

KOREAN NUCLEAR SOCIETY

www.kns.org

|일 정| 2015. 5. 6(수) ~ 5. 8(금)

|장 소| 제주 국제컨벤션센터

2015 춘계학술발표회



사단법인 한국원자력학회
KOREAN NUCLEAR SOCIETY

I. 행사일정	4
II. 연구부회별 워크숍	
A. SFR 원형로(PGSFR) 주요기기 조달 방안	5
B. 집합체 균질화 방법론 재검토	6
C. 중저준위방사성폐기물 처분시설의 안전성 및 수용성 제고 방안	7
D. 선진 핵연료 개발 현황	8
E. 중대사고 코드 국산화 개발현황 및 개선방향	9
F. 원전주변주민과 갑상선암에 관한 기술적 분석	10
G. 핵융합로 플라즈마대면부품 개발 현황 및 기술교류 워크숍	11
H. APR1400 NRC DC 사업추진 현황 및 향후 전망	12
I. 원전 형상관리 현황 및 향후 추진방향	13
J. 전략물자 수출통제 워크숍	14
K. 원전산업계 안전문화 증진 기반기술 개발 현황 및 향후 개선방안	15
L. 후쿠시마 원전사고 이후 MTO(Man-Technology-Organization) 연구 및 기술 현황	16
M. 원자력과 기후변화/Nuclear Intra-Communication	17
III. 개회식 및 특별강연 일정	18
IV. 분과별 논제 및 발표자	
1. 제 1 분과 : 원자로시스템기술(Reactor System Technology)	19
2. 제 2 분과 : 원자로물리 및 계산과학(Reactor Physics and Computational Science)	26
3. 제 3 분과 : 방사성폐기물관리(Radioactive Waste Management)	31
4. 제 4 분과 : 핵연료 및 원자력재료(Nuclear Fuel and Materials)	37
5. 제 5 분과 : 원자력열수력 및 안전(Thermal Hydraulics and Safety)	48
6. 제 6 분과 : 방사선이용 및 방호(Radiation Protection and Shielding)	65
7. 제 7 분과 : 양자공학 및 핵융합기술(Quantum Engineering and Nuclear Fusion)	71
8. 제 8 분과 : 원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)	75
9. 제 9 분과 : 원자력정책, 인력 및 협력(Nuclear Policy, Human Resources and Cooperation)	78
10. 제 10 분과 : 원자력계측제어 및 자동원격(MMIS & Remote Control)	82
11. 학생/청년 Competition Session	85
12. 한국연구재단 2014년도(제13기) 원자력대학생 논문연구회	88
V. 행사장 안내	
1. 행사장 교통안내	93
2. 항공예약	93
3. 행사장 배치도	94
VI. 연구부회 모임 일정	96
VII. 행운권(경품) 행사	97

❖ 전체 행사일정표

▶ 등록 및 접수 : 3층 로비

• 5.6(수) 12:30~17:30

• 5.7(목) 08:30~17:30

• 5.8(금) 08:30~12:00

회의장명		5. 6(수)		5. 7(목)		5. 8(금)	
201A	2층	(F) 원전 주변주민과 갑상선암에 관한 기술적 분석	13:30 ~ 19:00	• 6(A)방사선이용 및 방호 구두발표 • 방사선이용 및 방호 연구부회 모임	09:00~12:20 13:30~14:30	• 6(B)방사선이용 및 방호 구두발표	09:00~12:40
201B	2층			• 4(A)핵연료 및 원자력재료 구두발표 • 핵연료 및 원자력재료 연구부회 모임	09:00~12:20 13:30~14:30	• 4(C)핵연료 및 원자력재료 구두발표	09:00~12:20
202A	2층	(B) 집합체 균질화 방법론 재검토	13:30 ~ 18:00	• 2(A)원자로물리 및 계산과학 구두발표 • 원자로물리 및 계산과학 연구부회 모임	09:00~12:00 13:30~14:30	• 2(B)원자로물리 및 계산과학 구두발표	09:00~12:00
202B	2층	(G) 핵융합로 플라즈마대면부품 개발 현황 및 기술교류 워크숍	13:00 ~ 18:30	• 4(B)핵연료 및 원자력재료 구두발표	09:00~12:20	• 4(D)핵연료 및 원자력재료 구두발표	09:00~12:20
203	2층	(A) SFR 원형로(PGSFR) 주요기기 조달 방안	13:30 ~ 18:00	• 7(A)양자공학 및 핵융합기술 구두발표 • 양자공학 및 핵융합기술 연구부회 모임	09:00~12:20 13:30~14:30	• 2(C)원자로물리 및 계산과학 구두발표	09:00~12:20
삼다홀A	3층	–	–	• 1(A)원자로시스템기술 구두발표 • 원자로시스템기술 연구부회 모임	09:00~12:20 13:30~14:30	• 1(C)원자로시스템기술 구두발표	09:00~12:40
삼다홀B	3층	(H) APR1400 DC사업추진 현황 및 향후 전망	13:00 ~ 18:00	• 1(B)원자로시스템기술 구두발표	09:00~12:40	• S(A)학생/청년 Competition Session	09:00~11:40
한라홀A	3층	–	–	• 개회식 및 특별강연	15:30~18:00	–	–
한라홀B	3층	(E) 중대사고 코드 국산화 개발현황 및 개선방향	13:10 ~ 18:00				
3층 로비	3층	–	–	• 포스터 발표 (1분과~10분과) • 한국연구재단 2014년도(제13기) 원자력대학생 논문연구회	13:00~15:00	–	–
300	3층	(C) 중저준위방사성폐기물 처분시설의 안전성 및 수용성 제고방안	13:00 ~ 18:00	• 3(A)방사성폐기물관리 구두발표 • 방사성폐기물관리 연구부회 모임	09:00~12:40 13:30~14:30	• 3(B) 방사성폐기물관리 구두발표	09:00~12:40
301A	3층	(M) 원자력과 기후변화/Nuclear Intra-Communication	14:00 ~ 18:00	• 한국연구재단 2014년도(제13기) 원자력대학생 논문연구회 시상식	16:00~17:00	• S(B)학생/청년 Competition Session	09:00~12:20
301B	3층					• S(C)학생/청년 Competition Session	09:00~12:00
302	3층	(L) 후쿠시마 원전사고 이후 MTO(Man-Technology-Organization) 연구 및 기술 현황	13:30 ~ 18:20	• 10(A)원자력계측제어 및 자동원격 구두발표 • 원자력계측제어 및 자동원격 연구부회 모임	09:00~12:20 13:30~14:30	• 10(B)원자력계측제어 및 자동원격 구두발표	09:00~12:00
303A	3층	(I) 원전 형상관리 현황 및 향후 추진방향	13:00 ~ 18:00	• 9(A)원자력정책, 인력 및 협력 구두발표 • 원자력정책, 인력 및 협력 연구부회 모임	09:00~12:20 13:30~14:30	• 9(B)원자력정책, 인력 및 협력 구두발표	09:00~12:40
303B	3층			• 8(A)원전건설 및 운영기술 구두발표 • 원전건설 및 운영기술 연구부회 모임	09:00~12:40 13:30~14:30	• 8(B)원전건설 및 운영기술 구두발표	09:00~13:00
400	4층	(원자력계 원로워크숍) 원전사고의 교훈과 안전정책 및 제도변천 고찰	17:00 ~ 18:30	• 5(A)원자력열수력 및 안전 구두발표 • 원자력열수력 및 안전 연구부회 모임	09:00~12:40 13:30~14:30	• 5(F)원자력열수력 및 안전 구두발표	09:00~12:40
401A	4층	(D) 선진 핵연료 개발 현황	13:00 ~ 18:00	• 5(B)원자력열수력 및 안전 구두발표	09:00~12:40	• 5(G)원자력열수력 및 안전 구두발표	09:00~12:20
401B	4층			• 5(C)원자력열수력 및 안전 구두발표	09:00~12:20	• 5(H)원자력열수력 및 안전 구두발표	09:00~11:40
402A	4층	(J) 전략물자 수출통제 워크숍	13:00 ~ 18:00	• 5(D)원자력열수력 및 안전 구두발표	09:00~12:20	• 5(I)원자력열수력 및 안전 구두발표	09:00~12:20
402B	4층	(K) 원전산업계 안전문화 증진 기반기술 개발 현황 및 향후 개선방안 Workshop	09:00 ~ 18:00	• 5(E)원자력열수력 및 안전 구두발표	09:00~12:40	• 5(J)원자력열수력 및 안전 구두발표	09:00~12:20
델리지아별실 (406호)	3층	–	–	• 청년/학생지부 간담회	14:00~15:00	–	–
탐라홀B+C	5층	–	–	• 참가자 중식장소 • 참가자 만찬장소	12:00~13:30 18:00~19:00	• 참가자 중식장소	12:00~13:30
오션뷰	5층	–	–	• 제거차 평의회	11:30~13:00	–	–

❖연구부회별 워크숍 [5월 6일(수)]

코드	워크숍명	일정
A	SFR 원형로(PGSFR) 주요기기 조달 방안	13:30 - 18:00
B	집합체 균질화 방법론 재검토	13:30 - 18:00
C	중저준위방사성폐기물 처분시설의 안전성 및 수용성 제고 방안	13:00 - 18:00
D	선진 핵연료 개발 현황	13:00 - 18:00
E	중대사고 코드 국산화 개발현황 및 개선방향	13:10 - 18:00
F	원전 주변주민과 갑상선암에 관한 기술적 분석	13:30 - 19:00
G	핵융합로 플라즈마대면부품 개발 현황 및 기술 교류 워크숍	13:00 - 18:30
H	APRI400 DC사업추진 현황 및 향후 전망	13:00 - 18:00
I	원전 형상관리 현황 및 향후 추진방향	13:00 - 18:00
J	전략물자 수출통제 워크숍	13:00 - 18:00
K	원전산업계 안전문화 증진 기반기술 개발 현황 및 향후 개선방안 Workshop	09:00 - 18:00
L	후쿠시마 원전사고 이후 MTO(Man-Technology-Organization) 연구 및 기술 현황	13:30 - 18:20
M	원자력과 기후변화/Nuclear Intra-Communication	14:00 - 18:00
*	[원자력계 원로워크숍] 원전사고의 교훈과 안전정책 및 제도변천 고찰	17:00 - 18:30
*	2015년도 춘계 청년지부 총회	18:00 - 21:00

❖개회식 및 학술발표회

5월 7일(목)		5월 8일(금)	
08:30	등록 및 접수	09:00	분과별 학술발표
09:00	분과별 학술발표		학생/청년 Competition Session
10:40	휴식	10:40	휴식
11:00	분과별 학술발표	11:00	분과별 학술발표
11:30	제71차 평의회 (오션부, 5층)		학생/청년 Competition Session
12:00	중식 (탐라홀B+C, 5층)	12:00	중식
13:00	분과별 포스터발표 (3층 로비)		
13:30	연구부회 모임		
15:30	학술발표회 개회식 (한라홀, 3층)		
	• 국민의례		
	• 개회사 : 장문희 학회장		
	• 축 사 : 최종배 (미래부 창조경제조정관)		
	• 학술발표회 우수논문상 시상		
	• 학생/청년 Competition Session 시상		
	• 장학증서 수여		
16:00	특별강연(Ⅰ)		
16:40	휴식		
17:00	특별강연(Ⅱ)		
18:00	만찬		

❖특별강연

- [Ⅰ] Implication of Fukushima and Future Prospects for Nuclear Energy Yoichi Fuji-ie (Representative Director, NPO Nuclear Salon Fuji-ie)
- [Ⅱ] 제주인들은 어떻게 살았을까 강만생(제주역사문화진흥원 원장)

❖등록비

구 분	사전등록(마감 : '15.4.22)	현장등록비
학생	50,000원	50,000원
전년도(2014년도) 연회비 납부회원, 평생회원, 2015년도 신규회원	100,000원	120,000원
전년도(2014년도) 연회비 미납회원	150,000원	170,000원
비회원	150,000원	170,000원

Ⓐ SFR 원형로(PGSFR) 주요기기 조달 방안

- 일 시 : 2015년 5월 6일(수) 13:30~18:00
- 장 소 : 제주 국제컨벤션센터, 2층 203
- 주 최 : 한국원자력학회 원자로시스템기술 연구부회

• 일 정

일 정	내 용
13:30 - 13:35	인사말 (연구부회장)
13:35 - 14:05	SFR 원형로 Supply Chain 개발 전략, 김태완 (SFRA)
14:05 - 14:35	SFR 원형로 주요기기의 설계특성, 구경회 (KAERI)
14:35 - 15:05	SFR 원형로 주요기기의 제작특성, 최한광 (두산중공업)
15:05 - 15:20	Coffee Break
15:20 - 15:50	국내원전 주요기기 공급사례, 박수용 (두산중공업)
15:50 - 16:20	Kirloskar Brothers Limited (KBL) pumps for Nuclear Power Plants application, Bhagwan Kalanke (Kirloskar Brothers Ltd.)
16:20 - 16:50	Experience in Monju Major Components Development, Masakazu Ichimiya (University of Fukui)
16:50 - 18:00	종합토론

• 기타사항

등록비 : 5만원 (저녁식사 제공)

문의처 : 김태완 / 소듐냉각고속로개발사업단 / 042-868-8791 / twkim3@kaeri.re.kr

안규석 / 소듐냉각고속로개발사업단 / 042-868-8979 / ksahn@kaeri.re.kr

Ⅱ. 연구부회별 워크숍

B 집합체 균질화 방법론 재검토

- 일 시 : 2015년 5월 6일(수) 13:30~18:00
- 장 소 : 제주 국제컨벤션센터, 2층 202A
- 주 최 : 한국원자력학회 원자로 물리 및 계산과학 연구부회
- 일 정

일 정	내 용
13:30 – 13:40	Opening, Han Gyu Joo (Seoul National University)
13:40 – 14:40	A Review of Homogenization Techniques for Core Calculations, Richard Sanchez (SNU)
14:40 – 15:40	A Generic Discontinuity Factor Theory for Diffusion, SPn, and Transport Calculations, Yung-An Chao (Former Westinghouse Senior Engineer, Retired in China)
15:40 – 15:50	Break
15:50 – 16:30	Practice of Baffle-Reflector Homogenization, Jae Seung Song (KAERI)
16:30 – 17:10	Neighborhood Consideration in Fuel Assembly Homogenization, Yong Hee Kim (KAIST)
17:10 – 17:50	Equivalent Group Constant Generation for Hexagonal TPEN Method by Whole Core Transport Calculation, Jin Young Cho (KAERI)
17:50 – 18:00	Closing, Nam Zin Cho (KAIST)

• 기타사항

등록비 : 3만원 (저녁식사 제공)

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

㉔ 중저준위방사성폐기물 처분시설의 안전성 및 수용성 제고 방안

- 일 시 : 2015년 5월 6일(수) 13:00~18:00
- 장 소 : 제주 국제컨벤션센터, 3층 300
- 주 최 : 한국원자력학회 방사성폐기물관리 연구부회, 원자력바르게알기실천연대, 한국원자력환경공단(KORAD)

• 일 정

일 정	내 용
13:00 - 14:00	등록
14:00 - 14:10	개회사, 김승평 (연구부회장)
14:10 - 14:20	격려사, 이종인 (KORAD 이사장)
14:20 - 14:40	(기조연설) 공감의 원자력과 지역수용성, 박영일 (이화여대 부총장, 전 과기부 차관)
14:40 - 15:20	(특별강연) 원자력시설 지역수용성을 위한 여성의 역할, 이레나 (이화여대 교수, Win-KOREA 회장)
15:20 - 15:50	(특별강연) 원자력시설 및 정책의 수용성 영향과 갈등에 대한 이론과 실제, 조성경 (명지대 교수)
15:50 - 16:00	휴식
16:00 - 16:30	경주 처분장 지역수용성 현황과 향후과제, 김용식 (KORAD)
16:30 - 17:00	경주 처분장 종합개발의 과제, 정찬우 (KINS)
17:00 - 17:30	경주 처분장 종합개발을 위한 부지특성, 김경수 (KAERI)
17:30 - 18:00	경주 처분장 종합개발 프로그램: Safety Case, 박진백 (KORAD)
18:00 - 20:00	폐회 및 저녁만찬, 참가자

• 기타사항

등록비 : 5만원 (주제 발표집 및 만찬포함)

문의처 : 박진백 / 한국원자력환경공단 기술연구소 안전평가실 / 042-601-5320 / jbpark@korad.or.kr

홍성욱 / 한국원자력환경공단 기술연구소 안전평가실 / 042-601-5321 / heart@korad.or.kr

Ⅱ. 연구부회별 워크숍

D 선진 핵연료 개발 현황

- 일 시 : 2015년 5월 6일(수) 13:00~18:00
- 장 소 : 제주 국제컨벤션센터, 4층 401(A+B)
- 주 최 : 한국원자력학회 핵연료 및 원자력재료 연구부회

• 일 정

일 정	내 용
13:00 - 13:25	등록
13:25 - 13:30	인사말 : 이찬복 (한국원자력학회 핵연료 및 원자력재료 연구부회장)
	제 1부 (좌장 : 손동성, UNIST)
13:30 - 14:00	후쿠시마 사고 이후 경수로 핵연료 개발 방향: 사고저항성 핵연료 - 구양현 (KAERI)
14:00 - 14:30	SMR용 핵연료 개발 현황 - 전상윤 (KNF)
14:30 - 15:00	중수로 개량핵연료 37M 개발 - 김영구 (KNF)
15:00 - 15:30	연구용원자로용 U-Mo 핵연료 개발 - 이종탁 (KAERI)
15:30 - 15:50	휴식
	제 2부 (좌장 : 박광현, 경희대)
15:50 - 16:15	VHTR 입자연료 개발 - 조문성 (KAERI)
16:15 - 16:40	SFR 금속연료 설계 및 성능 평가 - 천진식 (KAERI)
16:40 - 17:05	미래 핵연료 3I 플랫폼: in pile, in situ, in silico - 류호진 (KAIST)
17:05 - 17:30	SFR 금속연료 제조기술 개발 - 김기환 (KAERI)
17:30 - 17:55	SFR 금속연료 부품 개발 - 김성호 (KAERI)
17:55 - 18:20	종합 토의 (좌장 : 손동성, 박광현)
19:00 -	석식

• 기타사항

등록비 : 3만원 (저녁식사 제공)

문의처 : 김준환 / KAERI / 010-4079-7819 / junhkim@kaeri.re.kr

천진식 / KAERI / 010-3388-5390 / jscheon@kaeri.re.kr

E 중대사고 코드 국산화 개발현황 및 개선방향

- 일 시 : 2015년 5월 6일(수) 13:10~18:00
- 장 소 : 제주 국제컨벤션센터, 3층 한라홀B
- 주 최 : 한국원자력학회 원자력 열수력 및 안전 연구부회

• 일 정

일 정	내 용
13:10 - 13:20	개회사, 정법동 (원자력 열수력 및 안전연구부회장)
13:20 - 13:35	중대사고 종합해석 코드개발 및 해석체계 구축, 김형택 (한국수력원자력(주))
13:35 - 14:25	중대사고 노내현상모델 개발현황 및 계획, 김동하 (한국원자력연구원)
14:25 - 14:55	중대사고 노외현상모델 개발현황 및 계획, 이병철 (주미래와도전)
14:55 - 15:15	중대사고 대차설비모델 개발현황 및 계획, 최유정 (한국수력원자력(주))
15:15 - 15:30	중대사고 코드 확인/검증 현황 및 계획, 문영태 (한국전력기술(주))
15:30 - 15:50	중대사고 통합체계 구축 현황 및 계획, 이병철 (주미래와도전)
15:50 - 16:00	휴식
16:00 - 16:30	Current status of USDOE CASL project, John Turner (ORNL)
16:30 - 17:00	SPACE/CAP 개발 경험 및 현황, 하상준 (한국수력원자력(주))
17:00 - 17:10	휴식
17:10 - 18:00	종합토의

• 기타사항

등록비 : 무료 (저녁식사 제공)

