

KOREAN NUCLEAR SOCIETY

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|일 정| 2014. 10. 29(수) ~10. 31(금)

|장 소| 보광 휘닉스파크

2014 추계학술발표회



사단법인 한국원자력학회
KOREAN NUCLEAR SOCIETY

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❖ 전체 행사일정표

▶ 등록 및 접수

- 10.29(수) 12:30 ~ 17:30 호텔, 2층 로비 및 휘닉스빌 유스호텔, 2층 로비
- 10.30(목) 08:30 ~ 17:30/10.31(금) 08:30 ~ 16:00 호텔, 2층 로비 (*호텔 동에서만 운영)

| 건물명 | 회의장명 | 10. 29(수) | | 10. 30(목) | | 10. 31(금) | |
|-------------|--------|---|-------------|--|----------------------------|--|----------------------------|
| 호텔 2층 | 휘닉스볼룸Ⅰ | (N)사용후핵연료 현안에 관련된 워크숍 -국가 사용후핵연료 관리 현안 논의- | 13:30~18:10 | • 5(A)원자력열수력 및 안전 구두발표 • 제47회 정기총회 및 특별강연(Ⅰ~Ⅲ) | 09:00~12:40 15:00~18:30 | • 5(G)원자력열수력 및 안전 구두발표 | 09:00~12:40 |
| 호텔 2층 | 휘닉스볼룸Ⅱ | (D)국내 중대사고 연구 현황 및 향후 과제 | 13:00~18:30 | • 5(B)원자력열수력 및 안전 구두발표 • 제47회 정기총회 및 특별강연(Ⅰ~Ⅲ) | 09:00~12:40 15:00~18:30 | • 5(H)원자력열수력 및 안전 구두발표 | 09:00~12:20 |
| 호텔 2층 | 휘닉스볼룸Ⅲ | (M)열수력·안전 미래전략 특별위원회 미래전략 보고 | 13:30~17:30 | • 4(A)핵연료 및 원자력재료 구두발표 • 제47회 정기총회 및 특별강연(Ⅰ~Ⅲ) | 09:00~12:20 15:00~18:30 | • 5(I)원자력열수력 및 안전 구두발표 | 09:00~12:40 |
| 호텔 2층 | 다이아몬드Ⅰ | (J)원자력의 재도약을 위한 진단과 제언 | 13:00~17:30 | • 포스터발표(1분과~10분과) | 13:00~15:00 | • 4(B)핵연료 및 원자력재료 구두발표 | 09:00~12:00 |
| 호텔 2층 | 다이아몬드Ⅱ | (K)디지털 MMIS 국산화 이후 발전방향 | 14:00~18:00 | | | • (SA)학생/청년 Competition Session | 13:30~17:10 |
| 호텔 2층 | 에메랄드 | (G)데이터 기반 원전 건설관리체계 기술개발 현황 및 전망 | 13:00~18:00 | • 1(A)원자로시스템기술 구두발표 • 원자로시스템기술 연구부회 모임 | 09:00~12:00 13:30~14:30 | • 1(B)원자로시스템기술 구두발표 • (SC)학생/청년 Competition Session | 09:00~12:20 13:30~16:50 |
| 호텔 2층 | 루비Ⅰ | (C)미래 원자력 구조재료 연구 및 개발 현황 | 13:00~18:00 | • 9(A)원자력정책, 인력 및 협력 구두발표 • 원자력정책, 인력 및 협력 연구부회 모임 | 09:00~12:40 13:30~14:30 | • 5(J)원자력열수력 및 안전 구두발표 | 09:00~12:20 |
| 호텔 2층 | 루비Ⅱ | | | • 7(A)양자공학 및 핵융합기술 구두발표 • 양자공학 및 핵융합기술 연구부회 모임 | 09:00~12:20 13:30~14:30 | | |
| 호텔 3층 | 토파즈Ⅰ | (H)원자력기술 발전 방안(NU-Tech 2030) 추진(안) Workshop | 13:00~18:00 | • 8(A)원전건설 및 운영기술 구두발표 • 원전건설 및 운영기술 연구부회 모임 | 09:00~12:00 13:30~14:30 | • 8(B)원전건설 및 운영기술 구두발표 | 09:00~12:00 |
| 호텔 3층 | 토파즈Ⅱ | | | • 10(A)원자력계측제어 및 자동원격 구두발표 • 원자력계측제어 및 자동원격 연구부회 모임 | 09:00~12:40 13:30~14:30 | • 8(C)원전건설 및 운영기술 구두발표 | 09:00~11:40 |
| 호텔 3층 | 토파즈Ⅲ | | | • 3(A)방사성폐기물관리 구두발표 • 방사성폐기물관리 연구부회 모임 | 09:00~12:00 13:30~14:30 | - | - |
| 호텔 3층 | 오팔 | - | - | • 핵연료 및 원자력재료 연구부회 모임 | 13:30~14:30 | - | - |
| 호텔 1층 | 자스미나 | - | - | • 제70차 평의회 • 원자력열수력 및 안전 연구부회 모임 | 11:30~13:00 13:30~14:30 | - | - |
| 스키하우스 2층 | 스피넬Ⅰ | (I)원자력 인력양성의 효율화 방안 | 13:30~18:00 | • 2(A)원자로물리 및 계산과학 구두발표 • 원자력물리 및 계산과학 연구부회 모임 | 09:00~12:20 13:30~14:30 | • 6(C)방사선 이용 및 방호 구두발표 | 09:00~12:00 |
| 스키하우스 2층 | 스피넬Ⅱ | (B)원자로물리 현장 적용의 실제와 현안 | 13:30~17:30 | • 2(B)원자로물리 및 계산과학 구두발표 | 09:00~12:20 | • 2(C)원자로물리 및 계산과학 구두발표 | 09:00~12:20 |
| 휘닉스빌 유스호텔2층 | 벌개미취Ⅰ | (A)미래원자력시스템 공동연구 현황 및 국내 추진방안 | 10:00~18:00 | • 6(A)방사선 이용 및 방호 구두발표 • 방사선 이용 및 방호 연구부회 모임 | 09:00~12:40 13:30~14:30 | - | - |
| 휘닉스빌 유스호텔2층 | 벌개미취Ⅱ | (E)중성자 과학의 현재와 미래 | 13:00~18:10 | • 6(B)방사선 이용 및 방호 구두발표 | 09:00~12:40 | - | - |
| 휘닉스빌 유스호텔2층 | 벌개미취Ⅲ | (F)방사성동위원소 기화와 도전(II) | 13:30~18:00 | - | - | - | - |
| 휘닉스빌 유스호텔2층 | 금낭화 | (L)해양원자력 시스템의 비즈니스 모델 | 14:00~18:00 | - | - | - | - |
| 휘닉스빌 유스호텔2층 | 얼레지 | (원자력계 원로워크숍) 국제기구 IAEA 및 NEA의 원자력 안전정책 현황 | 17:00~19:00 | - | - | - | - |
| 스키하우스1층 | 푸드팰리스 | - | - | • 참가자 중식장소 • 참가자 만찬장소 | 12:00~13:30 18:30~19:30 | • 참가자 중식장소 | 12:00~13:30 |

I. 행사일정 안내

❖ 연구부회 워크숍 [10월 29일(수)]

| 코드 | 워크숍명 | 일정 | 참가비 |
|----|---|-------------|-----------|
| A | 미래원자력시스템 공동연구 현황 및 국내 추진방안 | 10:00~18:00 | □ 20,000원 |
| B | 원자로물리 현장 적용의 실제와 현안 | 13:30~17:30 | □ 무료 |
| C | 미래 원자력 구조재료 연구 및 개발 현황 | 13:00~18:00 | □ 50,000원 |
| D | 국내 중대사고 연구 현황 및 향후 과제 | 13:00~18:30 | □ 50,000원 |
| E | 중성자 과학의 현재와 미래 | 13:00~18:10 | □ 무료 |
| F | 방사성동위원소 기회와 도전(II) | 13:30~18:00 | □ 무료 |
| G | 데이터 기반 원전 건설관리체계 개발 현황 및 전망 | 13:00~18:00 | □ 30,000원 |
| H | 원자력기술발전방안(Nu-Tech 2030) 추진(안) Workshop | 13:00~18:00 | □ 무료 |
| I | 원자력 인력양성의 효율화 방안 | 13:30~18:00 | □ 무료 |
| J | 원자력의 재도약을 위한 진단과 제언 | 13:00~17:30 | □ 50,000원 |
| K | 디지털 MMIS 국산화 이후 발전방향 | 14:00~18:00 | □ 40,000원 |
| L | 해양원자력 시스템의 비즈니스 모델 | 14:00~18:00 | □ 50,000원 |
| M | 열수력·안전 미래전략 특별위원회 미래전략 보고 | 13:30~17:30 | □ 30,000원 |
| N | 사용후핵연료 현안에 관련된 워크숍 -국가 사용후핵연료 관리 현안 논의- | 13:30~18:10 | □ 무료 |
| * | (원자력계 원로워크숍) 국제기구 IAEA 및 NEA의 원자력 안전정책 현황 | 17:00~19:00 | □ 무료 |
| * | 2014년도 청년지부 총회 | 18:00~20:00 | |

❖ 제47회 정기총회 및 학술발표회

| 10월 30일(목) | 10월 31일(금) |
|---|---------------------------------|
| 08:30 등록 및 접수 | 09:00 분과별 학술발표 |
| 09:00 분과별 학술발표 | 10:40 Coffee Break |
| 10:40 Coffee Break | 11:00 분과별 학술발표 |
| 11:00 분과별 학술발표 | 12:00 중식 |
| 11:30 평의원회 | 13:30 학생/청년 Competition Session |
| 12:00 중식 | |
| 13:00 분과별 포스터발표 | |
| 13:30 연구부회 모임 | |
| 15:00 제47회 정기총회 및 각종 시상식 | |
| • 국민의례 | |
| • 개회사: 장문희 학회장 | |
| • 축 사: 민병주 국회의원 | |
| • 제47회 정기총회 | |
| • 공로패 및 감사패 증정 | |
| • 위촉장 증정 | |
| • 퀴리상, 청년/학생 Competition Session, 학술발표회/학회지우수논문상, 학회지발전기여상, 학술상, 기술상, 두산원자력기술상, HANA기술상, 한국원자력대상 시상 | |
| 16:45 휴 식 | |
| 17:00 특별강연(I) | |
| 17:40 특별강연(II) | |
| 18:30 만찬 | |

❖ 특별강연

- [I] 에너지, 여건의 변화와 정책 방향 손양훈(에너지경제연구원 원장)
 [II] 명량, 이순신, 임진왜란, 그리고 역사적 교훈 한명기(명지대학교 사학과 교수)

❖ 등록비

| 구 분 | 사전등록(마감: '14.10.15) | 현장등록 |
|--------|---------------------|----------|
| 학생 | 50,000원 | 50,000원 |
| 정/평생회원 | 100,000원 | 120,000원 |
| 비회원 | 120,000원 | 140,000원 |

II. 워크숍 안내

A 미래원자력시스템 공동연구 현황 및 국내 추진방안

- 일 시 : 2014년 10월 29일(수) 10:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 휘닉스빌 유스호스텔 2층, 별개미취 1
- 주 최 : 한국원자력학회 원자로시스템기술 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|---|
| 10:00~10:30 | 제4세대원자로국제포럼(GIF) 추진현황 및 전망, 한도희(KAERI) |
| 10:30~11:00 | 소듐냉각고속로(SFR), 김영일(KAERI) |
| 11:00~11:30 | 초고온가스로(VHTR), 김민환(KAERI) |
| 11:30~12:00 | 안전성 평가그룹(RSWG), 한상훈(KAERI) |
| 12:00~12:30 | SFR 안전설계요건(SDC) TF, 이태호(KAERI) |
| 12:30~14:30 | 중식 및 휴식 |
| 14:30~14:50 | 소듐냉각고속로-파이로 중장기연구 사전점검 결과보고, 황주호(경희대) |
| 14:50~15:30 | 해외의 미래원자력시스템 연구현황 - I, 변철호(교토대) |
| 15:30~16:10 | 해외의 미래원자력시스템 연구현황 - II, Zhimin Dai(Chinese Academy of Sciences) |
| 16:10~16:30 | Coffee Break |
| 16:30~16:50 | 국내 미래원자력시스템 R&D 현안, 송종순(조선대) |
| 16:50~18:00 | 패널토의 (다양한 미래원자력시스템의 균형적 R&D 방안) |

• 기타사항

등록비 : 20,000원 (중식/석식 제공, 사전등록한 학생회원에 한하여 무료)

문의처 : 오전 : 최종민 / 한국원자력협력재단 / 042-867-0193 / jmchoi@konicof.or.kr

오후 : 허균영 / 경희대학교 / 031-201-3593 / gheo@khu.ac.kr

II. 워크숍 안내

B 원자로물리 현장 적용의 실제와 현안

- 일 시 : 2014년 10월 29일(수) 13:30 ~ 17:30
- 장 소 : 보광 휘닉스파크, 스키하우스 2층, 스피넬II
- 주 최 : 한국원자력학회 원자로물리 및 계산과학 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|--|
| 13:30~14:00 | 노심핵설계코드 개발과 적용, 박상원(KNF) |
| 14:00~14:30 | Equivalent correction of resonance upscattering in ASTRA, 박찬오(KNF) |
| 14:30~15:00 | 노심시뮬레이터 이용 노물리시험교육, 신호철(KHNP-CRI) |
| 15:00~15:15 | 휴식 |
| 15:15~15:45 | 연구로의 안전해석 입력자료 평가, 박창제(세종대) |
| 15:45~16:15 | 초고온가스로 노물리 해석 코드 개발, 이현철(KAERI) |
| 16:15~16:30 | 휴식 |
| 16:30~17:00 | 초장주기 고속로 설계, 이덕중(UNIST) |
| 17:00~17:30 | 블랭킷 사용 소듐 핵변환로 노심설계, 홍서기(KHU) |

• 기타사항

등록비 : 무료 (저녁 식사 제공)

문의처 : 주한규 / 서울대학교 / 010-5108-9241 / joohan@snu.ac.kr

㉔ 미래 원자력 구조재료 연구 및 개발 현황

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 호텔 2층, 루비(I+II)
- 주 최 : 한국원자력학회 핵연료 및 원자력재료 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|---|
| 13:00~13:30 | 등록 |
| 13:30~13:40 | 환영사 : 이찬복 (KAERI) |
| | Session I : Gas-Cooled Reactor Materials (좌장: 장진성) |
| 13:40~14:10 | HTGR 용 고온구조재료 개발 동향 - 박지연 (KAERI) |
| 14:10~14:40 | Oxidation Resistant Ni-base Alloy Development - 유영수 (KIMS) |
| 14:40~15:10 | 미래 원자력용 세라믹 복합재료 연구개발 현황 - 김원주 (KAERI) |
| 15:10~15:40 | 초임계이산화탄소 환경에서의 구조재료 양립성평가 - 장창희 (KAIST) |
| 15:40~16:00 | 휴식 |
| | Session II : Liquid Metal-Cooled Reactor Materials (좌장: 장창희) |
| 16:00~16:30 | SFR 금속연료 피복관 개발 현황 - 김준환 (KAERI) |
| 16:30~17:00 | Materials Corrosion in Pb-Bi environment - 박병기 (순천향대)/황일순 (SNU) |
| 17:00~17:30 | 미래 원자력용 산화물분산강화 합금 개발 현황 - 장진성 (KAERI) |
| 17:30~17:50 | Discussion & Wrap-up |
| 17:50~ | Dinner |

• 기타사항

등록비 : 50,000원 (발표집 및 저녁 식사 제공)

문의처 : 천영범 / KAERI / 042-868-4571 / youngbumchun@kaeri.re.kr

II. 워크숍 안내

㉔ 국내 중대사고 연구 현황 및 향후 과제

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 18:30
- 장 소 : 보광 휘닉스파크, 호텔 2층, 휘닉스 볼룸 II
- 주 최 : 한국원자력학회 원자력 열수력 및 안전 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|---|
| 13:00~13:20 | 등록 |
| 13:20~13:30 | 인사말 |
| 13:30~14:00 | 노심용융물 냉각성능 확보 기술 개발, 김환열, 한국원자력연구원 |
| 14:00~14:30 | 격납건물 건전성 확보 기술 개발, 홍성완, 한국원자력연구원 |
| 14:30~15:00 | 중대사고시 폭발위해도 해석 및 저감 기술 개발, 방광현, 한국해양대학교 |
| 15:00~15:30 | 중대사고 종합 해석 코드 개발, 김형택, 한국수력원자력 |
| | 휴식 |
| 15:45~16:15 | 격납건물 여과배기 설비 개발, 이병철, 미래와 도전 |
| 16:15~16:45 | 원전사고대응 안전연구센터 연구현황, 박현선, 포항공과대학교 |
| 16:45~17:15 | 중대사고 규제 기술 개발 현황, 김한철, 한국원자력안전기술원 |
| | 휴식 |
| 17:30~18:30 | 패널 토의, 사회, 송진호, 한국원자력연구원 |

• 기타사항

등록비 : 50,000원 (저녁 식사 제공)

문의처 : 김환열 / 한국원자력연구원 / 042-868-8946 / hykim1@kaeri.re.kr

E 중성자 과학의 현재와 미래

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 18:10
- 장 소 : 보광 휘닉스파크, 휘닉스빌 유스호스텔 2층, 별개미취 II
- 주 최 : 한국원자력학회 방사선이용 및 방호 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|--|
| 13:00~13:30 | 등록 |
| | 사회 : 이창희(중성자이용 전문위원장) |
| 13:30~13:35 | 인사말 : 김교윤 (방사선이용 및 방호 연구부회장) |
| 13:35~13:40 | 환영사 : 임인철 (한국원자력연구원 하나로이용연구본부장) |
| 13:40~13:45 | 축 사 : 문주현 (한국연구재단 원자력단장) |
| | 좌장 : 성백석(한국원자력연구원) |
| 13:45~14:00 | 하나로 중성자 산란 시설과 이용 현황 이창희(한국원자력연구원) |
| 14:00~14:10 | 하나로 중성자 산란시설 이용 통계 한영수(한국원자력연구원) |
| 14:10~14:35 | 에너지저장 재료에서 중성자 회절과 원자레벨 분석의 조합 정성운(KAIST) |
| 14:35~15:00 | 산업용 공학재료의 중성자 빔 이용 연구 성과 우완측(한국원자력연구원) |
| 15:00~15:25 | Coffee Break |
| | 좌장 : 박성균(부산대학교) |
| 15:25~15:50 | 원자력/나노소재 분야 연구 성과 및 향후 전망 한영수(한국원자력연구원) |
| 15:50~16:15 | 중성자 산란을 이용한 기능성 자성 물질의 연구 정재호(고려대학교) |
| 16:15~16:40 | 세계 중성자산란 학회(ICNS2017)의 유치에 따른 기회와 도전 최성민(KAIST) |
| 16:40~17:00 | Coffee Break |
| | 패널 사회 : 박승일(한국원자력연구원) |
| 17:00~18:00 | ‘국가 중성자 과학의 새로운 도약을 위한 전략’ 토의 김만원(GIST/KAIST), 이기봉(POSTECH), 홍경태(KIST), 최성민(KAIST), 이창희(한국원자력연구원) |
| 18:00~18:10 | 맺음말 : 최성민(KAIST) |
| 18:30~ | 만찬 |

• 기타사항

등록비 : 무료 (저녁 식사 제공)

문의처 : 박승일 / 한국원자력연구원 / 042-868-8444 / jmspark@kaeri.re.kr

II. 워크숍 안내

F 방사성동위원소 기회와 도전(II)

- 국가 거대 연구시설 기반 RI 개발 체계 논의 -

- 일 시 : 2014년 10월 29일(수) 13:30 ~ 18:00
- 장 소 : 보광 휘닉스파크, 휘닉스빌 유스호스텔 2층, 별개미취III
- 주 최 : 한국원자력학회 방사선이용 및 방호 연구부회, 한국원자력연구원
- 일 정

| 일 정 | 내 용 |
|-------------------------|---|
| 13:30~14:00 | 등록 |
| 좌장 : 이준식(방사성동위원소 전문위원장) | |
| 14:00~14:10 | 인사말 : 김교윤(방사선이용 및 방호 연구부회장) |
| 14:10~14:20 | 환영사 : 임인철(한국원자력연구원 하나로이용연구본부장) |
| 14:20~14:30 | 축 사 : 문주현(한국연구재단 원자력단장) |
| 14:30~15:00 | 국가 RI 생산과 이용 연구 활성화 이준식(한국원자력연구원) |
| 15:00~15:30 | 원자로 · 가속기 RI 핵종 생산기술 양승대(한국원자력연구원) |
| 15:30~16:00 | 동위원소 의료, 과학 및 산업기기 제품화 기술 김상욱(동국대학교) |
| 16:00~16:30 | RI 영상과 테라노스틱스의 현황과 미래 양승오(동남권원자력의학원) |
| 16:30~17:00 | Coffee Break |
| 패널 사회 : 김용균(한양대학교) | |
| 17:00~18:00 | 'RI 생산 및 이용분야 연계 발전 방향' 토의 김용균, 김일한, 박찬일, 박태진, 신숙정, 예성준, 이기홍, 조용섭, 지대윤 |
| 18:00 ~ | 만찬 |

• 기타사항

등록비 : 무료 (저녁 식사 제공)

