. 18(금)

- 09:00 Nano-structural and Nano-chemical Analysis of Dissimilar Metal Weld Interfaces**
Kyoung Joon Choi, Sang Hoon Shin, Jong Jin Kim, Ju Ang Jung, and Ji Hyun Kim(UNIST)
- 09:20 Thermophysical Investigation of Uranium-Zirconium Alloy Phase Diagram**
Sangjoon Ahn and Sean M. McDevitt(TAMU)
- 09:40 Microstructure Evolution of 316L Stainless Steel during Simple Shearing**
Suk Hoon Kang, Hyung-Ha Jin, and Jinsung Jang(KAERI)
Yong Seok Choi and Kyu Hwan Oh(SNU)
- 10:00 Evaluation of Fracture Toughness Applicability of Small-scale Cruciform Bend Specimen**
Jong-Min Kim, Ki-Hyoung Lee, Ho-Jin Lee, and Bong-Sang Lee(KAERI)
- 10:20 Fatigue Crack Growth Rate Behavior Type 347 Stainless Steel in Simulated PWR Water Environment**
Ki-Deuk Min and Seon-Jin Kim(HYU)
Dae-Whan Kim and Bong-Sang Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Detection of the Sub Surface Cracks in a Stainless Steel Plate Using Pulsed Eddy Current**
D.G. PARK, C.S. ANGANI, M.B. KISHORE, Y.M. CHEONG, and D.H. LEE(KAERI)
- 11:20 Pipe Wall Thickness Monitoring Using Dry-coupled Ultrasonic Waveguide Technique**
Yong-Moo Cheong, Ha-Nam Kim, and Hong-Pyo Kim(KAERI)
- 11:40 Atomistic Simulations of Small-scale Materials Tests of Nuclear Materials**
Chansun Shin, Hyung-ha Jin, and Junhyun Kwon(KAERI)
- 12:00 Development of Electrochemical Oxygen Sensor for High Temperature Sodium Environment Application**
Sang Hun Shin, Jong Jin Kim, Ju Ang Jeong, Kyoung Joon Choi, Sang Il Choi, and Ji Hyun Kim(UNIST)
- 12:20 Development of Reduced Activation Ferritic-Martensitic Steels in South Korea**
Y.B. Chun, B.K. Choi, C.H. Han, D.W. Lee, T.K. Kim, and Y.H. Jeong(KAERI)
S. Cho(NFRI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 A

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력실험-I(Thermal Hydraulic Experiment-I)

좌 장 김한곤(Han Gon KIM), 문상기(Sang Ki Moon)

발표장소 삼다홀A

일 정 | 5. 17(목)

- 09:00 Design of Supercritical Carbon Dioxide Compressor Testing Loop**
Seong Gu Kim, Jeong Ik Lee, Yoonhan Ahn, and Jekyoung Lee(KAIST)
Ho Joon Yoon and Yacine Addad(KUSTAR)
- 09:20 Investigation of a Station Blackout Scenario with the ATLAS Test**
Yeon-Sik Kim, Xin-Guo Yu, Kyoung-Ho Kang, Hyun-Sik Park, Seok Cho, Kyeong-Ho Min, Nam-Hyeon Choi,
Bok-Deuk Kim, Jong-Gook Park, and Ki-Yong Choi(KAERI)
- 09:40 Experimental Study on the PAFS (Passive Auxiliary Feedwater System) during the Quasi-steady State and the MSSV Open**
Byoung-Uhn Bae, Seok Kim, Yu-Sun Park, Bok-Deuk Kim, and Kyung Ho Kang(KAERI)
- 10:00 Development of the Phenomena Identification Ranking Table (PIRT)for the Passive Auxiliary Feedwater System (PAFS) of the APR+**
Chul-Hwa song, Bub-Dong Chung, Kyoung-Ho Kang, and Han-Ok Kang(KAERI)
Byong-Jo Yun(PNU)
Young-Suk Bang(KINS)
Ho-Je Seong(KEPCO E&C)
Soon-Joon Hong(FNC Tech.)
Suk-Ku Sim(EN2T)
- 10:20 Choking Flow through Steam Generator Cracks- experiments and Models**
S. T. Revankar(POSTECH)
B. Wolf(Purdue Univ.)
R Riznic(CNSC)
- 10:40 Coffee Break**
- 11:00 Single-tube Condensation Experiment in Passive Auxiliary Feedwater System of APR1400+**
Chang Wook Shin, Hee Cheon NO, Bong Yo Yun, and Byong Guk Jeon(KAIST)
- 11:20 Lessons Learned from the 2nd Domestic Standard Problem Based on ATLAS Test**
Ki-Yong Choi, Yeon-Sik Kim, Seok Cho, Hyun-Sik Park, and Kyoung-Ho Kang(KAERI)
- 11:40 Major Results of SBLOCA Tests with VISTA-ITL for the SMART Design**
Hyun-Sik Park, Byoung-Yeon Min, Yong-Chul Shin, Nam-Hyun Choi, Young-Jong Chung, Won-Jae Lee, and
Sung-Jae Yi(KAERI)

제 5 분과 B

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력실험- II(Thermal Hydraulic Experiment- II)

좌 장 이상중(Sang Jong Lee), 백세진(Se Jin Baek)

발표장소 삼다홀B

일 정 | 5. 17(목)

- 09:00 Surfactant Effect on Bubble Motion in Rectangular Micro-channel with T-mixer**
Chiwoong Choi, Kwi Seok Ha, Hae Yong Jeong, Seok Hoon Kang, Won Pyo Chang, and Kwi Rim Lee(KAERI)
Moohwan Kim(POSTECH)
- 09:20 Visualization of Water Droplet Dynamics on the Heated Nanostructure Surface**
Seol Ha Kim, Ho Seon Ahn, Joonwon Kim, and Moo Hwan Kim(POSTECH)
- 09:40 Establishment of Stable Shear Flow for Measurement of Lift Force on the Bubble Interface Using L-channel**
Nam-hee Kim, Sero Yang, and Jae-young Lee(HGU)
- 10:00 Water Level Measurement of the Stratified Flow Using Ring-type Impedance Sensor**
Sung Yong Lee, Min Seok Ko, Bo An Lee, and Sin Kim(JNU)
Byong Jo Yun(PNU)
- 10:20 Natural Convection Mass Transfer Experiments in Horizontal Cylinders**
Myeong-Seon Chae and Bum-Jin Chung(JNU)
- 10:40 Coffee Break**
- 11:00 Design of Multi Bubble Sonoluminescence Reactor for Low Frequency Pressure Radiation**
Yun-seok Choi and Jae-young Lee(HGU)
- 11:20 Experimental Investigation of Bubble Dynamics in Nucleate Pool Boiling for TiO₂ Nano Particle Coated Surface**
Yongwook Shin, Won Seok Han, and Jae-young Lee(HGU)
- 11:40 An Experimental Study on Spiral Motion of Free Rising Oblate Spherical Bubble**
Woo-ram Lee, Sero Yang, and Jae-young Lee(HGU)
- 12:00 Experimental Investigaion of Pool Boiling for Single and Double Heaters Using Printed Circuit Board**
Won-Seok Han and Jae-Young Lee(HGU)
- 12:20 Velocity Fields Measurement of Natural Circulation Flow Inside a Pool Using PIV Technique**
Seok Kim, Dong Eok Kim, Young-Jung Youn, Dong-Jin Euh, and Chul-Hwa Song(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 C

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 안전현안 (Safety Issues)

좌 장 박종석(Jong Seuk PAPK), 이재용(Jae Yong Lee)

발표장소 300

일 정 | 5. 17(목)

- 09:00 Preliminary Evaluation of APR1400 SB LOCA Analyses Against Breakaway Oxidation**
Kang-Moon Lee, In-Hun Kim, Shin Eom, and Nam-Ho Lee(KEPCO NF)
- 09:20 Fluid-structure Interaction Analysis for Pressurizer Surge Line Subjected to Thermal Stratification**
Dong-Gu Kang, Myung-Jo Jhung, and Chae-Yong Yang(KINS)
- 09:40 A Survey of Core Inlet Blockage Test Due to Debris after Large Break LOCA**
Jae Yong Lee, Moon Gyu Park, and Jeong Kwan Suh(KHNP CRI)
Seung Jong Oh(KINGS)
- 10:00 An Approach to Reducing the Adverse Effect of Inappropriate Human Actions in Nuclear Power Plant**
Jinkyun park, Wondea Jung, Jaewhan Kim, Seunghwan Kim, and Sun Yeong Choi(KAERI)
Gyunyoung Heo(KHU)
- 10:20 Manual Fire Fighting Tactics at Nuclear Power Plant**
Moon-Hak Jee and Chan-Kook Moon(KHNP CRI)
- 10:40 Coffee Break**
- 11:00 FDS5 Simulation of PRISME INTEGRAL Test, PRS_INT_4**
JongSeuk PARK(KINS)
- 11:20 Simulation of Iodine Behavior by Coupling of a Standalone Model with MELCOR**
Han-Chul Kim(KINS)
Song-Won Cho(KORTIC)
- 11:40 Design Modification of Sparger in the IRWST**
Sang-Nyung Kim and Seung-Won Han(KHU)
- 12:00 Integrated Passive Safety System (IPSS) for Ultimate Safe Nuclear Power Plants**
Soon Heung Chang, Sang Ho Kim, and Jae Young Choi(KAIST)

제 5 분과 D

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력해석-I (Thermal Hydraulic Analysis-I)

좌 장 정재준(Jae Jun JEONG), 최한림(Han Rim CHOI)

발표장소 302

일 정 | 5. 17(목)

- 09:00 On the Consistency of Non-drag Interfacial Force Models in Fully Developed Turbulent Bubbly Two Phase Flow**
Van Thai Nguyen, Chul-Hwa Song, Byoung-Uhn Bae, and Dong Jin Euh(KAERI)
- 09:20 Computational Fluid Dynamic Analysis of Alumina Nanofluid Coolant for a Typical PWRs**
Mohammad Naziffard and Kune Y. Suh(SNU)
Mohammad Reza Nematollahi(Shiraz Univ.)
- 09:40 Simulation of Two-phase Natural Circulation Loop for Core Cather Cooling Using Air Water**
S. T. Revankar, S.F. Huang and K.W. Song(POSTECH)
B.W Rhee, R.J. Park, and J.H. Song(KAERI)
- 10:00 CFD Simulation of Acoustic-induced Vibration in Main Steam Line of APR1400**
Sang-Gyu Lim, Tae-Jun Kim and Han-Gon Kim(KHNP CRI)
- 10:20 Core Pressure Drop Characteristics in a CANDU Reactor**
Jun Ho Bae, Bo Wook Lee and Jong Yeob Jeong(KAERI)
- 10:40 Coffee Break**
- 11:00 Analysis of MSLB for SKN 5&6 Containment Design Using KIMERA Methodology**
Cheol Woo Kim, Seoung Rae Kim, and Ki Moon Park(KEPCO E&C)
- 11:20 Post-test Calculation of a Feedwater Line Break Experiment Performed at ATLAS**
XinGuo Yu, Hyun Sik Park, and Ki Yong Choi(KAERI)
- 11:40 Discussion on Scaling Analysis on the Fluid-solid Coupled Domain in Sodium Fast Reactor**
Soon Joon HONG and Doo Yong LEE(FNC Tech.)
Jae Hyuk EOH(KAERI)
- 12:00 Development of Ellipse Equation for Spray Droplet Shape Modeling**
Seung Chan Lee and Sang Yeol Kim(KHNP CRI)
- 12:20 Comparative Analysis of SLB for APR1400 by Using the SPACE Code and CESEC-III**
Jong Choel Park, Cheol Shin Lee, and Jong Joo Son(KEPCO E&C)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 E