문의처 : 최유정 / 한국수력원자력(주) / 010-7597-5689 / yujung.choi@khnpp.co.kr

김환열 / 한국원자력연구원 / 010-4500-8946 / hykim1@kaeri.re.kr

Ⅱ. 연구부회별 워크숍

F 원전 주변주민과 갑상선암에 관한 기술적 분석

- 일 시 : 2015년 5월 6일(수) 13:30~19:00
- 장 소 : 제주 국제컨벤션센터, 2층 201(A+B)
- 주 최 : 한국원자력학회 이슈위원회/방사선이용 및 방호 연구부회
대한방사선방어학회 의학위원회
- 일 정

일 정	내 용
13:30 - 14:00	등록
	사회 : 김교윤 (KNS 방사선이용 및 방호 연구부회장)
14:00 - 14:05	인사말 : 장문희 (한국원자력학회장)
14:05 - 14:10	인사말 : 김일한 (대한방사선방어학회장)
제 1부	좌장 : 김교윤 (KNS 방사선이용 및 방호 연구부회장)
14:10 - 14:20	원전주변 갑상선암 기술적 분석 현황 김교윤 (KAERI)
14:20 - 14:40	저선량방사선이 인체에 미치는 영향 김광표 (경희대)
14:40 - 15:00	일반인 선량한도 김봉환 (KAERI)
15:00 - 15:20	원전 주변주민에 대한 방사선영향 금동권 (KAERI)
15:20 - 15:40	방사성요오드의 생리역동학적 모델 정규환 (KINS)
Coffee Break	
제 2부	좌장 : 박우윤 (KARP 의학위원장)
16:00 - 16:20	역학조사 국·내외 사례 진영우 (KIRAMS)
16:20 - 16:40	갑상선암의 특성 및 발생원인 김병일 (KIRAMS)
16:40 - 17:00	갑상선암 발생과 검진과의 관계 김현정 (고려대)
17:00 - 17:20	인과관계론 김수근 (성균관대)
17:20 - 17:40	원전 주변주민 갑상선암발생에 관한 기술적 종합분석 강건욱 (서울대)
17:40 - 17:50	원전과 갑상선암 발생의 의학적 관점 박우윤 (충북대)
Coffee Break	
종합토의	좌장 : 황주호 (KNS 부회장/이슈위원장)
18:00 - 19:00	패널 : 이재기 (한양대), 유근영 (서울대), 김종순 (전 원자력의학원장), 언론계 (2명)
19:00 -	만찬

• 기타사항

등록비 : 7만원 (만찬 제공)

문의처 : 김교윤 / 한국원자력연구원 / 042-868-2765 / sky@kaeri.re.kr

금동권 / 한국원자력연구원 / 042-868-2058 / dkkeum@kaeri.re.kr

G 핵융합로 플라즈마대면부품 개발 현황 및 기술교류 워크숍

- 일 시 : 2015년 5월 6일(수) 13:00~18:30
- 장 소 : 제주 국제컨벤션센터, 2층 202B
- 주 최 : 한국원자력학회 양자공학 및 핵융합기술 연구부회

• 일 정

일 정	내 용
13:00 – 13:20	등록
13:20 – 13:30	인사말 (오영국 연구부회장, 국가핵융합연구소)
진행 : 이동원 (KAERI)	
13:30 – 14:00	KSTAR PFC 개발 현황 및 전망 (김경민, 국가핵융합연구소)
14:00 – 14:30	ITER 불랑켓일차벽 및 TBM PFC 개발/시험 현황 (김석권, KAERI)
14:30 – 15:00	텅스텐 제작 방법에 따른 PSI 반응 특성 차이 (김곤호, 서울대)
15:00 – 15:30	핵융합로 대면재 적용을 위한 PVD 텅스텐코팅 기술개발 (장창희, KAIST)
Coffee Break	
15:50 – 16:20	PFC 재질의 gas retention 측정을 위한 TDS 기초 실험 (김희수, 단국대)
16:20 – 16:50	고온플라즈마 장비 구축 및 핵융합로 대면부품 기술 개발 현황 (홍봉근, 전북대)
16:50 – 17:20	Ion In-situ HVEM 장비 구축과 W합금/대면구조재 접합기술 동향 (윤한기, 동의대)
17:20 – 17:50	핵융합로 대면부품 냉각기술 개발 현황 및 계획 (김형대, 경희대)
17:50 – 18:30	토론 및 맺음말

• 기타사항

등록비 : 3만원 (발표집 및 만찬 포함)

문의처 : 이동원 / 한국원자력연구원 / 042-868-4659 / dwlee@kaeri.re.kr

Ⅱ. 연구부회별 워크숍

H APR1400 NRC DC 사업추진 현황 및 향후 전망

- 일 시 : 2015년 5월 6일(수) 13:00~18:00
- 장 소 : 제주 국제컨벤션센터, 3층 삼다홀B
- 주 최 : 한국원자력학회 원전건설 및 운영기술 연구부회
- 일 정

일 정	내 용
13:00 - 13:05	개 회 사 : 김명기 소장 (KHNP CRI)
13:05 - 13:10	환 영 사 : 채규남 과장 (산업부 원전수출진흥과)
13:10 - 13:30	특 강 : 오세기 총장 (KINGS)
13:30 - 13:50	APR1400 NRC DC 사업 현황 및 전망 (이재용/KHNP CRI)
13:50 - 14:10	설계인증 다변화 전략 및 미국 원전시장 전망 (양승태/KHNP)
14:10 - 14:30	APR1400 NRC DC 원전 내진해석 (유동현/KEPCO E&C AE)
14:30 - 14:50	APR1400 NRC DC 원전 UHS 냉각탑 설계 (김용건/KEPCO E&C AE)
14:50 - 15:10	APR1400 NRC DC 원전 오염최소화 설계 (강상호/KEPCO E&C AE)
15:10 - 15:20	휴식
15:20 - 15:40	APR1400 NRC DC 원전 다양성 보호계통 개선 (오양균/KEPCO E&C SD)
15:40 - 16:00	APR1400 NRC DC 원전 내부 구조물의 중성자조사 유기 응력부식균열(IASCC) 및 보이드 스웰링(VC) 평가 (유 완/KEPCO E&C SD)
16:00 - 16:20	APR1400 NRC DC 원전 안전해석 (전우청/KNF)
16:20 - 16:40	GSI-191 관련 시험 및 인허가 추진 현황 (서정관/KHNP CRI)
16:40 - 17:00	휴식
17:00 - 18:00	패널 토론

• 기타사항

등록비 : 없음

문의처 : 김태진 / 한수원 NRC-DC팀 / 042-870-5742 / kimtaejin@khnp.co.kr

1 원전 형상관리 현황 및 향후 추진방향

- 일 시 : 2015년 5월 6일(수) 13:00~18:00
- 장 소 : 제주 국제컨벤션센터, 3층 303(A+B)
- 주 최 : 한국원자력학회 원전건설 및 운영기술 연구부회

• 일 정

일 정	내 용
13:00 - 13:20	등록
13:20 - 13:30	개회사
13:30 - 13:40	인사말
13:40 - 14:10	가동원전 형상관리이행 기반 구축현황 및 계획 (이성호 차장/한수원 엔지니어링처)
14:10 - 14:40	건설원전 형상관리체계 구축현황 (박영한 부장/한수원 건설기술처)
14:40 - 15:10	원전 형상관리 규제 이행방안 (박종석 박사/KINS)
	휴식
15:30 - 16:00	데이터기반 설계통합시스템 기술개발 (김광철 부장/한국전력기술)
16:00 - 16:30	가동원전 형상관리 플랫폼 개발 (김형철 본부장, (주)NSE)
16:30 - 17:00	통합정보기반 원전 형상관리체계 구축 (박유진 차장, 한수원 중앙연구원)
	휴식
17:20 - 18:00	패널 토의 (원자력안전위원회, KINS, 한수원 관련 협력사)
18:30 - 20:00	만찬

• 기타사항

등록비 : 3만원 (발표집 및 만찬 제공)

문의처 : 박종석 / KINS / 042-868-0144 / park@kins.re.kr

II. 연구부회별 워크숍

J 전략물자 수출통제 워크숍

- 일 시 : 2015년 5월 6일(수) 13:00~18:00
- 장 소 : 제주 국제컨벤션센터, 4층 402A
- 주 최 : 한국원자력학회 원자력정책, 인력 및 협력 연구부회
- 일 정

일 정	내 용
13:00 - 13:30	Registration
13:30 - 14:00	Opening Session
13:30 - 13:40	Opening remarks -Young-Myung CHOI, Presidents, Korea Institute of Nuclear nonproliferation And Control(KINAC)
13:40 - 13:50	Welcoming remarks -Min BAEK, Director General(Radiation Emergency Bureau), Nuclear Safety and Security Commission(NSSC)
13:50 - 14:00	Keynote Speech -Youn Jong Kwon, Director(Disarmament and Nonproliferation Division), Ministry of Foreign Affairs(MOFA)
14:00 - 15:20	Session I
14:00 - 14:20	Technology Transfer Control in ROK -Sook-Hyeon KIM, Director (Nuclear Safeguards and Export Control Division), NSSC, ROK
14:20 - 14:40	Australia's regulation of intangible technology transfers-controls and catch-alls -Tina Mathewson, Director(Strategic Policy Division), Defence Export Control Office, Australia
14:40 - 15:00	Security export control in Tohoku university -Takahiko Sasaki, Professor (Institute for Materials Research), Tohoku University, Japan
15:00 - 15:20	Defence and Nonproliferation Export Control in China -Chen Kai, Secretary General, Chinese Arms Control and Disarmament Association (CACDA), China
15:20 - 15:30	Coffee Break
15:30 - 16:50	Session II
15:30 - 15:50	US Export control and Border control -Andrew R. Chilcoat, Export Control & Border Security Advisor, U.S. Embassy (Indonesia), US
15:50 - 16:10	The potential drawback and vision of the technology transfer -Bong-Geun JUN, Professor, Institute of Foreign Affairs and National Security, ROK
16:10 - 16:30	Effective export control and compliance program in national laboratory -Randy Beatty, Oak Ridge National Lab., US
16:30 - 16:50	The Issue of Knowledge Transfer in Export Control -Man-Sung YIM, Professor (Department of Nuclear and Quantum Engineering), Korea Advanced Institute of Science and Technology (KAIST), ROK
15:50 - 17:50	Panel Discussion

• 기타사항

등록비 : 무료

문의처 : 서하나 / 한국원자력통제기술원 / 042-860-9776 / hana@kinac.re.kr

K 원전산업계 안전문화 증진 기반기술 개발 현황 및 향후 개선방안

- 일 시 : 2015년 5월 6일(수) 09:00~18:00
- 장 소 : 제주 국제컨벤션센터, 4층, 402B
- 주 최 : 한국원자력학회 원자력정책, 인력 및 협력 연구부회

• 일 정

일 정	내 용
09:00 – 09:10	인사 및 소개 : 박윤원 교수, KAIST
09:10 – 09:30	일본 원전산업계 안전문화 문제점 및 증진 현황 Dr. Akihide Kugo, Executive Director, JANSI
09:30 – 09:50	Nuclear safety culture: The impact of cultural background Prof. Emanuel Pastreich
09:50 – 10:10	Policy initiative, oversight framework and validation of safety culture components 최영성 박사, KINS
10:10 – 10:30	한국 원전산업계 안전문화 증진 기반 기술개발 추진방향 박윤원 교수, KAIST
10:30 – 10:45	휴식 (Coffee Break)
10:45 – 12:00	발표자 토론회 좌장 : 은영수 박사, 토론회 : Panelist 4명
12:00 – 13:20	중식 (ICC내, 델리지아)
13:20 – 13:40	국내 안전문화 연구현황 소개 박윤원 교수, KAIST
13:40 – 14:10	원전안전문화 영향요소 도출, 개선안 개발 및 상시 모니터링 체계 구축 박흥규 이사 외 3인, 비즈(주)/한수원/인제대/KONES
14:10 – 14:40	원전안전문화 역량진단 체계 및 역량증진 도구 개발 장통일 박사 외 2인, 한국원자력연구원/KAIST/한양대
14:40 – 15:10	원전안전문화 영향분석 시뮬레이션 기술 개발 오영민 교수, 서울대학교
15:10 – 16:00	질의/응답 (30분), 이후 휴식 (Coffee Break)
16:00 – 18:00	안전문화 기술 개발과제 2차년도 수행실적 (비공개) 박윤원 교수, KAIST/평가위원 다수
18:30 – 20:30	만찬 (별도공지)

• 기타사항

등록비 : 무료 (만찬 제공)

문의처 : 박효찬 / 비즈(주) / 010-4437-5361 / parktomman@bees.pro

Ⅱ. 연구부회별 워크숍

㉠ 후쿠시마 원전사고 이후 MTO(Man-Technology-Organization) 연구 및 기술 현황

- 일 시 : 2015년 5월 6일(수) 13:30~18:20
- 장 소 : 제주 국제컨벤션센터, 3층 302
- 주 최 : 한국원자력학회 원자력 계측제어 및 자동원격 연구부회
- 일 정

일 정	내 용
13:30 - 13:40	개 회 : 연구부회장 인사말 : 성풍현 교수 (KNS 수석부회장)
좌장 : 정충희 실장 (KINS)	
13:40 - 14:10	후쿠시마 원전사고 이후 국내외 MTO 연구/기술 변화, 김종현 (KINGS)
14:10 - 14:40	설계기준 초과사고를 고려한 인간공학 규제요건 개발, 이동훈 (KINS)
14:40 - 15:10	중대사고 대처를 위한 가상현실 기반 훈련설비 개발, 정연섭 (KHNP)
15:10 - 15:40	디지털 환경의 I&C 및 인적신뢰도 평가 연구개발, 정원대 (KAERI)
15:40 - 16:00	Coffee Break
16:00 - 16:30	설계기준 초과사고에 대한 공학적 고찰, 김만철 (중앙대)
16:30 - 17:00	중대사고 대처 I&C 기술개발, 허섭 (KAERI)
17:00 - 17:30	설계기준 초과사고 시 전원설비 성능평가, 김인용 (KINS)
17:30 - 18:00	중대사고시에도 작동하는 고생존성 계측기술, 이수일 (KHNP)
18:00 - 18:20	Wrap-up
만찬 (향토음식전문점 대기정, 064-739-1041, 서귀포시 대포동 1787)	

• 기타사항

등록비 : 4만원 (만찬 제공)

문의처 : 이동훈 / KINS / 042-868-0669 / 010-8797-8931 / dhlee@kins.re.kr

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

M 원자력과 기후변화/Nuclear Intra-Communication

- 일 시 : 2015년 5월 6일(수) 14:00~18:00
- 장 소 : 제주 국제컨벤션센터, 3층 301(A+B)
- 주 최 : 한국원자력학회 여성회원 활성화 특별위원회

• 일 정

일 정	내 용	비 고
14:00 - 14:05	개회사	김은희 (여성특별위원장)
14:05 - 14:10	축사	장문희 (원자력학회장)
세션 I (특별 강연) 원자력과 기후 변화 진행 : 김은희 (서울대)		
14:10 - 15:10	기후 변화에 대한 국가 간 협력과 그 의의	최재철 (외교부 기후변화대사)
15:10 - 16:10	방사성폐기물 관리의 사회적, 정책적 문제	임만성 (KAIST 교수)
16:10 - 16:30	휴식	
세션 II (토론회) Nuclear Intra-Communication 진행 : 서은진 (KINS)		
16:30 - 17:30	발표 토의 : 김신애, 유안나 (KAERI), 양정선, 정진아 (KINS), 이정현 (KINAC), 윤봉요 (KHNP-CRI)	
17:30 - 18:00	자유 토의 : KAERI, KINS, KINAC, KEPCO E&C, KHNP-CRI&RHI, KIRAMS-RIRMS&NREMC, 원자력 및 에너지 관련학과	
18:00	폐회	참가자

• 기타사항

등록비 : 무료 (만찬 제공)

문의처 : 이나영 / 한국원자력통제기술원 / 042-860-9792 / leeny@kinac.re.kr

Ⅲ. 개회식 및 특별강연 일정

• 일 시 : 2015년 5월 7일(목) 15:30~18:00

• 장 소 : 3층 한라홀

• 일 정

일 정	내 용
15:30 ~ 16:00	국민의례
	개회식 : 장문희 학회장
	축 사 : 최종배 (미래창조과학부 창조경제조정관)
	2014년도 추계학술발표회 우수논문상 시상
	2014년도 추계학술발표회 학생/청년 Competition Session 시상
	2015년도 장학증서 수여
16:00 ~ 16:40	[특별강연 1] Implication of Fukushima and Future Prospects for Nuclear Energy (Yoichi Fuji-ie / Representative Director, NPO Nuclear Salon Fuji-ie)
16:40 ~ 17:00	휴식
17:00 ~ 17:40	[특별강연 2] 제주인들은 어떻게 살았을까 (강만생 / 제주역사문화진흥원 원장)
18:00 ~ 19:00	만찬 (*5층 탐라홀 B+C)

IV. 분과별 논제 및 발표자

제1분과A

원자로시스템기술(Reactor System Technology)

-소듐냉각고속로/경수로(Sodium Cooled Fast Reactor/Light Water Reactor)

좌 장 김정만(Jeong Mann Kim), 어재혁(Jaehyuk Eoh)

발표장소 삼다홀 A

일 정 | 5. 7(목)

- 09:00 Investigation of Electricity Generation by Using Gamma Radiation from Spent Fuels**
Haneol Lee and Man-Sung Yim(KAIST)
- 09:20 Numerical Analysis of In-Vessel Retention Using MARS-Ga for APR 1400 under the Gallium-water External Reactor Vessel Cooling System**
Sarah Kang, Seong Dae Park, In Guk Kim, and In Cheol Bang(UNIST)
- 09:40 Preliminary Studies of S-CO₂ Critical Flow for Leak Modeling in Sodium-CO₂ Heat Exchanger**
Hwa-Young Jung, A-Reum Go, and Jeong Ik Lee(KAIST)
Myung-Hwan Wi(KAERI)
- 10:00 In-Vessel Storage Cooling Analysis in PGSFR**
Jung Yoon and Tae-ho Lee(KAERI)
- 10:20 Validation of Printed Circuit Heat Exchanger Design Code KAIST_HXD**
Seungjoon Baik, Seong Gu Kim, Jekyoung Lee, and Jeong Ik Lee(KAIST)
- 10:40 Coffee Break**
- 11:00 Cooling Performance of ALIP according to the Air or Sodium Cooling Type**
Huee-Youl Ye, Jung Yoon, and Tae-Ho Lee(KAERI)
- 11:20 Multidimensional Thermal-Hydraulic Analysis for Decay Heat Exchanger of PGSFR**
Jonggan Hong, Jung Yoon, Dehee Kim, and Tae-Ho Lee(KAERI)
- 11:40 Design and Performance Evaluation of a Combined DHX Unit for SFR Design Application**
Jaehyuk Eoh, Dehee Kim, Chang-Gyu Park, and Ji-Young Jeong(KAERI)
- 12:00 Visualization Study of Melt Dispersion Behavior for SFR with a Metallic Fuel under Severe Accidents**
Hyo Heo, Seong Dae Park, and In Cheol Bang(UNIST)
Dong Wook Jerng(CAU)

IV. 분과별 논제 및 발표자

제1분과B

원자로시스템기술(Reactor System Technology)

- 고온가스로/연구로(High Temperature Gas Cooled Reactor/Research Reactor)

좌 장 김응선(Eung Seon Kim), 최용석(Yong Seok Choi)

발표장소 삼다홀 B

일 정 | 5. 7(목)