문의처 : 최강혁 / 한국원자력연구원 / 042-868-4643 / khchoi@kaeri.re.kr

김진주 / 한국원자력연구원 / 042-868-4679 / jinjookim@kaeri.re.kr

G 데이터 기반 원전건설관리체계 개발 현황 및 전망

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 호텔 2층, 에메랄드
- 주 최 : 한국원자력학회 원전건설 및 운영기술 연구부회, 한수원 중앙연구원
- 후 원 : 한국전력기술, 한전KDN
- 일 정

| 일 정 | 내 용 |
|---|--|
| 13:00~13:20 | 등록 |
| 사회 : 한수원 중앙연구원 문병석 부장 | |
| 13:20~13:30 | 환영사(원자력학회 원전건설 및 운영기술 연구부회장 정대울) |
| 13:30~13:40 | 격려사(한국수력원자력 건설본부장 김동수) |
| Session 1 건설관리체계 및 설계 (좌장 : 한수원 중앙연구원 이재경 그룹장) | |
| 13:40~14:10 | 원전 건설관리 선진화 기술개발 추진 현황 (문병석, 한수원중앙연구원) |
| 14:10~14:40 | 프로세스기반의 원전건설 사업관리체계 개발 현황 (노승만, 한전KDN) |
| 14:40~15:10 | 데이터 기반 설계통합시스템 개발 추진 현황 (정경화, 한국전력기술) |
| 15:10~15:30 | 휴식 |
| Session 2 형상관리 및 통합정보관리 (좌장 : 한국과학기술원 한순흥 교수) | |
| 15:30~16:00 | 원전 생애주기 통합화/자동화 기술개발 추진 현황 (조윤상, 한수원중앙연구원) |
| 16:00~16:30 | 형상관리/통합정보관리시스템 개발 현황 (안경익, 부품디비) |
| 16:30~17:00 | 패널토론 (사회 : 한수원 중앙연구원 플랜트건설기술연구소장 정대울) |
| 17:00~18:00 | 특별강연 |

• 기타사항

등록비 : 30,000원 (발표자료집, 기념품 제공)

문의처 : 김성수 / 한수원 중앙연구원 / 010-2603-4484 / Kiss1234@khnp.co.kr

박항순 / 한수원 중앙연구원 / 010-2618-8117 / hspark@khnp.co.kr

II. 워크숍 안내

H 원자력기술발전방안(Nu-Tech 2030) 추진(안) Workshop

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 호텔 3층, 토파즈(Ⅰ+Ⅱ+Ⅲ)
- 주 최 : 한국원자력학회 원전건설 및 운영기술 연구부회/한국에너지기술평가원

- 일 정

| 일 정 | 내 용 |
|-------------|-------------------------------------|
| 13:00~13:10 | 인사말(KETEP) |
| 13:05~13:10 | 격려사 : 성풍현 (한국원자력학회 수석부회장) |
| 13:10~13:40 | 특강 : 한국형 원자력 안전 경영 (권동일, 서울대) |
| 13:40~14:00 | 휴식 |
| 14:00~14:20 | Nu-Tech 2030 추진 배경 및 현황(염학기, KETEP) |
| 14:20~14:40 | 운영원전 안전 최우선(김윤재, 고려대) |
| 14:40~15:00 | 수출원전 경쟁력강화(김군태, KINS) |
| 15:00~15:20 | 휴식 |
| 15:20~15:40 | 원전 사후관리(이병식, KEPCO-E&C) |
| 15:40~16:00 | 원전산업 생태계 활성화(이재설, 기자재협회) |
| 16:00~16:20 | 원전산업 전문인력 양성(정범진, 경희대) |
| 16:20~16:40 | 휴식 |
| 16:40~18:00 | 패널토론(사회 : 권동일, 패널 : PD & 발표자) |

• 기타사항

등록비 : 무료 (식사 제공 없음)

문의처 : 권지현 / KETEP / 02-3469-8385 / jhkwon@ketep.re.kr

❶ 원자력 인력양성의 효율화 방안

- 일 시 : 2014년 10월 29일(수) 13:30 ~ 18:00
- 장 소 : 보광 휘닉스파크, 스키하우스 2층, 스피넬 1
- 주 최 : 한국원자력학회 원자력정책, 인력 및 협력 연구부회, 교육협력협의회
- 일 정

| 일 정 | 내 용 |
|-------------|---|
| 13:30~13:35 | 개회사 (일정안내 및 참가자 소개) |
| 13:35~13:40 | 축사 |
| 13:40~14:10 | 프랑스 원자력인력양성 정책 현안 및 과제 : 원자력 인력양성 네트워크를 통한 지식관리 사례 (Yves Fanjas, I2EN 원장) |
| 14:10~14:40 | 일본 원자력인력양성 정책 현안 및 과제 : 원자력 인력양성 네트워크를 통한 지식관리 사례 (Keiko Kito, 일본원자력산업회의 부장) |
| 14:40~15:10 | 중국 원전운영사 인력양성 및 지식관리 현안 : 국가핵전기기술공사(SNPTC) 사례 (LIU Jianwei, 연구계획원 인력양성국 부국장) |
| 15:10~15:40 | 원자력 발전도입에 있어 해외인력 관리방안 : KHNP UAE 원전건설 인력양성 지원 사례 (조정래 부장, 글로벌교육센터한국수력원자력(주)) |
| 15:40~16:00 | Coffee Break |
| 16:00~16:30 | 원자력 연구기관의 체계적 지식관리 방안 : KAERI 기술기록사업 추진 사례 (송기찬 박사, KAERI 핵주기공정개발부) |
| 16:30~17:00 | 원자력 안전규제기관의 체계적 인력관리 방안 : 주제 미정 (조승호 팀장, KINS 교육운영팀) |
| 17:00~17:30 | 원자력 공급업체의 체계적 인력관리 방안 : 수출형 원전을 위한 정비인력양성계획 (박영재 차장, 한전KPS) |
| 17:30~18:00 | 원자력 미래연구자 인력양성 및 관리방안 : 한국원자력청년지부(KYGN) 사례 (김형대 교수, 경희대 원자력공학과) |

• 기타사항

등록비 : 무료 (식사 제공하지 않음)

문의처 : 유세종 / 한국원자력협력재단 / 042-867-0169 / sjyoo@konicof.or.kr

II. 워크숍 안내

J 원자력의 재도약을 위한 진단과 제언

- 일 시 : 2014년 10월 29일(수) 13:00 ~ 17:30
- 장 소 : 보광 휘닉스파크, 호텔 2층, 다이아몬드 I
- 주 최 : 한국원자력학회 원자력정책 인력 및 협력 연구부회
- 일 정

| 일 정 | 내 용 | |
|----------------|---|-------------------------|
| 13:00~13:10 | 개회 : 김군태 (원자력정책 인력 및 협력 연구부회장) 격려사 : 장문희 (원자력학회회장) | 사회 : 이영일(KINS) |
| 주 제 발 표 | | |
| 13:10~13:30 | 원자력계의 위기와 과제 | 황주호(경희대) |
| 13:30~13:50 | 원자력분야의 기술적·제도적 문제점 및 도전과제 | 김현준(KAERI) |
| 13:50~14:10 | 원자력 재도약을 위한 정부의 역할 | 김광암(NSSC) |
| 14:10~14:30 | 원자력 산업계의 자성과 향후 나아갈 방향 | 김병섭(前KHNP) |
| 14:30~14:40 | Coffee Break | |
| 14:40~15:00 | 원자력 연구개발의 문제점 및 개선방안 | 문주현(연구재단) |
| 15:00~15:20 | 원자력 산업계의 비판에 대한 수용과 개선 노력 | 양창호(KHNP) |
| 15:20~15:40 | 원자력의 재도약을 위한 규제기관의 역할 | 하종태(KINS) |
| 15:40~15:50 | Coffee Break | |
| 패 널 토 의 | | |
| 15:50~17:10 | 주제발표자 | 좌장 : 노태선 (KNS정책연구소장) |
| 17:10~ | 만찬 | 장소 추후 공지 |

• 기타사항

등록비 : 50,000원 (발표집 및 만찬 제공) * 원로 및 학생회원 면제
문의처 : 이영일 / KINS / 042-868-0886 / yelee@kins.re.kr

Ⓚ 디지털 MMIS 국산화 이후 발전방향

- 일 시 : 2014년 10월 29일(수) 14:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 호텔 2층, 다이아몬드II
- 주 최 : 한국원자력학회 원자력 계측제어 및 자동원격 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------|--|
| 14:00~14:10 | 개회 좌장 오승록 교수(단국대) |
| 14:10~14:50 | (MMIS 디지털 이후 현안기술) CCF 대응설계 현황 및 추진방안, 정기훈 부장(KEPCO-ENC) |
| 14:50~15:30 | (MMIS 디지털 이후 현안기술) 사이버보안 대응기술 개발 추진방안, 이철권 책임(KAERI) |
| 15:30~15:45 | Coffee break |
| 15:45~16:20 | (미래 MMIS R&D 방향) 운전지원 관점, 허균영 교수(경희대) |
| 16:20~16:55 | (미래 MMIS R&D 방향) 중대사고 대응 관점, 김정택 책임(KAERI) |
| 16:55~17:30 | (미래 MMIS R&D 방향) 인간공학 관점, 정연섭 팀장(한수원 CRI) |
| 17:30~18:00 | Discussion |
| 18:30~20:00 | 만찬 |

• 기타사항

등록비 : 40,000원 (저녁 식사 제공)

문의처 : 이동영 / KAERI / 042-868-2927 / dylee2@kaeri.re.kr

II. 워크숍 안내

● 해양원자력 시스템의 비즈니스 모델

- 일 시 : 2014년 10월 29일(수) 14:00 ~ 18:00
- 장 소 : 보광 휘닉스파크, 휘닉스빌 유스호스텔 2층, 금남화
- 주 최 : 한국원자력학회 해양-원자력 공동위원회

• 일 정

| 일 정 | 내 용 |
|-------------|-------------------------------------|
| 14:00~14:30 | 등록 |
| 14:30~14:40 | 축사, 박군철, 한국전력 국제원자력대학원대학교 |
| 14:40~15:00 | 저개발국 지원방안으로서 해양원자력시스템, 한순흥, 한국과학기술원 |
| 15:00~15:20 | 소형모듈원전과 해양원자력시스템, 이광원, (주) 한국전력기술 |
| 15:20~15:40 | 휴식 |
| 15:40~16:00 | 착저식 해양원자력시스템 비즈니스 모델, 이필승, 한국과학기술원 |
| 16:00~16:20 | 부유식 해양원자력시스템 비즈니스 모델, 박성환, 한국기계연구원 |
| 16:20~16:40 | 원자력 동력선 비즈니스 모델, 김지호, 한국원자력연구원 |
| 16:40~17:00 | 휴식 |
| 17:00~18:00 | 패널토론 |
| 18:00~ | 저녁식사 |

• 기타사항

등록비 : 50,000원 (저녁 식사 제공)

문의처 : 이정익 / 한국과학기술원 / 042-350-3829 / jeongiklee@kaist.ac.kr

M 열수력·안전 미래전략 특별위원회의 미래전략 보고

- 일 시 : 2014년 10월 29일(수) 13:30 ~ 17:30
- 장 소 : 보광 휘닉스파크, 호텔 2층, 휘닉스볼룸 III
- 주 최 : 한국원자력학회 원자력 열수력·안전 미래전략 특별위원회

• 일 정

| 일 정 | 내 용 |
|-------------|---------------------------------------|
| 13:00~13:30 | 등록 |
| 13:30~13:35 | 개회 및 인사말, 위원장 (노희천, KAIST) |
| 13:35~13:40 | 축사 |
| 13:40~14:10 | 미래전략 특별위원회 활동경과 보고, 부위원장 (송철화, KAERI) |
| 14:10~14:55 | 가동원전 안전기술 분과 프로그램 소개, 분과장 (설광원, KINS) |
| 14:55~15:10 | 휴식 |
| 15:10~15:55 | 미래 안전기술 분과 프로그램 소개, 분과장 (권태순, KAERI) |
| 15:55~16:40 | 공통 안전기술 분과 프로그램 소개, 분과장 (정재준, 부산대) |
| 16:40~17:30 | 종합 토론 (사회: 위원장) |
| 17:30~18:00 | 휴식 |
| 18:00~19:30 | 저녁식사 |

• 기타사항

등록비 : 30,000원 (미래전략보고 발표자료 및 저녁 식사 제공)

저녁식사 장소 : 리조트 단지 내 "풍경마루"

문의처 : 김성중 / 한양대학교 / 02-2220-2355, 010-2669-2761 / sungjkim@hanyang.ac.kr

II. 워크숍 안내

N 사용후핵연료 현안에 관련된 워크숍

- 국가 사용후핵연료 관리 현안 논의 -

- 일 시 : 2014년 10월 29일(수) 13:30 ~ 18:10
- 장 소 : 보광 휘닉스파크, 호텔 2층, 휘닉스볼룸 I
- 주 최 : 한국원자력학회 방사성폐기물관리 연구부회

• 일 정

| 일 정 | 내 용 |
|-------------------|---|
| 13:30~14:00 | 등 록 |
| 좌 장 : 김규태 (동국대학교) | |
| 14:00~14:10 | 인사말 : 김승평 (방사성폐기물관리 연구부회장) |
| 14:10~14:20 | 축 사 : 김영평 (한국원자력정책포럼 이사장) |
| 14:20~14:50 | 사용후핵연료 공론화의 국내쟁점 김은희 (서울대학교) |
| 14:50~15:20 | 원전산업의 환경변화분석 및 국민안심전략 김주경 (두원공과대학교) |
| 15:20~15:50 | 사용후핵연료 관리현황 및 향후전망 노성래 (한국수력원자력) |
| 15:50~16:20 | 사용후핵연료 관리기술 개발현황 김경수 (한국원자력연구원) |
| 16:20~16:40 | Coffee Break |
| 16:40~17:10 | 사용후핵연료관리 안전규제체제 정재학 (한국원자력안전기술원) |
| 17:10~17:40 | 사용후핵연료에 대한 지역주민의 여론 방향 이상기 (경주경실련) |
| 17:40~18:10 | 사용후핵연료 관리방안 도출과정상 주요쟁점 정주용 (한국교통대학교) |
| 18:10~ | 만찬 |

• 기타사항

등록비 : 무료 (저녁식사 제공)

문의처 : 염정민 / 조선대학교 / 062-230-7160 / spkim@chosun.ac.kr

Ⅲ. 제47회 정기총회 및 특별강연 일정

• 일 시 : 2014년 10월 30일(목) 15:00 ~ 18:20

• 장 소 : 호텔 2층, 휘닉스볼룸

• 일 정

| 일 정 | 내 용 |
|-------------|---|
| 15:00~16:45 | 국민의례 |
| | 개회식 : 장문희 학회장 |
| | 축 사 : 민병주 국회의원 |
| | 제47회 정기총회 |
| | 공로패 증정(제26대 학회장) 감사패 증정(제26대 임원 및 연임하지 않은 연구부회장) 위촉장 증정(연구부회장, 지역지부장, 청년지부장, 학생지부장) |
| | 퀴리상, 청년/학생 Competition Session, PHYSOR 장학증서 학술발표회/학회지우수논문상, 학회지발전기여상, 학술상, 기술상, 두산원자력기술상, HANA기술상, 한국원자력대상 시상 |
| | NET학술지 ELSEVIER 활용에 따른 변화 발표 |
| 16:45~17:00 | 휴식 |
| 17:00~17:40 | [특별강연 I] 에너지, 여건의 변화와 정책 방향 (손양훈, 에너지경제연구원 원장) |
| 17:40~18:20 | [특별강연 II] 명량, 이순신, 임진왜란, 그리고 역사적 교훈 (한명기, 명지대학교 사학과 교수) |
| 18:30 | 만찬 (스키하우스 1~2층, 푸드팰리스) |

IV. 분과별 논제 및 발표자

제 1 분과 A

원자로시스템기술(Reactor System Technology)

- 연구로/경수로/미래형(Research Reactor/Light Water Reactor/Future Reactor)

좌 장 탁남일(Nam Il Tak), 서철교(Chul-Gyo Seo)

발표장소 호텔2층, 에메랄드

일 정 | 10. 30(목)

- 09:00 Preliminary CFD Analysis and Experiment on Double-Etched Circular Channel Printed Circuit Heat Exchanger**
Serin Shin and Eung Soo Kim(SNU)
- 09:20 Development and Verification of Behavior of Tritium Analytic Code (BOTANIC)**
Min Young Park and Eung Soo Kim(SNU)
- 09:40 Experimental Investigation on Cross Flow of Wedge-shaped Gap in the core of Prismatic VHTR**
Jeong-Hun Lee, Goon-Cherl Park, and Hyoung-Kyu Cho(SNU)
Su-Jong Yoon(INL)
- 10:00 Off-Design Performance Prediction of Radial Compressor of Supercritical CO₂ Brayton Cycle for KAIST Micro Modular Reactor**
Seongkuk Cho, Jekyoung Lee, Seong Gu Kim, and Jeong Ik Lee(KAIST)
- 10:20 The Validation and Verification of Gas System Analysis Code GAMMA+ with S-CO₂ Compressor Test Data**
Seong Jun Bae, Yoonhan Ahn, and Jeong Ik Lee(KAIST)
- 10:40 Coffee Break**
- 11:00 Allowable Flow Band Design of the Primary Cooling System in consideration of the Pump Performance Test Results**
Hyun-Gi Yoon, Kyoung-Woo Seo, and Dae-Young Chi(KAERI)
- 11:20 Preliminary Assessment of the Loss of Flow Accident for PGSFR**
Andong SHIN, Yong Won Choi, and Moohoon BAE(KINS)
- 11:40 Thermal Stratification Analyses for Arrangements of Pressurizer Surge Line**
Da Yong Kim, Yoon Jae Choe, Seok Jeong Yune, and Eun Kee Kim(KEPCO-E&C)

제 1 분과 B

원자로시스템기술(Reactor System Technology)

- 소듐냉각고속로 설계기술I(Sodium Cooled Fast Reactor Design Technology I)

좌 장 홍중간(Jonggan Hong), 차재은(Jae Eun Cha)

발표장소 호텔2층, 에메랄드

일 정 | 10. 31(금)

- 09:00** **Verification of Heat Exchanger Design Code KAIST-HXD by Experiment**
Seungjoon Baik, Seong Gu Kim, Seong Jun Bae, Yoonhan Ahn, and Jeong Ik Lee(KAIST)
- 09:20** **Sensitivity Study on Nitrogen Brayton Cycle Coupled with a Small Ultra-Long Cycle Fast Reactor**
Seok Bin Seo, Han Seo, and In Cheol Bang(UNIST)
- 09:40** **Cycle Layout Studies of S-CO₂ Cycle for The Next Generation Nuclear System Application**
Yoonhan Ahn, Seong Jun Bae, Minseok Kim, Seong Kuk Cho, Seungjoon Baik, and Jeong Ik Lee(KAIST)
Jae Eun Cha(KAERI)
- 10:00** **Preliminary Evaluation of PGSFR DHR Heat Exchangers Performance Using STELLA-1 Facility**
Jonggan Hong, Jae-Hyuk Eoh, Sujin Yeom, Jewhan Lee, Tae-Joon Kim, Inkwoo Hwang, Chungcho Cho, Jong-Man Kim, Youngil Cho, Min-Hwan Jung, Da-Young Gam, and Ji-Young Jeong(KAERI)
- 10:20** **Breakup Behavior of Molten Wood's Metal Jet in Subcooled Water**
Hyo Heo, Seong Dae Park, and In Cheol Bang(UNIST)
Dong Wook Jerng(CAU)
- 10:40** **Coffee Break**
- 11:00** **The Optimum Design Analysis of The Small DC Electromagnetic Pump with Loop-Supported Type**
Geun Hyeong Lee and Hee Reyoung Kim(UNIST)
- 11:20** **Studies of S-CO₂ Power Plant Pipe Design for Small Modular Sodium-cooled Fast Reactor**
Min Seok Kim, Yoon Han Ahn, and Jeong Ik Lee(KAIST)
- 11:40** **CFD Analysis of 7-pin Fuel Bundle with New Wire-Wrapped Pattern**
Seong Dae Park, Hyo Heo, Sung Bo Moon, Seok Bin Seo, and In Cheol Bang(UNIST)
Dong Wook Jerng(CAU)
- 12:00** **Preliminary Studies of Na₂CO₃ Cleaning from Na-CO₂ Interaction in S-Co₂ Power Cycle coupled to SFR System**
Hwa-Young Jung and Jeong Ik Lee(KAIST)
Myung-Hwan Wi and Hong Joo Ahn(KAERI)

IV. 분과별 논제 및 발표자

제1분과 C

원자로시스템기술(Reactor System Technology) -Poster

- 연구로/경수로/미래형(Research Reactor/Light Water Reactor/Future Reactor)

좌 장 유연식(YeonSik Yoo), 김정만(Jeong Mann Kim)

발표장소 호텔2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P01C01 Performance Evaluation for Overpressure Transient at Reactor Coolant System of SINKORI 3/4 NPP by Loss of Turbine Load**
Byung Soo Shin, Yul Il Kim, and Bok Ki Min(KINS)
- P01C02 Thermal-Hydraulic Design of Mixed Transition Core for FCM Fuel Assembly**
Hyuk Kwon, K.W. Seo, S. J. Kim, J. P. Park, D. H. Hwang, and W.J. Lee(KAERI)
- P01C03 An Investigation of Wall Thinning and Cross Sectional Geometry Change of Bent Tube of Small Diameters**
Nguyen Dang Van and Namgung Ihn(KINGS)
- P01C04 Optimum Thermal Sizing and Operating Conditions for Once Through Steam Generator**
Kunwoo Yi, Kyongin Ju, Inyoung Im, and Eunkee Kim(KEPCO E&C)
- P01C05 Radiation Heat Transfer Effect on Thermal Sizing of Air-Cooling Heat Exchanger of Emergency Cooldown Tank**
Joo Hyung Moon, Young In Kim, and Keung Koo Kim(KAERI)
Myoung Jun Kim and Hee Joon Lee(KMU)
- P01C06 Economic Evaluation of SMART Deployment in the MENA Region using DEEP 5.0**
Han-Ok Kang, Man-Ki Lee, Sung-Kyun Zee, Young-In Kim, and Keung Koo Kim(KAERI)
- P01C07 Effect of Mass Transfer on Iodine Concentration under Evaporative Condition in Containment Building of SMR**
K.J. Kang, Y. I. Kim, and K.K. Kim(KAERI)
- P01C08 Results of the Preliminary Test in the 1/4-Scale RCCS of the PMR200 VHTR**
Jong-Hwan Kim, Yoon-Yeong Bae, Sung-Deok Hong, Chan-Soo Kim, Bong-Hyun Cho, and Min-Hwan Kim(KAERI)
- P01C09 Simulation of COMEDIE Fission Product Plateout Experiment Using GAMMA-FP**
Nam-il Tak and Churl Yoon(KAERI)
- P01C10 Assessment for the Applicability of Effective Thermal Conductivity Models on the Prismatic Fuel Assembly of Very High Temperature Reactor**
Dong-ho Shin and Hyoung-kyu Chon(SNU)
Nam-il Tak(KAERI)
Goon-cherl Park(KINGS)
- P01C11 Preliminary Test on Hydraulic Rotation Device for Neutron Transmutation Doping**
Ki-Jung Park, Han-Ok Kang, Seong Hoon Kim, and Cheol Park(KAERI)