원자력열수력 및 안전(Thermal Hydraulics and Safety)-Poster - Thermal Hydraulic Experiment

좌 장 이성재(Sung Jae Yi), 홍순준(Soon Joon HONG)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P05E01 Saturated Pool Boiling in Vertical Annulus with Reduced Outflow Area**
Myeong-Gie Kang(ANU)
- P05E02 Scaling Analysis of Reactor Cavity Cooling System for PMR 200**
Yoon-Yeong Bae, Sung-Deok Hong, and Yong-Wan Kim(KAERI)
- P05E03 Simulation of the Condensation Experiment for the SG Primary of SMART with MIDAS/SMR**
Jong-Hwa Park, Dong-Ha Kim, Young-Jong Chung, and Sunhee-Park(KAERI)
Seong-Won Cho(KORTIC)
- P05E04 PRHRS Performance Test on Safety Injection System Line Break with VISTA ITL for the SMART Design**
Byung-Youn Min, Hyun-Sik Park, Yong-Chul Shin, and Sung-Jae Yi(KAERI)
- P05E05 Break Size Effects on MSLB Event Using the ATLAS**
Seok Cho, Ki-Yong Choi, Hyun-Sik Park, Kyoung-Ho Kang, Yeon-Sik Kim, Nam-Hyun Choi, and Chul-Hwa Song(KAERI)
- P05E06 Advanced Measurement Techniques for a Horizontal Two-phase Flow**
Seungtae Lee, Seok Kim, and Chul-Hwa Song(KAERI)
- P05E07 A New Correlation to Predict Nucleate Pool Boiling Heat Transfer in Vertical Annuli with Closed Bottoms**
Myeong-Gie Kang(ANU)
- P05E08 Calibration of Helical Orifice with Rectangular Cross-section**
Hwang Bae, Hanok Kang, Hyun-Sik Park, Young-Jong Chung, and Sung-Jae Yi(KAERI)
- P05E09 Power Monitoring for Transient Supercritical Power Conversion System Experiment**
B. Halimi, Hyung M. Son, and Kune Y. Suh(SNU)
- P05E10 An Experimental Study on Enhancement of Critical Heat Flux in Pool Boiling Using Graphene Oxide Nanofluid**
Kyung Mo Kim, Seong Dae Park, Seung Won Lee, and In Cheol Bang(UNIST)
- P05E11 Investigation on Hydrodynamic Cavitation of a Restriction Orifice and Static Mixer on Crud-like Deposits**
Seong Man Kim, Seung Won Lee, Seong Dae Park, Sarah Kang, Han Seo, and In Cheol Bang(UNIST)

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- P05E12 Effects of Sea Salt Solution on Reflood Heat Transfer in a Long Vertical Tube**
Seung Won Lee, Seong Man Kim, and In Cheol Bang(UNIST)
- P05E13 A Review of Wettability Effect on Boiling Heat Transfer Enhancement**
Gwang Hyeok Seo, Gyoodong Jeun, and Sung Joong Kim(HYU)
- P05E14 Experiments on Injection Performance of SMART ECC Facility Using SWAT**
Youngil Cho, Seok Cho, Yungjoo Ko, Kyounggho Min, Yongcheol Shin, TaeSoon Kwon, Sungjae Yi, and
Wonjae Lee(KAERI)
- P05E15 Comparison of Velocity Profile between Particle Image Velocimetry and CFD Analysis in
a Scaled-down Facility for CANDU6 Moderator Tank**
Han Seo and In Cheol Bang(UNIST)
Hyoung Tae Kim(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 F

원자력열수력 및 안전(Thermal Hydraulics and Safety)-Poster - 열수력해석 I(Thermal Hydraulic Analysis)

좌 장 설광원(Kwang Won SEOL), 윤한영(Han Young YOON)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P05F01 An Implementation of a Boron Transport Equation into the CUPID Code**
Ik Kyu Park and Han Young Yoon(KAERI)
- P05F02 Preliminary Analysis of the Ex-vessel Core Catcher by Using the CUPID Code**
Dong Hun Lee and Jae Jun Jeong(PNU)
Ik Kyu park, Han Young Yoon, and Kwang Soon Ha(KAERI)
- P05F03 Analysis of the MSLB M/E Release for Framatome NPPs Using RELAP5/MOD3.3**
Jeong Kwan Suh, Dong Soo Song, and Jae Yong Lee(KHNP CRI)
Seung Jong Oh(KINGS)
- P05F04 MARS-KS Assessment for ROSA/LSTF Test 3-1**
Seung Wook Lee and Bub Dong Chung(KAERI)
- P05F05 Preliminary Assessment of MARS-KS for ROCOM Test-1**
Seung Wook Lee and Bub Dong Chung(KAERI)
- P05F06 Development and Testing of Gallium Properties for Natural Convection Analysis
Employing MARS-LMR Code**
Sarah Kang and In Cheol Bang(UNIST)
Kwi-Seok Ha(KAERI)
- P05F07 A Study on Accident Analysis for Wolsong 2/3/4 Using MARS-KS/CANDU**
Jin-Hyuck Kim, Joo-Sung Kim, and Kwang-Won Seul(KINS)
- P05F08 Use of the MARS-KS Code for the Prediction of Condensation Heat Transfer in a Passive
Cooling Heat Exchanger**
Byung Soo Shin, Jong Chull Jo, Sang Kyoan Lee, and Kyu Sik Do(KINS)
- P05F09 MARS-KS Condensation Assessment Results on Very Small Break LOCA**
Joosung KIM and Kwangwon SEUL(KINS)
- P05F10 Validation of CAP with SETH-PANDA Test-9**
Hoon Choi, Sang Jun Ha, and Hwang Yong Jun(KHNP CRI)
Sung Won Bae(KAERI)

제 5 분과 G

원자력열수력 및 안전(Thermal Hydraulics and Safety)-Poster - 열수력해석 II(Thermal Hydraulic Analysis)

좌 장 박찬억(Chan Eok PARK), 최기용(Ki Yong CHOI)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P05G01 Quality Assurance for Thermal Hydraulic Analysis Code, TASS/SMR-S**
Hee-Kyung Kim, Soo Hyoung Kim, and Young-Jong Chung(KAERI)
Hyeon-Soo Kim(CNU)
- P05G02 A Comparison of SKN 3&4 NCC Simulations Using SPACE and a Current Design Code**
Byung Heon Hwang, Il Soon Park, Myung Taek Oh, Chan Eok Park, and Jong Joo Sohn(KEPCO E&C)
- P05G03 SPACE Code ECCX Component Model and Comparisons with RELAP5/Mod 3.3 Code Predictions**
Moonkyu Hwang, Sung-Won Bae, and Kyung-Doo Kim(KAERI)
- P05G04 Numerical Study of Condensation Heat Exchanger Design in a Subcooled Pool: Correlation Investigation**
Hee Joon Lee and Yunjae Ju(KMU)
Han-Ok Kang, Tae-Ho Lee, and Cheon-Tae Park(KAERI)
- P05G05 Benchmark Simulation for the Development of the Regulatory Audit Subchannel Analysis Code**
G.H. Lee, C. Song, and S.W. Woo(KINS)
- P05G06 Effects of Curvature on the Turbulent Flow in a Helical Tube**
Dong-Hyeog Yoon and Kwang-Won Seul(KINS)
- P05G07 Conversion of Chord Length Data into Bubble Size Distribution: Generation of Chord Length Data and the Methodology Comparison**
Hoang Nhan Hien, D.J. .Euh, and C-H. Song(KAERI)
B.J. .Yun(PNU)
- P05G08 Design Modification of Boron Injection Tank for a Westinghouse Type NPP**
Dong Soo Song(KHNP CRI)
Song Kee Sung and Jae Il Lee(KEPCO NF)
- P05G09 Development of an Automatic Verification Program for Thermal-hydraulic System Codes**
J. Y. Lee, K. T. Ahn, S. H. Ko, Y. S. Kim, D. W. Kim, and J. J. Jeong(PNU)
J. S. suh and Y. S. Cho(SenTech)
- P05G10 Assessment of SPACE Code Using the LSTF 10% MSLB Test**
Yo-Han Kim, Chang Keun Yang, and Sang Jun Ha(KHNP CRI)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 H

원자력열수력 및 안전(Thermal Hydraulics and Safety)- Poster - 열수력해석Ⅲ (Thermal Hydraulic Analysis)

좌 장 배성원(Sung Won BAE), 박현식(Hyun Sik PARK)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P05H01 Evaluation of Natural Circulation Cooldown for the SMART**
Sook Kwan Kim, Koo Sam Kim, and Suk Ku Sim(en2t)
Ju Yeop Park and Kwang Won Seol(KINS)
Kyu Hwan Bae(KAERI)
- P05H02 The Characteristics of Single Stage and Multi Stage Core DNBR Analysis Models**
Younhwa Lee and Joon Hyong Cho(KEPCO NF)
- P05H03 Magnetite Transport Characteristics in a CANDU Reactor**
Jun Ho Bae, Bo Wook Lee, and Jong Yeob Jeong(KAERI)
- P05H04 Fluid to Fluid Modeling of R134a CHF in SMART 5x5 Rod Bundles**
Seong Jin Kim, Jeong Hun Cha, Kyong Won Seo, Hyuk Kwon, and Dae Hyun Hwang(KAERI)
- P05H05 Sensitivity Study of Regional TDC in MATRA-S Code Using PSBT Benchmark Exercise**
Seong Jin Kim, Jeong Hun Cha, Kyong Won Seo, Hyuk Kwon, and Dae Hyun Hwang(KAERI)
- P05H06 Validation of iSAM Using the Plant Startup Test**
Chansu. Jang and Kilsup. Um(KEPCO NF)
- P05H07 OPR1000 Control Rod Drop Accident Simulation Using the SPACE Code**
Chang-Keun Yang, Sang-Jun Ha, and Chan-Kook Moon(KHNP CRI)
- P05H08 Simulation of High Pressure Steam Boosting for Functional Test of Nuclear Equipment**
Sangho Sohn, Jin Wook Ko, Kyung Ha Ryu, and Byung Duck Kim(KIMM)
- P05H09 Analysis of ATLAS Cold Leg SBLOCA Using SPACE Code**
Doo-Hyuk Kang and Jae-Seung Suh(Sen Tech)
Seyun Kim(KHNP CRI)
- P05H10 Preliminary Validation and Verification of TURBO_DESIGN for S-CO2 Axial Compressor**
Jekyoung Lee, Jeong Ik Lee, Yoonhan Ahn, and Seong Gu Kim(KAIST)
Ho Joon Yoon and Yacine Addad(KUSTAR)

제 5 분과 I

원자력열수력 및 안전(Thermal Hydraulics and Safety)-Poster - 중대사고(Severe Accident)