- 09:00 Heat Transfer Distribution for Reactor Cavity Cooling System Riser Considering Thermal Conduction**
Byung Ha Park(KAERI)
- 09:20 Simulation on the HTTR Control Rod Withdrawal Test**
Ji Su Jun, Nam-il Tak, and Hong Sik Lim(KAERI)
- 09:40 Preliminary Analysis of the KAERI RCCS Experiment Using GAMMA+**
Samukelisiwe Khoza, Nam-il Tak, Hong-Sik Lim, Sung-Nam Lee, Bong-Hyun Cho, and Jong-Hwan Kim(KAERI)
- 10:00 Low Cycle Fatigue Behavior of Alloy 617 Base Metal and Welded Joints at Room Temperature and 850 °C for VHTR Applications**
Seon Jin Kim and Rando T. Dewa(PKNU)
Woo Gon Kim and Min Hwan Kim(KAERI)
- 10:20 Heat Transfer Experiments on an Internally Insulated Hot-Gas-Duct**
SungDeok Hong, ChanSoo Kim, and MinHwan Kim(KAERI)
InJun Lee and JaeSool Shim(YU)
- 10:40 Coffee Break**
- 11:00 Oxidation Protective SiC Coating on Graphite for VHTR Core Support Structure**
Jae-Won Park, Eung-Seon Kim, and Jae-Un Kim(KAERI)
William E. Winde(INL)
- 11:20 Comparison of Damage Formation and Crack Propagation Behavior of Selected Nuclear Graphite for HTGR**
Se-Hwan Chi, Hyun-Ju Kim, Eung-Seon Kim, and Min-Hwan Kim(KAERI)
- 11:40 High Temperature Operational Experiences of Helium Experimental Loop**
Chan Soo Kim, Sung-Deok Hong, Eung-Seon Kim, and Min Hwan Kim(KAERI)
- 12:00 Experimental Study for Flow Regime of Downward Air-Water Two-Phase Flow in a Vertical Narrow Rectangular Channel**
T.H. Kim, B.J. Yun, and J.H. Jeong(PNU)
- 12:20 Hot Water Layer and Thermal Stratification in Open-Pool Type Research Reactor**
Yong-Seok Choi, Hyun-Gi Yoon, Jeongwoon Choi, Seong-Hoon Kim, and Dae-Young Chi(KAERI)

일 정 | 5. 8(금)

- 09:00 Effects of Natural Convection & Radiation inside Hot-Gas-Duct on Temperature Distribution on the Surface**
Injun Lee, Sungyull Hong, Cheolho Bai, and Jaesool Shim(YU)
Sungdeok Hong, Chansoo Kim, and Minhwan Kim(KAERI)
- 09:20 Evaluation of Heat Removal Performance of Passive Decay Heat Removal System for S-CO₂ Cooled Micro Modular Reactor**
Jangsik Moon, Jeong Ik Lee, and Yong Hoon Jeong(KAIST)
- 09:40 Performance Estimation of Supercritical CO₂ Micro Modular Reactor (MMR) for Varying Cooling Air Temperature**
Yoonhan Ahn, Seong Gu Kim, Seong Kuk Cho, and Jeong Ik Lee(KAIST)
- 10:00 Creep-rupture Behaviors of a Diffusionally Aluminized Alloy 617**
Injin Sah(KAERI)
Sung Hwan Kim and Changheui Jang(KAIST)
- 10:20 Evaluation of Effective Thermal Conductivity Models for the VHTR Fuel Block**
Dong-Ho Shin, Hyoung Kyu Cho, and Goon-Cherl Park(SNU)
Su-Jong Yoon(INL)
Nam-II Tak(KAERI)
- 10:40 Coffee Break**
- 11:00 Analysis of Creep Crack Growth Behavior of Alloy 617 for Use in a VHTR System**
Woo-Gon Kim and Min-Hwan Kim(KAERI)
Jae-Young Park, I.M.W. Ekaputra, and Seon-Jin Kim(PKNU)
- 11:20 Turbomachinery Performance Map Application for Analyzing Cycle Off-Design Behavior of KAIST MMR**
Seong Kuk Cho, Jekyoung Lee, Seong Gu Kim, and Jeong Ik Lee(KAIST)
- 11:40 Conceptual System Design of a Supercritical CO₂ Cooled Micro Modular Reactor**
Seong Gu Kim, Bongseong Oh, Seung Joon Baik, Hwanyael Yu, Yonghee Kim, and Jeong Ik Lee(KAIST)
- 12:00 Heat Balance Study on Integrated Cycles for Hydrogen and Electricity Generation in VHTR**
Sang IL Lee and Yeon Jae Yoo(HEC)
Gyunyoung Heo, Soyoung Park, and Yeon Kwan Kang(KHU)
- 12:20 Steady-State Core Temperature Prediction Based on GAMMA+/CAPP Coupling**
Nam-il Tak, Hyun-Chul Lee, and Hong-Sik Lim(KAERI)

IV. 분과별 논제 및 발표자

제1분과D

원자로시스템기술(Reactor System Technology)-Poster -소듐냉각고속로 I (Sodium Cooled Fast Reactor I)

좌 장 이승원(Seung Won Lee), 박창규(Chang-Gyu Park)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P01D01 Preliminary Evaluation on In-vessel Source Term based on 4S Methodology in PGSFR

Seung Won Lee, Won-Pyo Chang, Seung Hwan Seong, Sang June Ahn, Seok Hun Kang, Chi-Woong Choi, Jin Yoo, Kwi Lim Lee, Jae-Ho Jeong, Taekyeong Jeong, and Kwi-Seok Ha(KAERI)

P01D02 Structural Integrity Evaluation of Intermediate Heat Exchanger in a Steady State Condition

Sung-Kyun Kim, Gyeong-Hoi Koo, Hyung-Kook Joo, and Jong-Bum Kim(KAERI)

P01D03 2014 PGSFR Safety Analysis for Loss of Flow

J. H. Jeong, K. L. Lee, C. W. Choi, T. K. Jeong, J. Yoo, W. P. Chang, S. J. Ahn, S. W. Lee, S. H. Kang, and K. S. Ha(KAERI)

P01D04 Basic Design of Experimental Facility for Measuring Pressure Drop of IHX in a SFR

Yung-Joo Ko, Jae-Hyuk Eoh, Hyungmo Kim, Dong-Won Lee, Ji-Young Jeong, and Hyeong-Yeon Lee(KAERI)
Dong Eok Kim(KNU)

P01D05 Preliminary Design for the Motor and Body of the IVTM in PGSFR

S. H. Kim and G. H. Koo(KAERI)

P01D06 Containment Performance Evaluation of a Sodium Fire Event Due to Air Ingress into the Cover Gas Region of the Reactor Vessel in the PGSFR

Sang June Ahn, Won-Pyo Chang, Seok Hun Kang, Chi-Woong Choi, Jin Yoo, Kwi Lim Lee, Jae-Ho Jeong, Seung Won Lee, Taekyeong Jeong, and Kwi-Seok Ha(KAERI)

P01D07 An Application Example Analysis of Quality Assurance Program for STELLA (Sodium Integral Effect Test Loop for Safety Simulation and Assessment) Project

Minhwan Jung, Dayoung Gam, Jae-Hyuk Eoh, and Ji-Young Jeong(KAERI)

P01D08 Structural Integrity Evaluation of Rotating Plug in a Steady State Condition

In-su Han, Gyeong-Hoi Koo, Sung-Kyun Kim, and Jong-Bum Kim(KAERI)

P01D09 Crack Growth Rate Properties of Gr.91 Steel for a Defect Assessment of a Component in a Sodium-Cooled Fast Reactor

Hyeong-Yeon Lee and Woo-Gon Kim(KAERI)

P01D10 Measurements of Flow Mixing at Subchannels in a Wire-Wrapped 61-Rod Bundle for a Sodium Cooled Fast Reactor

Dong Won Lee, Hyungmo Kim, Yung Joo Ko, Hae Seob Choi, Dong-Jin Euh, Ji-Young Jeong, and Hyeong-Yeon Lee(KAERI)

P01D11 Structural Evaluation of a PGSFR Steam Generator for a Steady State Condition

Chang-Gyu PARK, Jong-Bum KIM, Hoe-Woong KIM, and Gyeong-Hoi KOO(KAERI)

P01D12 Preliminary Stress Analysis for Receptacle of Prototype Sodium-cooled Fast Reactor

Jae-Hun Cho, Gyeong-Hoi Koo, Hyung-Kook Joo, and Jong-Bum Kim(KAERI)

제1분과E

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

좌 장 박선희(Sun Hee Park), 조충호(Chungho Cho)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P01E01 Preliminary Plugging Tests in Narrow Sodium Channels by Sodium and Carbon Dioxide Reaction**
Sun Hee Park, Myung-Hwan Wi, and Jae Hong Min(KAERI)
- P01E02 Preliminary Design of Compressor Impeller for Innovative Sodium Cooled Fast Reactor**
Jekyoung Lee, Seongkuk Cho, and Jeong Ik Lee(KAIST)
Jae Eun Cha(KAERI)
- P01E03 High Temperature Fatigue Crack Growth Rate of G91 Steel with Applying 30 Seconds Hold Time**
Jong-Bum Kim, Chang-Gyu Park, and Gyeong-Hoi Koo(KAERI)
Jong-Hoon Lee(SKKU)
Bum-Joon Kim(Osan Univ.)
- P01E04 Thermal Analysis on N₂ and S-CO₂ Brayton Cycle for the Energy Conversion System of Small Scale Ultra-long Cycle Fast Reactor**
Seok Bin Seo, Han Seo, and In Cheol Bang(UNIST)
- P01E05 Design of the Natural Circulation Loop and Implementation of DOWTHERM A Properties into MARS-LMR Code**
Yukyung Shin, Seong Dae Park, Sarah Kang, and In Cheol Bang(UNIST)
- P01E06 Two-Phase Flow Instability in Water-side Tube of SG under Axially Uniform Heat Flux Conditions**
Eui Kwang Kim, Dehee Kim, Yoon Jung, and Tae-Ho Lee(KAERI)
- P01E07 Electromagnet Response Time Tests on Primary CRDM of a Prototype Gen-IV SFR**
Lee, Jae-Han and Koo, Gyeong-Hoi(KAERI)
- P01E08 Natural Frequency Characteristics of a Cylindrical Structure According to the Porosity and Fluid Level**
Young-Kyu Lee, Chang-Gyu Park, Hoe-Woong Kim, and Gyeong-Hoi Koo(KAERI)
- P01E09 A Sensitivity Analysis of a Pipe Break Accident in a Preliminary Specific Design of the PGSFR**
Kwi Lim, Lee, Jae Ho, Jeong, and Kwi Seok, Ha(KAERI)
- P01E10 The Performance Estimation of PHTS Pump of DSFR**
Chungho Cho, Ji-Woong Han, Jong-Man Kim, Youngil Cho, Min-Hwan Jung, Da-Young Gam, Yong-bum Lee, and Ji-Young Jeong(KAERI)
- P01E11 Assessment of MATRA-LMR-FB with the SHRT-17 Core Subassembly Data**
Won-Pyo Chang, Jin Yoo, Seung Won Lee, Seung Hwan Seong, Sang June Ahn, Chi-Woong Choi, Kwi Lim Lee, Jae-Ho Jeong, Taekyeong Jeong, and Kwi-Seok Ha(KAERI)
- P01E12 Introduction of Sodium Fire Extinguishing System for STELLA-1**
Dayoung Gam, Jong-Man Kim, Min-Hwan Jung, Jae-Hyuk Eoh, and Jiyoung Jeong(KAERI)

IV. 분과별 논제 및 발표자

제1분과F

원자로시스템기술(Reactor System Technology)-Poster - 고온가스로(High Temperature Gas Cooled Reactor)

좌 장 김찬수(Chan Soo Kim), 전지수(Ji Su Jun)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P01F01 Verification of Gas System Analysis Code GAMMA+ with S-CO₂ Compressor Test Data

Seong Jun Bae, Yoonhan Ahn, and Jeong Ik Lee(KAIST)

P01F02 The Test Results of the NACEF RCCS Test Facility

Jong-Hwan Kim, Yoon-Yeong Bae, Chan-Soo Kim, Sung-Deok Hong, and Min-Hwan Kim(KAERI)

P01F03 Verification of KAERI-DySCo for a Dynamic Simulation of VHTR-based SI Hydrogen Production Facilities 1: Sulfuric Acid Multistage Distillation Column Module

Youngjoon Shin, Taehoon Lee, Kiyong Lee, and Minhwan Kim(KAERI)

P01F04 Numerical Analysis on Thermochemical Characteristics of a Hydrogen Iodine Decomposer in Sulfur-Iodine Cycle

T. H. Lee, K. Y. Lee, and Y. J. Shin(KAERI)

J. S. Choi and J. H. Choi(KMOU)

P01F05 Ion Beam Mixed Oxidation Protective Coating on Zry-4 Cladding

Jae-Un Kim and Jae-Won Park(KAERI)

P01F06 Calculation of LUEC Using HEEP Software for Nuclear Hydrogen Production Plant

Jongho Kim, Kiyong Lee, and Minhwan Kim(KAERI)

P01F07 Creep Rupture Properties for Base and Weld Metals of Alloy 617

Woo-Gon Kim and Min-Hwan Kim(KAERI)

Jae-Young Park, I.M.W. Ekaputra, and Seon-Jin Kim(PKNU)

P01F08 Thermal Analysis of CANDU Spent Fuel Bay Cooling System

Jeong Mann Kim, Ho Cheol Jang, Jin A Jang, and Eun Kee Kim(KEPCO E&C)

WanGyu Park(KHNP)

일 정 | 5. 7(목) 13:00-15:00

- P01G01 Performance Test of the Prototype SSDM for KJRR**
Sanghaun Kim, Yeong-Garp Cho, Yeon-Sik Yoo, and Jeong Soo Ryu(KAERI)
- P01G02 Two-Phase Instability Characteristics of Printed Circuit Steam Generator for the Low Pressure Condition**
Han-Ok Kang, Hun Sik Han, Young-In Kim, and Keung Koo Kim(KAERI)
- P01G03 Detailed Design of the Safety Residual Heat Removal System and a Circulation Pump For the KIJANG Research Reactor**
Hyungi Yoon, Kyoungwoo Seo, and Seonghoon Kim(KAERI)
- P01G04 Performance and Endurance Tests of the Top-Mounted CRDM for JRTR**
Myoung-Hwan Choi and Yeong-Garp Cho(KAERI)
Jung-Hyun Kim(POSCO Plantec)
Kwan-Hee Lee(RIST)
- P01G05 Design and Construction of Operation Bridge for Research Reactor**
Kwangsub Jung, Jinbok Choi, Jongmin Lee, and Jinho Oh(KAERI)
- P01G06 Experimental Investigation on Rotation Characteristic of Hydraulic Rotation Device for Neutron Transmutation Doping**
Ki-Jung Park, Han-Ok Kang, Seong Hoon Kim, and Cheol Park(KAERI)
- P01G07 Feasibility of Thermoelectric Waste Heat Recovery from Research Reactor**
Byeonghee Lee(KAERI)
- P01G08 Design, Fabrication, and Characteristic Experiment of a Hybrid Electromagnet for Bottom-Mounted Control Rod Drive Mechanism**
Hyung Huh, Jin-Haeng Lee, Yeon-Sik Yoo, Yeong-Garp Cho, and Jeong-Soo Ryu(KAERI)
- P01G09 Uncertainty Evaluation for Core Thermal Power in Research Reactor**
Sunil Lee, Kyoung-Woo Seo, Seong-Hoon Kim, Dae-Young Chi, and Cheol Park(KAERI)
- P01G10 Structural Integrity Evaluation for the Perforated Plate of a PCS Discharge Header Using Power Spectral Density Analysis**
Jinho Oh, Jongmin Lee, and Jeong-Soo Ryu(KAERI)
- P01G11 Numerical Analysis of Overpressure Transient during Cold Shutdown Operation for APR1400 Nuclear Power Plant**
Byung Soo Shin, Yun Il Kim, Ae Ju Jung, and Bok Ki Min(KINS)

IV. 분과별 논제 및 발표자

제2분과A

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

좌 장 심형진(Hyung Jin Shim), 김종운(Jong Woon Kim)

발표장소 202A

일 정 | 5. 7(목)

- 09:00 A Preliminary Study on an Uncertainty of Generated Self-shielded Total Cross Sections in an Unresolved Resonance Region**
Jong Woon Kim, Sang Ji Kim, Choong-Sup Gil, and Young-Ouk Lee(KAERI)
- 09:20 Competitive Resonance Interference Models in Direct Whole Core Transport Code nTRACER**
Meer Bacha and Han Gyu Joo(SNU)
- 09:40 On the Fly Doppler Broadening Using Multipole Representation**
Azamat Khassenov, Sooyoung Choi, and Deokjung Lee(UNIST)
- 10:00 Whole-Core Monte Carlo Calculation Based on Fission and Surface Source Iteration Method Applied to a Fast Reactor Core Configuration**
YuGwon Jo and Nam Zin Cho(KAIST)
- 10:20 Application of Higher-Mode Fission Matrix for Real Variance Estimation in McCARD Monte Carlo Eigenvalue Calculation**
Ho Jin Park(KAERI)
Hyung Jin Shim(SNU)
- 10:40 Coffee Break**
- 11:00 A New Strategy on the Monte Carlo Eigenvalue Estimation Method Based on the Fission Matrix Using Fine-Coarse Mesh Division**
Song Hyun KIM, Myeong Hyun Woo, and Chang Ho SHIN(HYU)
Hyun Chul LEE and Jea Man NOH(KAERI)
- 11:20 A Feasibility Study on a New Diagnostic Method for Convergence of Fission Source Distribution Using Kolmogorov-Smirnov Test**
Jae Yong LEE, Song Hyun KIM, Do Hyun KIM, and Chang Ho SHIN(HYU)
Hyun Chul LEE and Jea Man NOH(KAERI)
- 11:40 An Analysis on the Calculation Efficiency of the Responses Caused by the Biased Adjoint Fluxes in Hybrid Monte Carlo Simulation**
Quang Huy KHUAT, Song Hyun KIM, Do Hyun KIM, and Chang Ho SHIN(HYU)

제2분과B

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

좌 장 박상원(Sang Weon Park), 이현철(Hyun Chul Lee)

발표장소 202A

일 정 | 5. 8(금)

- 09:00 Recent Developments of Lattice Physics Code STREAM**
Sooyoung Choi and Deokjung Lee(UNIST)
- 09:20 Comparison of the Results of the Whole Core Decay Power Using the ORIGIN Code and ANS-1979 for the Uljin Unit 6**
Eun Hyun Ryu, Hae Sun Jeong, and Dong Ha Kim(KAERI)
- 09:40 Homogenization of Thermal Conductivity in a Periodic Structure**
Jonghwa Chang(KAERI)
- 10:00 Extension of Tom Booth's Modified Power Method for Higher Eigen Modes**
Peng Zhang, Hyunsuk Lee, and Deokjung Lee(UNIST)
- 10:20 Convergence Analysis of Two-Node CMFD Method for TWO-Group Neutron Diffusion Eigenvalue Problem**
Yongjin Jeong, Jinsu Park, and Deokjung Lee(UNIST)
Hyun Chul Lee(KAERI)
- 10:40 Coffee Break**
- 11:00 nTRACER/COBRA-TF Coupling and Initial Assessment**
Jaejin Lee and Han Gyu Joo(SNU)
Yann Perin and Kiril Velkov(GRS)
- 11:20 Fourier Stability Analysis of 1-D/1-D Transport-Transport Calculation and 1-D/1-D Transport-Diffusion Approximation**
Seungsu Yuk and Nam Zin Cho(KAIST)
- 11:40 Neutronics Design Flexibilities of the BigT Gadolinium Absorbers**
Mohd-Syukri Yahya and Yonghee Kim(KAIST)
HyeongHeon Kim(KEPCO E&C)

IV. 분과별 논제 및 발표자

제2분과C

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

좌 장 김용희(Yonghee Kim), 홍서기(Ser Gi Hong)

발표장소 203

일 정 | 5. 8(금)

- 09:00 Neutronic Analysis of Advanced SFR Burner Cores Using Deep-Burn PWR Spent Fuel TRU Feed**
Do-Yeon Kim and Ser Gi Hong(KHU)
- 09:20 An Advanced Option for Sodium Cooled TRU Burner Loaded with Uranium-Free Fuels**
WuSeung You and Ser Gi Hong(KHU)
- 09:40 Preliminary Heating Rate Evaluation of Control Assembly in Fast Reactor**
Yong-Kyo Lee, Sun Rock Choi, Jae-Yong Lim, and Sang-Ji Kim(KAERI)
- 10:00 FAST and SAFE Passive Safety Devices for Sodium-cooled Fast Reactor**
Donny Hartanto, Chihyung Kim, In-Hyung Kim, and Yonghee Kim(KAIST)
- 10:20 Implementation of a Gadolinium Burnable Absorber in the Carbide LEU-NTR**
Paolo Venneri and Yonghee Kim(KAIST)
- 10:40 Coffee Break**
- 11:00 A Point Dynamic Model for Stability Analysis of the PGSFR**
Pham Nhu Viet HA, Sun Rock CHOI, Min Jae LEE, Chang Moo KANG, and Sang Ji KIM(KAERI)
- 11:20 A Conceptual Study on a Supercritical CO₂-cooled KAIST Micro Modular Reactor**
HwanYeal Yu, Donny Hartanto, and Yonghee Kim(KAIST)
- 11:40 Comparative Performance Evaluation of ITER TBM Concepts**
SeongHee HONG, YunSeo PARK and Myung Hyun KIM(KHU)
- 12:00 Study of the External Neutron Source Effect on TRU Burning in a Sub-critical Reactor**
Zafar Iqbal ZAFAR and Myung Hyun KIM(KHU)

일 정 | 5. 7(목) 13:00-15:00

P02D01 Molten Salt Breeder Reactor Analysis Methods

Jinsu Park, Yongjin Jeong, and Deokjung Lee(UNIST)

P02D02 Preliminary Study for Inventories of Minor Actinides in Thorium Molten Salt Reactor

Choong Wie Lee and Hee Reyoung Kim(UNIST)

P02D03 MHTGR-350MW Benchmark Analysis by MCS Code

Hyeon-Jun Jeong, Hyunsuk Lee, and Deokjung Lee(UNIST)

Hyun Chul Lee(KAERI)

P02D04 Analysis of Irradiation Holes of In-Core Region

Won-ho IN, Yong-sub LEE, Tae-hwan KIM, Kyoung-hwan LIM, and Hyung-jin AHN(KAERI)

P02D05 Statistical Analysis for Criticality Uncertainty in Manufacturing Random Parameters

Gil Soo LEE and Sweng-Woong Woo(KINS)

P02D06 Implementation of Adjoint-Weighted Kinetics Parameter Calculation in MCS

Yunki Jo and Deokjung Lee(UNIST)

P02D07 Verification of Microscopic Depletion Module in RAST-K 2.0

Minyong Park and Deokjung Lee(UNIST)

Eunki Lee(KHNP CRI)

Hyun Chul Lee(KAERI)

P02D08 Improvement of Core Analysis of High Temperature Engineering Test Reactor Using McCARD Code

Chang Joon Jeong, Hyun Chul Lee, and Chang Keun Jo(KAERI)

P02D09 Application of Photon Transport Monte Carlo Module with GPU-based Parallel System

Chang Je Park(Sejong Univ.)