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- P01C12 Structural Analysis of Cabinet Support under Static and Seismic Loads**
Kwangsub Jung, Sangjin Lee, and Jinho Oh(KAERI)
- P01C13 Cost Evaluation with G4-ECONS Program for SI based Nuclear Hydrogen Production Plant**
Jong-ho Kim, Ki-young Lee, and Yong-wan Kim(KAERI)
- P01C14 A Hydraulic Transfer System for Producing Radioisotopes**
Joonho Jeong, Sangjin Lee, Chungyoung Lee, and Jongmin Lee(KAERI)
- P01C15 A Preliminary Analysis on the Safety Effect of the Downgraded Heavy Water of a Research Reactor**
Hyeonil Kim and Su-ki Park(KAERI)
- P01C16 Estimation of Siphon Break in a Research Reactor using CFD Analysis**
Hong Beom Park, Kyoungwoo Seo, Seong Hoon Kim, and Dae Young Chi(KAERI)
- P01C17 Development of Special Tools for the Straightness Measurement of JRTR Core Inner Shell**
Abdullah Al Sinjlawi(JAEC)
Yeong-Garp Cho and Jong-Ha Chung(KAERI)
- P01C18 Preliminary Analysis of K-DEMO Water Cooled Breeding Blanket Using MARS-KS**
Jeong-Hun Lee, Geon-Woo Kim, Goon-Cherl Park, and Hyoung-Kyu Cho(SNU)
Kihak Im(NFRI)
- P01C19 Estimation of Siphon Breakers for Jordan Research and Training Reactor**
Kwon-Yeong Lee, Kyoungwoo Seo, and Dae Young Chi(KAERI)
- P01C20 Perspective on Regulatory Review of SFR Flow Blockage Safety Issue**
Yong Won Choi, Andong SHIN, Moo-Hoon BAE, and Namduk SUH(KINS)

IV. 분과별 논제 및 발표자

제 1 분과 D

원자로시스템기술(Reactor System Technology) - Poster - 소듐냉각고속로 설계기술 II (Sodium Cooled Fast Reactor Design Technology II)

좌 장 한지웅(Ji Woong Han), 최치웅(Chi Woong Choi)

발표장소 호텔2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P01D01 Design Improvement Study for Passive Shutdown System of the PGSFR**
Lee, Jae-Han and Koo, Gyeong-Hoi(KAERI)
- P01D02 Sodium Purification and Impurity Measurement in STELLA-1 Facility**
Jewhan LEE, Jonggan HONG, Tae-Joon KIM, Jong-Man KIM, Chungho CHO, Jae-Hyuk EOH, Youngil CHO, Min-Hwan JUNG, Sujin Yeom, Da-Young GAM, Inkoo HWANG, and Ji-Young JEONG(KAERI)
- P01D03 Uncertainly Issues on S-CO₂ Compressor Performance Measurement**
Jekyoung Lee, Seongkuk Cho, and Jeong Ik Lee(KAIST)
- P01D04 Air Damper Sizing for the Decay Heat Removal System of the PGSFR**
Dehee Kim and Tae-Ho Lee(KAERI)
- P01D05 The Containment Performance Evaluation of the Sodium Fire Due to Leaks from DHRS in PGSFR**
Sang-Jun Ahn, Kwi-Seok Ha, and Hyung-Kook Joo(KAERI)
- P01D06 Investigation of Plugging of Narrow Sodium Channels by Sodium and Carbon Dioxide Interaction**
Sun Hee Park, Myung-Hwan Wi, Jae Hong Min, and Tae-joon Kim(KAERI)
- P01D07 Scoping Analysis on Energy Release and Core Explosion in CDA of PGSFR using CDA-ER and CDA-CEME Codes**
Seung Won Lee, Seok Hun Kang, Soo-Dong Suk, and Kwi-Seok Ha(KAERI)
- P01D08 Performance Prediction of Mechanical Pump in STELLA-1**
Ji-Woong Han, Chungho Cho, and Ji-Young Jeong(KAERI)
- P01D09 Feasibility Test of a Waveguide Sensor for Ranging Inspection in a Sodium-cooled Fast Reactor**
Hoe-Woong Kim, Sang-Hwal Kim, Young-Sang Joo, Chang-Gyu Park, and Jong-Bum Kim(KAERI)
Jae-Won Han(CNU)
- P01D10 Transient Simulation in the Upper Plenum of the MONJU with MARS-LMR**
Kwi Lim, Lee, Jae Ho, Jeong, and Kwi Seok, Ha(KAERI)
- P01D11 A Study on a MATRA-LMR-FB Prediction Capability with an EBR-II Natural Circulation test**
Won-Pyo Chang, Jin Yoo, Chi-Woong Choi, and Kwi-Seok Ha(KAERI)
- P01D12 Evaluating Program about Performance of Circular Sodium Heat Pipe**
Jae Sik Kwak and Hee Reyoung Kim(UNIST)

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- P01D13 Sodium Fire Demonstration Facility Design and Operation**
Youngil Cho, Jong-Man Kim, Jewhan Lee, Jonggan Hong, Sujin Yeom, Chungho Cho, Min-Hwan Jung, Da-Young Gam, and Ji-Young Jeong(KAERI)
- P01D14 Dynamic Characteristic Test for a Cylindrical Structure with Flow Holes Submerged in Water**
Chang-Gyu Park, Young-Kyu Lee, Hoe-Woong Kim, and Jong-Bum Kim(KAERI)
- P01D15 Flow Characteristics of the PHTS Mechanical Pump in PGSFR**
Jung Yoon and Tae-Ho Lee(KAERI)
Hwi-Seob Park(CD-adapco)
- P01D16 Design Improvement of Iso-Kinetic Flow Sampling Device at Subchannel in a Wire-Wrapped 37-pin Fuel Assembly for a Sodium Cooled Fast Reactor**
Dong-Won Lee, Hyungmo Kim, Yung-Joo Ko, Seok-Kyu Chang, Hae Seob Choi, Dong-kin Euh, and Hyeong-Yeon Lee(KAERI)
- P01D17 Measurements of Flow Mixing at Subchannels in a Wire-Wrapped 37-Rod Bundle for a Sodium Cooled Fast Reactor**
Hyungmo Kim, Hwang Bae, Seok-Kyu Chang, Sun Rock Choi, Dong Won Lee, Yung Joo Ko, Hae Seob Choi, Dong-Jin Euh, and Hyeong-Yeon Lee(KAERI)
- P01D18 Introduction of Alarm System for STELLA-1**
Dayoung Gam, Sujin Yeom, Jiyoung Jeong, Jae-Hyuk Eoh, Jonggan Hong, Jewhan Lee, Tae-Joan Kim, Inkoo Hwang, Chungho Cho, Jong-Man Kim, Youngil Cho, and Min-Hwan Jung(KAERI)
- P01D19 Numerical Analyses of a Single-phase Natural Convection System for Molten Flibe using MARS-FLIBE Code**
Sarah Kang and In Cheol Bang(UNIST)
- P01D20 Thermal Aging Evaluation of Mod. 9Cr-1Mo Steel using Nonlinear Rayleigh Waves**
Young-Sang Joo, Hoe-Woong Kim, and Jong-Bum Kim(KAERI)
Daniel Marino, Jin-Yeon Kim, and L. J. Jacobs(Georgia Tech)
Alberto Ruiz(UMSNH)
- P01D21 Sensitivity Tests for the Unprotected Events of the Prototype Gen-IV SFR**
Chiwoong CHOI, Kwilim Lee, Jaeho Jeong, Jin Yu, Sangjun An, Seung Won Lee, Wonpyo Chang, and Kwiseok Ha(KAERI)
- P01D22 Sensitivity Tests for Cumulative Damage Function (CDF) for the PGSFR**
Chiwoong CHOI and Kwiseok Ha(KAERI)
- P01D23 Effect of a Lumped Mass on the Natural Frequency in a Perforated Cylindrical Test Structure**
Young-Kyu Lee, Chang-Gyu Park, Hoe-Woong Kim, and Jong-Bum Kim(KAERI)
- P01D24 Assessment of Application Example for a Sodium Fire Extinguishing Facility using Safety Control of Dangerous Substances Act**
Minhwan Jung, Ji-Young Jeong, and Jongman Kim(KAERI)
- P01D25 Effects of Sodium Mal-distribution on AHX thermal Characteristics**
Sujin Yeom, Jonggan Hong, Jae-Hyuk Eoh, Ji-Young Jeong(KAERI)
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- P01D26 Structural Analysis of the Upper Internal Structure in PGSFR**
S. H. Kim and G. H. Koo(KAERI)
- P01D27 The Performance Test Procedure for the Mechanical Sodium Pump installed in STELLA-1**
Chungho Cho, Ji-Woong Han, Tae-Joon Kim, Inkoo Hwang, Jonggan Hong, Sujin Yeom, Jewhan Lee, Jong-Man Kim, Youngil Cho, Min-Hwan Jung, Da-Young Gam, Jae-Hyuk Eoh, and Ji-Young Jeong(KAERI)
- P01D28 Selection of number of SG Modules per Secondary Sodium Loop for a Prototype SFR**
Eui Kwang Kim, Jae-Woon Yoo, Hyung-Kook Joo, and Tae-Ho Lee(KAERI)
- P01D29 Preliminary Design of IHTS Piping Support for PGSFR**
Nak-Hyun Kim and Gyeong-Hoi Koo(KAERI)
- P01D30 An Evaluation of Fluid-elastic Instability for a FHX Serpentine Tube in PGSFR**
Sung-Kyun Kim and Gyeong-Hoi Koo(KAERI)
- P01D31 PGSFR Core Thermal Design Procedure to Evaluate the Safety Margin**
Sun Rock Choi and Sang-Ji Kim(KAERI)

제 2 분과 A

원자로물리 및 계산과학 - 가동원자로 물리해석 (Reactor Physics and Computational Science - Operating Reactor Physics Analysis)

좌 장 길충섭(Chung Sub Gil), 이덕중(Deokjung Lee)

발표장소 스키하우스 2층, 스피넬 I

일 정 | 10. 30(목)

- 09:00 Application of the BigT Burnable Absorber to an OPR1000 Core for a Low Critical Boron Concentration**
HwanYeal Yu and Yonghee Kim(KAIST)
- 09:20 Application of Periodic 3DPCM for Core Monitoring System**
Wi-Soo Jeong, Hae-Chan Lee, Hyeong-Seog Kim, Chang-Kue Lee, and Sang-Weon Park(KEPCO NF)
Jin-Su Baek(KHNP)
- 09:40 Investigation of the Power Coefficient of Reactivity of 3D CANDU Reactor through Detailed Monte Carlo Analysis**
Mohammad Abdul Motalab, Woosong Kim, and Yonghee Kim(KAIST)
- 10:00 A Study of Neutronics Effects of the Spacer Grids in a Typical PWR via Monte Carlo Calculation**
Tran Xuan Bach and Nam Zin Cho(KAIST)
- 10:20 Real Variance Estimation of BEAVRS Whole Core Benchmark in Monte Carlo Eigenvalue Calculations**
Ho Jin Park and Hyun Chul Lee(KAERI)
Hyung Jin Shim and Chang Hyo Kim(SNU)
- 10:40 Coffee Break**
- 11:00 Incorporation of Anisotropic Scattering in nTRACER**
Min Ryu, Yeon Sang Jung, Chang Hyun Lim, and Han Gyu Joo(SNU)
- 11:20 A Preliminary Study on a Method for Generating Self-shielded Multi-group Cross Sections in an Unresolved Resonance Region**
Jong Woon Kim, Sang Ji Kim, Choong-Sup Gil, and Young-Ouk Lee(KAERI)
- 11:40 Improvement of Resonance Interference Treatment in STREAM**
Sooyoung Choi, Azamat Khassenov, and Deokjung Lee(UNIST)
- 12:00 Model Calculation of Fission Product Yields Data using GEF Code**
Jounghwa Lee, Choong-Sup Gil, and Young-Ouk Lee(KAERI)
Seung-Woo Hong(SKKU)

IV. 분과별 논제 및 발표자

제 2분과 B

원자로물리 및 계산과학 - 신형원자로 핵설계 (Reactor Physics and Computational Science - Innovative Reactor Nuclear Design)

좌 장 박상원(Sang Weon Park), 홍서기(Ser Gi Hong)

발표장소 스키하우스 2층, 스피넬 II

일 정 | 10. 30(목)

- 09:00** **Implementation of Low Boron Core for APR1400 Initial Cycle**
TaeKyun Lim, SeungRyeol Yang, and K.B.Seong(KEPCO NF)
- 09:20** **Preliminary Investigation of the Soluble Boron Free AP1000 Core with the BigT Burnable Absorber**
Mohd-Syukri Yahya and Yonghee Kim(KAIST)
HyeongHeon Kim(KEPCO E&C)
- 09:40** **Burnable Absorbers with Enriched Er-167 in PWR Fuel Assembly**
Jiwon Choe, Chidong Kong, and Deokjung Lee(UNIST)
Ho Cheol Shin(KHNP CRI)
- 10:00** **New Sodium Cooled Long-Life Cores with Axially Multi-Driver Regions**
Hae Ri Hyun and Ser Gi Hong(KHU)
- 10:20** **Applicability of Various Fuel Forms with TRU for Small SFR**
Tae-Yang Noh and Myung Hyun Kim(KHU)
- 10:40** **Coffee Break**
- 11:00** **Sodium-cooled Fast Reactor Cores using Uranium-Free Metallic Fuels for Maximizing TRU Support Ratio**
WuSeung You and Ser Gi Hong(KHU)
- 11:20** **Impacts of Nuclear Data on the Core Characteristics of a Compact Breed-and-Burn Fast Reactor (B&BR)**
Donny Hartanto and Yonghee Kim(KAIST)
Peng Hong Liem(NAIS CO., Inc)
- 11:40** **A Neutronic Feasibility Study on a Small LEU Fueled Reactor for Space Applications**
Hyun Chul Lee, Hong Sik Lim, and Tae Young Han(KAERI)
- 12:00** **An Accident-tolerant Control Drum System for a Small Space Reactor**
Hyun Chul Lee, Tae Young Han, and Hong Sik Lim(KAERI)

제 2분과 C

원자로물리 및 계산과학 - 노심 해석 방법론 (Nuclear Data, Reactor Physics and Computational Science - Reactor Analysis Methods)

좌 장 조진영(Jin Young Jo), 이현철(Hyun Chul Lee)

발표장소 스키하우스 2층, 스피넬 II

일 정 | 10. 31(금)

- 09:00 A Study on MCNPX-CINDER90 System for Activation Analysis**
Sung-Min Kim and Myung Hyun Kim(KHU)
- 09:20 A Proposal of the Stochastic Error Estimation Method for the Sampling Based Sensitivity and Uncertainty Analysis in Monte Carlo Eigenvalue Calculation**
Song Hyun KIM, Myung Sub SONG, and Chang Ho SHIN(HYU)
Jae Man NOH(KAERI)
- 09:40 Monte Carlo Alpha Iteration Algorithm for a Subcritical System**
Hyung Jin Shim, Soo Min Kang, and Chang Hyo Kim(SNU)
- 10:00 An Analysis on the Characteristic of Multi-response CADIS Method for the Monte Carlo Radiation Shielding Calculation**
Do Hyun KIM, Chang Ho SHIN, and Song Hyun KIM(HYU)
- 10:20 3-D Whole-Core Transport Calculation with 3D/2D Rotational Plane Slicing Method**
Han Jong Yoo and Nam Zin Cho(KAIST)
- 10:40 Coffee Break**
- 11:00 An Experiment of Robust Parallel Algorithm for the Eigenvalue Problem of a Multigroup Neutron Diffusion Based on Modified FETI-DP : Part 2**
Jonghwa Chang(KAERI)
- 11:20 Two-Dimensional Application of the Functionalized Discontinuity Factors**
Woosong Kim and Yonghee Kim(KAIST)
- 11:40 Investigation of Some Variations of p-CMFD Acceleration Method in Continuous-Energy Monte Carlo Calculation**
YuGwon Jo and Nam Zin Cho(KAIST)
- 12:00 Proposal of Two-Material Coexisting Ring Model to Improve the Conventional Fast Reactor Analysis Method for Group Condensation**
Jong Hyuck Won and Nam Zin Cho(KAIST)

IV. 분과별 논제 및 발표자

제 2분과 D

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

좌 장 박문규(Moon Ghu Park), 이은기(Eun Ki Lee)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P02D01 Feasibility Study of Core Design with a Monte Carlo Code for APR1400 Initial core**
Jinsun Kim, Do Ik Chang, and Kibong Seong(KEPCO NF)
- P02D02 A Case Study for SAM Dissatisfaction due to ICI failure in OPR1000**
Roh Kyung-ho, Jang Ji-hoon, and Jung Won-chae(KHNP CRI)
- P02D03 Development of Core Simulator (CoSi) for APR1400 And Analysis of LPPT Result using APR1400-CoSi**
Sang-Rae Moon, Yong-Bae Kim, and Eun-Ki Lee(KHNP CRI)
- P02D04 The Difference between Flux Spectrums of WH-type Assembly and CANDU-type Lattice**
Eun Hyun Ryu and Yong Mann Song(KAERI)
- P02D05 The Evaluation of the Pressure Tube Creep Effect on the CANDU-6 Equilibrium Core with the Modified 37 Element Fuel**
Young Ae Kim, You Sung Chang, and Eun Ki Lee(KHNP CRI)
- P02D06 Application of RAST-K to Simulation of OPR1000 Daily Load Follow Operation**
Minyong Park, Jiwon Choe, and DeokjungLee(UNIST)
Eunki Lee(KHNP CRI)
- P02D07 VENUS-2 Benchmark Problem Analysis with HELIOS-1.9**
Hyeon-Jun Jeong, Jiwon Choe, and Deokjung Lee(UNIST)
- P02D08 A Proposal on the Advanced Sampling Based Sensitivity and Uncertainty Analysis Method for the Eigenvalue Uncertainty Analysis**
Song Hyun KIM, Myung Sub SONG, and Chang Ho SHIN(HYU)
Jae Man NOH(KAERI)
- P02D09 An Evaluation of the Adjoint Flux Using the Collision Probability Method for the Hybrid Monte Carlo Radiation Shielding Analysis**
Quang Huy KHUAT, Do Hyun KIM, Myung Sub SONG, Chang Ho SHIN, and Song Hyun KIM(HYU)
- P02D10 New Evaluation of Dysprosium Neutron Resonance Parameters**
Yeong-Rok Kang, Manwoo Lee, and KwangmoYang(DIRAMS)
Tae-Ik RO(DAU)
Guinyun Kim(KNU)
Y. Danon and D. Williams(RPI)
- P02D11 Comparative Study of DIMPLE Benchmark with Two-step and Direct Modelling Approaches**
Wonkyeong Kim and Deokjung Lee(UNIST)
Tomasz Kozłowski(UI)

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- P02D12 Preliminary Core Analysis of High Temperature Engineering Test Reactor Using DeCART Code**
Chang Joon Jeong, Hyun Chul Lee, and Jae Man Noh(KAERI)
- P02D13 Development of Visualization Tools for ZPPR-15 Analysis**
Min Jae Lee and Sang Ji Kim(KAERI)
- P02D14 Evaluation of Spent Fuel Recycling Scenario using Pyro-SFR related System**
Yong Kyo Lee, Sang Ji Kim, and Young Jin Kim(KAERI)
- P02D15 Decay Heat Analyses after Thermal-Neutron Fission of ^{235}U and ^{239}Pu by SCALE-6.1.3 with Recently Available Fission Product Yield Data**
Do Heon Kim, Choong-Sup Gil, and Young-Ouk Lee(KAERI)

IV. 분과별 논제 및 발표자

제 3분과 A

방사성폐기물관리(Radioactive Waste Management)

좌 장 정동용(Dong Yong Chung), 하영경(Yeong-Keong Ha)

발표장소 호텔 3층, 토파즈III

일 정 | 10. 30(목)

- 09:00** **Synthesis of Iron-ferrocyanide Functionalued Magnetic Nanocluster for the Removal of Cesium**
Hee-Man Yang, Sung-Chan Jang, Kune Woo Lee, Bum-Kyoung Seo, and Jei Kwon Moon(KAERI)
- 09:20** **A Concept of Countermeasure Against Radioactive Wastewater Generated in Disastrous Nuclear Accident such as Fukushima Daiichi Site Case**
Kwang-Wook Kim, Keun-Young Lee, Eil-Hee Lee, Yeji Baek, Ji-Yang So, Dong-Young Chung, and Jei-Kwon Moon(KAERI)
- 09:40** **¹⁴C Removal Technology for the Treatment of Spent Resin from Nuclear Power Plants : A Review**
Yaung-Ku Choi, Seunggeon An, Dae-Hwan Kim and Jun Ho Cho(SKAES CO.)
Hwan Seo Park and Hong Joo Ahn(KAERI)
- 10:00** **Spent Nuclear Fuel Cask and Storage Monitoring with ⁴He Scintillation Fast Neutron Detectors**
Heejun Chung, Ryan P. Kelley, and Kelly A. Jordan(UF)
Wanno Lee(KAERI)
Yong Hyun Chung(Yonsei Univ.)
- 10:20** **Development of Inverse Estimation Program of Burnup Histories for Nuclear Spent Fuel Based on ORIGEN-S**
Do-Yeon Kim and Ser Gi Hong(KHU)
Gil Hoon Ahn(KINAC)
- 10:40** **Coffee Break**
- 11:00** **An Evaluation on the Criticality Control Ability of a Neutron Absorber based on Artificial Rare Earth Compounds in PLUS7 and WH17x17 Spent Fuel Storage**
Jae Hyun KIM, Che Wook Yim, Chang Ho SHIN, and Song Hyun KIM(HYU)
Jung Hun CHOE, In Hak CHO, Jong Kyung KIM, and Hwan Seo PARK(KAERI)
Hyun Seo PARK, Jung Ho KIM, and Yoon Ho KIM(KRISS)
- 11:20** **Preview of DATACHOA Ver. 1.0: Database for Chemical and Physical Properties of Molten Chloride Salts Comprising Actinide and Lanthanide Chloride Salts**
Jong-Yun Kim, Jin-Hong Lee, Tae-Hong Park, Sang-Eun Bae, and Young Hwan Cho(KAERI)
- 11:40** **Calculating Program for Decommissioning Work Productivity based on Decommissioning Activity Experience Data**
Chan-Ho Song, Seung-Kook Park, Hee-Seong Park, Jei-kwon Moon(KAERI)