좌 장 박래준(Rae Joon PARK), 송용만(Yong Man SONG)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P05I01 Example Calculations of In_vessel Steam Explosions for a Prototypical PWR**
Ik Kyu Park and Seong Wan Hong(KAERI)
- P05I02 Thermal Load Analysis for IVR-ERVC Evaluation in SMART**
Rae-Joon Park, Jae-Ryong Lee, Sang-Baik Kim, Youngho Jin, and Hwan-Yeol Kim(KAERI)
- P05I03 Brief Results of the OECD-SERENA Project**
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)
- P05I04 Evaluation for External Reactor Vessel Cooling System Using CFD Simulation**
Seok Bin Seo, Seong Dae Park, and In Cheol Bang(UNIST)
- P05I05 3-D Simulation of Plunging Jet Penetration into a Denser Liquid Pool by the RD-MPS Method**
Shane Park(KEPCO NF)
Hyun Sun Park(POSTECH)
Hyeong-min Joo and Gyeodong Jeun(HYU)
- P05I06 Analysis of Severe Accident Induced by UTOP for the KALIMER-150 by Using SAS4A/SASSYS-1**
Seok Hun Kang, Kwi Seok Ha, Hae Yong Jeong, Chiwoong Choi, Won Pyo Chang, and Kwi Lim Lee(KAERI)
- P05I07 Ultrasonic Water Thickness Measurement at a Gas-liquid Interface Area in Full-scale Mockup Experiment**
Kil-Mo Koo, Rae-Joon Park, Jin-Ho Song, and Won-Pil Baek(KAERI)
- P05I08 Evaluation of Possibility for Reactor Corium Re-criticality in Fukushima NPP Accident**
Hae Sun Jeong, Eun Hyun Ryu, Jin Ho Song, Kwang Soon Ha, and Yong Mann Song(KAERI)
- P05I09 A Simulation for PHTS Response in PHWR Severe SGTR Accident**
Y.M. Song and D.H. Kim(KAERI)
- P05I10 A Preliminary Analysis of Subroutines between MELCOR and SCDAP/RELAP5 Codes For Core Modeling**
S. H. Park, D. H. Kim, J. H. Park, and R. J. Park(KAERI)
- P05I11 Natural Circulation Flow with Inclined Downward Facing Heating Channel**
Kwang Soon Ha, Kil Mo Koo, Bo Wook Rhee, and Rae Joon Park(KAERI)
Myung Kwan Jung(KNU)

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- P05I12 Radiological Consequence Analysis of Severe Accidents in a Small Modular Reactor**
S. D. Suk and S. K. Sim(en2t)
Y. Jin(KAERI)
- P05I13 Probabilistic Evaluation of Failure Time of a Hot Leg of APR1400 Following a SBO Accident**
Sung-Han Lee and Han-Chul Kim(KINS)
- P05I14 A Light-weight Software Platform for a Full-scope PSA**
Hyeon Gyu Kim, Sang Hoon Han, Ho Gon Lim, and Joon Eon Yang(KAERI)
- P05I15 Sensitivity Analysis of Core Damage Frequency for Advanced Power Reactor Plus**
H. R. Moon, S. H. Kang, and Y. S. Park(KHNP CRI)
- P05I16 Safety Evaluation for the Impact of Strom Surges on Nuclear Facilities Considering the Climate Change**
Seung Gyu Hyun and Sobeom Jin(KINS)
- P05I17 Development of the Advanced Nuclear Safety Information Management (ANSIM) System**
Jae-Min Sohn, Young-Cheol Ko, Tai-Gil Song, Sin-Bok Kang, Jin-Hee Kim, Hye-Seon Hwang, Dong-Seop Mun, and Geun-Sik Choi(KAERI)
Young-Jin Ham, Yoon-Ho Shin, and Gwon-Ho Kim(DBV Co. Ltd.)

제 5 분과 J

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력실험-III (Thermal Hydraulic Experiment-III)

좌 장 방인철(In Cheol Bang), 배성원(Sung Won Bae)

발표장소 삼다홀 A

일 정 | 5. 18(금)

- 09:00 Critical Heat Flux Enhancement Using Graphene Oxide Nanofluid in Flow Boiling**
Seung Won Lee, Kyung Mo Kim, and In Cheol Bang(UNIST)
- 09:20 Pool Boiling Heat Transfer on Heterogeneous Wetting Surface with Hydrophobic Dots**
HangJin Jo, SeolHa Kim, and Moo Hwan Kim(POSTECH)
- 09:40 Influence of the Exit Length and Geometry of the Chimney on the Heat Transfer**
Chul-Kyu Lim and Bum-Jin Chung(JNU)
- 10:00 A Study on Identification of Transition Boundary between Intermittent and Annular Flow in an Inclined Two-phase Flow**
Min Seck Ko, Bo An Lee, Sung Yong Lee, and Sin Kim(JNU)
Byong Jo Yun(PNU)
- 10:20 An Experimental Study on Rayleigh-Benard Natural Convection**
Je-Young Moon and Bum-Jin Chung(JNU)
- 10:40 Coffee Break**
- 11:00 Natural Convection Heat Transfer Experiments on an Inclined Helical Coil**
Young-Chan Byun and Bum-Jin Chung(JNU)
- 11:20 Experimental Study of Critical Heat Flux under Rolling Condition**
Jin-Seok Hwang, Yeon-Gun Lee, and Goon-Cherl Park(SNU)
- 11:40 Heat Transfer Enhancement by a Spacer Grid**
Byoung Jae Kim, Seok Cho, and Sang Ki Moon(KAERI)
- 12:00 A Study on CHF Enhancement Mechanism for Nanofluids Based on Taylor Instability**
Seong Dae Park, Seung Won Lee, Sarah Kang, Seong Man Kim, Han Seo, and In Cheol Bang(UNIST)
- 12:20 An Experimental Study on Pool Boiling CHF with Hierarchical Porous Surface Fabricated by PMMA Coating and Electron Irradiation**
Sub Lee Song, Jae Joon Kim, Sung Oh Cho, and Soon Heung Chang(KAIST)
Eun Je Lee(KAERI)

Ⅲ. 분과별 논제 및 발표자

제5분과K

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력해석- II(Thermal Hydraulic Analysis-II)

좌 장 김경두(Kyung Doo KIM), 김윤호(Yun Ho KIM)

발표장소 삼다홀 B

일 정 | 5. 18(금)

- 09:00 Well-posedness, Convergence and the Stability of the Semi-implicit Upwind Numerical Solver for the Single Pressure Multi-fluid Model**
Sang Yong Lee, Chan Eok Park, and Jong Joo Sohn(KEPCO E&C)
- 09:20 Simulation of the Passive Condensation Cooling Tank of the PASCAL Test Facility Using the Component Thermal-hydraulic Analysis Code CUPID**
Hyoung Kyu Cho, Seung-Jun Lee, and Han Young Yoon(KAERI)
- 09:40 Flow Excursion Analysis in PAFS**
Soon Joon HONG and Kyung Jin LEE(FNC Tech.)
Jong CHEON and Han Gon KIM(KHNP CRI)
- 10:00 Evaluation of Effect of N₂ Gas on the Cooling Capability of Passive Auxiliary Feedwater System (PAFS) in APR+**
Yun-Je Cho, Kyong-Ho Kang, and Byong-Jo Yun(KAERI)
- 10:20 Thermal-hydraulic Analysis of SGTR for Supporting PSA in APR+**
Sang Hee Kang(KHNP CRI)
- 10:40 Coffee Break**
- 11:00 Validation of the Condensation Model in the CAP Code with the BFMCD1 and D12 Tests**
Moonhee Choi, Dongin Yu, Sanghun Park, Jinho Park, Hyun Sun Park, and Moo Hwan Kim(POSTECH)
Hoon Choi(KHNP CRI)
- 11:20 Simulation of Cold-leg Small Break LOCA for ATLAS Using SPACE Code**
Byoung Jae Kim, Hyoung Tae Kim, and Kyung Doo Kim(KAERI)
- 11:40 Verification of the SPACE Code for Separate Effects Tests**
Myung Taek Oh, Chan Eok Park, and Jong Joo Sohn(KEPCO E&C)
- 12:00 Effect of Flow Blockage and Fuel Relocation on Core Coatability during Loss of Coolant Accident**
Seunghoon Ahn(KINS)
- 12:20 Feasibility Study for Applicability of the Wavelet Transform to Code Accuracy Quantification**
Jongrok Kim and Ki-Yong CHOI(KAERI)

제 5 분과 L

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 중대사고(Severe Accident)

좌 장 홍성완(Seong Wan HONG), 문영태(Young Tae MOON)

발표장소 300

일 정 | 5. 18(금)

- 09:00 The Accident Analysis for TMI-2 Using MELCOR**
Moon-Oh Kim and Hee-Do Lee(ACT co., Ltd.)
Jeong-Wha Park and Seong-Wan Hong(KAERI)
- 09:20 Design of Passive Containment Cooling System of PWR Using Multi-pod Heat Pipe**
Jun-Seok Park and Sang-Nyung Kim(KHU)
- 09:40 The Effect of the Geometric Scale on the Critical Heat Flux for The Top of the Reactor Vessel Lower Head**
Hae Min Park and Yong Hoon Jeong(KAIST)
- 10:00 Overall Consideration to Flood Liquid Gallium in Reactor Cavity for IVR-ERVC**
Seong Dae Park, Sarah Kang, Seung Won Lee, Seong Man Kim, Han Seo, and In Cheol Bang(UNIST)
- 10:20 CFD Analysis for a Hydrogen Flame Acceleration in the IRWST Facility**
Hyung Seok Kang, Kwang-Soon Ha, Sang-Baik Kim, and Seong Wan Hong(KAERI)
- 10:40 Coffee Break**
- 11:00 Sensitivity Study on Hydrogen Generation in APR1400 RPV by MELCOR Code**
Vo Thi Huang, Tae-Woon Kim, Jinho Song, and Bo Wook Rhee(KAERI)
- 11:20 Containment Spray Modeling Using the Flow Regime of Viscous Flow and Transition Flow**
Seung Chan Lee, Je Joong Sung, and Sang Yeol Kim(KHNP CRI)
- 11:40 CFD Analysis of Heat Transfer Phenomena with Phase Change in Molten Corium**
Tae Hyub Hong, Yujung Choi, and Chan-Kook Moon(KHNP CRI)
- 12:00 Equipment Survivability Assessment in APR1400**
Young H. Seo, Won Sang Jeong, and Young Tea Moon(KEPCO E&C)
- 12:20 Evaluation of Dynamic Pressures from Ex-vessel Steam Explosion Using the TEXAS-V**
Yusung Song, Seokwon Whang, Moo Hwan Kim, and Hyun Sun Park(POSTECH)
Hyeongmin Joo(HYU)

Ⅲ. 분과별 논제 및 발표자

제 5 분과 M

원자력열수력 및 안전(Thermal Hydraulics and Safety) - PSA(Probabilistic Safety Assessment)

좌 장 한상훈(Sang Hoon HAN), 한진규(Jin Kyu HAN)

발표장소 302

일 정 | 5. 18(금)