Heejeong Shon(Golden Eng. Co. LTD)

Donghak Lee(CoCo Link Inc.,)

P02D10 Isotope Separation Effect of Burnable Absorber for Long-cycle Boron-free Reactor Core

Chidong Kong, Jiwon Choe, and Deokjung Lee(UNIST)

Ho Cheol Shin(KHNP CRI)

P02D11 Dynamic Analysis of Plate in Water Tank

Kang Soo Kim, Kyeng Hoon Jeong, and Gyeong Hoi Koo(KAERI)

-
- P02D12 Real-time Performance Verification of Core Protection and Monitoring System with Integrated Model for SMART Simulator**
Bon-Seung Koo, Sung-Jin Kim, and Dae-Hyun Hwang(KAERI)
- P02D13 Measurements of Isomeric Yield Ratios in the Photo-Production of $^{58m,g}\text{Co}$ from ^{nat}Co Using 60-, 65-, and 70-MeV Bremsstrahlung**
H. J. Kim, S. J. Noh, M. W. Lee, D. H. Jeong, J. K. Kim, K. M. Yang, and Y. R. Kang(DIRAMS)
T. I. Ro(Dong-A Univ.)
S. G. Shin and Y. Kye(POSTECH)
G. N. Kim(KNU)
- P02D14 Investigation of Activation Cross-Sections of Alpha-Induced Nuclear Reactions on Natural Silver**
Muhammad Shahid, Kwangsoo Kim, Haladhara Naika, Muhammad Zaman, Sinchul Kang, Changgi Huh, and Guinyun Kim(KNU)
- P02D15 Measurement of the $^{27}\text{Al}(n,\alpha)$ and $^{27}\text{Al}(n,p)$ Reaction Cross Section in the Energy Region 15.2 to 37.2 MeV**
Muhammad Zaman, Guinyun Kim, Kwangsoo Kim, Sangil Park, Muhammad Shahid, and Muhammad Nadeem(KNU)
Haladhara Naik(BARC)
- P02D16 Measurement of Yields for the $^{197}\text{Au}(\gamma,xn)^{197-x}\text{Au}$ Reactions Induced by 2.5 GeV Bremsstrahlung**
Nguyen Thi Hien, Guinyun Kim, Kwangsoo Kim, Muhammad Shahid, Muhammad Zaman, and Muhammad Nadeem(KNU)
Pham Due Khue, Kim Tien Thanh, and Nguyen Van Do(VAST)
- P02D17 Validation Study on Preliminary Evaluations of U-238 for JEFF**
Do Heon Kim, Hyeong Il Kim, Choong-Sup Gil, and Young-Ouk Lee(KAERI)
Peter Schillebeeckx(EC-JRC)
- P02D18 Improvement of PWR Performance with Reflector**
Jiwon Choe and Deokjung Lee(UNIST)
Ho Cheol Shin(KHNP CRI)
- P02D19 Preliminary Study for Conceptual Design of Advanced Long Life Small Modular Fast Reactor**
Taewoo Tak, Jiwon Choe, Yongjin Jeong, and Deokjung Lee(UNIST)
T. K. Kim(ANL)

제3분과A

방사성폐기물관리(Radioactive Waste Management)

좌 장 정관성(Kwan Seong Jeong), 육대식(Dae Sik Yook)

발표장소 300

일 정 | 5. 7(목)

- 09:00 A Well Established System for the Dry Storage of Spent Fuel**
Juergen Skrzyppek and Josef Du-III Kim(GNS)
- 09:20 Quivers For Special Fuel Rods-Disposal of Special Fuel Rods in CASTOR® V Casks**
Amin Bannani, Wojciech Cebula, Olga Buchmüller, and Roland Hüggenberg(GNS)
Helmut Kühl(WTI)
- 09:40 Development of Aircraft Impact Scenario on a Concrete Cask in Interim Storage Facility**
Belal Almomani, Min Yoo, and Hyun Gook Kang(KAIST)
- 10:00 An Approach to Assessment of Occupational Exposure Dose to Workers for Decommissioning of Nuclear Facilities**
KwanSeong Jeong, JeiKwon Moon, ByungSeon Choi, Dongjun Hyun, Jonghwan Lee, IkJune Kim, GeunHo Kim, and JaeSeok Seo(KAERI)
- 10:20 Evaluation on Waste Volume and Weight from Decommissioning of Kori Unit 1 Reactor Vessel**
Yujeong Choi, Seong-Cheol Lee, and Chang-Lak Kim(KINGS)
- 10:40 Coffee Break**
- 11:00 Competitive Binding Reaction of Strontium as a Function of Ionic Strength**
Seeun Chang, Wooyong Um, Jaehyuk Kang, and Jungjin Kim(POSTECH)
- 11:20 Real-time Quantitative Analysis of Mixed Lanthanides for an Assessment of Material Stream in Pyroprocessing**
Young Taek Jee and Jong-Il Yun(KAIST)
Bong Young Kim(KAERI)
- 11:40 The Effect of pH on the Sorption and Speciation of U(VI) in $\text{Ca}^{2+}/\text{UO}_2^{2+}/\text{CO}_3^{2-}$ - SiO_2 System**
A. Sh. Saleh and J.-I. Yun(KAIST)
- 12:00 Development of Integrated Analyzing and Training Simulator for Spent Nuclear Fuel Pool, CAREPool**
Yongdeog Kim(KHNP CRI)
- 12:20 Updated Strategic Assessment of the U.S. NRC Low-Level Radioactive Waste (LLW) Program and the New WCS Commercial Disposal Facility for LLW**
David S. Kessel and Chang-Lak Kim(KINGS)

IV. 분과별 논제 및 발표자

제3분과B

방사성폐기물관리(Radioactive Waste Management)

좌 장 고원일(Won Il Ko), 이효직(Hyo Jik LEE)

발표장소 300

일 정 | 5. 8(금)

- 09:00 Analysis of ^{14}C in the Spent Resin from Wolsong NPP**
Young-Ku Choi, Seunggeon An, Dae-Hwan Kim, and Seak Jun Yoo(SunKwang T&S Co.,)
Hwan Seo Park and Hong Joo Ahn(KAERI)
- 09:20 Development of Evaluation Code for MUF Uncertainty**
Byung Hee Won, Bo Young Han, Hee Sung Shin, Seong-Kyu Ahn, Geun-Il Park, and Se Hwan Park(KAERI)
- 09:40 Radioactive Iodine (I-129) Gas Adsorption by Using Bismuth-Embedded SBA-15**
Jae Hwan Yang, Yong-Jun Cho, Jang Jin Park, and Do-Hee Ahn(KAERI)
Man-Sung Yim(KAIST)
- 10:00 Development of Tributyl Phosphate Apatite for Uranium Removal**
HyunJu Kim, Jaehyuk Kang, and Jungjin Kim(POSTECH)
Wooyong Um(PNNL)
- 10:20 Formation of Pu(III) Colloids Observed by Laser-induced Breakdown Detection**
H.-R. Cho, W. Cha, K.K. Park, and E.C. Jung(KAERI)
- 10:40 Coffee Break**
- 11:00 Pyroprocessing Product and Waste Estimation with Storage Sizing**
Hyo Jik Lee, Sun Hee Lee, and Won Il Ko(KAERI)
- 11:20 Empirical Modeling of Metal Oxides Dissolution**
Seon-Byeong Kim, Hui-Jun Won, Sang-Yoon Park, Jei-Kwon Moon, and Wang-Kyu Choi(KAERI)
- 11:40 Fault Tree Analysis of an Accident Probability for Pyroprocessing Facility**
Gil Beom KANG and Hyun Gook KANG(KAIST)
- 12:00 Behavior of Volatile I_2 and CH_3I from Water Droplets-Air Flow**
Hee-Jung Im and Jei-Won Yeon(KAERI)
Pham Tien Thang, Hong-Hyun Kim, and Jae-Hwan Lee(Gemvax & KAEI Inc.,)
- 12:20 On the Bonding Properties of Trivalent Actinide and Lanthanide Ions: U(III)-Cl , Np(III)-Cl and Ce(III)-Cl Bonding in a LiCl-KCl Eutectic Melt at 450°C : Spectroscopic Evidences from Their $f-d$ and $f-f$ Electronic Transitions**
Young-Hwan Cho, Sang-Eun Bae, Dae-Hyun, Jong-Yun Kim, and Tae-Hong Park(KAERI)

일 정 | 5. 7(목) 13:00-15:00

- P03C01 Heat Removal Performance in Accordance with the Location of the Half-blockage of the Inlet Openings of Concrete Storage Cask**
K. S. Bang, S. H. Yu, J. C. Lee, and S. H. Lee(KAERI)
- P03C02 Oxide Formation on Alloy 800 at pH_{25°C} 8.4**
Chong Hun Jung(KAERI)
M. Momeni and C. J. Wren(Univ. of Western Ontario)
- P03C03 Effect of Fuel Structure on Performance of Unified Spent Fuel Attribute Tester**
Kihyun Kim, Byung Marn Kho, and Seong Youn Jo(KINAC)
Siwan Noh(HYU)
- P03C04 Reduction of Waste Solution Volume Generated on Electrokinetic Remediation**
Gye-Nam Kim, Dae-Seo Koo, Seung-Soo Kim, Jung-Whan Jeong, Gyu-Seong Han, and Jei-Kwon Moon(KAERI)
- P03C05 Removal of Uranium by Exchanger Resins from Soil Washing Solution**
Seung Soo Kim, G. S. Han, G. N. Kim, D. S. Koo, J. W. Jeong, and J. K. Moon(KAERI)
- P03C06 Solidification of Metal Oxide from Electrokinetic-electrodialytic Decontamination**
Daeseo Koo, Uk-Ryang Park, Gye-Nam Kim, Seung-Soo Kim, and Jei-Kwon Moon(KAERI)
- P03C07 Comparative Study on the Preparation of Uranium Source Using a Cerium Fluoride Co-precipitation Method and an Electrodeposition Method**
Han-Byeol Kang, Seunghoon Park, Jung-Ki Shin, Gil Hoon Ahn, Heejun Chung, and Sung-Woo Kwak(KINAC)
- P03C08 The Pretreatment Cost of a Pyroprocess Facility in Korea**
S. K. Kim, S. R. Youn, S. H. Lee, H. J. Lee, and W. I. Ko(KAERI)
- P03C09 Review of Modeling Codes for Radioactive Corrosion Product of PWR Primary Coolant System**
Taebin Yoon, Juyoul Kim, Sukhoon Kim, Juyub Kim, and Seunghee Lee(FNC Tech.)
- P03C10 Current Status of Research Activities Related to THM-Coupled Processes in Buffer**
Heui-Joo Choi, Changsoo Lee, Young-Chul Choi, Minsoo Lee, and Jin-Seop Kim(KAERI)
- P03C11 Dissolution of Oxide Layer on Alloy 600 by HYBRID Solution**
H. J. Won, W. S. Lee, S. B. Kim, S. Y. Park, W. K. Choi, and J. K. Moon(KAERI)
- P03C12 A Generic Safety Assessment Model for a Trench Type LILW Repository**
Youn-Myoung Lee and Hee-Joo Choi(KAERI)

-
- P03C13 Concept Evaluation of Pyroprocess Waste Storage System**
Ju-Chan Lee, Woo-Seok Choi, Sanghoon Lee, Chung-Seok Seo, and Hyo-Jik Lee(KAERI)
- P03C14 Cutting Method of the CAD Model of the Nuclear Facility for Dismantling Simulation**
Ikjune Kim, ByungSeon Choi, Dongjun Hyun, KwanSeong Jeong, GeunHo Kim, Jonghwan Lee, JeiKwon Moon, and JaeSeok Seo(KAERI)
- P03C15 Treatment of Decommissioning Combustible Wastes with Incineration Technology**
B. Y. Min, D. S. Yang, G. S. Yun, K. W. Lee, and J. K. Moon(KAERI)
- P03C16 A Feasibility Study of a Portable Alpha Particle Spectrometer**
Han-Byeol Kang, HeeJun Chung, Seunghoon Park, Jung-Ki Shin, and Sung-Woo Kwak(KINAC)
- P03C17 Engineering Design of a Double Reactor for Spent Fuel Oxidation**
Young-Hwan Kim, Jae-Won Lee, Ju-Ho Lee, Yung-Zun Cho, and Do-Hee Ahn(KAERI)
- P03C18 Management Status of Disused Sealed Radioactive Sources in Korea**
Seunghee Lee, Juyoul Kim, Sukhoon Kim, Juyub Kim, and Taebin Yoon(FNC Tech.)
- P03C19 Activation Evaluation of Metal Target for LSDS System**
Jeong Dong Kim, Young Gook Kim, and YongDeok Lee(KAERI)
Chang Je Park(Sejong Univ.)
- P03C20 Effect of Surface Precipitate on the Crevice Corrosion in HYBRID and Oxalic Acid Solution**
S. Y. Park, J. Y. Jung, H.J. Won, S. B. Kim, W.K. Choi, and J. K. Moon(KAERI)
S. J. Park(CNU)
- P03C21 Demonstration of Depth Dependent Distribution Using in Situ Gamma Spectrometry for Final Status Survey in KRR Site**
Sang Bum Hong, Jong Soo Nam, Yong Suk Choi, Bum Kyoung Seo, and Jei Kwon Moon(KAERI)
- P03C22 Preliminary Evaluation on Effect of Application of Pyro-processing on CANDU SNFs in the Perspective of Source Term**
In-Young Kim, Heui-Joo Choi, Jong-Youl Lee, Hyun-Ah Kim, and Min-Soo Lee(KAERI)
- P03C23 Fabrication of Stimuli-sensitive Hydrogel for the Removal of Cesium**
Hee-Man Yang, Sang Bum Bong, Chan Woo Park, Kune Woo Lee, Bum-Kyoung Seo, and Jei Kwon Moon(KAERI)
- P03C24 Evaluation of Impact Resistance of Concrete Overpack of Storage Cask**
Sanghoon Lee, Ki-Young Kim, Je-Eon Jeon, and Ki-Seog Seo(KAERI)
- P03C25 Key Factors to Determine the Borehole Spacing in a Deep Borehole Disposal for HLW**
Jongyoul LEE, Heuijoo CHOI, Minsoo LEE, Geonyoung KIM, and Kyeongsoo KIM(KAERI)
- P03C26 Study on the Metal Fiber Filter Modeling for Capturing Radioactive Aerosol**
Seunguk Lee, Chanhun Lee, Minchan Park, and Jaekeun Lee(EERI)
- P03C27 Shielding Design and Radiation Shielding Evaluation for LSDS System Facility**
Younggook Kim, Jeongdong Kim, and Yongdeok Lee(KAERI)
-

-
- P03C28 Basic Research about Calculation of the Decommissioning Unit Cost based on the KRR-2 Decommissioning Project**
Chan-Ho Song, Hee-Seong Park, Jea-Hyun Ha, Hyung-Gon Jin, and Seung-Kook Park(KAERI)
- P03C29 A study of a Decommissioning Activities Classification Structure for Decommissioning of the Project Management of a Nuclear Power Plant**
Hee Seong Park, Seung Kook Park, Hyung Gon Jin, Chan Ho Song, Jei Hyun Ha, and Jei kwon Moon(KAERI)
- P03C30 Validation of Decommissioning Engineering System Application against KRR-2**
Hyung Gon Jin, Seungkook Park, Heeseong Park, Chanhong Song, and Jaehyun Ha(KAERI)
- P03C31 A Criticality Evaluation of the GBC-32 Dry Storage Cask in PWR Burnup Credit**
Hyoungju Yoon, Kwangheon Park, and Ser Gi Hong(KHU)
- P03C32 Analysis of NRC Regulatory Guide 1.21 Revision 2**
Sung Il Kim, Dae Sik Yook, and Byung Soo Lee(KINS)
- P03C33 Decontamination of Metal Ions in Soil by Supercritical CO₂ Extraction with Crown Ether**
Jihye Park and Kwangheon Park(KHU)
- P03C34 Study of Chemical Decontamination Process for CRUD Removal**
Seongsik Nam, Won-Seok Kim, Jungjin Kim, and Wooyong Um(POSTECH)
- P03C35 Cost Probability Analysis of China's Nuclear Fuel Cycle Transition**
R.X. Gao(UST)
W. I. Ko and S. H. Lee(KAERI)
- P03C36 Introduction of Applying Technology for Decommissioning and Decontamination in PWR Npp's**
Dukwon Kang, Youngsoo Jo, Seungil Kim, Jongsuk Park, Hyunki Kim, Jun Heo, and Seban Lee(Huviswater Co.,)
- P03C37 A Movable Asymmetrical Flow Field-Flow Fractionation System for Size Characterization of Nanoparticles**
Sun Tae Kim, Hye-Ryun Cho, Wansik Cha, and Euo Chang Jung(KAERI)
Seungho Lee(Hannam Univ.)
- P03C38 Optimization of CHA-PCFC Hybrid Material for the Removal of Radioactive Cs from Waste Seawater**
Keun-Young Lee, Jimin Kim, Minsung Park, Kwang-Wook Kim, Eil-Hee Lee, Dong-Yong Chung, and Jei-Kwon Moon(KAERI)
- P03C39 Effect of Cerium(IV)-Surfactant Reaction in Foam Decontamination**
Han Beom Yang, Chong-Hun Jung, In-Ho Yoon, Chorong Kim, and Wang-Kyu Choi(KAERI)
- P03C40 Experience Review on Dismantling Procedure for American Decommissioned NPPs**
Hyosub Kim, Daesun Son, Jaeyong Lee, Kyungmin Kim, and Yong-soo Kim(HYU)
- P03C41 A Study on Rack Thickness Effect for Spent Fuel Pool Storage**
Mi Jin Kim, Hee-Jae Lee, and Dong-Seong SOHN(UNIST)
-