일 정 | 10. 30(목) 13:00-15:00

- P03B01 Development of High-temperature Molten Salt Transport Technology**
S. H. Lee, G. I. Park, and S. B. Park(KAERI)
- P03B02 Treatment of Uranium-Contaminated Concrete for Reducing Secondary Radioactive Waste**
Seung Soo Kim, G. S. Han, U. K. Park, G. N. Kim, and J. K. Moon(KAERI)
- P03B03 Selective Decontamination Effect of Metal Ions in Soil Using Supercritical CO₂ and TBP Complex**
Jihye Park, Kwangheon Park, and Wonyoung Jung(KHU)
- P03B04 Fixation of Soil Using PEC and Separation of Fixed Soil**
Yong Suk Choi, Hee-Man Yang, Kune Woo Lee, Bum-Kyoung Seo, and Jei Kwon Moon(KAERI)
- P03B05 A Review of the Effects of Normal Conditions of Transport on Spent Fuel Integrity in Transportation Casks**
Junggoo Kim, Youngik Yoo, Seongki Lee, and Chaejoon Lim(KEPCO NF)
- P03B06 Experiment on Physical Desalinization of Uranium-contaminated Gravel Surface**
Uk-Ryang Park, Gye-Nam Kim, Seung-Soo Kim, Gyu-Seong Han, and Jai-Kwon Moon(KAERI)
- P03B07 Assessment of Exposure Dose to Workers in Virtual Decommissioning Environments**
KwanSeong Jeong, JeiKwon Moon, ByungSeon Choi, Dongjun Hyun, Jonghwan Lee, IkJune Kim, GeunHo Kim, and JaeSeok Seo(KAERI)
- P03B08 Feasibility study of a Compton Suppression System for the X-ray Fluorescence (XRF) Using Monte Carlo simulation**
Seung Kyu Lee, Hee Seo, Byung Hee Won, Hyun Su Lee, Se-Hwan Park, and Ho-Dong Kim(KAERI)
- P03B09 Volume Reduction of Decommissioning Radioactive Burnable and Metal Wastes**
B. Y. Min, Y. J. Lee, G. S. Yun, K. W. Lee, and J. K. Moon(KAERI)
Y.K Choi and J.H.Cho(SKAES CO.)
- P03B10 Conceptual Study on Dismantling of CANDU Nuclear Reactor**
Woo-Tae Jeong and Sang-Guk Lee(KHNP CRI)
- P03B11 A Matric System Combining NPP Facilities Information and Decommissioning Activity Information**
Hee Seong Park, Seung Kook Park, Chan Ho Song, and Jei kwon Moon(KAERI)
- P03B12 A Study on Dismantling of Westinghouse Type Nuclear Reactor**
Woo-Tae Jeong and Sang-Guk Lee(KHNP CRI)

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- P03B13 Safety Assessment of the Centralized Storage Facility for Disused Sealed Radioactive Sources in United Republic of Tanzania**
Vitus Abel(KAIST)
JaeSeong Lee(KINS)
- P03B14 Status of the Decommissioning Engineering System Code Development of KAERI in 2014**
Hyung Gon Jin, S. K. Park, H. S. Park, and C. H. Song(KAERI)
- P03B15 Risk Management of Large Component in Decommissioning**
Kyung Ku Nah and Tae Ryong Kim(KINGS)
- P03B16 Study on C-14 Generation and Release in Pressurized Water Reactor**
Kristyo Rumboko(KAIST)
Sung Il Kim(KINS)
- P03B17 Developing Specific Criteria for Distinguishing Between Different Categories of Radioactive Waste Classification System for Uganda Using the RESRAD Computer Code**
Abdul Byamukama(KAIST)
Haiyong Jung(KINS)
- P03B18 Decontamination Planning and Approach to its Methodology**
Genn-young Park and Chang-Lak Kim(KINGS)
- P03B19 Development of Decontamination Process for Soil Contaminated Uranium**
Gye-Nam Kim, Seung-Soo Kim, Uk-Rang Park, Gyu-Seong Han, and Jei-Kwon Moon(KAERI)
- P03B20 The Terminal Solid Solubility of Hydrogen in Zircaloy-4 and Opt-ZIRLO with a DSC**
Tae-hoon Kim and Yong-soo Kim(HYU)
Ju-seong Kim(KAERI)

제 4 분과 A

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 핵연료(Fuel)/원자력재료 (Materials) A

좌 장 유종성(Jongsung Yoo), 권준현(Junhyun Kwon)

발표장소 호텔 2층, 휘닉스볼룸 Ⅲ

일 정 | 10. 30(목)

- 09:00 Application of Coating Technology for Accident Tolerant Fuel Cladding**
Hyun-Gil Kim, Il-Hyun Kim, Yang-Il Jung, Dong-Jun Park, Jeong-Yong Park, and Yang-Hyun Koo(KAERI)
- 09:20 The Effect of Additives on the Pore Structure of Sintered UO_2 Pellets**
Jang Soo Oh, Jae Ho Yang, Dong-Joo Kim, Jong Hun Kim, Keon Sik Kim, Young Woo Rhee, and Yang-Hyun Koo(KAERI)
- 09:40 Investigation of Eigenvalue Behavior in the Asymptotic Analysis of PCMI**
Hyung-Kyu Kim, Young-Ho Lee, Jae-Yong Kim, Kyung-Ho Yoon, Kang-Hee Lee, and Heung-Seok Kang(KAERI)
- 10:00 Effect of Starting Powder Polytype on Thermal Conductivity of Liquid-Phase Sintered Silicon Carbide Ceramics**
Kwang-Young Lim and Seung-Jae Lee(KEPCO NF)
Young-Wook Kim(UOS)
- 10:20 The Influence of Zn Nanoparticle Treatment on the Stress Corrosion Cracking Resistance of the 304 Stainless Steel**
Seong-Cheol Kim, Sung-Min Kim, Sang-Yul Lee, Jae-Woong Bak, and Bo-Young Lee(KAU)
Jung-Wan Kim(INU)
- 10:40 Coffee Break**
- 11:00 Strategic Assessment of Causes, Impacts & Mitigation of Radiation Embrittlement of RPV steel in LWRs**
Jubair Ahmed Shamim, Palash Kumar Bhowmik, Abhinav Gairola, Kune Y. Suh(SNU)
- 11:20 Dimensional Change due to Short Range Ordering in 316L Stainless Steel**
SungSoo Kim, Dae Whan Kim, and Young Suk Kim(KAERI)
- 11:40 Microstructural Changes on Tensile Property of Austenitic Alloys Exposed to High Temperature Supercritical- CO_2 Environment**
Hyunmyung Kim, Ho Jung Lee, and Changheui Jang(KAIST)
- 12:00 A Study on Microstructural Changes of Austenitic Stainless Steel After Proton Irradiation**
Hyung-Ha Jin, Eunsol Ko, Junhyun Kwon, and Sungsik Hwang(KAERI)

IV. 분과별 논제 및 발표자

제 4 분과 B

핵연료 및 원자력재료(Nuclear Fuel and Materials)

- 핵연료(Fuel)/원자력재료 (Materials) B

좌 장 김진원(Jin Won Kim), 김원주(Weon-Ju Kim)

발표장소 호텔 2층, 다이아몬드 I

일 정 | 10. 31(금)

- 09:00 Comparison on Mechanical Properties of SA508 Gr.3 Cl.1, C1.2, and Gr.4N Low Alloy Steels for Pressure Vessels**
Min-Chul Kim, Sang-Gyu Park, and Bong-Sang Lee(KAERI)
Ki-Hyoung Lee(KINS)
- 09:20 Calculation of DPA in the Reactor Internal Structural Materials of Nuclear Power Plant**
Yong Deog Kim and Hwan Soo Lee(KHNP-CRI)
- 09:40 The Effects of Dissolved Hydrogen on PWSCC Initiation Behavior and Oxide Characteristics of Alloy 182 Weld**
Jong-Dae Hong, Ho-Sub Kim, Junho Lee, Myeong-Gyu Seo, and Changheui Jang(KAIST)
- 10:00 Self-ion Irradiation Damage of F/M and ODS steels**
Suk Hoon Kang, Young-Bum Chun, Sanghoon Noh, Jinsung Jang, and Tae Kyu Kim(KAERI)
- 10:20 Effect of Dissolved Hydrogen on Crack Growth Rate in Stainless Steel**
K.J. Choi, S.C.Yoo, T.H. Kim, S.H. Kim, and J.H. Kim(UNIST)
- 10:40 Coffee Break**
- 11:00 Microstructural Analysis of the Type-II Boundary Region in Alloy 152 Weld**
Seung Chang Yoo, Kyoung Joon Choi, and Ji Hyun Kim(UNIST)
- 11:20 End Closure Welding of SFR Metallic Fuel Rod by GTAW**
Jung Won Lee, Soo Sung Kim, Yoon Myeng Woo, Hyung Tae Kim, Ki Hwan Kim, and Kyung Ho Yoon(KAERI)
- 11:40 Investigation of Reusable Crucibles on Uranium Casting by Injection Method**
Hoon Song, Jong-Hwan Kim, Young-Mo Ko, Yoon-Myung Woo, Ki-Hwan Kim, and Chan-Bock Lee(KAERI)

제 4 분과 C

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster - 핵연료(Fuel) A

좌 장 양재호(Jae Ho Yang), 김용덕(Yong Deok Kim)

발표장소 호텔 2층, 다이아몬드

일 정 | 10. 30(목) 13:00-15:00

- P04C01 Cr Effect on The Corrosion Behavior in Zr Alloy**
Jung-ho Shin, Hoon Jang, Yoon-ho Kim, Yong-Kyoon Mok, and Seung-Jae Lee(KEPCO NF)
- P04C02 Development of Non-Destructive Test for Fuel Rods using X-ray CT in Hotcell**
Heemoon Kim, Byung Ok Yoo, Gil Soo Kim, Sang Ryul Baek, Ki Soo Heo, and Sang Bok Ahn(KAERI)
- P04C03 Corrosion Behavior of The Zr-Nb Experimental Alloys with Final Annealing**
Min-Young Choi, Chung-Yong Lee, Sung-Yong Lee, and Yong-Kyoon Mok(KEPCO NF)
- P04C04 Enhanced Thermal Conductivities of ZrO₂ Pellets Reinforced with Mo Wires or Powder**
Joon Hui Kim, Soon H. Hong, and Ho Jin Ryu(KAIST)
- P04C05 Corrosion Resistance Evaluation of HANA Claddings in Commercial PWR**
Hee-Hun Lee, Oh-Hyun Kwon, Hong-Jin Kim, Jong-Sung Yoo, and Yong-Hwan Kim(KEPCO NF)
- P04C06 Development of Mechanical Analysis Module for Simulation of SFR Fuel rod Behavior Using Finite Element Method**
Andong Shin, Hyedong Jeong, and Namduk Suh(KINS)
HyoChan Kim and Yongsik yang(KAERI)
- P04C07 Simulation of Power Ramp Test in REGATE Experiment by Using FRAPCON3**
Yung-suk Jung and Hyung-jin Kim(ACT Co.,Ltd.)
Yong Sik Yang(KAERI)
- P04C08 3D FE Simulation of PCMI (Pellet-Cladding Mechanical Interaction) Considering Frictionless Contact**
Sang-Kyu Seo, Sung-Uk Lee, Eun-Ho Lee, and Dong-Yol Yang(KAIST)
Hyo-Chan Kim and Yong-Sik Yang(KAERI)
- P04C09 Effects of Particle Size and Shape on U-MO/Al Thermal Conductivity**
Tae-Won Cho and Dong-Seong Sohn(UNIST)
- P04C10 The Prediction of Creep Behaviors of Zircaloy-4 Using Uniaxial Stress Relaxation**
Tae-hoon Kim, Ho-a Kim, and Yong-soo Kim(HYU)
Ju-seong Kim(KAERI)
- P04C11 Improvement of Silicide Coating Method as Diffusion Barrier for U-Mo Dispersion Fuel**
Ji Min Nam, Sunghwan Kim, Kyu Hang Lee, and Jong Man Park(KAERI)
- P04C12 Improvement of the HANA™-4 Tubing Workability**
Yoon-Ho Kim, Min-Young Park, In-Kyu Kim, and Yong-Kyoon Mok(KEPCO NF)
Hyun-Gil Kim(KAERI)

P04C13 Stress Behaviors of a UN TRISO of a 12x12 FCM Fuel Assembly

Young Min Kim, C. K. Jo, and M. S. Cho(KAERI)

P04C14 The Effect of Hoop Stress, Hydrogen Content and Cooling Rate on Hydride Reorientation of Oxidized Zr Alloy Cladding Tubes

Ju-Jin Won, Hyun-Jin Cha, and Kyu-Tae Kim(DGU)

제 4 분과 D

핵연료 및 원자력재료(Nuclear Fuel and Materials)- Poster - 핵연료(Fuel) B

좌 장 김현길(Hyun Gil Kim), 이병호(Byung-Ho Lee)

발표장소 호텔 2층, 다이아몬드

일 정 | 10. 30(목) 13:00-15:00

- P04D01 Air Oxidation Behaviors of Zircaloy-4 Cladding During a LOCA In Spent Fuel Pool**
Je Geon Bang, Tae Hyun Chun, Sun Ki Kim, and Yang Hyun Koo(KAERI)
- P04D02 Performance of Nb Protective Diffusion Coating on U-Mo/Al Dispersion Fuel**
Ji-Hyeon Kim and Dong-Seong Sohn(UNIST)
Sunghwan Kim, Ji Min Nam, Kyu Hong Lee, and Jong Man Park(KAERI)
- P04D03 Evaluation of Electron Beam Welding Performance of AA6061-T6 Plate-type Fuel Assembly**
Soo-Sung Kim, Kyoung-Seok Seo, Don-Bae Lee, Jong-Man Park, Yoon-Sang Lee, and Chong-Tak Lee(KAERI)
- P04D04 Mechanical Resistance of UO₂ Pellet by Means of Free-fall-Impact Testing**
Tae-sik Jung, Seung-jae Lee, Jae-ik Kim, Young-ho Jo, Bo-yong Park, and Sang-ern Ko(KEPCO NF)
- P04D05 Modified Fabrication Method of Metal Fuel Slug for Preventing Evaporation of Volatile Elements**
Ki-Hwan Kim, Jong Hwan Kim, Hoon Song, Hyung-Tae Kim, Jung-Won Lee, and Chan-Bock Lee(KAERI)
- P04D06 Frictional Behavior of Fe-based Cladding Candidates for PWR**
Young-Ho Lee and Hyung-Kyu Kim(KAERI)
Thak Sang Byun(ORNL)
- P04D07 Fabrication of Fully Ceramic Microencapsulated Fuel by Hot Pressing**
H. G. Lee, D. J. Kim, J. Y. Park, and W.-J. Kim(KAERI)
S. J. Lee(KEPCO NF)
- P04D08 Peculiarities of Fuel Slugs Prepared by Gravity Casting Method**
Jong-Hwan Kim, Hoon Song, Hyung-Tae Kim, Jung-Won Lee, Ki-Hwan Kim, and Chan-Bock Lee(KAERI)
- P04D09 Mechanical Design Concept of Fuel Assembly for Prototype GEN-IV Sodium-cooled Fast Reactor**
K. H. Yoon and C. B. Lee(KAERI)
- P04D10 An Experimental Study on the Nuclear Fuel Debris Filtering Efficiency Using Wire Debris**
Joon-Kyoo Park, Oh-Joon Kwon, Tae-Kwon Lee, Nam-Cyu Park, and Jae-Ik Kim(KEPCO NF)
- P04D11 Nuclear Fuel Test Rod Fabrication for Data Acquisition Test**
Chang-Young Joung, Jin-Tae Hang, Ka-Hye Kim, and Sung-Ho Huh(KAERI)
- P04D12 Fabrication of BN Nanosheet Reinforced ZrO₂ Composite Pellets for Inert Matrix Fuel**
Malik Shukeir, Malik Umer, Bin Lee, and Ho Jin Ryu(KAIST)
- P04D13 A Study on Structural Strength of Irradiated Spacer Grid for PWR Fuel**
Y. G. Jin, S. J. Baek, D. S. Kim, B. O. Yoo, S. B. Ahn, and Y. B. Chun(KAERI)
J. I. Kim, Y. H. Kim, and J. J. Lee(KEPCO NF)

IV. 분과별 논제 및 발표자

제 4 분과 E

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -원자력재료(Materials) A

좌 장 장진성(Jinsung Jang), 장영기(Young Ki Jang)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P04E01 Understanding of Radiation Effect on Sink in Aluminum Base Structure Materials**
Sang Il Choi, and Ji Hyun Kim(UNIST)
- P04E02 The Influence of Post Weld Heat Treatment in Alloy 82/182 Dissimilar Metal Weld Between Low Alloy Steel and 316L Stainless Steel**
Sunghoon Hong, Jong-Dae Hong, and Changheui Jang(KAIST)
Kyoung Soo Lee(KHNP CRI)
- P04E03 Corrosion Behavior and Mechanical Property of CVD SiC**
Hyun-Jin Cha, Ju-Jin Won, and Kyu-Tae Kim(DU)
- P04E04 Identification of Radiation-Induced Segregation in Ion-Irradiated Stainless Steel 316 Using Atom Probe Tomography**
Gyeong-Geun Lee, Hyung-Ha Jin, Kunok Chang, and Junhyun Kwon(KAERI)
- P04E05 Characteristics of Domestic Reactor Pressure Vessel Steel After High-dose Neutron Irradiation**
Ji-Hyun Yoon, Min-Chul Kim, Kwon-Jae Choi, Young-Gwan Jin, Man Soon Cho, and Bong-Sang Lee(KAERI)
- P04E06 The Manufacturing of Stress Corrosion Crack(SCC) in Inconel 600 Tube**
Seunggi Bae, Jaewoong Bak, Seongcheol Kim, Sangyul Lee, and Boyoung Lee(KAU)
- P04E07 The Dislocation Loop Density Dependence on the Thickness of a TEM Sample**
Sang Chul Kwon and Jun Hyun Kwon(KAERI)
- P04E08 Finite Element Limit Pressures for Circumferential Through-Wall Cracks in the Interface Between Elbow and Pipe**
Yoon-Young Jang, Tae-Song Han, and Nam-su Huh(SEOULTECH)
Jae-Uk Jeong(SKKU)
- P04E09 The Electrochemical Property of the Electrodeposited Magnetite Electrode With Different pH Values**
Myong-Jin Kim, Dong Jin Kim, and Hong Pyo Kim(KAERI)

제 4 분과 F

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -원자력재료(Materials) B

좌 장 김민철(Min Chul Kim), 박지연(Ji Yeon Park)

발표장소 호텔 2층, 다이아몬드

일 정 | 10. 30(목) 13:00-15:00

- P04F01 Microstructure Characterization of Oxide Dispersion Strengthened Alloy 617**
Y.B. Chun, C.H. Han, B.Y. Lee, and J. Jang(KAERI)
- P04F02 Microstructure and Texture Evolution of Cold-rolled ODS Steel During Annealing**
Y.B. Chun, S.H. Kang, S. Noh, and T.K. Kim(KAERI)
- P04F03 Effect of Aging on Tensile Properties of ODS Steel**
Dae Whan Kim, Sang Hoon Noh, and Tae Gyu Kim(KAERI)
- P04F04 Design Improvement of Double Pressure Vessel in the In-pile Test Section**
Jintae Hong, Sung-Ho Heo, Chang-Young Joung, and Ka-HyeKim(KAERI)
- P04F05 Development of Multi-Purpose Jig for Laser Welding**
Sung-Ho Heo, Jintae Hong, Chang-Young Joung, and Ka-Hye Kim(KAERI)
- P04F06 Effects of Mn Addition on Microstructures and Mechanical Properties of 10Cr ODS Ferritic/
Martensitic Steels**
Hyun Ju Jin and Tae Kyu Kim(KAERI)
- P04F07 Study on Microstructures and Tensile Properties with Addition of V and Sc in ODS Ferritic/
Martensitic Steels**
Hyun Ju Jin and Tae Kyu Kim(KAERI)
- P04F08 Dynamic Strain Aging Effects on Inelastic Behaviors of Type 316H at Elevated Temperature**
Ji-Hyun Yoon, Gyeong-Hoi Koo, and Bong-Sang Lee(KAERI)
Young-Choon Kim(UST)
- P04F09 Effects of Microstructural Inhomogeneity on Charpy Impact Properties for Reactor Pressure
Vessel.**
Seokmin Hong, Jaemin Song, Min-Chul Kim, Kwon-Jae Choi, and Bong-Sang Lee(KAERI)
- P04F10 The Effects of Hot Bending on the Low Cycle Fatigue Behaviors of 347 SS in PWR Primary
Environment**
Ho-Sub Kim, Jong-Dae Hong, Junho Lee, and Changheui Jang(KAIST)

IV. 분과별 논제 및 발표자

제 5분과 A

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

좌 장 김성중(Sung Joong Kim), 박래준(Rae-Joon Park)

발표장소 호텔 2층, 휴닉스볼룸 I

일 정 | 10. 30(목)