- 09:00 Application of Fire Modeling Uncertainty Analysis to the Determination of Cable Failure**
Dae il Kang and Kilyoo Kim(KAERI)
- 09:20 Thermal-hydraulic Analysis for SBLOCA in OPR1000 and Evaluation of Uncertainty for PSA**
Tae-jin Kim and Goon-cherl Park(SNU)
- 09:40 A Reliability Assessment and Optimization for a Passive System of the Very High Temperature Reactor**
Chansuh Lee, Hyungsuk Lee, and Moosung Jae(HYU)
- 10:00 Unavailability of K-out-of-n Reactor Protection Systems in Consideration of CCF**
Hyun Gook Kang, Hee-eun Kim, and Bo Gyung Kim(KAIST)
- 10:20 Evaluation of Failure Probability Considering Seismic Correlation for Probabilistic Safety Assessment**
Jung Han Kim and In-Kil Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 A Preliminary Assessment of Daily Weather Conditions in Nuclear Site for Development of Effective Emergency Plan**
Seok-Jung HAN and Kwang-II Ahn(KAERI)
- 11:20 The Sensitivity Study of the Usefulness of External Injection into RCS at SMART**
Youngho Jin(KAERI)
- 11:40 A Preliminary Study on Level 1 PSA of SFR-600 Conceptual Design**
Kilyoo Kim, SangHoon Han, and TaeWoon Kim(KAERI)
- 12:00 On-line Maintenance Methodology Development**
Hyowon Kim, Jaeho Kim, and Moosung Jae(HYU)
- 12:20 Estimation of CDF Considering the Degradation Effect of the Condensate Storage Tank**
Daegi Hahm, Young-Sun Choun, and In-Kil Choi(KAERI)
Jinsuo R. Nie and Joseph I. Braverman(BNL)

제 6 분과 A

방사선 이용 및 방호 I (Radiation Utilization and Protection I)

좌 장 선광민(Gwang-Min SUN), 정성희(Sung-Hee Jung)

발표장소 401B

일 정 | 5. 17(목)

- 09:00 Optimization of Radiation Diffusion Factor to Environment - Considering Gaussian Models for Coastal and Complex Terrain**
Seo-Yeon Park and Myung-Sub Roh(KINGS)
Y.G. Kim and J. Kim(YSU)
- 09:20 The Influence of Void on Image Quality in Industrial SPECT: a Monte Carlo Study**
Jang Guen Park and Chan Hyeong Kim(HYU)
Jong Bum Kim, Jinho Moon, and Sung-Hee Jung(KAERI)
- 09:40 A Study of Mechanical Properties of Polymer Composite Containing Tungsten Nano/Micro-Powder for Radiation Applications**
Duckbong Seo, Jaewoo Kim, Jun-hyung Lee, and Jungkuk Lee(KAERI)
- 10:00 OSL and TL of Resistors of Mobile Phones for Retrospective Accident Dosimetry**
J. I. lee, J. L. Kim, A. S. Pradhan, I. Chang, and B. H. Kim(KAERI)
- 10:20 Quality Analysis of $(n, \gamma)^{99}\text{Mo}/^{99\text{m}}\text{Tc}$ Generator for Labelling Efficiency**
Yong Bae Park, J. S. Lee, K. H. Choi, S. S. Nam, U. J. Park, K. J. Son, and B. S. Jang(KAERI)
- 10:40 Coffee Break**
- 11:00 Simulations of Cold Neutron Activation Station Using MCNPX Code**
Hoang Sy Minh Tuan and Gwang Min Sun(KAERI)
- 11:20 Development of Cold Neutron Activation Station at HANARO Cold Neutron Source**
G.M. Sun, S.M.T.Hoang, J.H. Moon, Y.S. Chung, S.J. Cho, and K.H. Lee(KAERI)
B.G. Park and H.D. Choi(SNU)
- 11:40 Investigation for the Fossil Embryo Using Neutron Tomography at HANARO, KAERI**
TaeJoo Kim and CheulMuu Sim(KAERI)
Dong Hee Kim(NSM)
Gerald Grellet-Tinner(TFM)
- 12:00 Adsorption of Iodide on Silver Rods for ^{125}I Seed Preparation**
J. H. Lee, U. J. Park, and K. H. Yu(DGU)
K. J. Son, J. S. Lee, K. H. Choi, S. S. Nam, J. S. Seo, and S. J. Choi(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 6분과 B

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

- 방사선 방호/차폐/안전/환경 연구
(Radiation Protection/Shielding/Safety/Environment)

좌 장 한승재(Seungjae Han), 금동권(Dong-Kwon Keum)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P06B01 Measurement of Air Sampling for RI Treating Facilities in Nuclear Medicine**
Yu-Sun Yeom, Young-Muk Hwang, Tae-Jin Park, Man-Sub Choi, and In-Seok Hong(KRIA)
Gi-Sub Kim(KIRAMS)
- P06B02 Optical Dating of Potteries Excavated from Pungnabtoseong Earthen Wall, Seoul**
Myung-Jin Kim and Mi-Seon Park(NSK)
Sung-Joon Lee, Hye-Rim Nah, and Hyung-woo Hong(NRICH)
- P06B03 Reduction of Equipment Access Time through Cyber Plant Navigation**
Jang-soo Suh, Ja-sung Goo, and Yong-yi Kim(KHNP)
- P06B04 Consideration of Radiation Dose Terms of the Korea Nuclear Safety Act for Evaluation of Dose Limit of Radiation Workers**
Seungjae Han(KINS)
- P06B05 Preparation of 6061 Borated Al Alloy by Hot Isostatic Pressing (HIP)**
Won Hyuk Rhee(DAT Co Ltd.)
Young Rang Uhm, Jin-Ju park, and Chang Kyu Rhee(KAERI)
- P06B06 Feasibility Study on a New Aggregate Concrete for Shielding High Energy X-ray Beams**
Kyung-O KIM and Jong Kyung KIM(HYU)
Soon Young KIM(RADCORE Co., Ltd.)
- P06B07 Microstructure Analysis to the LILW Concrete Structures by Environment Factor**
Kim Ki-Beom, Lee Jang-Hwa, Lee Ho-Jae, and Kim Do-Gyeum(KICT)
- P06B08 Evaluation of Neutron Shielding Efficiency of Metal Hydrides**
Sanghwan Jeon, San Chae, and Yongsoo Kim(HYU)
- P06B09 Lessons Learned from Fukushima Accident in Relation to Emergency Management**
Sung Il Kim and Ho Jin Lee(KINS)
- P06B10 Dependency of Soil Activity Concentration on Soil-biota Concentration Ratio of Radionuclides for Earthworm**
Dong-Kwon Keum, Byeong-Ho, Kim, In Jun, Kwang-Muk Lim, and Yong-Ho Choi(KAERI)

제 6 분과 C

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

- 방사선 생명의학/방사선 · RI 이용연구
(Radiation Bio-Medical/Radiation · RI Application)

좌 장 김동호(Dong Ho Kim), 강주현(Joo Hyun Kang)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P06C01 A Novel Radiation-Resistant Yeast, *Filobasidium elegans* RRY1**
Harinder Singh, Haram Kim, Hyunpa Song, Sangyong Lim, and Dongho Kim(KAERI)
- P06C02 An Approach of Imaging Technique Using MRI & ^{18}F -Fludeoxyglucose (^{18}F -FDG) PET/CT for Longitudinal Monitoring of Mouse Hepatocellular Carcinoma Model**
Ju Hui Park, Joo Hyun Kang, Yong Jin Lee, Kwang Il Kim, Tae Sup Lee, Kyeong Min Kim, Ji Ae Park, Yin Ohk Ko, Wee Sup Chung, and Sang Moo Lim(KIRAMS)
Dae-Yeul Yu(KRIBB)
Sang-Soep Nahm(KKU)
Tae Joo Jeon(Gangnam Severance Hospital)
Young-Seo Park(KWU)
- P06C03 Intratumoral Distribution of ^{64}Cu -ATSM and ^{18}F -FDG in VX2 Tumor Bearing Rabbit Model**
Ran Ji Yoo, Yong Jin Lee, Won Ho Lee, Kyeong Min Kim, Ji-Ae Park, Kyo Chul Lee, Wee Sup Chung, Joo Hyun Kang, and Sang Moo Lim(KIRAMS)
- P06C04 Cell Recovery after Combined Action of Ionizing Radiation and Chemicals**
Jin Kyu Kim, Changhyun Roh, and Tae Ho Ryu(KAERI)
Ludmila N. Komarova and Vladislav G. Petin(MRRC)
- P06C05 Surface Analysis of Nb Influenced by Liquid Ga at Estimated Temperature of ^{68}Ge Production Environment**
Eun Je Lee, Min Goo Hur, Jeong Mun Son, Jeong Hoon Park, and Seung Dae Yang(KAERI)
- P06C06 The Assessment of I-131 Internal Doses of Nuclear Medicine Workers in Korea Using Thyroid Uptake System**
Young Kag Bahn, Gi Back Oh, Chang Ho Lee, and Jong Doo Lee(Severance Hospital)
Yu-Sun Yeom and Young-Muk Hwang(KRIA)
- P06C07 Measurement of Urinary Radioactivities for the Workers in Nuclear Medicine**
Young-Muk Hwang, Yu-Sun Yeom, Tae-Jin Park, Man-Sub Choi, and In-Seok Hong(KRIA)
- P06C08 An Effort to Improve Uranium Foil Target Fabrication Technology by Single Roll Method**
Moonsoo SIM and Jong-Hyeon LEE(CNU)
Chang-Kyu KIM(KAERI)
- P06C09 Epigenetic Changes of *Arabidopsis* Genome Associated with Altered DNA Methyltransferase and Demethylase Expressions after Gamma Irradiation**
Ji Eun Kim, Eun Ju Cho, Ji Hong Kim, Byung Yeoup Chung, and Jin-Hong Kim(KAERI)

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- P06C10 Adsorption and Photocatalytic Activity of Electron-irradiated Polystyrene Nanosphere Multi-layer Film**
Sung Oh Cho, Seung Hwa Yoo, Jea Joon Kim, and Jong Min Kum(KAIST)
- P06C11 Modulation of Enzymatic Activities of Dual Functional Peroxiredoxin by Gamma Irradiation**
Sung Hyun Hong, Seung Sik Lee, Chul-Hong Park, and Byung Yeoup Chung(KAERI)
- P06C12 Improvement Enzymatic Hydrolysis of Weat Straw for Bioethanol Production by Combined Treatment of Radiation and Acid**
Sung Hyun Hong, Seung Sik Lee, Hyoung-Woo Bai, and Byung Yeoup Chung(KAERI)
- P06C13 Advanced Stabilization of PAN Fibers for Fabrication of Carbon Fibers by e-beam Irradiation**
Joon-Pyo Jeun, Du-Young Kim, Hye-Kyoung Shin, and Phil-Hyun Kang(KAERI)
Jung-Ki Park(KAIST)

제 6 분과 D

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

- 방사선 기기/시설기반 연구

(Radiation Instrumentation and Facility-based Research)

좌 장 하장호(Jang Ho Ha), 문명국(Myungkook Moon)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

P06D01 Residual Stress Analysis of Aircraft Part Using Neutron Beam

Eunjoo Shin, Baek-Seok Seong, and Cheul Muu Sim(KAERI)

P06D02 Determination of Mineral Contents in Unpolished Rice and Bean Samples by Neutron Activation Analysis.