P03C42 Measurement of Gamma-ray Energy Spectrum According to Temperature Variation Using a Fiber-Optic Radiation Sensor Based on YSO:Ce Crystal
H. Jeon, W. J. Yoo, S. H. Shin, J. S. Jang, J. S. Kim, G. Kwon, D. E. Lee, K. W. Jang, and B. Lee(KKU)

P03C43 Performance Test of Alpha Spectrometry for Environmental Radioactivity Analysis
Jung Youn Choi, Jong-Ho Yoon, Ki-Tek Han, and Gil Hoon Ahn(KINAC)

P03C44 Fluorescence Resonance Energy Transfer of the Tb(III)-Nd(III) Binary System in Molten LiCl-KCl Eutectic Salt
B. Y. Kim(KAERI)
J.-I. Yun(KAIST)

제4분과A

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

좌 장 이병호(Byung-Ho Lee), 류호진(Ho Jin Ryu)

발표장소 201B

일 정 | 5. 7(목)

- 09:00 Microstructure and Fracture Analysis of Fully Ceramic Microencapsulated Fuel**
H. -G. Lee, D. J. Kim, J. Y. Park, and W.-J. Kim(KAERI)
S. J. Lee(KEPCO NF)
- 09:20 Thermal Property Simulation of ZrO₂-based Nanocomposites for Inert Matrix Fuel**
Vivek Raj(IITK)
Qusai M. Mistarihi and Ho Jin Ryu(KAIST)
- 09:40 Temperature-dependent Changes at the Interface between UO₂ and Zr**
Young-Sang Youn, Jong-Goo Kim, Soon Dal Park, and Yeong-Keong Ha(KAERI)
- 10:00 Flow Regime Destabilizing Effect on Fluidelastic Instability of Tube Array Preferentially Flexible to the Flow Direction**
Kanghee Lee, Changhwan Shin, and Heungsoek Kang(KAERI)
Stephen Olala and Njuki Mureithi(Ecole Polytechnique)
- 10:20 Thermal Conductivity of Metallic Micro-Cell Fuel Pellet with Different Unit Cell Geometry**
Heung Soo Lee, Sun Woo Kim, and Dong Rip Kim(HYU)
Dong-Joo Kim, Jae Ho Yang, and Yang-Hyun Koo(KAERI)
- 10:40 Coffee Break**
- 11:00 Understanding of Radiation Effect on Sinks in Aluminum Materials for Research Reactors**
Sang Il Choi and Ji Hyun Kim(UNIST)
- 11:20 Development of the Coupled 3D Finite Element Module with FRAPCON3.4 for Simulation of Pellet-cladding Mechanical Interaction**
Sang-Kyu Seo, Sung-Uk Lee, Eun-Ho Lee, and Dong-Yol Yang(KAIST)
Hyo-Chan Kim and Yong-Sik Yang(KAERI)
- 11:40 Benchmark Calculations of OECD/NEA Reactivity-Initiated Accidents**
Hyedong Jeong, Joosuk Lee, and Swengwoong Woo(KINS)
- 12:00 Development of Audit Calculation Methodology for RIA Safety Analysis**
Joosuk Lee, Gwanyoung Kim, and Swengwoong Woo(KINS)

IV. 분과별 논제 및 발표자

제4분과B

핵연료 및 원자력재료(Nuclear Fuel and Materials)

-원자력재료(Nuclear Materials)(A)

좌 장 황성식(Seong Sik Hwang), 김지현(Ji Hyun Kim)

발표장소 202B

일 정 | 5. 7(목)

- 09:00 Effect of Proton Irradiation on Reactor Internal Material in PWR Primary Water**
Seong Sik Hwang, Yun Soo Lim, Sung Woo Kim, Min Jae Choi, and Hyung Ha Jin(KAERI)
G. Was and O. Toader(University of Michigan)
- 09:20 Surface Oxidation Phenomena of Ni-Based Alloy 600 in PWR Primary Water Conditions**
Yun Soo Lim, Seong Sik Hwang, and Sung Woo Kim(KAERI)
- 09:40 Surface Coatings on Carbon Steel for Prevention of Flow Accelerated Corrosion Under Two-phase Flow Conditions**
Hee-Sang Shim, Kyung Mo Kim, and Do Haeng Hur(KAERI)
Seung Hyun Kim and Ji Hyun Kim(UNIST)
- 10:00 In situ Investigation of Oxide Films on Zirconium Alloy in PWR Primary Water Chemistry**
Taeho Kim, Kyoung Joon Choi, Seung Chang Yoo, and Ji Hyun Kim(UNIST)
- 10:20 LiCl-KCl Induced Corrosion of Copper at Low Temperature**
Jae-Hoon Lee, Ji-Hyung Sim, and Yong-Soo Kim(HYU)
- 10:40 Coffee Break**
- 11:00 Effect of Surface Stress States on the Corrosion Behavior of Alloy 690**
Kyung Mo Kim, Hee-Sang Shim, Myung Ji Seo, and Do Haeng Hur(KAERI)
- 11:20 Correlation between General Corrosion Behavior and Eddy Current Noise of Alloy 690 Steam Generator Tube**
Do Haeng Hur, Myung Sik Choi, Deok Hyun Lee, and Hee-Sang Shim(KAERI)
- 11:40 In-Situ Oxide Layer Analysis of Alloy 182 Using Electrochemical Impedance Spectroscopy in High Dissolved Hydrogen Condition in PWR Environment**
Ho-Sub Kim, Gokul Obulan Subramanian, Jong-Dae Hong, Junho Lee, and Changheui Jang(KAIST)
- 12:00 Long-Term Corrosion Behavior of CVD SiC in PWR-Simulating Water**
Weon-Ju Kim, Daejong Kim, Hyeon Geun Lee, Ji Yeon Park, and Jung-Hwan Park(KAERI)

일 정 | 5. 8(금)

- 09:00 Development of Enhanced Accident Tolerant LWR Fuel Cladding**
Hyun-Gil Kim, Il-Hyun Kim, Yang-Il Jung, Dong-Jun Park, Jung-Hwan Park, Jeong-Yong Park, and Yang-Hyun Koo(KAERI)
- 09:20 MAX Phase Modified SiC Composites for Ceramic-Metal Hybrid Cladding Tubes**
Yang-Il Jung, Sun-Han Kim, Dong-Jun Park, Jeong-Hwan Park, Jeong-Yong Park, Hyun-Gil Kim, and Yang-Hyun Koo(KAERI)
- 09:40 Design Optimization of Multi-Layer Silicon Carbide Cladding for Light Water Reactors**
Youho Lee, Hee Cheon NO, and Jeong Ik Lee(KAIST)
- 10:00 Mechanical Properties and Thermal Shock Behaviors of Triplex SiC Composite Tube**
Daejong Kim, Dong-Heui Lee, Hyun-Guen Lee, Ji Yeon Park, and Weon-Ju Kim(KAERI)
- 10:20 Qualification Test of End Closure Welding for SFR Metallic Fuel Rod**
Jung Won Lee, Soo Sung Kim, Yoon Myeng Woo, Hyung Tae Kim, Ki Hwan Kim, and Sung Ho Kim(KAERI)
- 10:40 Coffee Break**
- 11:00 Optimization of Additive-Powder Characteristics for Metallic Micro-Cell UO₂ Fuel Pellet Fabrication**
Dong-Joo Kim, Keon Sik Kim, Young Woo Rhee, Jong Hun Kim, Jang Soo Oh, Jae Ho Yang, and Yang-Hyun Koo(KAERI)
- 11:20 Effect of Liquid Phase Content on Thermal Conductivity of Hot-Pressed Silicon Carbide Ceramics**
Kwang-Young Lim, Hun Jang, and Seung-Jae Lee(KEPCO NF)
Young-Wook Kim(UOS)
- 11:40 Alternative Fabrication of Recycling Fast Reactor Metal Fuel**
Ki-Hwan Kim, Jong Hwan Kim, Hoon Song, Hyung-Tae Kim, and Chan-Bock Lee(KAERI)
- 12:00 Development of Cr Electroplated Cladding Tube for Preventing Fuel-Cladding Chemical Interaction (FCCI)**
Jun Hwan Kim, Je Woong Woo, Sung Ho Kim, Jin Sik Cheon, Byung Oon Lee, and Chan Bock Lee(KAERI)

IV. 분과별 논제 및 발표자

제4분과D

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

좌 장 김태규(Tae Kyu Kim), 장창희(Changheui Jang)

발표장소 202B

일 정 | 5. 8(금)

- 09:00 Mechanical Properties of Ni-base ODS Alloy Influenced by Process Variables**
Y.B. Chun, B.Y. Lee, M.S. Kim, X. Mao, and J. Jang(KAERI)
- 09:20 Material Flow and Oxide Particle Distributions in Friction-Stir Welded F/M-ODS Sheets**
Suk Hoon Kang, Sanghoon Noh, Hyun Ju Jin, and Tae Kyu Kim(KAERI)
- 09:40 Microstructural Evolution of Advanced Radiation-Resistant ODS Steel with Different Lengths of Mechanical Alloying Time**
Sanghoon Noh, Ga Eon Kim, Suk Hoon Kang, and Tae Kyu Kim(KAERI)
- 10:00 Fabrication of W-Nb-Mo-Ta-V High Entropy Alloys by Mechanical Alloying and Spark Plasma Sintering**
Seoung Woo Kuk, Woo Jin Lim, Seung Su Kim, Soon Hyung Hong, and Ho Jin Ryu(KAIST)
- 10:20 Structural Evolution of Fe-18Ni-16Cr-4Al Steel during Aging at 950 °C**
Man Wang and Jinsung Jang(KAERI)
Zhangjian Zhou(USTB)
- 10:40 Coffee Break**
- 11:00 Analytical Method and Experimental Verification for Predicting Static Recrystallization Fraction of Zr-1.6Nb-0.2Cu**
Tae-sik Jung, Yong-kyoon Mok, Yoon-ho Kim, Chung-yong Lee, Dae-kyoon Ko, and Jae-ik Kim(KEPCO NF)
- 11:20 Effects of Short Range Ordering on High Temperature Deformation Behavior in SS316L**
SungSoo Kim and Young Suk Kim(KAERI)
- 11:40 Effects of Heat Treatment Conditions on High-temperature Tensile Properties in HT9 and Gr.92 Steel**
Sang Gyu Park, Hyeong Min Heo, Jun Hwan Kim, and Sung Ho Kim(KAERI)
- 12:00 Cyclic Creep Behavior with Hold Time under Tension-Tension Loading Cycles of Grade 91 Steel**
Woo-Gon Kim and Jinsung Jang(KAERI)
Jae-Young Park(PKNU)

제4분과E

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -핵연료 설계 및 제조(Nuclear Fuel Design and Manufacturing)

좌 장 김기환(Ki Hwan Kim), 김용환(Yong Hwan Kim)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P04E01 Fabrication of Rare-earth Bearing Fuel Slug by Injection Casting Method

Jong-Hwan Kim, Hoon Song, Hyung-Tae Kim, Ki-Hwan Kim, and Chan-Bock. Lee(KAERI)

P04E02 Fretting Wear Behavior of Cr-coated Fuel Rod for Accident-Tolerant Fuel in Flowing Fluid

Young-Ho Lee, Hyung-Kyu Kim, Hyun-Gil Kim, and Yang-Hyun Koo(KAERI)

P04E03 Evaluation of Two Passes Cold Pilgering Property for PLUS7™ Guide Thimble and Instrumentation Tubing

Min Young Park, Ki Bum Park, In Kyu Kim, Young Hee Lee, and Jong Yeol Kahng(KEPCO NF)

P04E04 Grid Cell Relaxation Effects on the High Frequency Vibration Characteristics

Joo-Young Ryu, Kyong-Bo Eom, Sang-Youn Jeon, and Jae-Ik Kim(KEPCO NF)

P04E05 Comparison of Material Behavior of Matrix Graphite for HTGR Fuel Elements Upon Irradiation : A Literature Survey

Young-Woo Lee, Seunghwan Yeo, and Moon Sung Cho(KAERI)

P04E06 Metallic Reactor Fuel Fabrication for SFR

Hoon Song, Jong-Hwan Kim, Young-Mo Ko, Yoon-Myung Woo, Ki-Hwan Kim, and Chan-Bock Lee(KAERI)

P04E07 Effects of the Manufacturing Parameter and Chemical Composition on Properties of HANA-4 Cladding Tube

Sung Yong Lee, Yoon Ho Kim, Hun Jang, Min Young Choi, and Yong Kyoan Mok(KEPCO NF)

P04E08 Effects of Silicide Coating on the Interdiffusion between U-7Mo and Al

Ji Min Nam, Ji Hyun Kim, Sunghwan Kim, Kyu Hong Lee, Jong Man Park, Yong Jin Jeong, and Ki Nam Kim(KAERI)

P04E09 Cold Spray Coating Technique with FeCrAl Alloy Powder for Developing Accident Tolerant Fuel Cladding

Dong Jun Park, Hyun Gil Kim, Jeong Yong Park, Yang Il Jung, Jung Hwan Park, and Yang Hyun Koo(KAERI)

P04E10 Increase of Grain Boundary Mobility by Radiation Damage under Thermal Gradient Condition Using Molecular Dynamics Simulation

Woongkee Kim, Massoud Kaviani, and Jihoon Shim(POSTECH)

P04E11 Thermal Shock Properties of Cladding with SiCr/SiC Composite Protective Films

Donghee Lee and Kwangheon Park(KHU)

Weonju Kim, Jiyeon Park, Daejong Kim, and Hyeon-geun Lee(KAERI)

P04E12 Sintering Behavior of B₄C-dispersed UO₂ Pellet

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

P04E13 Isotherm And Kinetic Studies On The Electrosorption Of Uranyl Tricarbonate Complex [UO₂(CO₃)₃]⁴⁻ From Aqueous Solutions By Activated Carbon Electrodes

Aznan Fazli Ismail and Man-Sung Yim(KAIST)

IV. 분과별 논제 및 발표자

제4분과F

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -핵연료 성능(Nuclear Fuel Performance)

좌 장 김재익(Jae Ik Kim), 유종성(Jong-Sung Yoo)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P04F01 An Estimation of Effective Thermal Conductivity of an Advanced Fuel Element

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

P04F02 C-ADU Gel Particle Preparation by Modified-External Gelation Method

Jeong Kyung Chai, Eom Sung Ho, and Cho Moon Sung(KAERI)

P04F03 Crud Cleaning for Reloaded PLUS7 Nuclear Fuels

Han JungYoon, Kim GyungHoon, Han UkJin, and Woo SangKyun(KEPCO NF)
Kim KyoungSoo and Yu MongJin(KHNP)

P04F04 Fabrication Process of a Nuclear Fuel Test Rig in HANARO

Jintae Hong, Chang-Young Joung, Sung-Ho Ahn, Sung-Ho Heo, and Jin-Joo Kim(KAERI)

P04F05 TEM Analysis of δ -hydride in Zircaloy-4 Cladding

Ju-Seong Kim(KAERI)
Sung-Dae Kim(KIMS)
Jonghun Yoon(HYU)

P04F06 The Fuel Performance Analysis of LWR Fuel Containing High Thermal Conductivity Reinforcements

Seung Su Kim and Ho Jin Ryu(KAIST)

P04F07 Code Structure for U-Mo Fuel Performance Analysis in High Performance Research Reactor

Gwan Yoon Jeong, Tae Won Cho, Chul Min Lee, and Dong Seong Sohn(UNIST)
Kyu Hong Lee and Jong Man Park(KAERI)

P04F08 Rigorous Study of Mechanical Module in FRAPCON/FRAPTRAN

Hyochan Kim, Yongsik Yang, Daeho Kim, and Yanghyun Koo(KAERI)

P04F09 Assembly Bow Characteristics of the HIPER16™ Fuel Design

Sang-Youn Jeon, O-Cheol Kwon, Dong-Geun Ha, and Jae-Ik Kim(KEPCO NF)

P04F10 Evaluation of FRAPCON3.5 Enhancement with IFA-597 Experiment

Young-jun Kim, Hyo-chan Kim, and Yong-Sik Yang(KAERI)

P04F11 Preliminary Study of Mechanical Behavior for Cr coated Zr-4 Fuel Cladding

Do-Hyoung Kim and Hak-Sung Kim(HYU)
Hyo-Chan Kim and Yong-Sik Yang(KAERI)

제4분과G

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -핵연료시험 및 평가(Nuclear Fuel Test and Evaluation)

좌 장 이주석(Joosuk Lee), 오제용(Jae-Yong Oh)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P04G01 Non-destructive Test for Irradiated Fuels Using X-ray CT System in Hot-laboratory**
Heemoon Kim, Gil-Soo Kim, Bong-Ok Yoo, Young-Wook Tahk, Moon-Sung Cho, and Sang-Bok Ahn(KAERI)
- P04G02 Progress (I) on the 2nd Irradiation Test of the Metallic Fuel for SFR in the HANARO**
Bong Goo Kim, Junehyung Kim, Jin-Sik Cheon, ByoungOon Lee, and Chan Bock Lee(KAERI)
- P04G03 Diffusion Coefficients and Activation Energies for Ag Transport Through SiC**
Bong Goo Kim, Sunghwan Yeo, Young Woo Lee, and Moon Sung Cho(KAERI)
- P04G04 Lateral Stiffness Analysis of Fuel Assembly as Contact Condition for PGSFR**
K. H. Yoon and C. B. Lee(KAERI)
- P04G05 Thermal Creep of Hydride Zircaloy-4 Plates under Dry Storage Conditions**
Ho-A Kim, Ju-Seong Kim, Tae-Hoon Kim, and Yong-Soo Kim(HYU)
- P04G06 Development of Mechanical Sealing and Laser Welding Technology to Instrument Thermocouple for Nuclear Fuel Test Rod**
Chang-Young Joung, Sung-Ho Ahn, Jin-Tae Hong, Ka-Hye Kim, and Sung-Ho Huh(KAERI)
- P04G07 A Study on the Effect of Oxygen Content and Cooling Rates on Hydride Reorientations of Zirconium Alloy Cladding Tubes**
Hyun-Jin Cha and Kyu-Tae Kim(DU)
- P04G08 Effects of Annealing on the Corrosion and Creep Resistance of Zr-Nb- Mo or P Alloys.**
Min-Young Choi, Yeon-soo Na, Sung-yong Lee, Yoon-ho Kim, and Yong-Kyoon Mok(KEPCO NF)
- P04G09 The Oxidation Behaviors of Zry-4 and ZIRLO Tube Covered by CRUD in Steam and in Air**
Jungmin Choi and Kwangheon Park(KHU)
- P04G10 Microscopic Analysis of Oxide Formed on ZIRLO® Cladding Tube**
Ho Yeon Bae and Chi Bum Bahn(PNU)

IV. 분과별 논제 및 발표자

제4분과H

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -원자력재료 신뢰성 및 경년열화(Nuclear Material Reliability and Degradation)

좌 장 임연수(Yeon Soo Lim), 홍진기(Jin Ki Hong)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P04H01 Feasibility Study of Laser Cutting for Fabrication of Tensile Specimen

Y. G. Jin, S. J. Baik, G. S. Kim, G. S. Heo, B. O. Yoo, S. B. Ahn, and Y. B. Chun(KAERI)

P04H02 Evaluation of Crack Growth Rate of Alloy 152 by Extended Finite Element Method

Sung-Jun Lee and Yoon-Suk Chang(KHU)

P04H03 A Proposal on the Quantitative Homogeneity Analysis Method of SEM Images for Material Inspections

Song Hyun KIM, Jong Woo KIM, and Chang Ho SHIN(HYU)

Jung-Hoon CHOI, In-Hak CHO, and Hwan Seo PARK(KAERI)

P04H04 Seismic Response Analysis of Assembled Reactor Vessel Internals

Sang-Yun Je and Yoon-Suk Chang(KHU)

Sung-Sik Kang(KINS)

P04H05 Micro Compression Test in Proton Irradiated Austenitic Stainless Steel

Hyung-Ha Jin, Eunsol Ko, and Junhyun Kwon(KAERI)

Chansun Shin(Myongji Univ.)