- 09:00** **Simulation of ISTP-EPICUR Iodine Chemistry Tests with RAIM**
Han-Chul Kim, Yeong-Hun Cho, Dong-Ju Jang, and Myung-Hyun Ryu(KINS)
- 09:20** **Mixing Characteristics during Fuel Coolant Interaction under a Reactor Submerged Condition**
S.W. Hong, Y. S Na, S. H. Hong, and J. H. Song(KAERI)
- 09:40** **An Experimental Investigation on APR1400 Penetration Weld Failure by Metallic Melt**
Sang Mo An, Kwang Soon Ha, Hwan Yeol Kim(KAERI)
- 10:00** **A Study on Reinforced Concrete Cracking Models for Steam Explosion Analysis**
Seung Hyun Kim and Yoon-Suk Chang(KHU)
Sungchu Song and Yong-Jin Cho(KINS)
- 10:20** **Experimental Assessment of the Two-Phase Flow in a Large Inclined Channel**
Thanh Hung Nguyen, Ki Won Song, Shripad T.Revankar, and Hyun Sun Park(POSTECH)
- 10:40** **Coffee Break**
- 11:00** **CFD Analysis for Natural Convection Induced by Steam Condensation in the THAI Facility**
Hyung Seok Kang and Seong Wan Hong(KAERI)
Martin Freitag(Becker Technologies GmbH)
- 11:20** **A Conceptual Study of the Filtration Equipment Arrangement in CFVS System**
Hyun-Soo Kim, Jong-Wook Lee, and Won-Seok Kim(BHI)
- 11:40** **Numerical Study of Severe Accidents on Containment Venting Conditions**
Na Rae Lee, Young Suk Bang, Tong Kyu Park, and Doo Yong Lee(FNC Tech.)
Yu Jung Choi, Sang Won Lee, and Hyeong Taek Kim(KHNP CRI)
- 12:00** **Pressurized Thermal Shock Analysis for OPR1000 Pressure Vessel**
P. K. Bhowmik, J. A. Shamim, A. Gairola, and Kune Y. Suh(SNU)
- 12:20** **The Effect of the SIT Injection Rate on Delaying RPV Failure during Severe Accidents**
Seungwon Seo, Gyoodong Jeun, and Sung Joong Kim(HYU)
Hwan-Yeol Kim and Kwang Soon Ha(KAERI)

제 5 분과 B

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 확률론적 안전성평가(Probabilistic Safety Assessment)

좌 장 정원대(Wondea Jung), 황석원(Seok Won Hwang)

발표장소 호텔 2층, 휘닉스볼룸 II

일 정 | 10. 30(목)

- 09:00 A Reanalysis of Interfacing Systems LOCA Frequency of Hanul Units 3 and 4**
Dong San Kim, Jin Hee Park, and Seung Cheol Jang(KAERI)
- 09:20 Development of the Level 1 PSA Model for PGSFR Regulatory**
Hyun Ju Na and Yong Suk Lee(FNC Tech.)
Andong Shin and Nam Duk Suh(KINS)
- 09:40 Development of a Base Frame for the New Fire PSA Training, and Lessons Learned**
Kilyoo Kim, Daell Kang, and Wee Kyong Kim(KAERI)
- 10:00 Framework for Estimating Response Time Data to Conduct a Seismic Human Reliability Analysis - Its Feasibility**
Jinkyun park, Yochan Kim, Wondea Jung, and Seung Cheol Jang(KAERI)
- 10:20 Examination of Conservatism in Early/Latent Fatality Estimation in Level 3 PRA**
Sung-yeop Kim, Haneol Lee, and Man-Sung Yim(KAIST)
- 10:40 Coffee Break**
- 11:00 Quantifications and Modeling of Human Failure Events in a Fire PSA**
Dae Il Kang, Kilyoo Kim, and Seung-Cheol Jang(KAERI)
- 11:20 Correlation Relationship of Performance Shaping Factors (PSFs) for Human Reliability Analysis**
Bheka M. Khumalo, and Kim Joughyun(KINGS)
- 11:40 Surrogate Model for Recirculation Phase LBLOCA and DET Application**
Douglas A. Fynan and Kwang-II Ahn(KAERI)
John C. Lee(UMICH)
- 12:00 A Study on Fire Ignition Frequency of UCN 3 During Shutdown**
Kilyoo Kim, Daeil Kang, and Seung-Cheol Jang(KAERI)
- 12:20 A Study on the Adverse Effect of AOVs in AFWS Recirculation Paths on Plant Safety**
Ho Thi Thanh Huong(KAIST)
Dae-Wook Chung(KINS)

IV. 분과별 논제 및 발표자

제 5 분과 C

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

좌 장 김환열(Hwan Yeol Kim), 박현선(Hyun Sun Park)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P05C01 Performance Evaluation of Emergency Rapid Depressurization Function in APR1400**
Yongjin Cho, Kukhee Lim, and Tae-hyeong Kim(KINS)
- P05C02 A Preliminary Study of the Core Catcher System on Various Stud Shapes using FLUENT**
Uiju Jeong, Gwang Hyeok Seo, Gyoodong Jeun, and Sung Joong Kim(HYU)
- P05C03 Enhancement of Weld Failure and Tube Ejection Model in PENTAP Program**
Jaehoon Jung, Sang Mo An, Kwang Soon Ha, and Hwan Yeol Kim(KAERI)
- P05C04 Analysis of Large In-vessel First Wall Pipe Break with Wet Confinement Bypass in the ITER**
Sung Bo Moon and In Cheol Bang(UNIST)
- P05C05 Analysis of Core Degradation in Fukushima Unit 1 Accident with MELCOR**
Sung Il Kim, Tae Woon Kim, and Kwang Soon Ha(KAERI)
- P05C06 Analysis of Two Phase Natural Circulation Flow in the Cooling Channel of the PECS**
R. J. Park, K. S. Ha, B. W. Rhee, and H. Y. Kim(KAERI)
- P05C07 Hydrogen Recombination Rates of Plate-type Passive Auto-catalytic Recombiner**
Jongtae Kim and Seong-Wan Hong(KAERI)
Gun Hong Kim(Kyungwon E&C Co.,)
- P05C08 Introduction of the U.S. Nuclear Regulatory Commission's Activities to Reflect Lessons Learned from Fukushima Nuclear Accident**
Sang-Kyu Ahn, Hyung-Joan Ahn, Gun-Hyun Chang, Byung-Jik Kim, Sun-Hye Kim, and Jin-Ho Lee(KINS)
- P05C09 KAERI Activities on the Cooling Performance of Ex-vessel Core Catcher**
Kwang Soon Ha and Rae Joon Park(KAERI)
Kyung Jin Wi(CNU)
Thuy Nguyen Thi Thanh(UST)
- P05C10 Consideration of MAAP 5.0.2 ESF Model Characteristics for APR1400 NPP**
Mi Ro Seo and Hyeong Taek Kim(KHNP CRI)
- P05C11 Effect of Fuel Structure Materials on Radiation Source Term in Reactor Core Meltdown**
Hae Sun Jeong and Kwang Soon Ha(KAERI)
- P05C12 Preliminary Assessment for the Mitigative Effectiveness of External Injection During Extended SBO**
S. Y. Park and K. I. Ahn(KAERI)

P05C013 Reactor Core Coolability Analysis during Hypothesized Severe Accidents of OPR1000

Yongjae Lee, Seungwon Seo, and Sung Joong Kim(HYU)
Kwang Soon Ha and Hwan-Yeol Kim(KAERI)

P05C14 Development of Lower Plenum Molten Pool Module of Severe Accident Analysis Code in Korea

Donggun Son, Dong-Ha Kim, Rae-Jun Park, and Jun-Ho Bae(KAERI)
Suk-Ku shim and Ralph Marigomen(E&E Tech.)

P05C15 A Study on the Coupled FEM-Analysis for Reactor Vessel Lower Head of APR1400 under the Severe Accident Scenario

Hyonam Kim and Ihn Namgung(KINGS)

P05C16 Introduction to the Modified TROI Test Facility for Fuel Coolant Interaction under a Submerged Reactor Vessel

Young Su Na, Seong-Wan Hong, Jin Ho Song, and Seong-Ho Hong(KAERI)

IV. 분과별 논제 및 발표자

제 5분과 D

원자력열수력 및 안전(Thermal Hydraulics and Safety)-Poster - 확률론적 안전성평가(Probabilistic Safety Assessment)

좌 장 황미정(Meejeong Hwang), 장동주(Dong Ju Jang)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P05D01 Survey on Challenging Issues of Multi-Unit PSA**
Kyemin Oh and Gyunyoung Heo(KHU)
Seung-cheol Jang(KAERI)
- P05D02 A Methodology for Evaluating Severe Accident Management Strategies**
Yongjin Lee and Moosung Jae(HYU)
- P05D03 Impact on the PSV Stuck Open According to the Henry-Fauske Model Modification in RELAP5/MOD3.3**
Dong Hyun Cho, Cheol Woo Kim, Jae Young Huh, Gyu Cheon Lee, and Shin Whan Kim(KEPCO E&C)
- P05D04 Development of a Risk Assessment Methodology and An Application**
Tae Wook Kang and Moosung Jae(HYU)
- P05D05 A Computer Program for Assessing Nuclear Safety Culture Impact**
Kiyoon Han and Moosung Jae(HYU)
- P05D06 Study of Updating Initiating Event Frequency using Prognostics**
Hyeonmin Kim, Sang-Hwan Lee, Jun-seok Park, Hyungdae Kim, Yoon-Suk Chang, and Gyunyoung Heo(KHU)
- P05D07 Quantitative Screening Analysis of Internal Flooding PSA Using the EPRI Methodology For Kori 2 Nuclear Power Plant**
Hyungho Lee(FNC Tech.)
Hyun Gyo Lee(KHNP CRI)
- P05D08 Quantification of ISLOCA Frequency Using Plant Specific and NUREG/CR-6928 Reliability Data for Kori 3 and 4 Nuclear Power Plant**
Cheol Ju Kim(FNC Tech.)
Tae-Young Shin(KHNP CRI)
- P05D09 A COCAP Program for Estimating the Common Cause Failure Parameters**
Baehyeuk Kwon(KAERI)
Jangwan Moon and Moosung Jae(HYU)

제 5 분과 E

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

좌 장 이성재(Sung-Jae Lee), 조형규(Hyung Kyu Cho)

발표장소 호텔 2층, 다이아몬드

일 정 | 10. 30(목) 13:00-15:00

- P05E01 Suggestion of a New Empirical Correlation to predict Pool Boiling Heat Transfer on Tandem Tubes**
Myeong-Gie Kang(ANU)
- P05E02 Improved Measurement System and Design Characteristics of the ATLAS Facility**
B. U. Bae, K. Y. Choi, K. H. Kang, J. R. Kim, Y. S. Park, Y. C. Shin, N. H. Choi, and K. H. Min(KAERI)
S. G. Lim(KHNP CRI)
- P05E03 Effects of Dihedral Angle on Pool Boiling Heat Transfer from Two Tubes in Vertical Alignment**
Myeong-Gie Kang(ANU)
- P05E04 Test Specification of A1-2 Test for OECD-ATLAS Project**
Kyoung-Ho Kang, Sang-Ki Moon, Seung-Wook Lee, Ki-Yong Choi, and Chul-Hwa Song(KAERI)
- P05E05 Experimental Study on the Lift-off Phenomena of Bubbles Generated on Horizontal Tube**
Sung Uk Ryu, Seok Kim, and Dong-Jin Euh(KAERI)
- P05E06 Heat Transfer Characteristics of SiC-coated Heat Pipe for Passive Decay Heat Removal**
Kyung Mo Kim, In Guk Kim, Yeong Shin Jeong, In Cheol Bang(UNIST)
- P05E07 Modification of the Horizontal Condensation Heat Transfer Model based on Slip Ratio Model**
S. Kim, S. W. Ryu, S. T. Lee, and D.-J. Euh(KAERI)
- P05E08 Experimental Investigations of Vertical and Horizontal Heat Pipes**
In Guk Kim, Kyung Mo Kim, Young Shin Jeong, and In Cheol Bang(UNIST)
- P05E09 Non-condensable Gas Effect During a Late Reflood Phase of the LBLOCA**
Yusun Park, Hyun-sik Park, Kyoung-ho Kang, Nam-hyun Choi, Kyoung-ho Min, and Ki-yong Choi(KAERI)
- P05E10 High-speed Infrared Thermography for the Measurement of Microscopic Boiling Parameters on Micro- and Nano-Structur Surfaces**
Youngjae Park and Hyungdae Kim(KHU)
Hyungmo Kim(KAERI)
Joonwon Kim(POSTECH)

IV. 분과별 논제 및 발표자

제 5 분과 F

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

좌 장 최동수(Tong Soo Choi), 박찬억(Chan-Eok Park)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P05F01** **GOTHIC Simulation of APR1400 Auxiliary Charging Pump Room Heat Up**
Hui-Un Ha and Sun Heo(KHNP CRI)
- P05F02** **Numerical Simulation for Frictional Loss and Local Loss of a 5x5 SMART Rod Bundle**
Jong-Pil Park, Seong Jin Kim, Hyuk Kwon, Kyong-Won Seo, and Dae-Hyun Hwang(KAERI)
- P05F03** **Improvement of Parallel Algorithm for MATRA Code**
Seong-Jin Kim, Kyong-Won Seo, Hyouk Kwon, Dae-Hyun Hwang(KAERI)
- P05F04** **CFD Study of Deteriorated Turbulent Heat Transfer in Upward Flow**
Yohanes Setiawan Nietiadi and Jeong Ik Lee(KAIST)
Yacine Addad(KUSTAR)
- P05F05** **Flow Regime Comparison of MARS-KS to SPACE during LBLOCA**
Min-Gil Kim, Youho Lee, and Jeong Ik Lee(KAIST)
- P05F06** **Passive Decay Heat Removal Strategy of Integrated Passive Safety System (IPSS) for SBO-combined Accidents**
Sang Ho Kim, Soon Heung Chang, and Yong Hoon Jeong(KAIST)
- P05F07** **Initial Core Start-up Model of the JRTR Simulator**
Seung Wook Lee, Sung Won Bae, and Kyung Doo Kim(KAERI)
- P05F08** **Study on the Opening Characteristics of MSSV**
Jong-Beom Lee and Dong-Soo Song(KHNP CRI)
- P05F09** **Assessment of the SPACE Code Using the LSTF SGTR Test**
Yo-Han Kim, Chang-Keun Yang, and Sang Jun Ha(KHNP CRI)
- P05F10** **Cumulative Damage Fraction Evaluation for the Sub-channel Blockage Accident in PGsFR**
Jin Yoo, Won-Pyo Chang, and Ki-Suk Ha(KAERI)
- P05F11** **Assessment of TRACE CCFL Model with Air-Water Countercurrent Flow Test**
Kyung Won Lee, Ae Ju Cheong, and Nam Duk Suh(KINS)
- P05F12** **Sensitivity Test of RIA in 5MW Research Reactor during Startup**
Soo Been Yum and Su Ki Park(KAERI)
- P05F13** **Sensitivity Study for Uncertainty Range of Fuel and Safety Injection Parameters in KINS-REM**
Byung Gil Huh, Kwang-Won Seul and Taesuk Hwang(KINS)

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- P05F14** **Simulation of IVR-ERVC and Estimation Method of Coolant Inflow to the Cavity**
Hyunjin Lee and Ihn Namgung(KINGS)
- P05F15** **Assessment of TRACE Code for MIT Pressurizer Tests to Review Industrial Code**
Chanyi Song, Young Seok Bang, Andong Shin, and Sweng-Wong Woo(KINS)
- P05F16** **Anticipated Transient Without SCRAM(ATWS) Analysis Using the RETRAN Code**
Bum soo Youn, Jong beom Lee, Dong soo Song, and Sang jun Ha(KHNP CRI)
- P05F17** **A Theoretical Model for the Prediction of Siphon Breaking Phenomenon**
Youngmin Bae, Young-In Kim, Jae-Kwang Seo, Keung Koo Kim, and Juhyeon Yoon(KAERI)
- P05F18** **Available Driving Head Following a Loss-of-Coolant Accident in the APR1400 Design**
Jeong-kwan Suh and Jae-yong Lee(KHNP CRI)
Hae-jung Sung(KEPCO NF)
- P05F19** **Development of Inspection Guideline for Gas Accumulation in the Safety Systems**
Seung Hun Yoo, Kwang-Won Seul, Young-Seok Bang, and Jun Soo Lee(KINS)
- P05F20** **Analysis of Radioactive Material in Consideration of Containment Filtered Venting System for Wolsong NPP Unit 1**
Sung-Han Lee, Jin-Hyuck Kim, and Nam Duk Suh(KINS)
Song-Won Cho(NSE)
- P05F21** **Evaluation of the SPACE Code Using the SB-LOCA in Zion Unit 1**
Nam-Hee Lim, Yo-Han Kim, and Seyun Kim(KHNP CRI)
- P05F22** **Analysis of Spent Fuel Assembly Thermal Behaviors in Boil-off Accident Scenarios**
Hye-Min Kim, Tae-Hyun Chun, and Sun-Ki Kim(KAERI)
- P05F23** **The Effect Analysis of CCP Calculated with the 95% Power Condition of Wolsong-2**
You Sung-Chang and Ryu Eui-Seung(KHNP CRI)
- P05F24** **The Comparison Analysis of Thermalhydraulic Behavior between A Reference 37-element Bundle and A Modified 37-element Bundle**
Ryu Eui - Seung and You Sung-Chang(KHNP CRI)
- P05F25** **The Optimum Operation Strategy of Hybrid SIT with PAFS Following a Station Blackout Accident**
Sun Heo and Hui-Un Ha(KHNP CRI)
- P05F26** **RANS Based CFD Investigation of a Fuel Assembly with Local Blockage**
J. H. Jeong, J. Yoo, K. L. Lee, and K. S. Ha(KAERI)
- P05F27** **Analysis of MIT Pressurizer Experiment Using RETRAN Code**
Dong-Hyuk Lee, Yo-Han Kim, and Bum-Soo Youn(KHNP CRI)
- P05F28** **Computational Fluid Dynamic Pressure Drop Estimation of Flow between Parallel Plates**
Hyung Min Son, Soo Hyung Yang, and Jong Hark Park(KAERI)
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P05F29 Implementation of Wall Film Condensation Model for Large System Analysis in CUPID

Je Hee Lee and Hyoung Kyu Cho(SNU)
Han Young Yoon(KAERI)

P05F30 The Effect of High Burnup on Fuel Modeling in APR1400 SBLOCA Analyses

In-Hun Kim, Kang-Moon Lee, and Jae Il Lee(KEPCO NF)

P05F31 Validation of Turbulence Models for Pool Natural Convection in CUPID Code

Ikjun Song and Jungwoo Kim(SEOULTECH)

P05F32 Do High Order Accurate Schemes for the Convection Terms always Guarantee the Improved Prediction for Nuclear Safety Problems?

Gong Hee Lee and Ae Ju Cheong(KINS)

P05F33 Validation Uncertainty of MATRA Code for Subchannel Void Distributions

Dae-Hyun Hwang, Seong-Jin Kim, Hyouk Kwon, and Kyong-Won Seo(KAERI)

제 5 분과 G

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력실험 - I (Thermal Hydraulic Experiment - I)

좌 장 문상기(Sang-Ki Moon), 이정익(Jeong Ik Lee)

발표장소 호텔 2층, 휘닉스볼룸 I

일 정 | 10. 31(금)

- 09:00 Onset of Nucleate Boiling (ONB) Experiment on a Smooth Heating Surface Free from Trapped Vapor**
HangJin Jo and Hyun Sun Park(POSTECH)
Moo Hwan Kim(KINS)
- 09:20 Oxidation Effect on Pool Boiling Heat Transfer in Atmospheric Saturated Water**
Hong Hyun Son, Uiju Jeong, Gwang Hyeok Seo, Gyoodong Jeun, and Sung Joong Kim(HYU)
- 09:40 Measurement of Liquid Film Thickness Using near Infrared Imagery with Application to Film Condensation**
Sangeun Kim and Hyungdae Kim(KHU)
- 10:00 Visualization of Two Phase Natural Convection Flow in a Vertical Pipe Using the Sulfuric Acid - Copper Sulfate Electroplating System**
Seung-Min Ohk, Myeong-Seon Chae, and Bum-Jin Chung(KHU)
- 10:20 Improvements of Critical Heat Flux Models Based on the Viscous Potential Flow Theory**
Byoung Jae Kim, Jong Hyuk Lee, and Kyung Doo Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Development of Uncertainty Quantification Method for MIR-PIV Measurement Using BOS Technique**
Jee Hyun Seong, Min Seop Song, and Eung Soo Kim(SNU)
- 11:20 Measurement of Velocity Field in Pipe with Classic Twisted Tape Using Matching Refractive Index Technique**
Min Seop Song, So Hyun Park, and Eung Soo Kim(SNU)
- 11:40 Interfacial Friction Factor Model for Two-dimensional Film Flow**
Jin-Hwa Yang, Hyoung-Kyu Cho, and Goon-Cherl Park(SNU)
Dong-Jin Euh(KAERI)
- 12:00 Study on Effects of Orientation on Wall Boiling Heat Flux Partitioning**
Satbyoul Jung and Hyungdae Kim(KHU)
- 12:20 Experimental Study of Droplet-wall Direct Contact Heat Transfer Using Infrared Thermometry**
Junseok Park and Hyungdae Kim(KHU)
Jun Yeong Jung(KAIST)

IV. 분과별 논제 및 발표자

제 5분과H

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력 실험 - II (Thermal Hydraulic Experiment - II)

좌 장 방인철(In Cheol Bang), 최기용(Ki-Yong Choi)

발표장소 호텔 2층, 휘닉스볼룸 II

일 정 | 10. 31(금)