J. H. Moon, S. H. Kim, S. Y. Baek, and Y. S. Chung(KAERI)

P06D03 Development of Cold Neutron Depth Profiling System at HANARO

B.G. Park and H.D. Choi(SNU)

G.M. Sun(KAERI)

P06D04 Furnace Design for the Mercuric Iodide Crystal Growth for New Semiconductor Radiation Detector

Jang Ho Ha, Sunmog Yeo, Han Soo Kim, and Young Soo Kim(KAERI)

P06D05 Microstructural Characterization of CdZnTe(CZT) Crystal Ingot Grown by Bridgman Method at KAERI

Kyuhong Lee, Han Soo Kim, Jang Ho Ha, Young Soo Kim, and Hyo Jeong Choi(KAERI)

P06D06 Establishment of the Compton Suppression System (CSS) for Gamma Screening of Environmental Samples

Hana SEO and Gil Hoon AHN(KINAC)

P06D07 Measurement and Simulation of Neutron Response at Cf-252 Neutron Field Using SiC Diode Detector

Junesic Park, Hee Sung Shin, Ho-dong Kim, and Se Hwan Park(KAERI)

Sang Mook Kang, Cheol Ho Lee, and Yong Kyun Kim(HYU)

P06D08 Estimation of Energy Dependency for Modulation Transfer Function of Digital Radiography Sensor by X-ray Spectrum

MinSeok Park, Haijo Jung, Gi-sub Kim, and Mun-sik Choi(KIRAMS)

Jungmin Kim(KU)

P06D09 Design of the Low-Noise Charge Sensitive Preamplifier for Semiconductor Radiation Detectors

Young Soo Kim, Jang Ho Ha, Han Soo Kim, and Kyuhong Lee(KAERI)

P06D10 Establishment of X-ray Measurement System for On-line Monitoring of Water Content in Powder

J. Hwang(KI Tech.)

Y. S. Choi and J. Y. Kim(KAERI)

B. J. Choi(Idealsystem co., Ltd.)

P06D11 Construction of the Calibration Neutron Fields and Spectrum Weighted Response of Several Detectors

S. I. Kim, I. S. Chang, J. S. Kim, J. I. Lee, J. L. Kim, and B. H. Kim(KAERI)

P06D12 Performance Evaluation of CdZnTe Crystal Grown at KAERI

Han Soo Kim, Jang Ho Ha, Kyuhong Lee, Young Soo Kim, and Hyo Jeong Choi(KAERI)

P06D13 Passivation Effect of CdZnTe Crystal Grown at KAERI

H.J. Choi, H.S. Kim, and J.H. Ha(KAERI)

제 6 분과 E

방사선 이용 및 방호 II(Radiation Utilization and Protection II)

좌 장 이원호(Wonho Lee), 하장호(Jang Ho Ha)

발표장소 401B

일 정 | 5. 18(금)

- 09:00 Development of SiC Neutron Detector Assembly to Measure the Neutron Flux of the Reactor Core**
Se-Hwan Park, Junesic Park, Hee-Sung Shin, and Ho-Dong Kim(KAERI)
Yong-Kyun Kim(HYU)
- 09:20 New Paradigm of Detection: 10x14 URA Patterned Sensitive Collimator**
Taewoong Lee and Wonho Lee(KU)
- 09:40 Comparison of the Effect of Incomplete Charge Collection on DQE of Various Direct Conversion Detectors**
Jong Chul Han and Ho Kyung Kim(PNU)
- 10:00 Energy Calibration of a CdZnTe Photon-counting Linear-array Detector with Various X-ray Spectra**
Okla Joe, Hanbean Youn, and Ho Kyung Kim(PNU)
- 10:20 Effect Analysis on the Radiation Dose Rate of Nagasaki Atomic Bomb Survivors by Atmospheric Condition**
Ji Sun SEO and Jong Kyung KIM(HYU)
Chang-Ho SHIN(iTRS)
Do Heon KIM(KAERI)
- 10:40 Coffee Break**
- 11:00 Determination of Neutron Flux at the HANARO Cold Neutron Guides**
Minyoung Kang, Gwang Min Sun, Yuna Lee, Sangho Yoo, and Chang-Hee Lee(KAERI)
Byung Gun Park(SNU)

Ⅲ. 분과별 논제 및 발표자

제 7 분과 A

양자공학 및 핵융합기술 (Quantum Engineering and Nuclear Fusion)

좌 장 홍봉근(Bong-Gun Hong), 권혁중(Hyeok-Jung Kwon)

발표장소 402A

일 정 | 5. 17(목)

- 09:00 Load Specification and Seismic Analysis for ITER Tritium SDS**
Woo-seok Choi and Jae-han Lee(KAERI)
Seungyon Cho and Sei-hun Yun(NFRI)
- 09:20 Reliability Analysis Modeling of ITER Tritium Storage and Delivery System at Conceptual Design Stage**
Ihn Namgung(KINGS)
H.G. Kang, M.H. Chang, C.H. Kim, S.H. Yun, and K.J. Jung(NFRI)
- 09:40 Calcium Atom Trap for Atom Trap Mass Spectrometer**
Kwang-Hoon Ko, Hyunmin Park, Jaemin Han, Taek-Soo Kim, Yong-Ho Cha, Gwon Lim, and Do-Young Jeong(KAERI)
- 10:00 Survey and Positioning of the 100MeV Linear Accelerator**
Bum-Sik Park, Yong-Sub Cho, Hyeok-Jung Kwon, Ji-Ho Jang, Han-Sung Kim, Kyung-Tae Seol, Young-Gi Song, Dae-Il Kim, Sang-Pil Yun, Jin-Yeong Ryu, and Sung-Su Cha(KAERI)
- 10:20 Electron Impact Ionization of Tungsten Ion**
Duck-Hee Kwon, Young-Sik Cho, Yong-Joo Rhee, and Young-Ouk Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Epics Support IOC for Monitoring Waveform Data of PEPF 100-MeV Proton LINAC**
Young-Gi Song, Hyeok-Jung Kwon, Ji-ho Jang, and Yong-Sub Cho(KAERI)
- 11:20 Study on Critical Safety Functions and Conceptual Design of Safety Systems for Korean Fusion DEMO Plant**
Kyemin Oh, Myoung-suk Kang, and Gyunyoung Heo(KHU)
Young-Seok Lee and Hyoung-Chan Kim(NFRI)
- 11:40 VME Configurations and Test for a Digital Control System of A 120-keV Helium Ion RF Implanter**
Ying-Min Li(UST)
Young-Gi song, Sung-Su cha, Ji-Ho Jang, Hyeok-Jung Kwon, Han-Sung Kim, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)
- 12:00 The Characteristics of the Ion Temperature and Toroidal Rotation Velocity in the KSTAR Plasma**
Won-Ha Ko, Hyungho Lee, Seungtae Oh, Hanmin Wi, Jong-Ha Lee, Kyu-Dong Lee, Young-Mu Jeon, Siwoo Yoon, Jayhyun Kim, Young-soon Bae, Sang Gon Lee, Woongchae Kim, Jong-Gu Kwak, and the KSTAR Team(NFRI)
Katsumi Ida(NIFS)
Joon-Wook Ahn(ORNL)

제 7 분과 B

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

좌 장 김준연(Jun-Yeon Kim), 이동원(Dong-Won Lee)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P07B01 Helium Inlet Temperature Maintenance Performance of a Vertical-type Metal Hydride Bed**
Jungmin Lee, Dongyou Chung, Daeseo Koo, and Hongsuk Chung(KAERI)
- P07B02 Measurement of the Beam Size and Emittance for the CRC Cyclotron**
Park Sae-Hoon and Kim Yu-Seok(DGU)
- P07B03 Fabrication of a 1/6-scale Mock-up and Manifolds for the Korea First Wall in the ITER**
Jae Sung Yoon, Suk-Kwon Kim, Eo Hwak Lee, and Dong Won Lee(KAERI)
- P07B04 Effect of Wetting Durability on Al Surface by High Current Ion Beam Treatment**
Chan Young Lee, Jae Sang Lee, and Hyuk Jun Choi(KAERI)
Bum Suk Kim(Aerospace Univ.)
- P07B05 Fabrication of ITER Semi-Prototype Blanket First Wall for the Final Qualification**
Byoung-Kwon Choi, Yang-Il Jung, and Jeong-Yong Park(KAERI)
Suk-Kwon Kim, Don Won Lee, Duck-Hoi Kim, and Seungyon Cho(NFRI)
- P07B06 Heat Load Test Facility Using Electron Beam System for the Plasma Facing Components**
Suk-Kwon Kim, Eo Hwak Lee, Jae-Sung Yoon, and Dong Won Lee(KAERI)
Seungyon Cho(NFRI)
- P07B07 Preliminary Study of Fast ion Diagnostics by Collective Thomson Scattering (CTS) in KSTAR**
Min Park, C. Y. An, dongjin Ku, S. H. Kim, S. J. Wang, and S. K. Kim(KAERI)
- P07B08 Basic Design Study of RFQ for Helium Implantation in Power Semiconductors**
Yong-sub Cho, Ji-ho Jang, and Hyeok-jung Kwon(KAERI)
- P07B09 RF Interlock System for the PEPF 100MeV Linac**
Kyung-Tae Seol, Hyeok-Jung Kwon, Han-Sung Kim, Young-Gi Song, and Yong-Sub Cho(KAERI)
- P07B10 Performance of a Simulated Decay Heater in a Hydrogen Storage Bed**
Daeseo Koo, Dongyou Chung, Jungmin Lee, and Hongsuk Chung(KAERI)
- P07B11 Conceptual Study of Transmutation Reactor Based on LAR Tokamak Fusion Neutron Source**
B.G. Hong(JBNU)
- P07B12 Fabrication of KSTAR 5 GHz LHCD Launcher Coupler**
K. Kim, H. K. Kim, H. T. Kim, S. Park, Y. S. Bae, and H. L. Yang(NFRI)
S. Y. Yoo(CNU)
R. Parker(MIT)
W. Namkung, H. Park, and M. H. Cho(POSTECH)

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- P07B13 Construction of a High Temperature and Pressure Helium Supplying System for ITER TBM**
Eo Hwak Lee, Jae Sung Yoon, Dong Won Lee, and Suk Kwon Kim(KAERI)
Seungyon Cho(NFRI)
- P07B14 New Beam Line Design of TRIAC as a Stable Heavy-Ion Accelerator at KAERI**
Cheol Ho Lee, Dae-Sik Chang, and Byung-Hoon oh(KAERI)
Yong-Kyun Kim(HYU)
Chang Seog Seo and Chong Cheoul Yun(IFS)
Sun-Chan Jeog(HEARO)
- P07B15 Status of Preliminary Design on the Assembly Tools for ITER Tokamak Machine**
Nam Kyoung, Park Hyunki, and Kim Dongjin(NFRI)
Jaehwan Moon, Kim Byungseok, and Lee Jaehyuk(SFA)
Robert Shaw(ITER)
- P07B16 Beam Dynamics Study of the PEPF SCL Linac**
Ji-ho Jang, Hyeok-jung Kwon, Han-sung Kim, and Yong-sub Cho(KAERI)
- P07B17 Low Power Test of the PEPF Prototype Beam-line BPM and Linac BPM**
Jin-Yeong Ryu, Hyeok-Jung Kwon, Ji-Ho Jang, Han-Sung Kim, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)
- P07B18 Electrical and Thermal Analysis of Alumina Insulator for the KSTAR ICRF Transmission Line**
Dongjin Ku, S. H. Kim, C. Y. An, Min Park, and S. J. Wang(KAERI)
- P07B19 Thermal Analysis for 100 MeV Proton Beam Dump in the Target Room**
Sang-Pil Yoon, Han-Sung Kim, Bum-Sik Park, Hyeok-Jung Kwon, Ji-Ho Jang, and Yong-Sub Cho(KAERI)
- P07B20 Performance Test of the Microwave Ion Source with the Multi-layer DC Break**
Dae-Il Kim, Hyeok-Jung Kwon, Han-Sung Kim, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)
- P07B21 Q-Band X-Mode Reflectometry for the Diagnostics of ICRF Evanescent Layer**
Chan Yong An, Sonjong Wang, Dongjin Ku, Min Park, Sun Ho Kim and Sung Kyu Kim(KAERI)

제 7 분과 C

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

좌 장 김유석(Yu-Seok Kim), 조용섭(Yong-Sub Cho)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