P04H06 Estimation of Fracture Parameters for Leak-before-Break Assessment on Elevated Temperature

S. Y. Lee and G. H. Koo(KAERI)

D. J. Kim and N. H. Kim(KU)

P04H07 Corrosion Characteristics of Nano-structured Coatings for the Application in Secondary Piping System of Nuclear Power Plants

Jeong Won Kim, Seung Hyun Kim, and Ji Hyun Kim(UNIST)

P04H08 A Study on the Radial Hydride Assisted Delayed Hydride Cracking of Zircaloy

Jin-Ho Jeong, Ji-Min Lee, and Yong-Soo Kim(HYU)

P04H09 Statistical Analysis of Charpy Transition Temperature Shift in Reactor Pressure Vessel Steels : Application of Nuclear Materials Database(MatDB)

Gyeong-Geun Lee, Soyeon Kil, and Junhyun Kwon(KAERI)

P04H10 High-Temperature Oxidation Accelerated Effects of Zircaloy by Hydride

Sungwoo Ha and Kwangheon Park(KHU)

Yunmock Jung(KAERI)

P04H11 Mechanical Properties of Thermally Aged Austenitic Stainless Steel Welds and Cast Austenitic Stainless Steel

Sunghoon Hong, Myeong-Gyu Seo, and Changheui Jang(KAIST)
Kyoung Soo Lee(KHNP CRI)

P04H12 Feasibility Study on Nano-structured Coatings to Mitigate Flow-Accelerated Corrosion in Secondary System of Nuclear Power Plants

Seunghyun Kim, Jeong Won Kim, and Ji Hyun Kim(UNIST)

IV. 분과별 논제 및 발표자

제4분과

핵연료 및 원자력재료(Nuclear Fuel and Materials)-Poster -원자력신소재기술(New Nuclear Materials)

좌 장 김원주(Weon-Ju Kim), 이경근(Gyung Geun Lee)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P04I01 Dynamical Properties of Hydrogen in ZnO:H Treated by H₂/Ar Plasma under Atmospheric Pressure**
Jun Kue Park, Hyeok-Jung Kwon, Han-Sung Kim, Dae-Il Kim, and Yong Sub Cho(KAERI)
- P04I02 Synthesis of Multiphase SYNROC Powders as a High Level Radioactive Waste Ceramic Forms by a Solution Combustion Synthesis**
Young-Min Han, Soo-Ji Jung, Yeon-Ku Kim, and Choong-Hwan Jung(KAERI)
- P04I03 Effect of Thermo-mechanical Treatment on Mechanical Properties of Korean RAFM Steel**
M.S. Kim, Y. B. Chun, D. W. Lee, and C. K. Lee(KAERI)
S. Y. Cho(NFRI)
- P04I04 Oxidation Resistant Chromium Coating on Zircaloy-4 for Accident Tolerant Fuel Cladding**
Jung-Hwan Park, Eui-Jung Kim, Yang-Il Jung, Dong-Jun Park, Hyun-Gil Kim, Jeong-Yong Park, and Yang-Hyun Koo(KAERI)
- P04I05 Microstructure and Mechanical Properties of Solution Heat-Treated Alloy 617 ODS Alloy**
Boyoung Lee, M.S. Kim, Xiaodong Mao, Y.B. Chun, and Jinsung Jang(KAERI)
Sun-Ig Hong(CNU)
- P04I06 Oxidation Behavior of FeCrAl-coated Zirconium Cladding Prepared by Laser Coating**
Il-Hyun Kim, Hyun-Gil Kim, Byung-Kwan Choi, Jeong-Yong Park, Yang-Hyun Koo, and Jin-Seon Kim(KAERI)
- P04I07 Fabrication of Zircaloy-4 Fuel Cladding Pipe with Nanostructured Oxide Layer for Prevention of Hydrogen Production**
Y. J. Park, J. W. Park, H. J. Kim, and S. O. Cho(KAIST)
- P04I08 Study on the Properties of the Fuel Compact for High Temperature Gas-cooled Reactor**
Chung-yong Lee, Sung-yong Lee, Min-young Choi, Seung-jae Lee, and Young-ho Jo(KEPCO NF)
Young-woo Lee and Moon-sung, Cho(KAERI)
- P04I09 Impurity Effect on Thermal Property of the LiF-NaF-KF Mixture**
Ji-Hyeon Kim and Dong-Seong Sohn(UNIST)
Jong Man Park(KAERI)
- P04I10 Effect of an Intermediate Heat Treatment During a Cold Rolling on Microstructures and Mechanical Properties of 10Cr-1Mo ODS Steel**
Hyun Ju Jin, Ki Baik Kim, Byoung Kwon Choi, Suk Hoon Kang, Sang Hoon Noh, Ga Eon Kim, and Tae Kim(KAERI)

P04I11 Influence of Heat Treatment Conditions on Microstructures and Mechanical Properties of Ferritic-Martensitic ODS Steel

Hyun Ju Jin, Ki Baik Kim, Byoung Kwon Choi, Suk Hoon Kang, Sang Hoon Noh, Ga Eon Kim,
and Tae Kyu Kim(KAERI)

P04I12 Study on Stacking Sequence on the Flexural Properties of Basalt/Carbon/Epoxy Hybrid Composites Using Test and Finite Element Analysis

S.H. Kim, J.I. Lee, and K.Y. Rhee(KHU)
C.R. Choi(ELSOLTEC Inc.,)

IV. 분과별 논제 및 발표자

제5분과A

원자력열수력 및 안전(Thermal Hydraulics and Safety)

-열수력실험-I (Thermal Hydraulic Experiment-I)

좌 장 주인철(In Chul Chu), 방인철(In Cheol Bang)

발표장소 400

일 정 | 5. 7(목)

- 09:00 Experiments of Pool Boiling Performance (Boiling Heat Transfer and Critical Heat Flux) on Designed Micro-Structures**
Seol Ha Kim, Jun Young Kang, Gi Chol Lee, Moriyama Kiyofumi, Moo Hwan Kim, and Hyun Sun Park(POSTECH)
- 09:20 Observation of Boiling Structure and CHF Phenomena between Parallel Vertical Plates Submerged in a Pool**
In-Cheol Chu, Dong Jin Euh, and Chul-Hwa Song(KAERI)
- 09:40 Film Boiling on Porous Layered Brass Sphere during Quenching**
Jun-young Kang, Seol Ha Kim, Hangjin Jo, Gi Cheol Lee, Moriyama Kiyofumi, and Hyun Sun Park(POSTECH)
Moo Hwan Kim(KINS)
- 10:00 Experimental Study of CHF Enhancement Using Fe_3O_4 Nanofluids at Subcooled Boiling Region**
Young Jae Choi, Dong Hoon Kam, and Yong Hoon Jeong(KAIST)
- 10:20 Inside-pipe Hydrophobic Coating Method Promoting Dropwise Condensation in a Passive Cooling System**
Joo Won Kang, Jun Young Kang, Kyoung Won Hwang, Hyun Sun Park, and Moriyama Kiyofumi(POSTECH)
Moo Hwan Kim(KINS)
- 10:40 Coffee Break**
- 11:00 Experimental Investigation on the CHF in the Narrow Rectangular Channel under the Downward Flow Condition**
Huiyung Kim, Byongjo Yun, and Jinyeong Bak(PNU)
Jonghark Park, Heetaek Chae, and Cheol Park(KAERI)
- 11:20 Experimental Study of Condensation Heat Transfer in the Presence of Noncondensable Gas on the Vertical Tube**
Yeong-Jun Jang, Dong-Jae, Choi, and Yeon-Gun Lee(JNU)
Sin Kim(CAU)
- 11:40 Experimental Study of Silicon Oil Effect on Two-Phase Closed Thermosyphon**
Jun Yeong Jung and Yong Hoon Jeong(KAIST)
- 12:00 Experimental Investigation on Heat Transfer Performance of Annular Flow Path Heat Pipe**
In Guk Kim, Kyung Mo Kim, Yeong Shin Jeong, and In Cheol Bang(UNIST)
- 12:20 Development of an Electrical Sensor for Measurement of Void Fraction and Identification of Flow Regime in a Horizontal Pipe**
Woo Yeon Won, Bo An Lee, and Yeon Gun Lee(JNU)
Min Seok Ko and Sin Kim(CAU)

일 정 | 5. 7(목)

- 09:00 Evaluation for KAERI 6x6 Reflood Test Using TRACE Code**
Byung Gil Huh, Chang-Yong Jin, Ae Ju Cheong, and Taesuk Hwang(KINS)
- 09:20 Hydraulic Simulation of In-vessel Downstream Effect Test Using MARS-KS Code**
Young Seok Bang, Joon Soo Lee, and Seung Hoon Ryu(KINS)
- 09:40 Evaluation of Two-Phase Flow Parameters of a Subcooled Boiling Flow in SUBO Test Using TRACE Code**
Chang-Yang Jin, Byung Gil Huh, Ae ju Cheong, and Taesuk Hwang(KINS)
- 10:00 Sensitivity Evaluation on the ROH Quality for the DBA Safety Analysis of Wolsong NPP Unit 1**
Jong-Hyun Kim, Seong-Soo Choi, and Sang-Koo Han(ACT Co., Ltd.)
Sung-Min Kim and Dong-Wook Kho(KHNP CRI)
- 10:20 LBLOCA Analysis and Its Sensitivity Study Using Coupling (CATHENA and RFSP) Method for Wolsong NPP Unit 1**
Byung-Il Lee, Jong-Hyun Kim, Dai-Hai Chung, and Seong-Soo Choi(ACT Co., Ltd.)
Sung-Min Kim and Dong-Wook Kho(KHNP CRI)
- 10:40 Coffee Break**
- 11:00 The Gravity Makeup on the LORHR Event during Mid-Loop Operation for APR1400**
Cheol Woo Kim, Yong Hee Lee, Gyu Cheon Lee, and Shin Whan Kim(KEPCO E&C)
- 11:20 Evaluation of the Main Steam Line Break Accident for the APR+ Standard Design Using MARS-KS**
M. H. Park, Y. S. Kim, Min Jeong Hwang, and S. K. Sim(En2T)
Young Seok Bang(KINS)
- 11:40 Comparison of SPACE to MARS-KS under SUBO Experimental Conditions**
Min-Gil Kim, Wonwoong Lee, and Jeong Ik Lee(KAIST)
Young Seok Bang(KINS)
- 12:00 PCT Uncertainty Analysis Using Unscented Transform with Random Orthogonal Matrix**
Douglas A. Fynan and Kwang-Il Ahn(KAERI)
John C. Lee(Univ. of Michigan)
- 12:20 Development of a System Analysis Toolkit for Sensitivity Analysis, Uncertainty Propagation and Estimation of Parameter Distribution**
Jaeseok Heo and Kyung Doo Kim(KAERI)

IV. 분과별 논제 및 발표자

제5분과C

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

좌 장 이상용(Sang Yong Lee), 이정익(Jeong Ik Lee)

발표장소 401B

일 정 | 5. 7(목)

- 09:00 Investigation of Wire Effect in Sub-channels for 7-Pin Fuel Assembly**
J. H. Jeong, J. Yoo, K. L. Lee, and K. S. Ha(KAERI)
- 09:20 Effects of Heat Transfer Coefficient Treatments on Thermal Shock Fracture Prediction for LWR Fuel Claddings in Water Quenching**
Youho Lee, Jeong Ik Lee, and Hee Cheon NO(KAIST)
- 09:40 Prediction of ThAI TH-13 Experiment Using CFX User Defined Function**
Jeong Hee HA and Soon Joon HONG(FNC Tech.)
Chun Tae PARK(KAERI)
- 10:00 Modeling of Wall Effects on Drag and Lift Acting on Bubbles in Bubbly Flow**
Dongjoo Kim(KIT)
Jungwoo Kim(Seoultech)
- 10:20 Multi-Dimensional Verification of the Two-Fluid Momentum Equation on Dispersed Flows**
Seung-Jun Lee, Byoung Jae Kim, and Ik Kyu Park(KAERI)
- 10:40 Coffee Break**
- 11:00 Polygonal Prism Mesh in the Viscous Layers for the Polyhedral Mesh Generator, PolyGen**
Sang Yong Lee, Chan Eok Park, and Kim Shin Whan(KEPCO E&C)
- 11:20 Influence of Chimney Flow Pattern on Natural Convection Heat Transfer of Open Channel Finned Plates**
Seung-Hyun Hong and Bum-Jin Chung(KHU)
- 11:40 CFD Study of Dominant Effect in Combined DTHT by Using Hypothetical Boundary Conditions**
Yohanes Setiawan Nietiadi and Jeong Ik Lee(KAIST)
Yacine Addad(KUSTAR)
- 12:00 Analytical Assessment of Environmental Impact for APR1400DC UHS Cooling Tower**
Jaiho Lee(KHNP CRI)

일 정 | 5. 7(목)

- 09:00 Analysis on the Effect of Risk from Containment Failure by Over-pressurization during the Operation of Containment Filtered Venting System**
Jaehyun Ham and Hyun Gook Kang(KAIST)
Soon Heung Chang(HGU)
- 09:20 Kinetic Behaviors of e_{aq}^- and $\bullet OH$ Radical in Water Radiolysis**
A Yeong Kim and Han-Chul Kim(KINS)
Jun-Yeop Lee and Jong-Il Yun(KAIST)
- 09:40 In-Plant Fission Product Behavior in SGTR Accident with Long-Term SBO**
Tae Woon Kim, Seok Jung Han, and Kwang Il Ahn(KAERI)
- 10:00 Introduction to Test Facility for Iodine Retention in Filtered Containment Venting System**
Jaehoon Jung, Sang Mo An, Kwang Soon Ha, and Hwan Yeol Kim(KAERI)
- 10:20 Effects of Anchor Bolts Failures in Steam Explosion Analyses**
Seung Hyun Kim and Yoon-Suk Chang(KHU)
Sungchu Song and Yong-Jin Cho(KINS)
- 10:40 Coffee Break**
- 11:00 Effects of Water Pool Depth for Ex-Vessel Molten Core Coolability and Steam Explosion Loads**
Kiyofumi Moriyama and Hyun Sun Park(POSTECH)
- 11:20 Review and Preliminary Evaluation of Pool Scrubbing Models**
Hyun-Joung Jo, Kwang Soon Ha, Sang Mo An, and Hwan Yeol Kim(KAERI)
Dong Soon Jang(CNU)
- 11:40 The Effect of Water Injection on the Fission Product Aerosol Behavior in Fukushima Unit 1**
Sung Il Kim, Kwang Soon Ha, Dong Ha Kim, and Tae Woon Kim(KAERI)
- 12:00 Severe Accident Progression and Consequence Assessment Methodology Upgrades in ISAAC for Wolsong CANDU6**
Y.M. Song and D.H. Kim(KAERI)
Sunil Nijhawan(Prolet Inc.,)

IV. 분과별 논제 및 발표자

제5분과E

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

좌 장 나장환(Jang Hwan Na), 강대일(Dae Il Kang)

발표장소 402B

일 정 | 5. 7(목)

- 09:00 Establishment of Infrastructure for Domestic-Specific Level 3 PSA Based on MACCS2**
Seung-Cheol Jang, Seok-Jung Han, Sun-Yeong Choi, and Seung-Jun Lee(KAERI)
Wan-Seob Kim(KoRTS)
- 09:20 A Development of Domestic Food Chain Model Data for Chronic Effect Estimation of Off-Site Consequence Analysis**
Seok-Jung HAN, Dong-Kwon KEUM, and Seung-Cheol JANG(KAERI)
- 09:40 Application of Korean Specific Data to Economic Cost Estimation by KOSCA-MACCS2**
Sun Yeong Choi and Seung-Cheol Jang(KAERI)
- 10:00 Atmospheric Dispersion Simulation for Level 3 PSA at Ulchin Nuclear Site Using a PUFF Model**
Seung Jun Lee, Seok-Jung Han, Hyojoon Jeong, and Seung-Cheol Jang(KAERI)
- 10:20 Methodology for Evaluating Multi-unit Site Risk**
Seung-Cheol Jang and Kye-Min Oh(KAERI)
- 10:40 Coffee Break**
- 11:00 Case Study of Multi-Unit Risk: Multi-unit Station Black-Out**
Kyemin Oh and Seung-cheol Jang(KAERI)
Gyunyoung Heo(KHU)
- 11:20 A Methodology for Level 2 PSA Evaluation with Consideration of Specific Features for Low Power Shutdown Probabilistic Safety Assessment**
Jae Gab Kim and Ho Seok(KEPCO E&C)
- 11:40 Post-Fukushima Probabilistic Safety Enhancements of Industry**
Janghwan Na, Ho-Jun Jeon, and Hyun-Gyo Lee(KHNP CRI)
- 12:00 Safety Effect Analysis of the Large-Scale Design Changes in a Nuclear Power Plant**
Eun-Chan Lee and Hyun-Gyo Lee(KHNP CRI)
- 12:20 Evaluation Logic of Main Control Board Fire Risk**
Dae Il Kang, Kilyoo Kim, and Ho Gon Lim(KAERI)

제5분과F

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

좌 장 박현식(Hyun-Sik Park), 정용훈(Yong Hoon Jeong)

발표장소 400

일 정 | 5. 8(금)

- 09:00 An Overall Investigation of Direct Vessel Injection Line Break Accidents of the ATLAS Facility**
Yeon-Sik Kim, Ki-Yong Choi, Seok Cho, and Bok-Deuk Kim(KAERI)
- 09:20 Experimental Study for the Effects of Fuel Relocation on the Rod Bundle**
Jongrok Kim, Jong-kuk Park, and Sang-Ki Moon(KAERI)
- 09:40 Major Results from 1-Train Passive Safety System Tests for the SMART Design with the SMART-ITL Facility**
Hyun-Sik Park, Hwang Bae, Sung-Uk Ryu, Byong-Guk Jeon, Sung-Uk Ryu, Hyobong Ryu, Woo-Shik Kim, Sun-Joon Byun, Yong-Cheol Shin, Kyoung-Ho Min, and Sung-Jae Yi(KAERI)
- 10:00 Experimental Study and Validation of MARS Code for CCFL in Passive Emergency Core Cooling System (PECCS) of Public Acceptable Simple SMR (PASS) System**
Ho Sik Kim, Mun Won Song, and Hee Cheon No(KAIST)
- 10:20 Performance Evaluation of a Printed Circuit Steam Generator for Integral Reactors: A Feasibility Test**
Hun Sik Han, Han-Ok Kang, Juhyeon Yoon, Young In Kim, and Keung Koo Kim(KAERI)
Jang-won Seo and Brain Choi(ALK)
- 10:40 Coffee Break**
- 11:00 Review of Mixed Convection Flow Regime Map of a Vertical Pipe**
Myeong-Seon Chae and Bum-Jin Chung(KHU)
Gyeong-Uk Kang(KORAD)
- 11:20 Similarity Analysis for Reactor Flow Distribution Test and Its Validation**
Soon Joon HONG and Jung Hui HA(FNC Tech.)
Taehoo LEE and Ji Woong HAN(KAERI)
- 11:40 Thermal Performance and Operation Limit of Heat Pipe Containing Neutron Absorber**
Kyung Mo Kim, Yeong Shin Jeong, In Guk Kim, and In Cheol Bang(UNIST)
- 12:00 Isothermal Flow Measurement Using Planar PIV in the 1/4 Scaled Model of CANDU Reactor**
Sunghyuk Im and Hyung Jin Sung(KAIST)
Han Seo and In Cheol Bang(UNIST)
Hyoung Tae Kim(KAERI)
- 12:20 CHF Enhancement by Surface Patterning Based on Hydrodynamic Instability Model**
Han Seo and In Cheol Bang(UNIST)

IV. 분과별 논제 및 발표자

제5분과G

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

좌 장 윤한영(Hanyoung Yoon), 윤병조(Byong-Jo Yun)

발표장소 401A

일 정 | 5. 8(금)