- 09:00** **Some Findings from Thermal-Hydraulic Validation Tests for SMART Passive Safety System**
Hyun-Sik Park, Hwang Bae, Sung-Uk Ryu, Hyobong Ryu, Yong-Cheol Shin, Kyoung-Ho Min, and Sung-Jae Yi(KAERI)
- 09:20** **Comparison of SBLOCA Test Results with the FESTA Facility for the SMART Design**
Hyobong Ryu, Hyun-Sik Park, Hwang Bae, Sung-Uk Ryu, Young-Joo Ko, and Sung-Jae Yi(KAERI)
- 09:40** **Study on the Scaling of Core Flow Distribution Test**
Soon Joon HONG and Jung Hui HA(FNC Tech.)
Taehoo LEE and Ji Woong HAN(KAERI)
- 10:00** **The 3rd ATLAS Domestic Standard Problem for Improvement of Safety Analysis Technology**
Ki-Yong Choi, Kyoung-Ho Kang, Yusun Park, Jongrok Kim, Byoung-Uhn Bae, and Nam-Hyun Choi(KAERI)
- 10:20** **Test Specification of A1-1 Test for OECD-ATLAS Project**
Kyoung-Ho Kang, Sang-Ki Moon, Seung-Wook Lee, Ki-Yong Choi, and Chul-Hwa Song(KAERI)
- 10:40** **Coffee Break**
- 11:00** **An Experimental Study on the Onset of Nucleate Boiling in Narrow Rectangular Channels for Downward Flow**
Jung-Hyun Song, Juhyung Lee, and Yong Hoon Jeong(KAIST)
Soon Heung Chang(HGU)
- 11:20** **Performance Tests of Three Flow Distributors Using SMART-ITL with 1-Train CMT**
Hwang Bae, Sung Uk Ryu, Yong-Cheol Shin, Yung-Joo Ko, Kyoung-Ho Min, Hyo Bong Ryu, Jong-Kuk Park, Yun-Gon Bang, Young-Jong Chae, Sung-Jae Yi, and Hyun-Sik Park(KAERI)
- 11:40** **Effect of the Design Change of the LSSBP on Core Flow Distribution of APR+ Reactor**
Kihwan Kim, Dong-Jin Euh, Hae-Seob Choi, and Tae-Soon Kwon(KAERI)
- 12:00** **An Experimental Study on the Heat Focusing of the Metallic Layer in a Severe Accident**
Je-Young Moon and Bum-Jin Chung(KHU)

제 5 분과 I

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력 해석 - I (Thermal Hydraulic Analysis - I)

좌 장 윤한영(Hanyoung Yoon), 김오한(Yo Han Kim)

발표장소 호텔 2층, 휘닉스볼룸 Ⅲ

일 정 | 10. 31(금)

- 09:00** **Rayleigh-Taylor Instability of a Viscous Vapor-Liquid Interface with Mass Transfer**
Byoung Jae Kim and Kyung Doo Kim(KAERI)
- 09:20** **Application of Solar Chimney Concept to Solve Potential Safety Issues of Nuclear Power Plants**
Khalid KHASAWNEH and Youn Won PARK(KAIST)
- 09:40** **Evaluation of Thermal Margin for the Nuclear Fuel Bundle in the MAST Assembly with Multi-scale Analysis**
Byong-Jo Yun, Young Soo Kim, Hui-Yung Kim, and Jun-Yean Lee(PNU)
Jae-Yeong Jeon(POWER MnC)
- 10:00** **Prediction of Heat Removal Capacity of Horizontal Condensation Heat Exchanger Submerged in Pool**
Seong-Su Jeon and Soon-Joon Hong(FNC Tech.)
Hyoung-Kyu Cho(SNU)
Goon-Cherl Park(KINGS)
- 10:20** **Numerical Simulation of Two-Dimensional Film Flow Using CUPID1.8 Code**
Y. J. Cho and H. Y. Yoon(KAERI)
H. K. Cho(SNU)
- 10:40** **Coffee Break**
- 11:00** **Status of the Polyhedral Mesh Generator Using SALOME PLATFORM and TetGen**
Sang Yong Lee, Chan Eok Park, and Kim Shin Whan(KEPCO E&C)
- 11:20** **Development of Calculation Algorithm for ECCS Kinematic Shock**
Seung-Chan Lee, Duk-woo Yoon, and Sang-Jun Ha(KHNP CRI)
- 11:40** **Parametric Study of External Steam Condensation in Presence of Air Using CFD**
Byong Guk Jeon and Hee Cheon NO(KAIST)
- 12:00** **The Loss of Spent Fuel Pool Cooling Analysis during Plant Outage for OPR1000**
Cheol Woo Kim and Jae Young Huh(KEPCO E&C)
- 12:20** **Development and Verification of Smoothed Particle Hydrodynamics Code for Analysis of Tsunami near NPP**
Young Beom Jo and Eung Soo Kim (SNU)

IV. 분과별 논제 및 발표자

제 5 분과 J

원자력열수력 및 안전(Thermal Hydraulics and Safety)

- 열수력 해석 - II (Thermal Hydraulic Analysis - II)

좌 장 오덕연(Deog-Yeon Oh), 정해용(Hae-Yong Jeong)

발표장소 호텔 2층, 루비 I+II

일 정 | 10. 31(금)

- 09:00 Subchannel Code Benchmarking to Columbia University 4x4 and Pacific Northwest Laboratory 2x6 Bundle Test Data**
Kang Hoon Moon, Erdal Özdemir, and Seung Jong Oh(KINGS)
- 09:20 Comparison of THALES and VIPRE-01 Subchannel Codes for Loss of Flow and Single Reactor Coolant Pump Rotor Seizure Accidents Using Lumped Channel APR1400 Geometry**
Erdal Özdemir, Kanghoon Moon, and Seung Jong Oh(KINGS)
Yongdeog Kim(KHNP CRI)
- 09:40 Validation of MATRA-LMR by ORNL 19-rods Fuel Assembly Experiment**
Jangsik Moon, Yong Hoon Jeong, and Byung-Hyun You(KAIST)
- 10:00 Comparison of SPACE and COBRA-TF for the Droplet Field Predictions**
Nam Yee Kwak, Tong Soo Choi, and Jae Il Lee(KEPCO NF)
- 10:20 Pressure Response Analysis with Dispersal of Failed Fuel during Ria Using Retran-3D**
Chansu Jang, Gyosub Lee, Jaeil Lee, Jaedon Choi, and Songkee Sung(KEPCO NF)
- 10:40 Coffee Break**
- 11:00 Simulation of an SBLOCA Test of Shutdown Cooling System Line Break with the SMART-ITL Facility Using the MARS-KS Code**
Yeon-Sik Cho and Jae-Seung Suh(SE&T)
Hwang Bae, Sung-Uk Ryu, Sung-Jae Yi, and Hyun-Sik Park(KAERI)
- 11:20 Applicability of Coupled Thermalhydraulic Codes for Safety Analysis of Nuclear Reactors**
A. Gairola, P. K. Bhowmik, J. A. Shamim, and K. Y. Suh(SNU)
- 11:40 A Study of Time Response for Safety-Related Operator Actions in Non-LOCA Safety Analysis**
Min Seok Lee, Sang Seob Lee, Min Soo Park, Gyu Cheon Lee, and Shin Whan Kim(KEPCO E&C)
- 12:00 Introduction to Loss of Large Area Analysis**
Mee Jeong Hwang, Heoksoon Lim, and Myungsu Kim(KAERI)

제 6 분과 A

방사선 이용 및 방호(Radiation Utilization and Protection)

- 가속기 차폐 (Accelerator Shielding)

좌장 남신우(Shin Woo Nam), 이재성(Jae-Seong Lee)

장소 휘닉스빌 유스호스텔 2층, 별개미취 I

일 정 | 10. 30(목)

- 09:00** **Installation and Benchmark Tests of CINDER' 90 Activation Code**
Oyeon Kum, Seung Uk Heo, and Sunju Oh(KIRAMS)
- 09:20** **A Preliminary Study on the Prompt Radiation Shielding Analysis for Target Rooms in the RAON ISOL Facility**
Song Hyun KIM, Do Hyun KIM, and Chang Ho SHIN(HYU)
SHIN Woo NAM(IBS)
- 09:40** **Preliminary Shielding Analysis for the Neutron Science Facility in RAON**
S.-C.Yang, C.W. Lee, E.J. Lee, and Y.-O.Lee(KAERI)
J.C. Kim(IBS)
- 10:00** **A Preliminary Study on the Air and Concrete Activation Analysis for RAON ISOL-Bunker**
Do Hyun KIM, Song Hyun KIM, Myung Sub SONG, Gi Yeong HAN, Che Wook YIM, Jae Yong LEE, and Chang Ho SHIN(HYU)
Shin Woo NAM(IBS)
- 10:20** **A Preliminary Study on the Radiation Shielding Analysis for the C-12 Ion Beam in the RAON Bio-medical Laboratory**
Gil Yong Cha, Kyoung Yong Noh, and Soon Young Kim(RADCORE)
Sin Woo Nam(IBS)
- 10:40** **Coffee Break**
- 11:00** **Important Cautions in Shielding Computation by Using the FLUKA Code**
Seung Uk Heo, Sunju Oh, Yong keun Song, Oyeon Kum(KIRAMS)
Sang Hee Nam(Inje Univ.)
- 11:20** **Activation Analysis for the IFF System in RAON Facility**
Cheol Woo LEE and Young-Ouk LEE(KAERI)
Jong Won KIM and Mijung KIM(IBS)
- 11:40** **Bulk Shielding Calculation for 90° Bending Section of RISP**
J.H. Oh, N.S. Jung, and H.S. Lee(PAL)
Mokhtari Oranj(POSTECH)
S.K. Ko(UOU)
- 12:00** **A Benchmarking Study of High Energy Carbon Ion Induced Neutron Using Several Monte Carlo Codes**
D.H. Kim, J.H. Oh, N.S. Jung, and H.S. Lee(PAL)
Y.S. Shin, D.Y. Kwon, and Y.M. Kim(Catholic Univ.)
L. Mokhtari Oranj(POSTECH)
- 12:20** **A Study on the Dose Estimation Accuracy Using Neutron Source Terms Generated from the Proton-Target Reaction for the Radiation Safety Analysis in RAON ISOL Target Room**
Che Wook YIM, Do Hyun KIM, Song Hyun KIM, and Chang Ho SHIN(HYU)
Shin Woo NAM(IBS)

IV. 분과별 논제 및 발표자

제 6분과 B

방사선 이용 및 방호(Radiation Utilization and Protection)

- 하나로 활용 연구기술(Research & Technology for HANARO Application)

좌장 조만순(Man-Soon Cho), 박울재(UI Jae Park)

장소 휴닉스빌 유스호스텔 2층, 별개미취 II

일 정 | 10. 30(목)

- 09:00 Evaluation of Monte Carlo Codes Regarding the Calculated Detector Response Function in NDP Method**
Hoang Sy Minh Tuan, Gwang Min Sun, and Byung Gun Park(KAERI)
- 09:20 Performance of Scintillation Proximity Assay (SPA) to Measure the Level of VEGFR 1 Protein**
So-Young LEE, Jae-Cheong LIM, and Jin-Joo KIM(KAERI)
- 09:40 Study of Seed Layer Effect in Nuclear Battery with P-N Diode Junction**
Young Rang Uhm, Kwang Jae Son, Jun Sig Lee(KAERI)
Byoung Gun Choi(KMU)
- 10:00 Optimization and Validation of the Developed Uranium Isotopic Analysis Code**
J.H. Kim, M.Y. Kang, Jinhyeong Kim, and H.D. Choi(SNU)
- 10:20 Status of Neutron Irradiation of Non-Nuclear Materials at HANARO**
Kee-Nam Choo, Man-Soon Cho, Yoon-Taek Shin, Seng-Jae Park, Young Hwan Kang, Byung-Hyuk Jun, Chan-Joong Kim, and Sang-Jun Park(KAERI)
- 10:40 Coffee Break**
- 11:00 The Status and Prospects of the Irradiation Tests at HANARO**
Man Soon Cho, Kee Nam Choo, Seong Woo Yang, and Sang Jun Park(KAERI)
- 11:20 Metal Impurities Profile in a 450kg Multi-Crystalline Silicon Ingot by Cold Neutron Prompt Gamma-ray Activation Analysis**
Hani Baek, Gwang Min Sun, Ji seok Kim, Mok Oh, Yong Sam Chung, Jong Hwa Moon, Sun Ha Kim, Sung Yeol Baek, and Hoang Sy Minh Tuan(KAERI)
- 11:40 Semi-empirical Calculation of Detection Efficiency for Voluminous Source Based on Effective Solid Angle Concept**
M.Y. Kang, J.H. Kim, and H.D. Choi(SNU)
G.M. Sun(KAERI)
- 12:00 Analysis of Selenium Contents in Plant Foods Consumed by Korean Adults**
Okhee Lee and Kangsung Kim(YIU)
Jonghwa Moon and Yongsam Chung(KAERI)
- 12:20 Radioactive Waste Issues related to Production of Fission-based Mo-99 by Using LOW Enriched Uranium (LEU)**
Muhmood ul Hassan and Ho Jin Ryu(KAIST)

제 6분과 C

방사선 이용 및 방호(Radiation Utilization and Protection)

좌 장 황원태(Won-Tae Hwang), 문명국(Myung Kook Moon)

발표장소 스키하우스 2층, 스피넬 I

일 정 | 10. 31(금)

- 09:00 Neutron Absorbing Ability Variation in Neutron Absorbing Material Caused by the Neutron Irradiation in Spent Fuel Storage Facility**
Hee Dong Sohn, Seul Gi Han, Sang Dong Lee, Ki Hong Kim, Eag Hyang Ryu, and Hwa Gyu Park(Doosan)
- 09:20 Assessment of Safety Parameters for Radiological Explosion Based on Gaussian Dispersion Model**
AlokPandey(KAIST)
Hyungjoon Yu and Hong Suk Kim(KINS)
- 09:40 Neutron Beam Estimation and Collimator Design for RAON-nTOF**
E.J. Lee and G.S.Cho(KAIST)
C.W. Lee, S.C.Yang, and Y.W. Lee(KAERI)
J.C. Kim(IBS)
- 10:00 Radiation Dose Assessment Model for Marine Biota (K-BIOTA-DYN-M)**
Dong-Kwon Keum, Byeong-Ho Kim, In Jun, Kwang-Muk Lim, and Yong-Ho Choi(KAERI)
- 10:20 Importance of Environmental Radiation Measurements in Radiation Safety Report**
Sunju Oh, Seung Uk Heo, Oyeon Kum, MinSeok Park, and Gi-sub Kim(KIRAMS)
- 10:40 Coffee Break**
- 11:00 A Tracer Experiment to Understand Dispersion Characteristics at a Nuclear Power Plant Site-Focusing on the Comparison with Predictive Results Using Reg. Guide 1.145 Model**
Hyojoon Jeong, Eunhan Kim, Haesun Jeong, Wontae Hwang, and Moonhee Han(KAERI)
- 11:20 Geometrical Effect of Asymmetric Target in Two-step Shielding Calculation for 70 Mev Cyclotron Facility**
Kyoung Yong Noh and Soon Young Kim(RADCORE)
Shin Woo Nam and Jae Hong Kim(IBS)
- 11:40 Fabrication and Characterization of Li-6 Sandwich Detector**
Kiwhan Chung(FNC Tech.)
Metodi Iiev, Kiril Ianakiev, and Martyn Swinhoe(LANL)

IV. 분과별 논제 및 발표자

제 6분과 D

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

좌 장 한승재(Seung-Jae Han), 이정일(Jungil Lee)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P06D01 Au-coated X-ray Anti-scattering Grid Performance Test by MCNP**
Jun Woo Bae, Dong Han Yoo, and Hee Reyoung Kim(UNIST)
- P06D02 Assessment for Bulk Shielding of 600MeV Proton Beam**
Jae-Ho Lee, Yeon-Soo Yeo, Si-Wan Noh, and Jai-Ki Lee(HYU)
Chang-Ho Shin(ITRS)
Shin-Woo Nam(IBS)
- P06D03 Optimal Physical Protection Against Nuclear Terrorism**
Doyoung Lee and ChangLak Kim(KINGS)
- P06D04 Application of RASCAL Code for Multiunit Accident in Domestic Nuclear Sites**
Sang Hyun Park and Seung Young Jeong(KINS)
- P06D05 Proposal for Reference Soil Concentrations of Radiocesium Applicable to Accidentally Contaminated Rice and Soybean Fields**
Yong-Ho Choi, Kwang-Muk Lim, In Jun, Byung-Ho Kim, and Dong-Kwon Keum(KAERI)
- P06D06 Assessment of Transportation Risk of Radioactive Materials in Uganda**
Menya Richard and Jonghyun Kim(KINGS)
- P06D07 Quality Assurance of ^{137}Cs Photons for Vivo Mouse Irradiation System**
S.J.Noh(Inje Univ.)
H.J. Kim, D.H. Jeong, K.M. Yang, T.G. Son, and Y.-R. Kang(DIRAMS)
S.G. Shin and Y.-U. Kye(POSTECH)
- P06D08 Guidance Manual for Preparing Nuclear and Radiological Emergency Preparedness and Response Plan**
Kabiru Muhammed(KAIST)
Seung-Young Jeong(KINS)
- P06D09 The On-site Dose Assessment Using a Nuclide Recognizing Prompt Radiation Distribution Monitoring System**
Uk Jae. Lee, Dong Han. Yoo, and Hee Reyoung. Kim(UNIST)
- P06D10 Development of Calculation Module for Intake Retention Functions based on Occupational Intakes of Radionuclides**
Siwan Noh, Tae-Eun Kwon, and Jai-Ki Lee(HYU)
Jong-Il Lee and Jang-Lyul Kim(KAERI)

일 정 | 10. 30(목)

- 09:00 Control of the RF System for the Helium RFQ**
Hyeok-Jung Kwon, Han-Sung Kim, Yong-Sub Cho, and Kyung-Tae Seol(KAERI)
- 09:20 Development of KOMAC Beam Monitoring System Using EPICS**
Young-Gi Song, Sang-Pil Yun, Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- 09:40 Analysis of Beam Dynamics Design of the He2+ RFQ LINAC**
Sungkyun Park, Hyeok-Jung Kwon, Han-Sung Kim, Kyung-Tae Seol, Young-Gi Song, and Yong-Sub Cho(KAERI)
- 10:00 Performance Test of Korea Heat Load Test Facility (KoHLT-EB) for the Plasma Facing Components of Fusion Reactor**
Suk-Kwon Kim, Hyung Gon Jin, Eo Hwak Lee, Jae-Sung Yoon, and Dong Won Lee(KAERI)
Seungyon Cho(NFRI)
- 10:20 Status of the GAMMA-FR Code Validation -Two Phase Flow**
Hyung Gon Jin, Dong Won Lee, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Brad J. Merrill(INL)
H. G. Lee(NFRI)
- 10:40 Coffee Break**
- 11:00 Failure Assessment of Hypervapotron Mockup for Fusion Application with KAERI High Heat Flux Test Facilities**
D. W. Lee, H. G. Jin, E. H. Lee, J. S. Yoon, S. K. Kim, T. S. Kim, and S. H. Jeong(KAERI)
S. Cho(NFRI)
- 11:20 Follow-up Study of ITER Safety Analysis : Large In-vessel First Wall Pipe Break with Wet Confinement Bypass**
Sung Bo Moon and In Cheol Bang(UNIST)
- 11:40 RF High Voltage Test and Thermal Analysis on the ICRF Vacuum Feed-through**
H. J. Kim, S. J. Wang, S. W. Seon, B. H. Park, and S. W. Yoon(NFRI)
Y. Lee(KAIST)
- 12:00 Equilibrium Analysis Using Finite Element Method of Ohmic Plasmas in VEST**
Jeongwon Lee, YoungHwa An, JeongHun Yang, Young-Gi Kim, Jong-Yoon Park, Min-Gu Yoo, Kyoung-Jae Chung, Y.S. Hwang, and Yong-Su Na(SNU)

IV. 분과별 논제 및 발표자

제 7 분과 B

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

좌 장 권혁중(Hyeok-Jung Kwon), 이동원(Dong Won Lee)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P07B01 High Heat Flux Test Simulation of Tungsten Macro-brush Mock-ups for the KSTAR Divertor**
J. H. Song, K. M. Kim, H. T. Kim, H. K. Kim, E. N. Bang, K. S. Lee, S. H. Park, H. L. Yang, and Y. K. Oh(NFRI)
- P07B02 Objective Provision Tree for K-DEMO**
Kyemin Oh, Myung-suk Kang, and Gyunyoung Heo(KHU)
Hyoung-chan Kim(NFRI)
- P07B03 Development of Mach Probe for the Ion Flow Measurement in VEST**
S.M. Yang, N.K. Kim, K.S. Chung, J.W. Lee, H.Y. Lee, J.G. Jo, D.H. Na, M.G Yoo, G.H. Kim, Y.S. Hwang, and Yong-Su Na(SNU)
- P07B04 Experimental Reproducibility Analysis in DU Hydriding**
Daeseo Koo, Jongcheol Park, and Hongsuk Chung(KAERI)
- P07B05 Current Design of the Hydrogen Isotope Permeation Sensor for Liquid Breeder**
E. H. Lee, H. G. Jin, J. S. Yoon, S. K. Kim, and D. W. Lee(KAERI)
H. G. Lee(NFRI)
- P07B06 Simulation of Radiation Dose and Neutron Incidence Rate for Various Neutron Shielding Materials**
Yeon-Gyeong Choi and Yu-Seok Kim(DU)
- P07B07 Investigation for Interaction between Residual Gas and Proton Deam**
K. M. Park, H. S. Kim, S. P. Yoon, H. J. Kwon, and Y. S. Cho(KAERI)
- P07B08 Hydrogen Plasma Generation with 200 MHz RF Ion Source**
Jeongtae Kim, Kwangmook Park, Dong Hyuk Seo, Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B09 Poisson Simulation for High Voltage Terminal of Test Stand for 1MV Electrostatic Accelerator**
Sae-Hoon Park, Jeong-Tae Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
Yu-Seok Kim(DU)
- P07B10 Simulation of the Modulator for Driving a Klystron in KOMAC**
Hae-Seong Jeong, Dae-II Kim, Gwang-Soo Kim, Hyeok-Jung Kwon, Han-Sung Kim, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)
- P07B11 Displacement Analysis of Building Movement by Using the Survey of Align Networ at KOMAC**
Dae-II Kim, Dong-Hyuk Seo, Tae-Sung Ahn, Hyeok-Jung Kwon, Han-Sung Kim, and Yong-Sub Cho(KAERI)
- P07B12 Simultaneous Heat and Mass Transfer in DU Hydriding**
Jongcheol Park, Daeseo Koo, and Hongsuk Chung(KAERI)

P07B13 Design of Multi-Harmonic Buncher for Pulsed Proton Beam

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

P07B14 Comparison Study on Finite Element Model for Structural Analysis of Lower CTS Cylinder Lifting Adaptor in ITER Assembly Tool

Jinho Bae, Kyounggo Nam, Hyunki Park, Dongjin Kim, and Heejae Ahn(NFRI)

Yongsu Yoo(SFA Engineenng Corp.,)