P07C01 Electric Power Distribution System Design Status of PEPF

Kyeong-Jun Mun, Hoi-Won Jung, Sumg-Sik Park, Sung Won Cho, and Jun Yeon Kim(KAERI)

P07C02 The Design of Compressed Air System in the Conventional Facility of Proton Accelerator Research Center

G.P.Jeon, J.Y.Kim, S. W. Cho, Y.S.Min, K. J. Mun, J.S.Cho, J. M. Nam, S. S. Park, and J. H. Jo(KAERI)

P07C03 Water Contact Angle of Poly(Dimethylsiloxane) by Ion Beam Irradiation

Hyuk-Jun Choi, Jae-Sang Lee, Chan-Young Lee, and Yong-Gi Kim(KAERI)

P07C04 Licensing and Safety Analysis of the Ion Accelerator for Developing

Y.S. Min, J.M. Nam, J.H. Jo, and J.Y. Kim(KAERI)

P07C05 Report on Licensing and Safety Issues for The Proton Accelerator Research Center of PEPF

J.Y. Kim, Y.S. Min, J.M. Nam, and J.H. Jo(KAERI)

P07C06 Optimization of Beam Transmission of PAL-PNF Electron Linac

S.G. Shin, S.K. Kim, E.A. Kim, H.R. Yang, J. Jang, G. Ha, and M. H. Cho(POSTECH)

S. H. Kim, S. D. Jang, H. S. Kang, and W. Nanmkung(PAL)

P07C07 Solar Power System Installation Scheme of PEPF

Hoi-Won Jung, Kyeong-Jun Mun, Sung-Sik Park, Sung Won Cho, and Jun Yeon Kim(KAERI)

P07C08 Driving Parts Optimization Design for Radiation Shielding Doors of Proton Accelerator Research Center

J. M Nam, Y. G Han, G. P Jeon, Y. S Min, S. S Park, J. S Cho, K. J Mun, S. W Cho, and J. Y Kim(KAERI)

P07C09 Analysis Report of Reducing Cooling Loads by Using the LOW-E Pair Glass

Young-Ku Han, Jungmin Nam, Yi-Sub Min, Sung-Sik Park, Jinsam Cho, Kyeong-Jun Mun, and Hoi-Won Jung, Sung Won Cho and Jun Yeon Kim(KAERI)

P07C10 Preliminary Design of 13MHz RF Implanter 2nd Cavity

Sung-Su cha, Hyeok-Jung Kwon, Ji-Ho Jang, Han-Sung Kim, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)

P07C11 Heat Load and Cooling Configurations of the PEPF DTL

Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)

P07C12 Resonant Frequency Adjustment Method of the 20-MeV Drift Tube Linac

Hyeok-Jung Kwon, Han-Sung Kim, Ji-Ho Jang, and Yong-Sub Cho(KAERI)

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- P07C13 Preliminary Study on the Melting and Reaction with Liquid Metal Breeders for Developing the Korean Test Blanket Module in ITER**
D. W. Lee, J. S. Yoon, S. K. Kim, and E. H. Lee(KAERI)
H. G. Lee(NFRI)
- P07C14 Preliminary Study on the ITER Neutral Beam Duct Liner Mockup for High Heat Flux Test**
D. W. Lee, S. K. Kim, E. H. Lee, and J. S. Yoon(KAERI)
C. K. Park and J. W. Sa(NFRI)
- P07C15 Lighting System Design of PEFP According to the Energy-saving Scheme**
Sung-Won Cho, Hoi-Won Jung, Kyeong-Jun Mun, and Jun Yeon Kim(KAERI)
- P07C16 Development Strategy of RF Ion Source for Neutral Beam Injector in Fusion Devices**
D. H. Chang, S. H. Jeong, S. H. Kim, M. Park, T. S. Kim, S. J. Wang, K. W. Lee, and S. R. In(KAERI)
- P07C17 Optimum Perveance Study for Neutral Beam Ion Source**
T. S. Kim, S. H. Jeong, D. H. Chang, K. W. Lee, and S. R. In(KAERI)
- P07C18 Contribution of Beam-driven Fusion in Pure Deuterium Plasma**
S. R. In(KAERI)
- P07C19 Nondestructive Image Detection of Cracks for a Nuclear Fuel Plate by Using Active Thermal Phase**
Nak-Kyu Park, Seung-Kyu Park, Sung-Hoon Baik, Yoon-Sang Lee, and Byung-Heon Cha(KAERI)
Young-June Kang(CNU)
- P07C20 Detection of Fatigue Damage by Using High Frequency Nonlinear Laser Ultrasonic Signals**
Seung-Kyu Park, Nak-Kyu Park, Sung-Hoon Baik, Yong-Moo Cheong, and Byung-Heon Cha(KAERI)
- P07C21 Thermal Control Characteristics in a Small Scale Hydrogen Isotope Storage Bed**
Dongyou Chung, Jungmin Lee, Daeseo Koo, and Hongsuk Chung(KAERI)
- P07C22 Preliminary Neutronics Analysis for the Korea HCSB TBM**
Cheol Woo Lee, Young-Ouk Lee, and Dong Won Lee(KAERI)
Mu-Young Ahn and Seungyon Cho(NFRI)

제 8 분과 A

원전 건설 및 운영 기술

(Nuclear Power Plant Construction and Operation Technology)

- 원전 내진 및 구조(NPP's Structural Engineering)

좌 장 백용락(YongLak Baek), 최인길(InKil Choi)

발표장소 한라홀A

일 정 | 5. 17(목)

- 09:00 Seismic Analysis of the Main Steam Pipelines in Seismically Isolated Nuclear Power Plants**
Bub-Gyu Jeon, Dhileep M., and Nam-Sik Kim(PNU)
Dae-Gi Hahm(KAERI)
- 09:20 Seismic Fragility Analysis of Surface Facilities in Low-Intermediate Level Radioactive Waste Repository**
Junhee Park, Minkyu Kim, and In-Kil Choi(KAERI)
- 09:40 Effect of the Logic Tree Types on the Seismic Hazards in the PSHA**
Hyun-Me Rhee, Jeong-Moon Seo, and In-Kil Choi(KAERI)
Dong-Hoon Sheen(CNU)
- 10:00 Assessment of the Effective Prestress Force on Bonded Tendon by a Finite Element Analysis**
H.P. Lee and M.S. Cho(KHNP CRI)
J.B. Jang(KEPCO RI)
- 10:20 Preliminary Study on Evaluation of Impact Resistance Performance of Fiber Reinforced Concrete Walls**
Byeong Moo Jin, Yunseok Lee, and Young Jin Kim(Daewoo E&C)
Se Jin Jeon(Ajou Univ.)
- 10:40 Coffee Break**
- 11:00 Investigation of Displacement Behavior and Deformation Capacity of I-Shaped Steel-Concrete Shear Wall due to Cyclic Loading**
Ahmer Ali, Dookie Kim, and Jintao Cui(KNU)
Sung Gook Cho(JACE KOREA)
- 11:20 Comparison of Response between RC and SC Containment Structures Subjected to Aircraft Impact**
Shin. Sangshup and In-Kil Choi(KAERI)
Park. Taehyo(HYU)
- 11:40 Tsunami Research Status in IAEA after Fukushima Event**
Min Kyu Kim and In-Kil Choi(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 8 분과 B

원전 건설 및 운영 기술

(Nuclear Power Plant Construction and Operation Technology)

- 원전 운전 및 정비기술(NPP's Operating & Maintenance Technology)

좌 장 신선동(SunDong Shin), 고우식(WooSig Ko)

발표장소 한라홀B

일 정 | 5. 17(목)

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|-------|---|
| 09:00 | Case Study of Signature Analysis on Engine Condition of Emergency Diesel Generators
Kwang-Hee Choi, Sang-Guk Lee, and Byoung-Oh Lee(KHNP CRI) |
| 09:20 | Graded Approach to the Development a Contingency Plan for On-line Maintenance
Hee Seung Chang, Jung Wun Kim, and Tae Young Song(KHNP CRI) |
| 09:40 | Initial MR Evaluation for Plants Shut Down for Extended Periods
Tae Young Ju and Tae Young Song(KHNP CRI) |
| 10:00 | Application of Temporary Neutron Monitoring System for Subcriticality Monitoring during Initial Fuel Loading of OPR1000
Yu Sun Choi, Hwan Soo Lee, and Ho Cheol Shin(KHNP CRI)
Hang Ki Kim(KHNP) |
| 10:20 | Statistical Analysis of Fission Chamber Signal
Yu Sun Choi, Kyoan Ho Cha, and Seong Man Bae(KHNP CRI) |
| 10:40 | Coffee Break |
| 11:00 | Xe-133 Activity Evaluation of a Defective Fuel Rod Depending on Loading Cycle
Kim Ki-Young, Yang Sung-Tae, and Jung Ji-Eun(KHNP CRI) |
| 11:20 | The Study on Residual Stress Improvement with 29 Inch Pipe by MeSIA
Ki Hyun Cho, Hong Seok Cho, and Min Hwan Mo(KPS) |
| 11:40 | Strategy of Risk-Informed Inspection for Secondary Systems in NPPs
Soyoung Kim, and Gyunyoung Heo(KHU) |

제 8 분과 C

원전 건설 및 운영 기술

(Nuclear Power Plant Construction and Operation Technology)-Poster

- 원전 운전, 정비 및 경년열화 관리 (NPP's Operating, Maintenance Technology & Aging Management)

좌 장 장희승(HeeSeung Chang), 김낙철(NakCheol Kim)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P08C01 Development of EDG Engine Condition Diagnosis Logic in Korean Nuclear Power Plants**
Byoung-Oh Lee, Kwang-Hee Choi, and Sang-Guk Lee(KHNP CRI)
- P08C02 A Study on the Ultrasonic Sensor and Accelerometer Installation and Signal Acquisition Method for Engine Condition Diagnosis on EDG in Nuclear Power Plant**
Sang-Guk Lee, Kwang-Hee Choi, and You-Sung Choi(KHNP CRI)
- P08C03 Ultrasonic Cleaning of Nuclear Steam Generator by Micro Bubble**
Woo-Tae Jeong(KHNP CRI)
Sang-Tae Kim and Sang-Jung Yoon(Sae-an ENG.)
- P08C04 A Study on Electrical Characteristics for Coil Winding Number Changes of the ECT Bobbin Probe for S/G Tube Inspection in NPPs**
Min Woo Nam, Hee Jong Lee, Chan Hee Cho, and Hyun Ju Yoo(KHNP CRI)
- P08C05 Data Management Tool Design for Eddy Current Testing of Steam Generator Tube in NPP**
Hyun Ju Yoo, Hee Jong Lee, Min Woo Nam, and Chan-Hee Cho(KHNP CRI)
- P08C06 Development of Visual Inspection System for Flow Distribution Plate of OPR1000 SG**
Woo-Tae Jeong(KHNP CRI)
Seok-Chul Kang and Young-Kug Kim(Sae-an ENG.)
- P08C07 Development of Eddy Current Analysis Program for Steam Generator Tubing Data**
Chan Hee Cho, Hee Jong Lee, Min Woo Nam, and Hyun Ju Yoo(KHNP CRI)
- P08C08 Application of Logarithmic Amplifier in Ultrasonic Testing of Nuclear Power Plant Pipe Weld**
Byung-Sik Yoon, Wang-Bae Kim, and Seung-Pyo Lee(KHNP CRI)
- P08C09 Assessment of Ultrasonic Amplitude for Air Filled and Water Filled Piping Weld in Nuclear Power Plant**
Byung-Sik Yoon, Seung-Han Yang, and Yong-Sik Kim(KHNP CRI)
- P08C10 Development of Regulatory Audit Programs for Wolsong Unit 1 Continued Operation**
Hong Key Kim, Seung Hwan Nho, and Myung Ho Song(KINS)
- P08C11 A Study on the Obsolescence Management Methodology and Its Application**
J.S. Kim, H.W. Kim, J.S. Park, and S.G. Jung(KEPCO E&C)
- P08C12 Operating Margin Analyses in Large Load Rejection and Reactor Trip Transients after Power Uprate of UCN 1&2**
Duk-Joo Yoon, Jae-Yong Lee, and Sang-Yeol Kim(KHNP CRI)