- 09:00 The Safety Assessment of OPR-1000 for Station Blackout Applying Combined Deterministic and Probabilistic Procedure**
Dong Gu Kang, Seung-Hoon Ahn, and Dae-Hyung Cho(KINS)
- 09:20 Thermodynamic Optimization of Supercritical CO₂ Brayton Cycles**
Dong-Ryul Rhim, Sung-Ho Park, Su-Hyun Kim, and Choong-Sub Yeom(IAE)
- 09:40 Performance Evaluation of the Concept of Hybrid Heat Pipe as Passive In-core Cooling Systems for Advanced Nuclear Power Plant**
Yeong Shin Jeong, Kyung Mo Kim, In Guk Kim, and In Cheol Bang(UNIST)
- 10:00 An Overall Investigation of Cold Leg Pipe Break Accidents of the ATLAS Facility**
Yeon-Sik Kim, Seok Cho, Ki-Yong Choi, and Bok-Deuk Kim(KAERI)
- 10:20 Development of TPNCIRC Code for Evaluation of Two-Phase Natural Circulation Flow Performance under External Reactor Vessel Cooling Conditions**
A-Reum Choi, Hyuk-Jin Song, and Jong-Woon Park(DU)
- 10:40 Coffee Break**
- 11:00 Safety Injection System Filling Using Dynamic Venting**
Sung Je Hong, Wong Bae Kim, Jin Huh, Joo Hee Lee, In Young Im, and Eun Kee Kim(KEPCO E&C)
- 11:20 Analysis on Roles for Components of Passive Emergency Core Cooling System**
Soon Il Chung and Soon Joon Hong(FNC Tech.)
Sang Hee Kang and Han Gon Kim(KHNP)
- 11:40 Preliminary Analysis of Supercritical CO₂ Loop Using MARS**
Jai Oan Cho and Jeong Ik Lee(KAIST)
- 12:00 Thermohydraulic Design Analysis Modeling for Korea Advanced NUClear Thermal Engine Rocket for Space Application**
Seung Hyun Nam, Jae Young Choi, Paolo F. Venneri, Yong Hoon Jeong, and Soon Heung Chang(KAIST)

일 정 | 5. 8(금)

- 09:00 Statistical Uncertainty Quantification of Physical Models during Reflood of LBLOCA**
Deog Yeon Oh, Kwang Won Seul, and Sweng Woong Woo(KINS)
- 09:20 A Study on the Uncertainty of Flow-Induced Vibration in a Cross Flow Over Staggered Tubes**
Ji-Su Kim and Jong-Woon Park(DU)
Hyeon-Kyeong Choi(Hannam Univ.)
- 09:40 Development of RETRAN-3D Model to Analyze the Water Discharge through Pressurizer Purge Drain Pipe**
Y.S.KWON, C.S.Jang, J.D.Choi, G.S.Lee, and J.W.SUN(KEPCO NF)
H.Y.YOON(KAERI)
- 10:00 Analysis of MSLB for APR1400 Using SPACE Mass and Energy Release Methodology**
Seong Min Hong, Hyoung Kyoung Ahn, Seok Jeong Park, and Chan Eok Park(KEPCO E&C)
- 10:20 Development of Methodology for Spent Fuel Pool Severe Accident Analysis Using MELCOR Program**
Won-Tae Kim and Jae-Uk Shin(RETech.Co., Ltd.)
Kwang-Il Ahn(KAERI)
- 10:40 Coffee Break**
- 11:00 Hydrogen Risk in the Containment Filtered Venting System**
Young Su Na and Kwang Soon Ha(KAERI)
Song-Won Cho(NSE)
- 11:20 Current State of the Construction of an Integrated Test Facility for Hydrogen Risk**
Young Su Na, Seong-Ho Hong, and Seong-Wan Hong(KAERI)

IV. 분과별 논제 및 발표자

제5분과

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

좌 장 박래준(Rae-Joon Park), 방인철(In Cheol Bang)

발표장소 402A

일 정 | 5. 8(금)

- 09:00 Investigation of Focusing Effect According to the Cooling Condition and Height of the Metallic Layer in a Severe Accident**
Je-Young Moon and Bum-Jin Chung(KHU)
- 09:20 Conjugate Heat Transfer Analysis Model for Best Estimation of In-Vessel Retention of Multiple Layered Corium**
Jae-ho Bae and Jong-Woon Park(DU)
- 09:40 Experimental Study for Effects of the Stud Shape of the Core Catcher System**
Kysang Song, Hong Hyun Son, Uiju Jeong, Gwang Hyeok Seo, Doyoung Shin, Gyoodong Jeun, and Sung Joong Kim(HYU)
- 10:00 Evaluation of Ablation Rate by the Change of Sacrificial Material for PECS in EU-APR**
Do Hyun Hwang, Yong Soo Kim, and Keun Sung Lee(KHNP CRI)
- 10:20 Measurement of Pool Boiling CHF for SUS 304&SA 508 Flat Plate under Downward-facing and Atmospheric Conditions**
Dong Hoon Kam, Hae Min Park, Young Jae Choi, and Yong Hoon Jeong(KAIST)
- 10:40 Coffee Break**
- 11:00 Development and Verification of MAAP5.0.3 Parameter File for APR1400**
Mi Ro Seo and Hyeong Taek Kim(KHNP CRI)
- 11:20 CFD Analysis for H₂ Flame Propagation during Spray Operation in the THAI Facility**
Hyung Seok Kang and Seong-Wan Hong(KAERI)
Sanjeev Gupta(Becker Technologies GmbH)
- 11:40 The Analysis of Surrounding Structure Effect on the Core Degradation Progress with COMPASS Code**
Jun Ho Bae, Dong Gun Son, Jong Tae Kim, Rae Jun Park, and Dong Ha Kim(KAERI)
- 12:00 A Study of Invasive RCS Depressurization under SBO/SBLOCA in OPR1000-IPSS**
Jihee Kim and Hyun Gook Kang(KAIST)
Soon Heung Chang(HGU)

일 정 | 5. 8(금)

- 09:00 Design of Qualitative HRA Database Structure**
Seunghwan Kim, Yochan Kim, Sun Yeong Choi, Jinkyun Park, and Wondea Jung(KAERI)
- 09:20 SCHEME (Soft Control Human Error Evaluation MEthod) for Advanced MCR HRA**
Inseok Jang and Wondea Jung(KAERI)
Poong Hyun Seong(KAIST)
- 09:40 Measuring Risk Aversion for Nuclear Power Plant Accident : Results of Contingent Valuation Survey in Korea**
Sang Hun Lee and Hyun Gook Kang(KAIST)
- 10:00 A Framework to Estimate the Coverage of AOPs in Nuclear Power Plants**
Jinkyun Park and Wondea Jung(KAERI)
- 10:20 Restructuring of an Event Tree for a Loss of Coolant Accident in a PSA Model**
Ho-Gon Lim, Sang-Hoon Han, Jin-Hee Park, and Seong-Chul Jang(KAERI)
- 10:40 Coffee Break**
- 11:00 Classification of Cold Leg LOCA by Thermal Hydraulic Analysis**
Jaehyun Cho, Ho-Gon Lim, and Jin-Hee Park(KAERI)
- 11:20 A Quantitative Index to Support Recurrence Prevention Plans of Human-Related Events**
Yochan Kim, Jinkyun Park, and Wondea Jung(KAERI)
Do Sam Kim and Durk Hun Lee(KINS)
- 11:40 Development of Collision Accident Scenario during Nuclear Spent Fuel Maritime Transportation**
Min Yoo and Hyun Gook Kang(KAIST)
- 12:00 Comparison of Various Methods to Quantify a Fault Tree for Seismic PSA**
Sang Hoon HAN, Jin Hee PARK, Dong San KIM, Ho-Gon LIM, and Seung Cheol JANG(KAERI)

IV. 분과별 논제 및 발표자

제5분과K

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

좌 장 어동진(Dong Jin Euh), 김성중(Sung Joong Kim)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P05K01 Subcooled Pool Boiling from Two Tubes of 6 Degree Included Angle in Vertical Alignment**
Myeong-Gie Kang(ANU)
- P05K02 Effects of Inclination Angle on Pool Boiling Heat Transfer from Tandem Tubes**
Myeong-Gie Kang(ANU)
- P05K03 Hydrodynamic Experiments for a Flow Distribution of a 61-Pin Wire-wrapped Rod Bundle**
S.K. Chang, D.J. Euh, H.S. Choi, H.M. Kim, Y.J. Ko, D.W. Lee, H.Y. Lee, and S.R. Choi(KAERI)
- P05K04 Experimental Study on the Thermal Stratification in a Pool Boiling with a Horizontal Heat Source**
Seok Kim, Sung Uk Ryu, Dong-Jin Euh, and Chul-Hwa Song(KAERI)
- P05K05 Evaluation for the Impact of Debris Settling on the In-Vessel Downstream Effect Tests of the APR1400 Design**
Jeong-kwan Suh and Jae-yong Lee(KHNP CRI)
- P05K06 Scaling Analysis of the Single-Phase Natural Circulation : the Hydraulic Similarity**
Xin-Guo Yu(UST)
Ki-Yong Choi(KAERI)
- P05K07 Thermal-hydraulic Experiments for the PCHE Type Steam Generator**
C. W.Shin and H.C.NO(KAIST)
- P05K08 Pool Boiling Heat Transfer Characteristics of Chromium Coatings Deposited by RF Magnetron Sputtering**
Gwang Hyeok Seo, Hong Hyun Son, Uiju Jeong, Gyoodong Jeun, and Sung Joong Kim(HYU)
- P05K09 Improvement of Interfacial Friction Factor for the Prediction of Void Fraction in the Nearly Horizontal Flow**
Tae-Hwan Ahn, Jae-Jun Jeong, and Byong-Jo Yun(PNU)
- P05K10 A Comparative Study on the Critical Heat Flux Characteristics of Oxidized Multi-Walled Carbon Nanotube and Graphene Nanofluids**
Young Hun Kim, Sung Seek Park, Woo Joong Kim, and Nam Jin Kim(JNU)
- P05K11 Understanding of CHF Enhancement Mechanisms with Millimeter-scale Fin Structures**
Jin Young Choi, Hee Cheon NO, and Dong Yeol Yeo(KAIST)
- P05K12 Propagation of Local Bubble Parameters of Subcooled Boiling Flow in a Pressurized Vertical Annulus Channel**
In-Cheol Chu, Seung Jun Lee, Young Jung Youn, Jong Kuk Park, Hae Seob Choi, and Dong Jin Euh(KAERI)

P05K13 Inspection of Pool Boiling with Superhydrophilic and Superhydrophobic Coating

Gyumin Son, Sung Bo Moon, and In Cheol Bang(UNIST)

P05K14 Experimental Investigation on Thermal-Hydraulic Interaction between CMT and SIT of a Single-Train Passive Safety System during an SBLOCA Test

Hwang Bae, Sung Uk Ryu, Yong-Cheol Shin, Kyoung-Ho Min, Hyo Bong Ryu, Jong-Kuk Park, Yun-Gon Bang, Young-Jong Chae, Sung-Jae Yi, and Hyun-Sik Park(KAERI)

P05K15 Development of Three-Ring Conductance Meter on Flexible Printed Circuit Board for Liquid Film Thickness Measurement

Kyu-Byoung Lee, Goon-Cherl Park, and Hyoung Kyu Cho(SNU)
Jong-Rok Kim and Dong-Jin Euh(KAERI)

IV. 분과별 논제 및 발표자

제5분과L

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

좌 장 정법동(Bub Dong Chung), 김경두(Kyung Doo Kim)

발표장소 3층 로비

일 정 5. 7(목) 13:00-15:00

P05L01 Reflood Phenomena in a 5x5 Ballooned Rod Bundle

Byoung Jae Kim, Jong Rok Kim, Kihwan Kim, and S. K. Moon(KAERI)

P05L02 Numerical Simulation of Fluid Mixing In Upper Annular Space of SMART during Early Stage of Non-LOCA

Youngmin Bae, Young-In Kim, and Keung Koo Kim(KAERI)

P05L03 Implementation of a Model of Turbulence into a System Code, GAMMA+

Hyeonil Kim and Hong-Sik Lim(KAERI)

Hee-Cheon No(KAIST)

P05L04 Assessment Using ANL Experiments on Void Fraction in a Vertical Tube

KyuHyun Han and YoungSeok Bang(KINS)

P05L05 The Effect of the Holes Size Change of Lower-Support-Structure-Bottom Plate on the Reactor Core-Inlet Flow-Distribution

Gong Hee Lee, Young Seok Bang, and Ae Ju Cheong(KINS)

P05L06 Thermal-hydraulic Analysis and Code Assessment for Reactor Vessel Upper-head Small Break LOCA Using SPACE Code

Minhee Kim and Seyun Kim(KHNP CRI)

P05L07 Lunar Nuclear Power Plant Design for Thermal-Hydraulic Cooling in Nano-Scale Environment: Nuclear Engineering-based Interdisciplinary Nanotechnology

Tae Ho Woo(Systemix Global Co., Ltd.)

P05L08 Assessments of UCB-Kuhn Condensation Tests by Various Thermal-Hydraulic Codes

Ju Yeop Park(KINS)

P05L09 A Preliminary Study on the Reconstruction Algorithm of the Bubble Size to Inspect Twophase Flows Using Single Cone-beam X-ray

Che Wook YIM, Song Hyun KIM, and Chang Ho SHIN(HYU)

P05L10 Determination of Initial Conditions for the Safety Analysis by Random Sampling of Operating Parameters

Hae-Yong Jeong and Moon-Ghu Park(Sejong Univ.)

P05L11 k-ε Turbulence Modeling in the CUPID Code for Natural Convection

Seung-Jun Lee, Ik Kyu Park, and Han Young Yoon(KAERI)

Jungwoo Kim(Seoultech)

-
- P05L12 Numerical Analysis of APR1400 Steam Generator by CUPID/MARS Heat Structure Coupling**
Jae Ryong Lee, Seung Jun Lee, Ik Kyu Park, and Han Young Yoon(KAERI)
Hyoung Kyu Cho(SNU)
- P05L13 A Study on the Optimization Method of the Main Steam Safety Valve Characteristics for Overpressure Protection**
Kyoung Ryun Kim, Ung Soo Kim, Min Soo Park, Gyu Cheon Lee, and Shin Whan Kim(KEPCO E&C)
- P05L14 Integrity Analysis of Turbine Building for the MSLB Using GOTHIC Code for Wolsong NPP Unit 2**
Bong-Jin Ko, Dong-Sik Jin, Jong-Hyun Kim, and Sang-Koo Han(ACT Co., Ltd.)
Choi Hoon, Dong-Wook Kho(KHNP CRI)
- P05L15 Comparative Study of Thermal Hydraulic Analysis Codes for Pressurized Water Reactors**
Yang Hoon Kim, Mi Suk Jang, and Kee Soo Han(NESS)
- P05L16 Assessment of TRACE Condensation Model Against Reflux Condensation Tests with Noncondensable Gases**
Kyung Won LEE, Ae Ju CHEONG, Andong SHIN, and Nam Duk SUH(KINS)
- P05L17 Assessment of Wall Condensation Model in the Presence of Noncondensable Gas for the SPACE Code**
Jong Hyuk Lee, Byong Jae Kim, Seung Wook Lee, and Kyung Doo Kim(KAERI)
Hyung Kyu Cho(SNU)
- P05L18 CUPID Code Simulation of Two-Dimensional Film Flow Test**
Y. J. Cho and H. Y. Yoon(KAERI)
J. H. Yang and H. K. Cho(SNU)
- P05L19 CFD Investigation the Thermal-hydraulic Behavior Behind the Flow Blockage in SFR**
Jin Yoo, J. H. Jeong, W. P Chang, and K. S Ha(KAERI)
- P05L20 A Comparative Study of MATRA-LMR/FB with CFD on a Fuel Assembly in PGSFR**
Jin Yoo, Won-Pyo Chang, Jae-Ho Jeong, Kwi-Seok Ha, Kwi-Lim Lee, Seung Won Lee, Chiwoong Choi, and Sang-Jun Ahn(KAERI)
- P05L21 CATHENA Code Assessment for Pressure Tube and Calandria Tube Contact Phenomena**
Hyoung Kyoung Ahn, Chul Jin Choi, and Jong Ho Choi(KEPCO E&C)
- P05L22 Preliminary Analysis of a Loss of Condenser Vacuum Accident Using the MARS-KS Code**
Jieun Kim, Young Seok Bang, Deog Yeon Oh, Kap Kim, and Sweng-Wong Woo(KINS)
- P05L23 Code Coupling for Multi-Dimensional Core Transient Analysis**
Jin-Woo Park, Guen-Tae Park, Min-Ho Park, Seok-Hee Ryu, Kil-Sup Um, and Jae-Il Lee(KEPCO NF)
- P05L24 Validation of Friction Models in MARS-MultiD Module with Two-Phase Cross Flow Experiment**
Chi-Jin Choi, Jin-Hwa Yang, Hyoung-Kyu Cho, and Goon-Cherl Park(SNU)
Dong-Jin Euh(KAERI)
-

-
- P05L25 Bubble Size Models for the Prediction of Bubbly Flow with CMFD Code**
Jin-yeong Bak, Byong-jo Yun, and Jae-jun Jeong(PNU)
- P05L26 Preliminary Evaluation of the Diverse Protection System in PGSFR**
Taekyeong Jeong, Won-Pyo Chang, Seung Hwan Seong, Sang June Ahn, Seok Hun Kang, Chi-Woong Choi, Jin Yoo, Kwi Lim Lee, Seung Won Lee, Jae-Ho Jeong, and Kwi-Seok Ha(KAERI)
- P05L27 MARS-KS Code Analysis for SBLOCA Counterpart Test in ATLAS Facility**
B. U. Bae, Y. S. Park, K. Y. Choi, K. H. Kang, J. R. Kim, and N.H. Choi(KAERI)
- P05L28 Numerical Analysis on Temperature Variation of Coolant in Pressurizer Spray Nozzle Considering Vapor Condensation**
Se-Hong Oh, Choengryul Choi, and Sung-Man Son(ELSOLTEC Inc.,)
Hyun-Su Kim, Chang-Kyun Oh, and Sung-Kyu Jung(KEPCO E&C)
- P05L29 Assessment of Nucleation Site Density Models for CFD Simulations of Subcooled Flow Boiling**
N.H. Hoang(UST)
I. C. Chu, and D. J. Euh, and C. H. Song(KAERI)
- P05L30 Sensitivity Analysis to Improve the Gap Conductance Uncertainty for KINS-REM**
Chanyi Song, DeogYeon Oh, Kwang-Won Seul, and Young Seok Bang(KINS)
- P05L31 Preliminary Analysis on Reactivity Insertion Transient of Natural Circulation Reactor**
Hyung Min Son(KAERI)
Kune Yull Suh(SNU)

일 정 | 5. 7(목) 13:00-15:00

P05M01 Key Characteristics of Combined Accident Including TLOFW Accident for PSA ModelingBo Gyung Kim and Hyun Gook Kang(KAIST)
Ho Joon Yoon(KUSTAR)**P05M02 Development of Web-Based Common Cause Failure (CCF) Database Module for Nuclear Power Plants**

Hyun-Gyo Lee, Seok-Won Hwang, and Tae-young Shin(KHNP CRI)

P05M03 Piping Failure Probability Assessments on Material Types, Temperatures and Leak Rates for a RI-ISI Program

Yoonho Bae and Dongwook Kim(KEPCO E&C)

P05M04 A Methodology for Evaluating Quantitative Nuclear Safety Culture Impact

Kiyoon Han and Moosung Jae(HYU)

P05M05 Survey of Dynamic PSA MethodologiesHansul Lee, Hyeonmin Kim, and Gyunyoung Heo(KHU)
Taewan Kim(KINGS)**P05M06 Outline of the Desktop Severe Accident Graphic Simulator Module for OPR-1000**

S. Y. Park and K.I. Ahn(KAERI)

P05M07 New Algorithm to Detect Modules in a Fault Tree for a PSA

Woo Sik Jung(Sejong Univ.)

P05M08 Hybrid Method to Detect Modules in a Fault Tree for a PSA

Woo Sik Jung(Sejong Univ.)