Emma Watson and Robert Shaw(ITER)

P07B15 Corrosion Test Using Commercial FMS and Developed ARAA in the Experimental Loop for Liquid Breeder

J. S. Yoon, S. K. Kim, E. H. Lee, H. G. Jin, D. W. Lee, and Y. I. Jung(KAERI)

H. G Lee(NFRI)

IV. 분과별 논제 및 발표자

제 8분과 A

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)

- 발전소 건설, 설계 및 제작 (NPP's Construction, Design & Fabrication)

좌 장 박진호(Jin Ho Park), 김성환(Sung Hwan Kim)

발표장소 호텔 3층, 토파즈 I

일 정 | 10. 30(목)

- 09:00** **Fragility Assessment Method of Concrete Wall Subjected to Impact Loading**
Daegi Hahm, Sang Shup Shin, and In-Kil Choi(KAERI)
- 09:20** **Modal Testing of the CEDM Assembly**
Lee Myoung Goo, Park Jin Seok, Jang Yong Tae, Chang Sang Gyoon, and Lee Dae Hee(KEPCO E&C)
- 09:40** **A New Physical Protection System Design and Evaluation Process**
Heoksoon Lim, Myungsu Kim, Yeongkyoung Bae, and Janghwan Na(KHNP CRI)
- 10:00** **Prediction of Overall Heat Transfer Coefficient for RMI Insulation Using the Test and Analysis**
Lee Sung-Myung, Eo Min-hun, and Kim Won-Seok(BHI)
- 10:20** **A Study on U-bending Technology Using Rotary Draw Bending**
Ok-gyu Kwak and Won-seok Kim(BHI)
Tae-wan Ku(PNU)
- 10:40** **Coffee Break**
- 11:00** **Improvement in Mechanical Properties of SA508 Gr.1a Piping Material by Modifying Microstructure**
Jin Weon Kim and Myung Rak Choi(CSU)
Young Jin Oh, Heung Bae Park, and Kyung Su Kim(KEPCO E&C)
- 11:20** **Design of The Backup-hardcopy in A4 Size**
Hyekyoung Kim, Nokyu Seong, Sungjin Lee, and Yeonsub Jung(KHNP CRI)
- 11:40** **Prioritization of Delay Factors for NPP Construction Risk in International Project by Using AHP Methodology**
Muhammed Mufazzal Hossen, Sunkoo Kang, and Jonghyun Kim(KINGS)

제 8 분과 B

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology) - 원전 내진 및 구조 (NPP's Structural Engineering)

좌 장 이진우(Jin Woo Lee), 백용락(Yong Lak Paek)

발표장소 호텔 3층, 토파즈 I

일 정 | 10. 31(금)

- 09:00 A Sensitivity Study for an Evaluation of Input Parameters Effect on a Preliminary Probabilistic Tsunami Hazard Analysis**
Hyun-Me Rhee, Min Kyu Kim, and In-Kil Choi(KAERI)
Dong-Hoon Sheen(CNU)
- 09:20 Evaluation of Floor Response Spectrum Considering Ductility of Structure**
Junhee Park and In-Kil Choi(KAERI)
- 09:40 Floor Response Evaluation for Building Subjected to Liquid Filled Missile Impact**
Sang Shup Shin, Daegi Hahm, and In-Kil Choi(KAERI)
- 10:00 Dynamic Performance Characteristic Tests of Real Scale Lead Rubber Bearing for the Evaluation of Performance Criteria**
Min Kyu Kim, Jung-Han Kim, and In-Kil Choi(KAERI)
- 10:20 Experimental Study on the Ultimate Property Diagram of Base Isolators**
Jung Han Kim, Min Kyu Kim, and In-Kil Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Analysis of Bi-directional Effects on the Response of a Seismic Base Isolation System**
Hyung-Kui Park, Jung Han Kim, Min Kyu Kim, and In-Kil Choi(KAERI)
- 11:20 Experimental Study on a Prototype Seismic Isolation Device for NPP**
Hong-Pyo Lee, Myung-Sug Cho, and Kyung-Hun Kang(KHNP CRI)
- 11:40 FSI-based Overflow Assessment of the Seismically-Isolated SFP with Fuel Racks**
Gil Y. Chung, Hyun T. Park, and Soo-Hyuk Chang(KM)
Sang-Hoon Lee(KEPCO E&C)

IV. 분과별 논제 및 발표자

제 8 분과 C

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)
- 원전 경년열화, 운전/정비 (Aging Managemnet, Operation/Maintenance)

좌 장 김종석(Jong-Seog Kim), 정성규(Seong Gyu Cheong)

발표장소 호텔 3층, 토파즈 II

일 정 | 10. 31(금)

- 09:00 A Study on the Application of Dissolved Oxygen for Environmental Fatigue Evaluation**
Yang Ho Cheon, Byeong Ho Park, Seong Chan Park, and Eun Kee Kim(KEPCO E&C)
- 09:20 Study on an ISO 15926 Based Data Modeling Methodology for Nuclear Power Industry**
Kyungik An(PartDB)
Yoon Sang Cho and Youjin Park(KHNP CRI)
- 09:40 Development of Stress-Based Fatigue Monitoring System Based on the Stress Transfer Function for Nuclear Power Plants**
Myung-Hwan Boo and Eun-Sub Yun(KHNP CRI)
Chang-Kyun Oh and Hyun-Su Kim(KEPCO E&C)
- 10:00 Experimental Evaluation of the Burst Pressure of Steam Generator Tube with Multiple Part-through-wall Cracks**
Ki Hyeon Eom and Jin Weon Kim(CSU)
- 10:20 Deformation Evaluation for Weld Repair of Reactor Vessel Upper Head Penetration Nozzle and Weld**
Kyoungsoo Lee(KHNP CRI)
Taeyoung Ryu(SKKU)
- 10:40 Coffee Break**
- 11:00 Comparison Study on Thermal-Hydraulic Analysis Depending on Liquid Relief Valve Response for an Station Blackout in CANDU-6**
S.M Kim and D.W. Kho(KHNP CRI)
S.Y. Choi, B. J Moon, and S.R Kim(NESS)
- 11:20 Derivation of Essential Electrical Elements for Ensuring the Reliability of Fire Hazard Analysis in Nuclear Power Plant**
Hyuntae Yim and Seungjun Oh(PNE Co., Ltd.)
Weekyong Kim(KINS)

제 8 분과 D

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)-Poster

- 발전소 건설 (NPP's Construction)

좌 장 최인길(In-kil Choi), 주광호(Kwang Ho Joo)

발표장소 호텔 2층, 다이아몬드

일 정 | 10. 30(목) 13:00-15:00

- P08D01 Development of Earned Value Management System in NPP Construction Project**
Lee, Sang-Hyun and Moon, Byeong-Suk(KHNP CRI)
- P08D02 A Comparative Study on Economic Analysis of Current Designs of NPPs**
Kee Il Guon and Myung-Sub Roh(KINGS)
- P08D03 Development of the Stress Evaluation Method of Nuclear Power Plant Piping System Considering Characteristic of Relative Displacement**
Jin Sung Park, Tae Young Ryu, Han Bum Surh, Min Kyu Kim, Jin Won Hong, Seok Jun Kang, Moon Ki Kim, Jae Boong Choi(SKKU)
Eun Woo Ahn(KEPCO E&C)
- P08D04 Tunnel Boring Machine Cutter Maintenance for Constructing Underground Cable Lines from Nuclear Power Plants**
Lee Jaehwang and Eric Yee(KINGS)
- P08D05 A Probability Analysis of the Generating Cost for EU-APR1400 Single Unit**
Gak-Hyeon Ha and Sung-Hwan Kim(KHNP CRI)
- P08D06 Installation of Borehole Seismometer for Earthquake Characteristics in Deep Geological Environment**
Park, Dong Hee, Cho, Weon-Hack, Cho, Sung-il, and Chang, Chun-Joong(KHNP CRI)
- P08D07 Test for Design Equation of Development Length on High - Strength Reinforcement in Nuclear Power Plant**
Sang-Jun Yim, Byung-Soo Lee, and Chang-Joon Bang(KHNP CRI)
- P08D08 A Study on Nonconformance and Construction Method Improvement for Nuclear Power Plant**
JongYeob Kim and MyungSub Roh(KINGS)

IV. 분과별 논제 및 발표자

제 8분과 E

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)-Poster

- 원전 경년열화, 운전/정비, 기타 (NPP's Aging Managemnet, Operation/Maintenance & etc.)

좌 장 장창희(Changheui Jang), 권원택(Won Taek Kwon)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P08E01 A study on the Improvement of a Automatic Seismic Trip System in Hanbit Unit #1,2**
Hyun-Jin Song and Goung-Jin Lee(CSU)
- P08E02 Development of APR1400 Regulatory Information Management System for NRC Design Certification**
Kang Deog-Ji and Lee Jae-yong(KHNP CRI)
- P08E03 Study on the VFD (Variable Frequency Drive) for RCP (Reactor Coolant Pump) Motors of APR1400.**
JungHa Park, Robert.M.Field, and Tae-Ryong Kim(KINGS)
- P08E04 A Study on the Stress Corrosion Cracking Reduction Method of Steam Generator Secondary Side of KSNP**
June-Hoon Kim and Goune-Jin Lee(CSU)
- P08E05 Consideration of Typical Nuclear Power Plant Site Characteristics for Groundwater Flow**
Chanhoi, Kim and Eric Yee(KINGS)
- P08E06 Point-In-Time Measurement Uncertainty Recapture for RCS Flow**
JUNG Byung Ryul, JANG Ho Cheol, YUNE Seok Jeong, and KIM Eun Kee(KEPCO E&C)
- P08E07 A Study on the Particle Penetration in RMS's Particle Transport System**
Son S. M., Oh S. H., and Choi C.R.(ELSOLTEC Inc..)
- P08E08 Introduction of Motor Stator Environmental Qualification for Wolsong NPP Primary Heat Transport Pump**
Kyung-Heum Park, Keug-Jin Bhang, Sun-Chul Jeon, Chul-Hwan Yun, and Tae-Hwan Kim(KHNP CRI)
- P08E09 Investigation Study on Gamma Ray Imaging Technology for Nuclear Power Plant Decommissioning**
Sang-Guk Lee and Woo-Tae Jeong(KHNP CRI)

일 정 | 10. 30(목)

- 09:00** **The Economic Value of Korean Nuclear Power Industry in the National Economy: An Input-Output Analysis**
M.K. Lee, S.S.Kim, J.H. Lee, and S.E. Kim(KAERI)
- 09:20** **Implications of Japan's NPPs Overseas Expansion Policy**
S.E. Kim and S.W. Yun(KAERI)
- 09:40** **A Brief Comparative Study on R&D Collaboration Strategy in US and French Nuclear Utilities**
Sung-Tae Yang and Jongeun Park(KHNP CRI)
- 10:00** **Experiences on Jordan Research and Training Reactor Licensing**
Yongse KWON, Hyunwoo LEE, and Minho CHOI(KAERI)
- 10:20** **Study on Applicability of 10 CFR Part 21 to APR1400 DC Project**
Shin Hye-Young, Lee Do-Hwan, Lim Jae-Soo, and Lee Jae-Yong(KHNP CRI)
- 10:40** **Coffee Break**
- 11:00** **Introduction to the Notice of NSSC for Fire Protection in NPPs**
Weekyong Kim, Joosung Kim, and Simwon Lee(KINS)
- 11:20** **Definition of Nuclear Material in Aspects of Nuclear Nonproliferation and Security**
Jihye Jeon and Chansuh Lee(KINAC)
- 11:40** **Verification of the Bulk Analysis Procedure of Safeguards Environmental Samples by Thermal Ionization Mass Spectrometry in KAERI**
Jong-Ho Park, Sang Ho Lim, Sun-Ho Han, Chi-Gye Lee, Kahee Jeong, and Kyuseok Song(KAERI)
- 12:00** **A Study on the Use of Commercial Satellite Imagery for Monitoring of Yongbyon Nuclear Activities**
Jung-Hyun Lee and Minsoo Kim(KINAC)
- 12:20** **Outcomes and Suggestions of the Nuclear Security Summit**
Jae San Kim and Myung Tak Jung(KINAC)

IV. 분과별 논제 및 발표자

제 9분과 B

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

좌 장 장현섭(Hyunsop Chang), 유동한(Donghan Yu)

발표장소 호텔 2층, 다이아몬드

일 정 10. 30(목) 13:00-15:00

- P09B01 A Strategy Study on the SCI List of Nuclear Engineering and Technology (NET)**
Jiho Yi, Yoojin Lee, and Joenn Jeong(KAERI)
- P09B02 A Study on the Economic Analysis for Overseas Project of New Nuclear Power Plant Using Binomial Option Pricing Model and Monte Carlo Simulation**
Byeong-gwon Kim and Myung-sub Roh(KINGS)
- P09B03 Preparatory Work for a Scenario-Based Electricity Expansion Plan for North Korea after Hypothetical Reunification Using WASP-IV**
Young Joo Kim and Choong-koo Chang(KINGS)
- P09B04 Use of NMAC for the Evaluation of Physical Protection**
Hosik YOO, Nayoung Lee, Moonsung Koh, Hyoungmin Seo, and Jaesan Kim(KINAC)
- P09B05 Accuracy Analysis of the CTBTO Nuclear Test Detection Scale and Improvement**
Ryu Young-kwang(SNU)
- P09B06 Development of Questionnaire for Self-Assessment of Regulatory Capture**
Muhmood ul Hassan and Young Eal Lee(PNRA)
Kwang Sik Choi(KINS)
- P09B07 Update of the INPRO Collaborative Project, Proliferation Resistance and Safeguardability Assessment (PROSA) Tools**
H.L. Chang, E.H. Kwon, S.K. Ahn, W.I. Ko, and H.D. Kim(KAERI)
- P09B08 Big Data-based Data Mining Modeling for Nuclear Security Analysis in the Modified Physical Protection System**
Tae Ho Woo(Systemix Global Co. Ltd.,)
- P09B09 Application of Nuclear Power Plant Simulator for High School Student Training**
Chidong Kong, Sooyoung Choi, Minyong Park, and Deokjung Lee(UNIST)
- P09B10 Review of Studies on Just Culture**
Kyung Joo Yi, Young Sung Choi, and Su Jin Jung(KINS)
- P09B11 Progress and Updates of Regulatory Challenges and Safety Issues in Korea during Three Years after Fukushima Accident**
Young-eal, LEE and Kyun-tae, KIM(KINS)

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- P09B12 The Educational Effects of Basic Nuclear Power and Radiation Education on Elementary-, Middle-, and High-School Students in 2012-2013**
JaeRok Kim, SeungKoo Lee, YoonSeok Choi, YoungKyu Hahm, JiEun Lee, and EunOk Han(KANS)
- P09B13 A Study on Enhancement of Understanding of Radiation and Safety Management**
Dong Han Yoo, Ji Young Park, Uk Jae Lee, Jun Woo Bae, and Hee Reyoung Kim(UNIST)
- P09B14 Study on Competitive Exporting Price-forecast of the SMART in the U.S**
In-Su Kim and Tae-Ryong Kim(KINGS)
- P09B15 Long term Energy Plan of Mongolian with Nuclear Power Plant Using Message Code**
Tsolmonbaatar Batmunkh and Myung-Sub Roh(KINGS)

IV. 분과별 논제 및 발표자

제 10 분과 A

원자력계측제어 및 자동원격 (MMIS & Remote Control)

좌 장 허 섭(Seop Hur), 유준범(Junbeom Yoo)

발표장소 호텔 3층, 토파즈 II

일 정 | 10. 30(목)

- 09:00** **Development of Operation Strategy for Hybrid-SIT in SBO Accident**
In Seop Jeon and Hyun Gook Kang(KAIST)
- 09:20** **Development of Thermal Stress Test Profile for Class 1E Equipment in Main Control Room of a Research Reactor**
Seung Ki Shin, Je Yun Park, and Cheol Park(KAERI)
Hee Jun Jang(Daewoo E&C)
- 09:40** **A Reliability Study for RPS in Jordan Research & Training Reactor**
EL-Bordany Ayman(KAIST)
Won Young Yun(KINS)
- 10:00** **Programming Guidelines for FBD Programs in Reactor Protection System Software**
Sejin Jung, Dong-Ah Lee, Eui-Sub Kim, and Junbeom Yoo(KU)
Jang-Soo Lee(KAERI)
- 10:20** **A Translator Verification Technique for FPGA Software Development in Nuclear Power Plants**
Jaeyeob Kim, Eui-Sub Kim, and Junbeom Yoo(KU)
- 10:40** **Coffee Break**
- 11:00** **A Correctness Verification Technique for Commercial FPGA Synthesis Tools**
Eui-Sub Kim and Junbeom Yoo(KU)
Jong-Gyun Choi, Jang-Yeol Kim, and Jang-Soo Lee(KAERI)
- 11:20** **Finite Test Sets Development Method for Test Execution of Safety Critical Software**
Sung Min Shin, Hee Eun Kim, and Hyun Gook Kang(KAIST)
Seung Jun Lee(KAERI)
- 11:40** **Prediction of Leak Flow Rate Using FNNs in Severe LOCA Circumstances**
Dong Yeong Kim, Kwae Hwan Yoo, Ju Hyun Kim, and Man Gyun Na(CSU)
Seop Hur and Chang-Hwoi Kim(KAERI)
- 12:00** **A Study on the Operation Strategy for Combined Accident Including TLOFW Accident**
Bo Gyung Kim and Hyun Gook Kang(KAIST)
Ho Joon Yoon(Khalifa Univ.)
- 12:20** **Lifetime Evaluation of Rhodium Self-Powered Neutron Detector (SPND) at the Peripheral Area of the Core**
Kyoon-Ho Cha, Kyung-Ho Noh, and Sang-Rae Moon(KHNP CRI)

일 정 | 10. 30(목) 13:00-15:00**P10B01 Variation of Transmission Rate in Optical Fiber Cable by Radiation**

D.W. Choi, B.-Y. Han, S.H. Park, and H.D. Kim(KAERI)

P10B02 Considerations for Deciding Data Verifying Methods of the Nuclear Power Safety-Related Controller

Taehee Kim, Sung Jae Hwang, and Donghwa Yun(PONUTech Co.)

P10B03 Pump Cavitation Noise Estimation from Acceleration Signals

Do Hwan Lee and Che Woong Ha(KHNP CRI)

P10B04 A Development of Auto Calibration Analog Input Module for Safety-related Controller

Kwanwoo Yoo, Donghwa Yun, Sungjae Hwang and Dongil Lee(PONUTech Co.)

P10B05 System Requirements Analysis for a Computer-based Procedure in a Research Reactor Facility

Jaekwan Park, Gwisook Jang, Sangmoon Seo, and Seungki Shin(KAERI)

P10B06 Actuator Module of Robot Manipulator for Nuclear Power Plants Inspection, Maintenance and Decommission

Sung Uk Lee, Kyung Min Jung, Yong Chil Seo, Byung-seon Choi, and Jei-kwon Moon(KAERI)

P10B07 Calculations for BDAS Setpoint with Non-conservative Boron Dilution Analysis

Hwan-Soo Lee, Ho-Cheol Shin, and Yong Bea Kim(KHNP CRI)

P10B08 Development of an Advanced Reactivity Computer Interface Circuit for Ex-core Neutron Flux Monitoring System

Sae-hyun Oh, Seok-jean Lyou, Sung-jun Bae, and Dae-SungYook(USERS)

P10B09 Regulatory Experience on Safety Smart Transmitter's CCF of SKN 3&4

Y.M. Kim and C. H. JEONG(KINS)

IV. 분과별 논제 및 발표자

제 10 분과 C

원자력계측제어 및 자동원격 (MMIS & Remote Control)

좌 장 박진균(Jin Kyun Park), 김종현(Jong Hyun Kim)

발표장소 호텔 2층, 다이아몬드 II

일 정 | 10. 31(금)

- 09:00** **Development of Highly Survivable Power and Communication System for NPP Instruments Under Severe Accident**
Seung J. Yoo, Beom W. Gu, Duy T. Nguyen, Bo H. Choi, and Chun T. Rim(KAIST)
Soo I. Lee(KHNP CRI)
- 09:20** **Development of a Qualitative Evaluation Method Using MFM for Abnormal Conditions of HPSI Pump in NPPs**
Young Gyu No, Seung Geun Kim, and Poong Hyun Seong(KAIST)
- 09:40** **System Dynamics Modeling for Emergency Operating System Resilience**
Ang Wei Eng and JongHyun Kim(KINGS)
- 10:00** **The Development of CPSES Plug-in(CPMP) for APR1400 Computerized Procedure Effective Maintenance**
Nokyu Seong, Sungjin Lee, Hyekyoung Kim, and Yeonsub Jung(KHNP CRI)
- 10:20** **HRA Data Collection from the Simulations of Abnormal Situations**
Yochan Kim, Jinkyun Park, and Wondea Jung(KAERI)
- 10:40** **Coffee Break**
- 11:00** **Impact of Pre-Initiators on PSA in Research Reactor**
Chimedtseren OCHIRBAT(KAIST)
Sok Chul KIM(KINS)
- 11:20** **Development of a Framework to Estimate Human Error for Diagnosis Tasks in Advanced Control Room**
Ar Ryum Kim, Inseok Jang, and Poong Hyun Seong(KAIST)
- 11:40** **A Study on Human Performance according to the Physical Environment in MCR**
Yeoju Oh and Yonghee Lee(KAERI)
- 12:00** **How to Cope with the Rare Human Error Events Involved with Organizational Factors in Nuclear Power Plants**
Sa Kil Kim, Meiling Luo, and Yong Hee Lee(KAERI)

일 정 | 10. 31(금)