-
- P08C13 Development of Digital Boron Dilution Alarm System (DBDAS)**
Ho Cheol Shin, Hwan-Soo Lee, and Chan-Kook Moon(KHNP CRI)
- P08C14 Development of Quality Assurance System for Equipment Qualification**
Jin Wook Ko, Byung Duck Kim, Sangho Sohn, Kyung Ha Ryu, Jae Hyung Kim, and Jun Hee Sin(KIMM)
- P08C15 Status of Technical Requirements Development for Maintenance Effectiveness Management**
Sang-Kyu AHN, Yun-Il Kim, Chang-Ju Lee, and Gun-Hyun Chang(KINS)
- P08C16 Large Mass Method As a Substitute of Quasi-static Decomposition Method for Dynamic Analysis of Rod Subjected to Support Motion**
Yong-Woo Kim(SCNU)

제 8 분과 D

원전 건설 및 운영 기술

(Nuclear Power Plant Construction and Operation Technology)-Poster

- 원전 내진/구조 및 설계/제작(NPP's Structure, Design & Manufacturing)

좌 장 방상윤(SangYoun Bang), 이덕현(DeokHyun Lee)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P08D01 Evaluation of Natural Circulation Cooldown Capability of APR⁺**
Ju Han Lee, Je Woo Cho, Myung Jun Song, Chan Eok Park, and Jong Joo Sohn(KEPCO E&C)
- P08D02 Seismic Analysis for a Crane System**
Kang Soo Kim, Chung Young Lee, and Jeong Soo Ryu(KAERI)
- P08D03 Microstructural Analysis on the NPP Concrete under Initial Frost Damage**
Kyung-Teak Koh, Chun-Jin Park, Si-Hwan Kim, and Gum-Sung Ryu(KICT)
- P08D04 Experimental Study on the Convective Heat Transfer Coefficient of Concrete Mix of Nuclear Power Plant**
Yun Lee(DJU)
Jung-Hwan Hyun, Jin-Wook Bang, Ji-Seok Seo, and Yun-Yong Kim(CNU)
- P08D05 Strength Characteristics in the Concrete with a Surface Enhancement Method**
Lee Jong Suk, Jeon Kyu Nam, An Gi Hang, Kim Do Gyeum, and Choi Won Sung(KICT)
- P08D06 Experiment Observations of the Effects of Fiber Types on the Post-peak Behaviors of Steel Fiber Reinforced Concretes under Tension**
Hyun-Woo Cho, Jae-Heum Moon, and Jang-Hwa Lee(KICT)
Su-Tae Kang(DU)
- P08D07 A Study on the Stress Cycle Determination Using an Optimization Technique**
HanOk Ko and MyungJo Jhung(KINS)
JaeBoong Choi(SKKU)
- P08D08 Stress Categories and Evaluation for Component Supports under Thermal Effects**
Sung Jun Kim, Tae Kyo Kang, Hyun Min Kim, and Taek Sang Choi(KEPCO E&C)
- P08D09 Improvement of C*-integral and Crack Opening Displacement Estimation Equations for Thin-walled Pipes with Circumferential Through-wall Cracks**
Jeong Soon Park and Myung Jo Jhung(KINS)
- P08D10 Fatigue Analysis of Reactor Pressure Vessel Using APDL**
Myung Jo Jhung and Hanok Ko(KINS)
- P08D11 Development of Integrated Head Assembly Design for the Operating WEC-type NPP**
Yeon Ho Cho, Hyun Min Kim, Tae Kyo Kang, Young Ju Kwon, Il Kon Kim, and Taek Sang Choi(KEPCO E&C)
- P08D12 A Polyethylene Moderator Design for Auxiliary Ex-core Neutron Detector**
Hwan-Soo Lee, Ho-Cheol Shin, and Seong-Man Bae(KHNP CRI)

P08D13 The Effect of Early Frost Damage on the Penetration Resistance of Chloride Ion of NPP Concrete

Kyung-Teak Koh, Chun-Jin Park, Si-Hwan Kim, and Gum-Sung Ryu(KICT)

P08D14 An Evaluation Method for the Structural Integrity of a Fillet Welded Plate on a Partially Thinned Pressure Vessel Wall

Hyung-nam Kim, Hyun-ju Yon, and Seung-han Yang(KHNP CRI)

제 8분과 토

원전 건설 및 운영 기술

(Nuclear Power Plant Construction and Operation Technology)

- 원전 건설, 설계/제작 및 경년열화(NPP's Construction, Design, Manufacturing & Aging Management)

좌 장 이정수(JungSoo Lee), 김임동(ImDong Kim)

발표장소 400

일 정 | 5. 18(금)

- 09:00** **Reactor Coolant Loop and Reactor Internals Concurrent Installation of APR1400 : a Feasibility Study**
Seung Wook Lee, Jang Hwan Jheon, Jong Sung Moon, Seung Ha Jeong, and Taek Sang Choi(KEPCO E&C)
- 09:20** **A Deterministic & Probabilistic Economic Analysis for APR+**
Gak-Hyeon Ha, Joong-Soo Yoon, and Cheol-Hwan Oh(KHNP CRI)
- 09:40** **APR+ Design Features in Preparation for External Hazards**
Sung-Hwan Kim, Ilyong Yoo, and Jong bo Lee(KHNP CRI)
- 10:00** **ITAAC Solution for APR1400 NRC Design Certification**
Jin-Kwon Kim and Myoung-Ki Kim(KHNP CRI)
Seong-Jong Oh(KINGS)
- 10:20** **Influence of Large Deformation Repair of Small Partial Penetration Nozzle on ASME Sec.III Evaluation Results**
Hak-sung Lee, Jong-in Kim, and Jin-sun Kim(DOOSAN)
- 10:40** **Coffee Break**
- 11:00** **The Study on the Effects of the PWSCC Mitigation Methods on Degradation Behavior of Steam Generator Tubes Using the Weibull Approach**
One Yoo, J. S. Kim, K. H. Nam, K. S. Yoon, and S. H. Jung(KEPCO E&C)
J. S. Choi and H. Y. Yang(KHNP CRI)
- 11:20** **Corrosion Behavior of Ni-base Alloys in Aqueous Sulfur Solutions at 340°C**
E. H. Lee, K. M. Kim, and D. H. Hur(KAERI)
- 11:40** **Seismic Design Parameters of the APR1400 DC**
Jang Jung-Bum and Yun Kwan-Hee(KEPCO RI)
Oh Seung-Jong(KINGS)
- 12:00** **Aging Management Plan for a Typical Research Reactor**
Mahsa Ebrahimi, Mohammad Nazififard, and Kune Y. Suh(SNU)

Ⅲ. 분과별 논제 및 발표자

제 9 분과 A

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

좌 장 유동한(Donghan YU), 이태준(Tae Joon LEE)

발표장소 400

일 정 | 5. 17(목)

- 09:00 Education and Training in Radiation Protection - Challenges and Way Forward**
Geetha Sadagopan, Youngmi Nam, Hyunkee Kim, and Miyeon Son(KAERI)
- 09:20 Licensing Process for Nuclear Power Plants in India and a Comparative Study with Korea and USA**
Sonal Gandhi(KAIST)
Kwang Sik Choi(KINS)
- 09:40 Prospects for Implementing Multilateral Nuclear Fuel Cycle Mechanism**
Dong Hoon Lee, Jae Soo Ryu, Eunju Jun, Han-Myung Lee, and Kwang Seok Lee(KAERI)
- 10:00 A Study on Establishing National Technology Strategy of Fusion Energy Development: Combining PEST-SWOT Methodologies**
Hansoo CHANG, Won-jae CHOI, Hyunsoo THO, Dong-yup KANG, and In-chung KIM(NFRI)
- 10:20 Prospects for the Competitive Exporting Price of SMART**
Man-ki Lee(KAERI)
Kiho Jeong(KNU)
- 10:40 Coffee Break**
- 11:00 Development and Measurement of the Nuclear Safety Trust Index in Korea**
SeongKyung Cho(MJU)
Yun Hyung Chung(KINS)
- 11:20 Positioning of a Peaceful Use of Nuclear Technology in National Security Aspects**
Hyun Jun KIM, Moon Hee CHANG, Hark Rho KIM, and Young Joon LEE(KAERI)
Sang Heon LEE(KNDU)
- 11:40 Suggestion on Valuation of Implementation of Post-Fukushima Actions to Strengthen Nuclear Safety**
Y.E.Lee(KINS)
- 12:00 Economic Evaluation Methodology Review on KAERI's Recent Projects**
Jinsam Cho and Jeeyoung Kim(KAERI)

제 9 분과 B

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

좌 장 문주현(Joo Hyun Moon), 정환삼(Whan-Sam CHUNG)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P09B01 Development of Integrated Code for Risk Assessment (INCORIA) 3D**
Jeong-ho Lee, Hyun-chul Kim, and Kook Heui Kwon(KINAC)
- P09B02 The Development of Pyro Human Resource Information System**
M.S. Jung, S. K. Kim, and W. I. Ko(KAERI)
- P09B03 Consideration on Interfaces between Safeguards and Physical Protection for a Nuclear Facility**
Jae Gwang Kim(KINAC)
- P09B04 The development of NMA report creator**
Hye-Won Shim(KINAC)
- P09B05 Technical Barriers to Proliferation**
H.L. Chang, W.I. Ko, and H.D. Kim(KAERI)
- P09B06 A Study on Method of Safety Classification about Nuclear Facility**
Won Joon Chang, Young Gill Yune, Jeong Yoo, and Seung-Ho Cho(KINS)
- P09B07 A Study on the Reliability of Nuclear Suppliers Group**
Sun-do Choi, Seung-hyo Yang, and Jae-woong Tae(KINAC)
- P09B08 Study on the Promotion in the Citation of the Nuclear Engineerng and Technology**
Young Choon CHUN, J. B. Yoo, and J.H. Yi(KAERI)
- P09B09 Thoughts on Documentation of Atomic Power Technology**
Jeong Hoon Oh, Hee Won Lee, and Ki Chan Song(KAERI)
- P09B10 Principles for National Inspections under IS Environment**
Seong Youn Jo and Seung Ho Ahn(KINAC)
- P09B11 Organizational Structure in Korea's Nuclear Energy Development**
J.H. Lee and T.J. Lee(KAERI)
- P09B12 SETT Facility of International Nuclear Secarity Academy**
Hyungmin Seo(KINAC)