- 13:30 New LWR Fuel Assembly Concepts Using Particle Burnable Poisons for Low Boron Concentration**
Yoo Ho Seong and Ser Gi Hong(KHU)
- 13:50 McCARD Analysis for the OECD/NEA MHTGR-350 MW Benchmark**
Soon Woo Kwon and Hyung Jin Shim(SNU)
Hyun Chul Lee(KAERI)
- 14:10 Flattening of UCFR Power Distribution with Fuel Zoning**
Taewoo Tak and Deokjung Lee(UNIST)
- 14:30 Advanced Small-Safe Long-Life Lead Cooled Reactor Cores for Future Nuclear Energy**
Jin Hyeong Kim and Ser Gi Hong(KHU)
- 14:50 Neutronics Study on LEU Nuclear Thermal Rocket Fuel Options**
Paolo Venneri and Yonghee Kim(KAIST)
Steven Howe(CSNR)
- 15:10 Coffee Break**
- 15:30 Neutronic Analysis on Coolant Options in a Hybrid Reactor System for High Level Waste Transmutation**
Seong-Hee HONG and Myung Hyun KIM(KHU)
- 15:50 Fission and Surface Source Iteration Scheme with Source Splitting in Domain Decomposition Monte Carlo Calculation**
YuGwon Jo and Nam Zin Cho(KAIST)
- 16:10 Application of Energy Window Concept in Doppler Broadening of ^{238}U Cross Section**
Azamat Khassenov, Sooyoung Choi, and Deokjung Lee(UNIST)
- 16:30 Application of CMFD on Continuous Energy Monte Carlo Simulation for Eigenvalue Problems**
Hyunsuk Lee and Deokjung Lee(UNIST)
- 16:50 Generation of Fast Reactor Multigroup Cross Sections Employing the NJOY System and Extended Transport Approximation**
Chang Hyun Lim and Han Gyu Joo(SNU)

IV. 분과별 논제 및 발표자

학생 / 청년

Competition Session B

좌 장 하광순(Kwang Soon Ha), 류성욱(Sung Uk Ryu)

발표장소 호텔 2층, 다이아몬드 II

일 정 | 10. 31(금)

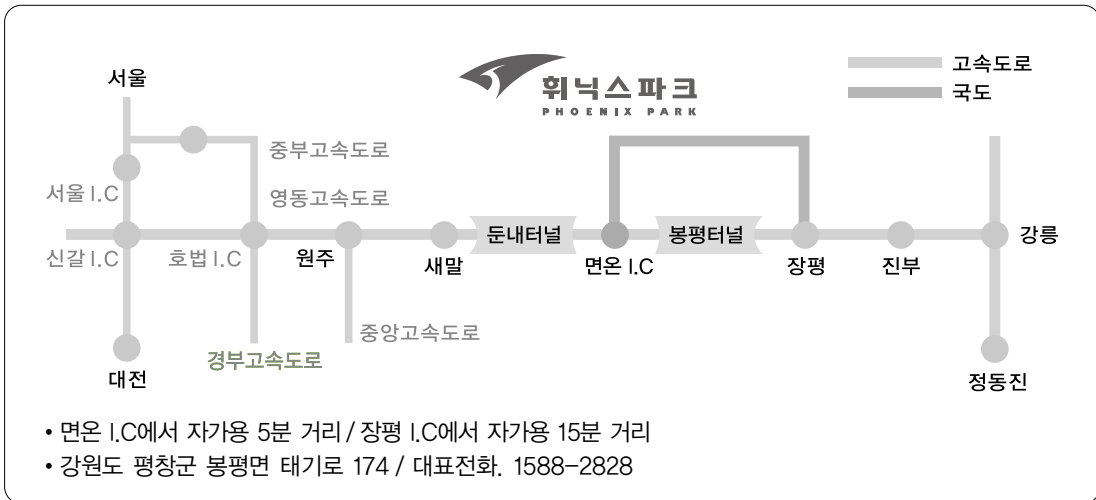
- 13:30 Experimental Test of the Concept of Long-term Passive Cooling System of Emergency Cooling Tank**
Myoung Jun Kim and Hee Joon Lee(KMU)
Joo Hyung Moon(KAERI)
- 13:50 The PAFS Design for Unlimited Operation**
Jun Yeong Jung and Yong Hoon Jeong(KAIST)
- 14:10 Experimental Investigation on the Droplet Entrainment from Interfacial Waves in Air-water Horizontal Stratified Flow**
Byeong-Geon Bae and Byong-Jo Yun(PNU)
Kyoung-Du Kim(KAERI)
- 14:30 Investigation on Siphon Breaking Phenomenon with Two-phase Downward Co-current Flow Regime Transition**
Soon Ho Kang and Hyun Sun Park(POSTECH)
Moo Hwan Kim(KINS)
- 14:50 Design of SMART Waste Heat Removal Dry Cooling Tower Using Solar Energy**
Young Jae Choi and Yong Hoon Jeong(KAIST)
- 15:10 Coffee Break**
- 15:30 RANS Based CFD Methodology of Wire-wrapped Fuel Bundles**
J. H. Jeong and K. S. Ha(KAERI)
H. Y. Jeong(Sejong Univ.)
- 15:50 Development of Ex-Vessel Corium Debris Bed under Two-Phase Natural Convection Flows in Flooded Cavity Pool during Severe Accident**
Eunho Kim, Mooneon Lee, and Hyun Sun Park(POSTECH)
- 16:10 Experimental Investigation of the Effect of Particle Shape on Frictional Pressure Drop in Particulate Debris Bed**
Jin Ho Park, Eunho Kim, and Hyun Sun Park(POSTECH)
- 16:30 Development of Nuclear Spent Fuel Onsite Transportation Scenario**
Min Yoo, Bo Gyung Kim, and Hyun Gook Kang(KAIST)

일 정 | 10. 31(금)

- 13:30 Comparison of GTN Model and XFEM for Fracture Mechanics Analysis**
Sung-Jun Lee and Yoon-Suk Chang(KHU)
- 13:50 Breakaway Oxidation of Constrained Zirlo at 1000 °C**
Cheol Min Lee, Je Kyun Baek, and Dong Seong Sohn(UNIST)
- 14:10 Method of Monitoring the Corrosion Behavior the Surface Treated FMS and CVD Coated Specimen in Liquid Sodium Environment**
Jeong Hyeon Lee, Sang Hun Shin, and Ji Hyun Kim(UNIST)
- 14:30 Thermal Conductivity of Carbon Reinforced ZrO₂ for Inert Matrix Fuel**
Malik A. Umer, Qusai M. Mistarihi, and Ho Jin Ryu(KAIST)
- 14:50 An Analysis of the Multinational Approach in Nuclear Fuel Cycle for East Asia**
Viet Phuong Nguyen and Man-Sung Yim(KAIST)
- 15:10 Coffee Break**
- 15:30 Pinhole X-ray Fluorescence Imaging of Gadolinium Nanoparticles: A Preliminary Monte Carlo Study**
Seongmoon Jung, Wonmo Sung, and Sung-Joon Ye(SNU)
- 15:50 On the Feasibility of the Radiochromic Film Dosimetry Using Raman-spectroscopy Based on the Change of Carbon Triple Bonds Concentration**
Taemin Heo, Seongmoon Jung, and Sung-Joon Ye(SNU)
- 16:10 Radiological Impact Assessment on a Sabotage of Spent Fuel Handling in a Pyroprocessing Facility**
Robby Christian and Hyun Gook Kang(KAIST)
- 16:30 An Analysis on the Radioactivity Uncertainty Caused by Monte Carlo Stochastic Errors Using Sampling Based Method for the Accelerator Activation Problem**
Gi Yeong HAN, Song Hyun KIM, and Chang Ho SHIN(HYU)

V. 행사장안내

1. 행사장 교통안내



▶ 대전기준

| 승용차 (소요시간 : 약 2시간 30분) |
|--|
| • 경부고속도로 → 면온 IC : 208km |
| • 경부고속도로 → 신갈분기점(강릉방향) → 영동고속도로 → 면온 IC → 휘닉스파크 |
| • 중부고속도로 → 호법분기점(강릉방향) → 영동고속도로 → 면온 IC → 휘닉스파크 |
| 대중교통 |
| • 대전버스터미널 → 원주시외버스터미널(장평행 버스 탑승) → 장평시외버스터미널 → 휘닉스파크(무료 셔틀버스 또는 택시 이용) |
| ※무료 셔틀버스 시간 → 09:15, 11:15, 12:50, 14:50, 17:15, 20:00 |

▶ 서울기준

| 승용차 (소요시간 : 약 2시간) |
|--|
| • 경부고속도로 → 면온 IC : 141.4km |
| • 경부고속도로 → 신갈분기점(강릉방향) → 영동고속도로 → 면온 IC → 휘닉스파크 |
| • 중부고속도로 → 호법분기점(강릉방향) → 영동고속도로 → 면온 IC → 휘닉스파크 |
| 대중교통 |
| • 동서울버스터미널(장평행 버스 탑승) → 장평시외터미널 → 휘닉스파크(무료 셔틀버스 이용) |
| ※무료 셔틀버스 시간 → 09:15, 11:15, 12:50, 14:50, 17:15, 20:00 |

▶ 정기셔틀 (1일 1회 운행/편도 15,000원)

• 2호선 삼성역 4번 출구 글라스타워 후문(09:30) → 종합운동장역 1번출구 앞(09:40) → 휘닉스파크

※정기셔틀은 운행일 전일 17시에 마감됩니다. 사전 예약자가 없는 경우 운행하지 않을 수 있으니, 사전에 반드시 예약을 해주시기 바랍니다. (두레고속관광 : 1588-9722)

▶ 무료셔틀 시간표 (장평터미널 ⇄ 휘닉스파크)

| 구분 | 장평터미널 출발 ▶ 휘닉스파크 도착 | 휘닉스파크 출발 ▶ 장평터미널도착 |
|-----|---------------------|--------------------|
| 1회차 | 09:15 | 08:50 |
| 2회차 | 11:15 | 10:50 |
| 3회차 | 12:50 | 12:25 |
| 4회차 | 14:50 | 14:25 |
| 5회차 | 17:15 | 16:50 |
| 6회차 | 20:00 | 18:30 |
| 7회차 | - | 20:30 |

| 탑승장 | 세부장소 |
|-----------|-------------------|
| 휘닉스파크 | 스키하우스 앞 대형주차장 |
| 장평터미널 건너편 | 장평터미널 건너편 장평막국수 앞 |

※문의 : 보광휘닉스파크 1588-2828

V. 행사장안내

2. 숙박안내

▶ 평창 휘닉스파크, 행사장 호텔 및 콘도

* 객실종류 및 금액(vat 포함)

| 객실종류 | 금액 | 비고 |
|--------|----------|------------|
| 콘도 20평 | 80,000원 | (4인 1실) |
| 콘도 30평 | 100,000원 | (5인 1실) |
| 콘도 40평 | 120,000원 | (6인 1실) |
| 호텔 | 100,000원 | (Standard) |

- 송 부 처 : Fax 02-527-9670
- 문 의 처 : 1577-0069
- 예약기간 : 객실 소진시까지

※ 학회 홈페이지(www.kns.org) 문서 자료실에서 객실예약신청서를 다운받아 작성 후 송부해 주셔야 할인혜택을 받으실 수 있습니다.

3. 행사장 배치도

- 등록 및 접수 : 10.29(수) ~ 10.31(금), 호텔 2층, 등록데스크
10.29(수), 휘닉스빌 유스호스텔, 2층 등록데스크 *해당 동에서 개최되는 워크숍만 해당
- 정기총회 및 특별강연 : 10.30(목), 15:00 ~ 18:20, 호텔 2층, 휘닉스볼룸
- 포스터발표 : 10.30(목), 13:00 ~ 15:00, 호텔 2층, 다이아몬드
- 만찬 : 10.30(목), 18:30 ~ 19:30, 스키하우스 1~2층, 푸드팰리스
- 중식 : 10.30(목) ~ 10.31(금), 12:00 ~ 13:30, 스키하우스 1~2층, 푸드팰리스

■ 단지 배치도

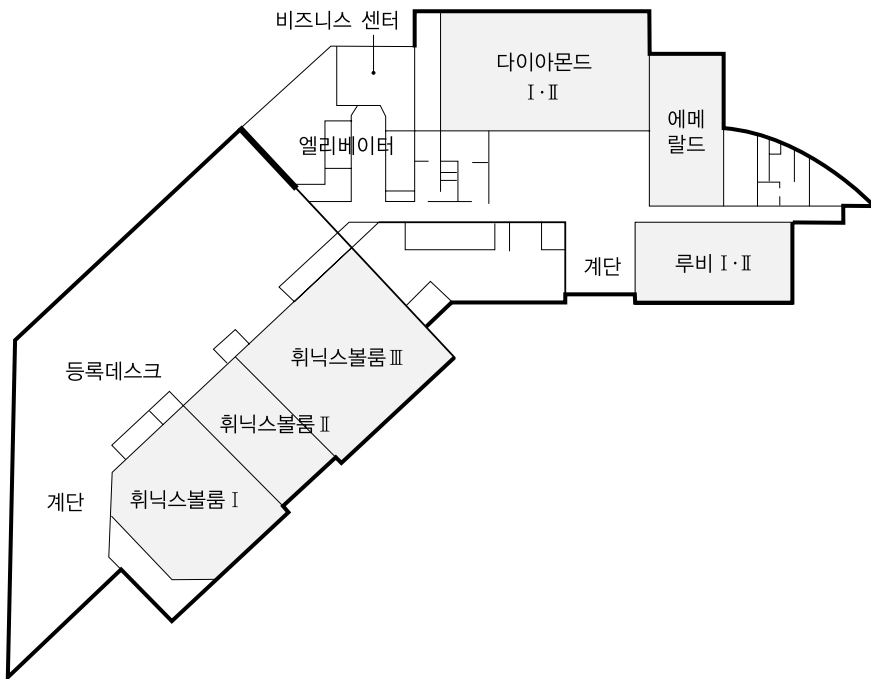


- ※ 동간거리 : 호텔 → 스키하우스(도보 3~4분)
호텔 → 휘닉스빌 유스호스텔 (도보 5~6분)

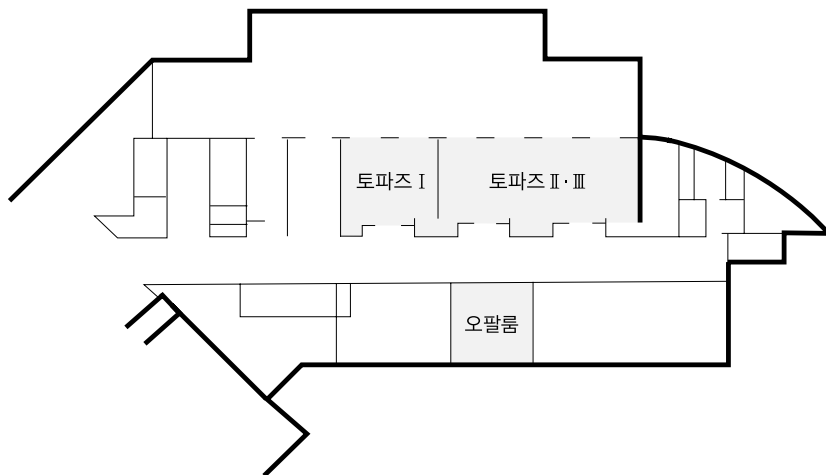
V. 행사장안내

[호텔]

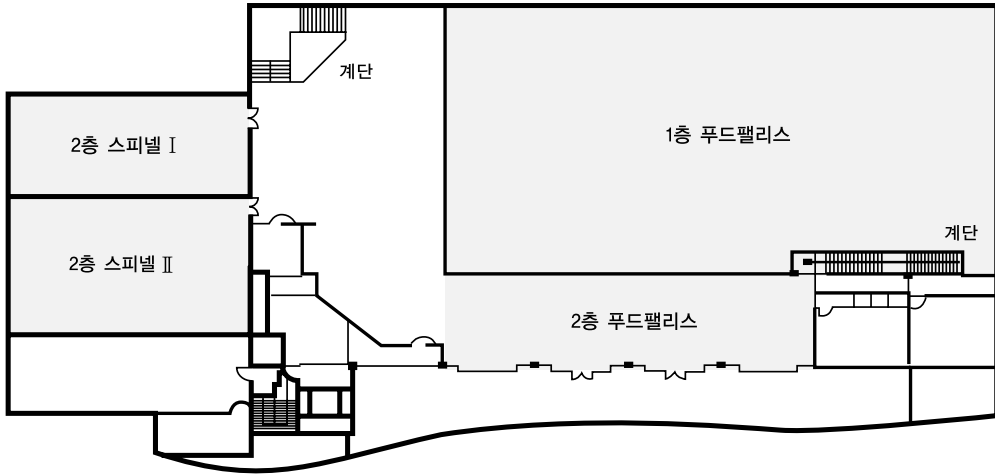
2F



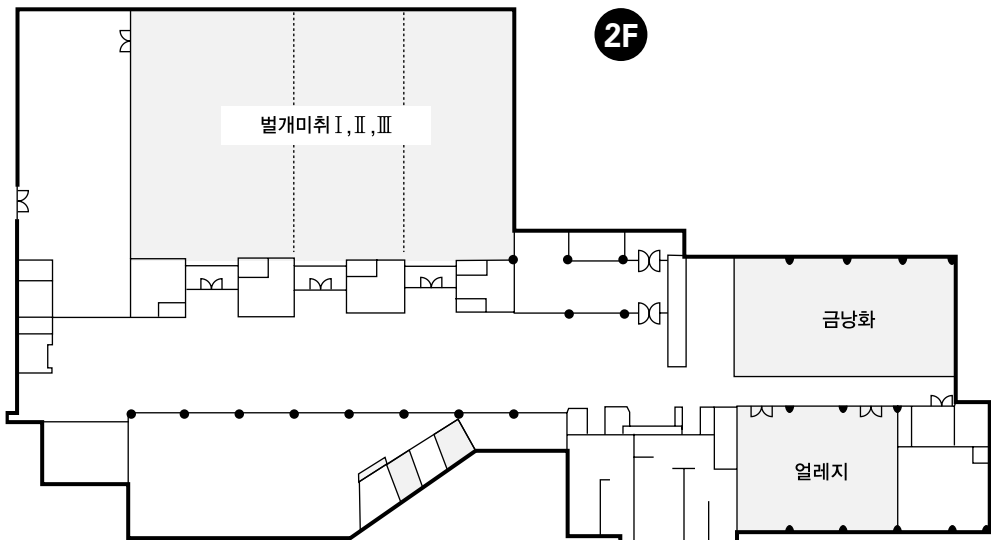
3F



[스키하우스] 1F



[휘닉스빌 유스호스텔]



Ⅵ. 연구부회 모임 일정 안내

각 연구부회별 사업계획 및 연구부회 활성화 방안을 논의하기 위한 자리를 아래와 같이 마련 하였습니다. 해당하는 연구부회 모임에 많은 참석과 관심을 부탁드립니다.

• 일 정 : 2014년 10월 30일(목) 13:30 ~ 14:30

[연구부회별 모임 장소]

| 연구부회명 | 건물명 | 회의장명 |
|----------------|------------------|---------|
| 원자로시스템기술 | 호텔 2층 | 에메랄드 |
| 원자로물리 및 계산과학 | 스키하우스 2층 | 스피넬 I |
| 방사성폐기물관리 | 호텔 3층 | 토파즈 III |
| 핵연료 및 원자력재료 | 호텔 3층 | 오팔 |
| 원자력열수력 및 안전 | 호텔 1층 | 자스미나 |
| 방사선이용 및 방호 | 휘닉스빌 유스호스텔 2층 | 벌개미취 I |
| 양자공학 및 핵융합기술 | 호텔 2층 | 루비 II |
| 원전건설 및 운영기술 | 호텔 3층 | 토파즈 I |
| 원자력정책, 인력 및 협력 | 호텔 2층 | 루비 I |
| 원자력계측제어 및 자동원격 | 호텔 3층 | 토파즈 II |

VII. 행운권(경품) 행사 안내

우리 학회에서는 제47회 정기총회 및 2014추계학술발표회 행사와 더불어 회원분들을 위하여 아래와 같이 행운권(경품) 행사를 마련하였사오니, 많은 참여 바랍니다.

▶ 추첨 일정

| 구 분 | 일 시 | 장 소 | 비 고 |
|-----|-----------------------|--------------|-----|
| 1차 | 2014. 10. 30(목) 19:00 | 스키하우스, 푸드팰리스 | 만찬시 |
| 2차 | 2014. 10. 31(금) 12:40 | 스키하우스, 푸드팰리스 | 중식시 |

▶ 대 상 자 : 학술발표회 등록 회원 (사전등록 및 현장등록)

▶ 운영방법 : 추첨을 통하여 추첨시 참석한 회원에게 경품 지급

VIII. 2015년도 춘계학술발표회 일정 및 등록비 인상 안내

1. 2015년도 춘계학술발표회 일정 및 장소

▶ 일 정 : 2015년 5월 6일(수) ~ 5월 8일(금)

▶ 장 소 : 제주 국제컨벤션센터

※ 예년보다 3주 앞당겨 개최하게 되었습니다.

향후 항공예약 일정 등에 반영하여 주시고, 많은 참여와 관심을 부탁드립니다.

2. 비회원 등록비 인상 및 등록비 책정방법 변경

▶ 등록비 책정 변경내용

| 구분 | 변경 후 (2015년 춘계학술발표회시부터) | | 현행 (2014년 추계학술발표회시까지) | |
|-----------------|----------------------------|--------------------------|--------------------------|----------|
| | 사전등록 | 현장등록 | 사전등록 | 현장등록 |
| 학 생 | 50,000원 (미인상) | 50,000원 (미인상) | 50,000원 | 50,000원 |
| 회 원 | 100,000원 (미인상) | 120,000원 (미인상) | 100,000원 | 120,000원 |
| 전년도 연회비 미납회원 | 150,000원 (50,000원 인상) | 170,000원 (50,000원 인상) | 100,000원 | 120,000원 |
| 비회원 | 150,000원 (30,000원 인상) | 170,000원 (30,000원 인상) | 120,000원 | 140,000원 |

▶ 적용시기 : 2015년 춘계학술발표회시부터

▶ 인상근거 : 제209차 이사회(2014.8.29)

▶ 회비 납부 안내

○정회원 : 5만원(신규가입시 가입비 2만원 별도)

※대학원 재학생 : 5천원(신규가입시 가입비 2천원 별도)

○평생회원 : 50만원(신규가입시 가입비 2만원 별도)

○계좌이체 : 외환은행 077-13-14726-0(예금주:한국원자력학회)

○온라인 카드결제 : 홈페이지(www.kns.org) 회원라운지 → 회비결제

○전자지로납부 : 지로번호 7605990