Ⅲ. 분과별 논제 및 발표자

제9분과 C

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

좌 장 김정민(Jungmin Kang), 최광식(Kwang-sik Choi)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P09C01 Fukushima Accident: Was It Preventable or Unavoidable? - A Sociological Perspective**
Young Sung Choi, Kwang Sik Choi, and Seong-Cheon Kam(KINS)
- P09C02 Analysis of Media Coverage and KINS Communication Activitis on Fukushima Accident**
Lee Ki-Hyung, Hwang Sun-Chul, Yun Yuen-Wha, Lee Gye-Hwi, Jeong Jin-A, Song Hye-Rim, and Yang Cho-Hee(KINS)
- P09C03 Recent Key Issues in New Reactors Licensing Program and APR1400 Design Upgrades**
Kwang-Hong Kim, Seong-Jong Oh, and Moon-Ghu Park(KHNP CRI)
- P09C04 Safety Requirement for Nuclear Logging in Logging While Drilling as an Application of Nuclear Energy in Industrial Facilities; an Overview for the Improvement of Nuclear Energy Regulating Process in Indonesia**
Lilis Susanti Setianingsih(KAIST)
Kwang Sik Choi(KINS)
- P09C05 Effectiveness of Safety Regulations in the Transport of Radioactive Materials in Bangladesh**
Mohammad Abul Hashem Bhuiyan(KAIST)
Kwang Sik Choi(KINS)
- P09C06 Cultivating Safety Culture in Malaysia Nuclear Industries through Education and Training**
Sabariah Kader Ibrahim(KAIST)
Kwang Sik Choi(KINS)
- P09C07 Regulatory Strategy to Control Radon Exposure in Pakistan**
Irfan Younus(KAIST)
Kunwoo Cho(KINS)
- P09C08 The Regulatory Independence of FANR**
Fatema ALNuaimi(KAIST)
Kwang Sik Choi(KINS)
- P09C09 Licensing Process for Nuclear Power Plants in Pakistan and its Comparison with Other Countries**
Javed Iqbal(KAIST)
Kwang Sik Choi(KINS)

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- P09C10 Jordan Reactor of Training and Research (JRTR) Licensing Process and Various Challenges of Nuclear Power Project in Jordan**
Mosab Banisalman(KAIST)
Kwang Sik Choi(KINS)
- P09C11 Enhancing Nuclear Safety Verification Ability for Personnel of Regulatory Body in Vietnam**
Nguyen Hoang Tu(KAIST)
Kwang Sik Choi(KINS)
- P09C12 Key Factors for Nuclear Being Economic after Fukushima**
Myung-Sub Roh and Seo-Yeon Park(KINGS)
- P09C13 A Study on the Nuclear Energy Cooperation Agreement of the India**
Eunju JUN, Jae-Soo RYU, Han-Myung LEE, Kwang-seok LEE, and Dong-Hoon LEE(KAERI)
- P09C14 Analysis on the Retransfer Provisions of the Korea-Japan Nuclear Agreement**
Han-Myung LEE, Jae-Soo RYU, Kwang-Seok LEE, Eunju JUN, and Dong-hoon LEE(KAERI)

Ⅲ. 분과별 논제 및 발표자

제 10 분과 A

원자력계측제어 및 자동원격 (Nuclear I&C and Remote Control)

좌 장 김정택(Jung-Taek Kim), 허균영(GyunYoung Heo)

발표장소 402B

일 정 | 5. 17(목)

- 09:00 On-power Detection of Wall-Thinned Defects Using IR Thermography in NPPs**
Ju Hyun Kim, Jae Hwan Kim, Sim Won Lee, Man Gyun Na, Jin Weon Kim, Hyun Chul Jung, and Kyeong Suk Kim(CSU)
- 09:20 Collaboration Plan for the Development of Diagnostics and Prognostics Methods, and Self-Powered Sensing Techniques for Sustainability of Safety Critical Functions**
Jung-Taek Kim and Seop Hur(KAERI)
Belle R. Upadhyaya(UT)
Sang-Jung Lee(CNU)
- 09:40 Laser Leak Detector for Fuel Channel Closer Plug in PHWR Nuclear Power Plant**
Hyunmin Park, Taek-Soo Kim, Lim Lee, Sung-Uk Lee, Kwang-Hoon KO, and Do-Young Jeong(KAERI)
- 10:00 Performance Improvement of the Core Protection Calculator System (CPCS) by Introducing Optimal Function Sets**
Byung Hee WON, Kyung-O KIM, and Jong Kyung KIM(HYU)
Soon Young KIM(RADCORE Co., Ltd.)
- 10:20 An Integrated Development Tool for a Safety Application Using FBD Language**
Young-Jun Lee, Jang-Soo Lee, and Dong-Young Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 NuDE: Development Environment for Safety-critical Software of Nuclear Power Plant**
Jong-Hoon Lee and Junbeom Yoo(KKU)
- 11:20 Development of Digital MMIS for Research Reactors: Graded Approaches**
Rahman Khalil ur, Jinsoo Shin, and Gyunyoung Heo(KHU)
Hanseong son(JBU)
Youngki Kim, Jaekwan Park, Sangmun Seo, and Yongjun Kim(KAERI)
- 11:40 A Classification Method of Technical Security Controls for Digital I&C Systems in NPPs**
J. G. Song, J. W. Lee, G. Y. Park, K. C. Kwon, D. Y. Lee, and C. K. Lee(KAERI)
- 12:00 Wireless Power System Design for Mobile Robots Used in Nuclear Power Plants**
S. Y. Choi, S. J. Yoo, Kun J. Lee, and C. T. Rim(KAIST)
- 12:20 Sensitivity Analysis of Unavailability of a Component in DPS with Various Fault-Tolerant Techniques**
Bo Gyung Kim, Hyun Gook Kang, Hee-eun Kim, and Poong Hyun Seong(KAIST)
Seung Jun Lee(KAERI)

제 10 분과 B

원자력계측제어 및 자동원격 (Nuclear I&C and Remote Control)-Poster

좌 장 이철권(Cheol-Kwon Lee), 이장수(Jang Soo Lee)

발표장소 3층 로비

일 정 | 5. 17(목) 13:00-15:00

- P10B01 Operators' Recovery Behaviors from Noncompliance under a Simulated Emergency**
Sun Young Choi, Jinkyun Park, and Wondea Jung(KAERI)
- P10B02 A development of HMI Style Guide for STELLA User Interface**
Shin Kwang Hyeon, Lee Yong Hee, and Hwang In Gu(KAERI)
- P10B03 Application of the Decomposition Method to the Design Complexity of Computer-based Display**
Hyoung Ju Kim, Seung Woo Lee, and Poong Hyun Seong(KAIST)
Jin Kyun Park(KAERI)
- P10B04 Pattern Matching Study Using Principal Component Analysis for the Monitoring of Power Plant Transients**
Sangjun Park, Jinsoo Shin, and Gyunyoung Heo(KHU)
Jinkyun Park(KAERI)
- P10B05 Application of Nuclear Application Programs to APR1400 Simulator**
DoHyun Hwang, MyeongSoo Lee, and JinHyuk Hong(KHNP CRI)
- P10B06 Development of a Precise Drilling Machine for a Nuclear Fuel Pellet**
Jintae Hong, Hwang-Young Jeong, Sung-Ho Ahn, and Chang-Young Joung(KAERI)
- P10B07 Development of Hardware and Software for Automated Ultrasonic Testing**
Sung-Nam Choi, Hee-long Lee, and Seung-Ok Yang(KHNP CRI)
- P10B08 Communication Board Design to Satisfy the Communication Independence in Safety I&C System**
Kwang-Il Jeong, Jong-Yong Keum, Yong-Suk Suh, and Je-Yun Park(KAERI)
- P10B09 A Development of Mass Estimation Tools Based on Pre-operation Test for the Loose Part Monitoring System of OPR-1000**
Seonjae KIM, Myung Jo Jhung, and Yong-beum KIM(KINS)
Yong-Gil LEE(KHNP)
- P10B10 Worst-case Execution Time Analysis of SCOPS Modules Based on Software Analysis Model**
Jong Yong Keum, Yong Suk Suh, Joon Ku Lee, Gwi Sook Jang, and Je Yun Park(KAERI)
Yong Jin Seo and Hyeon Soo Kim(CNU)
- P10B11 Radiation Dose-rate Extraction from the Camera Image of Quince 2 Robot System Using Optical Character Recognition**
Jai Wan Cho and Kyung Min Jeong(KAERI)

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- P10B12 Development of a Simulator for Verifying the Design Changes of Large Steam Turbines**
Jin-sik Kim and Gyunyoung Heo(KHU)
Bum-shin Kim and Woo-sung Choi(KEPCO RI)
- P10B13 On-line High Dose-rate Gamma Ray Irradiation Test of the CCD/CMOS Cameras**
Jai Wan Cho and Kyung Min Jeong(KAERI)
- P10B14 System for Steam Leak Detection by Using CCTV Camera**
Young-Chul Choi, Min-Soo Lee, and Hui-Ju Choi(KAERI)
Ki-Sung Son and Hyeong-Seop Jeon(Sae-an ENG.)
- P10B15 Design of Communication System in Conventional Facilities for the Proton Accelerator Research Center**
Sung Sik Park, Jun Yeon Kim, Sung Won Cho, Kyeong-Jun Mun, Jin Sam Cho, Gyo Po Jeon, Yi Sub Min, Jung Min Nam, Hoi Won Jung, Youg-Gu Han, and Jeong Hee Jo(KAERI)

제 10 분과 C

원자력계측제어 및 자동원격 (Nuclear I&C and Remote Control)

좌 장 박재윤(Je Yun Park), 서용석(Yong Suk Suh)

발표장소 402B

일 정 | 5. 18(금)

- 09:00 Analysis of One IHX Isolation Event of a Sodium-cooled Fast Reactor**
Seung-Hwan SEONG, Dong-Hoon Kim, Kwang-Seop Son, Gwi-Sook Jang, Kwang-Il Jeong, and Jong-Yong Keum(KAERI)
- 09:20 Co Simulation of Multi-body Dynamics and Fluid Flow for Valve Design in Nuclear Power Plant**
Dae yong Shin and Charn jung Kim(SNU)
Jung hee Lee(SGU)
Jae hyung Kim(KIMM)
- 09:40 Simulation of Valve Operation for Flow Interrupt Test in Nuclear Power Plant**
Jae hyung Kim(KIMM)
Dae yong Shin, Dong woo Shin, and Charn jung Kim(SNU)
Jung hee Lee(SGU)
- 10:00 Quantitative Estimation for the Effectiveness of Automation**
Seung Min Lee and Poong Hyun Seong(KAIST)
- 10:20 A Method and Support Tool for the Analysis of Human Error Hazards in Digital Devices**
Yong-Hee Lee, Seon-Soo Kim, and Yonghee Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 Verbal Communication Quality Analysis of Human Operators in Main Control Room**
Seunghwan Kim and Jinkyun Park(KAERI)
- 11:20 Preparedness of Operation Teams' Non-technical Skills in a Main Control Room of Nuclear Power Plants to Manage Emergency Situations**
Ho Bin Yim, Ar Ryum Kim, and Poong Hyun Seong(KAIST)
- 11:40 Design of a Control Room for Jordan Research & Training Reactor(JRTR)**
Kim Yong-Jun, Suh Sang-Moon, Lee Hyun-Chul, and Park Je-Yun(KAERI)
- 12:00 A Study on UAE Cultural Effects on Nuclear Power Plant (NPP) Operation**
Inseok Jang, Poonghyun Seong, and Hyungook Kang(KAIST)
- 12:20 A Human Reliability Evaluation Tool for Main Control Rooms in Nuclear Power Plants**
Seung Jun Lee, Jaewhan Kim, and Wondae Jung(KAERI)