P05M09 Analysis of Primary External Cooling Water Injection Mass during Extended SBO in Wolsong #1

Lee Youngseung and Shin Jungmin(KHNP CRI)

P05M10 Studies of Behavior Melting Temperature Characteristics for Multi Thermocouple In-Core Instrument AssemblyDonghyup Shin, Myoungseun Chae, Sungjin Kim, and Kyulim Lee(Woojin inc.)
Song Hae Ye(KHNP CRI)**P05M11 Evaluation of the Natural Circulation Flow Loop with Inclined Downward Heating Channel**Kyung Jin Wi, Kwang Soon Ha, and Rae Joon Park(KAERI)
Seong Yeon Yoo(CNU)

P05M12 Study of Containment Vent Strategies during Severe Accident Progression for the CANDU6 Plant
Youngho Jin and K.I. Ahn(KAERI)

P05M13 Effectiveness of Modified Jakob Number as a SAMG Entry Condition of OPR1000
Wonjun Choi, Youngjae Lee, and Sung Joong Kim(HYU)
Hwan-Yeol Kim(KAERI)

P05M14 A Study on Scenario Selection for Evaluation of Fission Product Behavior during a Severe Accident at APR 1400 Nuclear Power Plants
E. S. Yoon and Han-Chul Kim(KINS)
Song-Won Cho(NESTec)

P05M15 A Study on DB Schema of the Electronic SAMG
S.H. Park, K.I. Ahn, and Y.H. Jin(KAERI)

P05M16 Consideration of Task Performance for Robots Engaged in Extremely Dangerous Environment in Nuclear Power Plants
Seung Mo Hong, Kee Soo Han, Sung Deok Yi, and Seoung Rae Kim(NESS)
Young Choi(KAERI)

P05M17 Evaluation of Non-Condensable Gas Effect during LBLOCA in an OPR1000 Plant
Seung Hun Yoo, Kwang-Won Seul, Young-Seok Bang, and Jun Soo Lee(KINS)

P05M18 The Development of Evaluation Model for Component Aging in CANDU-6 Reactor
Jun Ho Bae, Jong Yeob Jung, and Yong Man Song(KAERI)

P05M19 Transient Performance of Air-cooled Condensing Heat Exchanger in Long-term Passive Cooling System during Decay Heat Load
Myoung Jun Kim and Hee Joon Lee(KMU)
Joo Hyung Moon, Youngmin Bae, and Young-In Kim(KAERI)

P05M20 Application of Full Equation in Kinematic Shock on Emergency Core Cooling System
Seung-Chan Lee, Duk-Joo Yoon, and Sang-Jun Ha(KHNP CRI)

P05M21 Technical Issues and Proposes on the Legislation of Probabilistic Safety Assessment in Periodic Safety Review
Seok-Won Hwang, Ho-Jun Jeon, and Jang-Hwan Na(KHNP CRI)

일 정 | 5. 7(목)

- 09:00 Design Case Studies of Anti-scattering X-ray Grid by MCNP Code Simulation**
Jun Woo Bae and Hee Reyoung Kim(UNIST)
- 09:20 An Activation Inventory Estimation Including Spallation Reactions by Modification of FISPACT 2010 Code**
Do Hyun KIM, Chang Ho SHIN, and Song Hyun KIM(HYU)
Shin Woo NAM(IBS)
- 09:40 A Proposal on the Method of Real Uncertainty Estimation in Two Step Monte Carlo Simulation for Residual Radiation Analysis**
Gi Yeong HAN, Do Hyun KIM, Song Hyun KIM, and Chang Ho SHIN(HYU)
Shin Woo NAM(IBS)
- 10:00 A Preliminary Assessment of Radiation and Air Activation 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)
- 10:20 Current Status of Burn up Evaluation for Test Fuel at HANARO**
Seong Woo Yang, Seung Jae Park, Yoon Taeg Shin, Kee Nam Choo, and Man Soon Cho(KAERI)
- 10:40 Coffee Break**
- 11:00 The Performance Assessment of the Detector for the Portable Environmental Radiation Distribution Monitoring System with Rapid Nuclide Recognition**
Uk Jae Lee and Hee Reyoung Kim(UNIST)
- 11:20 Radiological Consequence Analysis of LOCA for Kori Unit 2 Applying RG 1.183**
S.J.Yoon, C.S.Jang, K.M.Yoon, J.D.Choi, and G.S.Lee(KEPCO NF)
- 11:40 Radiological Impact Assessment of a Prolonged Release from a Pyroprocessing Facility**
Robby Christian and Hyun Gook Kang(KAIST)
- 12:00 Environmental Radioactivity Levels within New EPZ from Shin-Kori NPP Unit 3&4**
Dong Han Yoo and Hee Reyoung Kim(UNIST)

IV. 분과별 논제 및 발표자

제6분과B

방사선이용 및 방호 (Radiation Protection and Shielding)

좌 장 문명국(Myung Kook Moon), 김희령(Hee Reyoung Kim)

발표장소 201A

일 정 | 5. 8(금)

- 09:00 Therapeutic Efficacy with Treatment-related Toxicities of ^{177}Lu -labeled Bombesin Derivative for the Peptide Receptor Radiotherapy**
Jae Cheong Lim, Eun Ha Cho, and So Young Lee(KAERI)
- 09:20 Optimizing Detector Thickness in Dual-shot Dual-energy X-Ray Imaging**
Dong Woon Kim, Soohwa Kam, Hanbean Youn, and Ho Kyung Kim(PNU)
- 09:40 Effects of Intermediate Filter Thickness on the Detective Quantum Efficiency of Sandwich Detectors for Dual-Energy X-ray Imaging**
Junwoo Kim, Dong Woon Kim, Soohwa Kam, Hanbean Youn, and Ho Kyung Kim(PNU)
- 10:00 Electroplated Ni on the PN Junction Semiconductor**
Jin Joo Kim, Young Rang Uhm, Kwang Jae Son, Jong Bum Kim, Sang Moo Choi, Jong Han Park, and Jintae Hong(KAERI)
- 10:20 X-ray Beam Spectral Reconstruction Using Laplace Transform and Attenuation Curves**
Seongjin Maeng, Sang Hoo Lee, Dahye Kwon, and Jihye Seo(KNU)
Kyung-Won Seo(G&G RADCON Co.,)
- 10:40 Coffee Break**
- 11:00 A Feasibility Study on the Inspection System Development of Underground Cavities Using Neutron Source**
Che Wook YIM, Song Hyun KIM, Do Hyun KIM, and Chang Ho SHIN(HYU)
- 11:20 Comparison of Simulated Responses Derived from Silicon Detectors Depending on the Consideration of Primary Electron Tracks**
Geehyun Kim and Chang Je Park(Sejong Univ.)
- 11:40 Development of Planar CT System for Multi-layer PCB Inspection**
Seung Ho Kim, Hanbean Youn, Soohwa Kam, Eunpyeong Park, and Ho Kyung Kim(PNU)
- 12:00 Development of a Portable Fusion Neutron Generator**
Byung-Hoon Oh, Sang-Ryul In, Jeong-Tae Jin, Dae-Sik Chang, and Doh-Yun Jang(KAERI)
Cheol Ho Lee(HYU)
- 12:20 Cascaded-Systems Analysis of Flat-Panel Sandwich Detectors for Single-Shot Dual-Energy X-ray Imaging**
Ho Kyung Kim, Dong Woon Kim, Junwoo Kim, and Hanbean Youn(PNU)

좌 장 정규환(Kyu Hwan Jung), 엄영랑(Young Rang Uhm)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P06C01 Evaluation of Activity Concentration Limits for Building Materials Using Voxel Phantom**
Mee Jang, Kun Ho Chung, Young Yong Ji, Chang Jong Kim, Mun Ja Kang, and Guen Sik Choi(KAERI)
- P06C02 Alpha Spectrometry for Determination of ^{238}U , ^{235}U , ^{234}U , ^{232}Th and ^{230}Th in Soil Sample**
Young Gun Ko, Jong-Myoung Lim, Hoon Lee, Kun Ho Chung, Mun Ja Kang, and Geun-Sik Choi(KAERI)
- P06C03 Ultra Low Level Tritium Analysis Method Using a Liquid Scintillation Counter**
S. J. Noh, H. J. Kim, H. Kim, H. J. Lim, M. W. Lee, D. H. Jeong, J. K. Kim, and Y. -R. Kang(DIRAMS)
S. H. Nam(Inje Univ.)
- P06C04 Internal Exposure of a Seoul Subway Passenger due to Radon Inhalation: Before and After PSD Installation**
Ji-Yong Shin and Eun-Hee Kim(SNU)
- P06C05 Disturbance from Am-241 Photons of the Cellular Dose by Am-241 Alpha Emissions: Am-241 as an Alternative Source of Alpha Particles to Radon Daughters**
Ki-Man Lee and Eun-Hee Kim(SNU)
- P06C06 Subtraction of Low Level Background Noise in Measurement of Enriched Uranium Using CdZnTe Detector**
Jung-ki Shin and Sung-Woo Kwak(KINAC)
- P06C07 Development of Educational and Training Simulator for Emergency Response to Chinese Nuclear Accidents**
Juyub Kim, Juyoul Kim, Sukhoon Kim, Seunghee Lee, and Taebin Yoon(FNC Tech.)
Li-Chi Cliff Po(MST)
- P06C08 Assessment and Prognosis for Nuclear Emergency Management in Korea**
Seung-Young Jeong, Hyun-Ha Lee, Young-Min Lee, Sang-Hyun Park, Kwang-Woo Nam, Sang-Houn Joung, Sobeom Jin, Dong-Il Kim, and Wan-Joo Kim(KINS)
- P06C09 Soil- to-Whole Body Transfer Factors of Radionuclides for Terrestrial Wild Animals Living around the Gyeongju Nuclear Site**
Kwang-Muk Lim, Yong-Ho Choi, In Jun, Byung-Ho Kim, and Dong-Kwon Keum(KAERI)
- P06C10 Analysis of the Long-Term Meteorological Data at Kori Nuclear Power Plant for Environmental Impact Assessment**
Kihyun Park, Byung-Il Min, Sora Kim, and Kyung-Suk Suh(KAERI)
- P06C11 Preliminary Study on Tsunami Vulnerability Assessment in South Coast of Korean Peninsula**
Byung Il Min and Kyung Suk Suh(KAERI)
Gyumin Lee and Kyoung Soo Jun(SKKU)

-
- P06C12 Development of the Trajectory Model for Tracking Release Area of the Radioactive Materials**
Kyung-Suk Suh, Kihyun Park, Byung-JI Min, Sora Kim, and Yoonhee Jung(KAERI)
- P06C13 Review on Population Projection Methodology for Radiological Dose Assessment**
M-S Jang, H-S Kang, and S-R Kim(NESS)
W-T Hwang(KAERI)
Y-H Yang(KHNP)
- P06C14 Unit Risk Quotient (RQ) and Relative Significance of Radionuclide on Flora and Fauna to the EU-APR Optimization**
Keunsung Lee(KHNP CRI)
Sukhoon Kim(FNC Tech.)
Chonghui Lee(KEPCO E&C)
- P06C15 Numerical Analysis on Influence of Duct Shape on Flow Profile at RMS's Sampling Position**
Sungman Son, Sehong Oh, and Choengryul Choi(ELSOLTEC Co.,)
- P06C16 Sensitivity Analysis of Input Parameters for the Dose Assessment from Gaseous Effluents Due to the Normal Operation of Jordan Research and Training Reactor**
Sukhoon Kim, Seunghee Lee, Juyoul Kim, and Juyub Kim(FNC Tech.)
Moonhee Han(KAERI)
- P06C17 Trend Analysis of Gamma Exposure Rates and Soil Radionuclides Concentrations in Korea**
Ho Kyung HWANG, Seongjin MAENG, and Sang Hoon LEE(KNU)
Kyung Won SEO(G&G Radcon Co.,)
- P06C18 Detection of the Level of Reactive Oxygen Species Induced by Ionizing Radiation in Cells**
Jin Kyu Kim, Dong Min Chung, and Jin-Hong Kim(KAERI)
- P06C19 Podophyllotoxin Acetate Blocks IR-Induced Invasion of Non-Small Cell Lung Cancer Cell, A549**
Jeong Hyun Cho, Jae Yeon Choi, Sang-Gu Hwang, Hong-Duck Um, and Jong Kuk Park(KIRAMS)
- P06C20 Gene Expression Profile of Proton Beam Irradiated Breast Cancer Stem Cells**
Myung-Hwan Jung and Jeong Chan Park(KAERI)
- P06C21 Metal-Marked Tumor Tracking in Two Pair Stereo X-ray System Simulation**
Hanseong Jeong, Seho Lee, Youngju Kim, Ohsung Oh, Jeongho Kim, and Seung Wook Lee(PNU)
- P06C22 Semi-empirical Calculation of Detection Efficiency for Voluminous Source Based on Effective Solid Angle Concept**
M.Y. Kang, J.H. Kim, Jinhyeong Kim, and H.D. Choi(SNU)
G.M. Sun(KAERI)
- P06C23 Synthesis and Characterization of Water-dispersible Core/Shell Mn-doped Magnetite/Au Nanoparticles for Proton Radiotherapy**
Jeong Chan Park(KAERI)
-

-
- P06C24 Initial Investigation of Software-Based Bone-Suppressed Imaging**
Eunpyeong Park, Hanbean Youn, and Ho Kyung Kim(PNU)
- P06C25 Microstructure Analysis for the Ultrasonic Fatigued Alloys Using SANS**
Eunjoo Shin(KAERI)
Insik Jo(Sunmoon Univ.)
- P06C26 Design Study of Compact Neutron Target with 13 MeV Cyclotron**
Jeong ho Kim, Ohsung Oh, Youngju Kim, Hanseong Jeong, and Seung Wook Lee(PNU)
Myungkook Moon, Jongyul Kim, and TaeJoo Kim(KAERI)
- P06C27 Study of the Quantitative Measurement of Fuel Assemblies with Improved Efficiency**
Jaemin Lee, Suhong Lee, Jinyoung Chung, Jeonghee Son, Muhammad Minhaj Khan, and Jooho Whang(KHU)
Seungho Ahn(KINAC)
- P06C28 Design and Operation of the Double Crystal Monochromator for Energy Selective Neutron Imaging at ENF**
Jongyul Kim, Chang Hwy Lim, TaeJoo Kim, and Myung Kook Moon(KAERI)
Youngju Kim and Seung Wook Lee(PNU)
- P06C29 KSTAR Application for Fast Neutron Radiography**
Seungtae Oh, Young-Seok Lee, Jong-Gu Kwak, and KSTAR team(NFRI)
- P06C30 Double Side Electroplating for Applying Beta Voltaic with Sandwich Structure**
Sang Moo Choi, Young Rang Uhm, Kwang Jae Son, Jong Bum Kim, Jin Joo Kim, and Jong Han Park(KAERI)
- P06C31 Heat Transfer Analysis for Optimal Design of Radioisotope Thermoelectric Generator**
Jong Han Park, Kwang Jae Son, Jintae Hong, and Jong Bum Kim(KAERI)
- P06C32 Highly Stable Carbon Nanotube Field Emitters on Small Metal Tips Against Electrical Arcing for Miniature X-Ray Tubes**
Jun Mok Ha, Hyun Jin Kim, Hyun Nam Jim, Hamid Saeed Raza, and Sung Oh Cho(KAIST)
- P06C33 Design Verification of a High Energy X-ray Scanner for Cargo Inspections with the Stereo Visualization**
Suhyun Lee, Chang Hwy Lim, Myung-Kook Moon, and Jongyul Kim(KAERI)
Jeong ho Kim(PNU)
- P06C34 Development of In-situation Radioactivity Inspection System**
Sujung Min, Sanghun Lee, Miyoung Kim, Myungjin Kim, and Unjang Lee(ORIONENC Co.)
Jungkyun Park(KAERI)
- P06C35 Light Collection in the High Energy X-Ray Detector with the Pixelated CdW04 Scintillator Using Monte Carlo Method**
Chang Hwy Lim, Myung-Kook Moon, Suhyun Lee, Jongyul Kim, and Jeongho Kim(KAERI)
Jong-Won Park(KRISO)
-

P06C36 A Rapid Method for Radon Determination

N. Enkhbat, S. G. Shin, Y. U. Key, and M. H. Cho(POSTECH)
N. Norov(NUM)
G. Kim(KNU)
W. Namkung and H.S. Lee(PAL)

P06C37 Screening Uranium Swipe Samples Using the MMXRF

Ki-tek Han, Hee-jun Jeong, Jong-Ho Yoon, Jung Youn Choi, Hana Seo, and Gil Hoon Ahn(KINAC)

P06C38 Determination of an Absorbed Dose of MOSFET Dosimeter Using Monte Carlo N-Particle Simulation with Different Tallies and Response Functions

Hae Ri Hyun and Ser Gi Hong(KHU)
Yong Nam Kim and Soo Kon Kim(KNUH)

P06C39 Monte Carlo Study of Characteristics of Uranium L-edge from X-ray Absorption Spectrometry

Seunghoon Park, Sung-Woo Kwak, Jung-Ki Shin, Han-Byeol Kang, and Heejun Chung(KINAC)

P06C40 Comparative Study of Simultaneous Algebraic and Filtered Backprojection Reconstruction Methods in Digital Tomosynthesis for Nondestructive Testing

Dae Cheon Kim, Hanbean Youn, Seung Ho Kim, and Ho Kyung Kim(PNU)

P06C41 Comparison of Step-and-shoot and Continuous Scanning Methods in Cone-beam Computed Micro-tomography for NDT

Jun Beom Park, Hanbean Youn, Seung Ho Kim, Junwoo Kim, Soohwa Kam, Eunpyeong Park, and Ho Kyung Kim(PNU)

P06C42 Interior CT Reconstruction Based on Piecewise-Constant-Model

Ohsung Oh and Seung Wook Lee(PNU)
Ge Wang(RPI)

P06C43 Talbot Carpet Simulation for X-ray Grating Interferometer

Youngju Kim, Ohsung Oh, Hanseong Jeong, Jeongho Kim, and Seung Wook Lee(PNU)
Jongyul Kim, Myungkook Moon(KAERI)

P06C44 Strengthening of Poly Methyl Methacrylate (PMMA) through Electron Irradiation

Sung Ho Yoo, Hyung San Lim, Jun Mok. Ha, and Sung Oh Cho(KAIST)

일 정 | 5. 7(목)

- 09:00 Construction and Experimental Plan of Daejeon Ion Accelerator Complex**
Byung-Hoon Oh, Dae-Sik Chang, Doh-Yun Jang, and Jeong-Tae Jin(KAERI)
- 09:20 Development of a Magnetron Resonance Frequency Auto Tuning System for Medical X-band [9300 MHz] RF Linear Accelerator**
Sung Su Cha and Byung Cheol Lee(UST)
Yujong Kim, Hyung Dal Park, Byeong-No Lee, Seung Hyun Lee, Youngwoo Joo, Soo Min Lee, Ki Baek Song, and Hyungki Cha(KAERI)
- 09:40 Implementation of the DIAC Control System**
Dae-Sik Chang, Doh-Yun Jang, Jeong-Tae Jin, and Byung-Hoon Oh(KAERI)
- 10:00 Internal Magnetic Pitch Angle Measurements at KSTAR Tokamak**
J. Ko and J. Chung(NFRI)
M. C. C. Messmer(TU/e)
- 10:20 Diagnostics of Helium Plasma by Collisional-Radiative Modeling and Optical Emission Spectroscopy**
Wonwook Lee and Duck-Hee Kwon(KAERI)
- 10:40 Coffee Break**
- 11:00 Thermal Fatigue and Creep Assessment for the ITER Tritium SDS Bed**
Woo-seok Choi, Chang-kyu Park, and Young-sun Ju(KAERI)
Hyun-goo Kang, Min-ho Jang, and Sei-hun Yun(NFRI)
- 11:20 Thermal-hydraulic Performance Analysis for the Conceptual Design of Korean HCCR TBM-set**
Dong Won Lee, Hyung Gon Jin, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Kyu In Shin(Gentec Co.,)
Seungyon Cho(NFRI)
- 11:40 Range-Image Acquisition for Discriminated Objects in a Range-gated Robot Vision System**
Seung-Kyu Park, Yong-Jin Ahn, Nak-Kyu Park, Sung-Hoon Baik, Young-Soo Choi and Kyung-Min Jeong(KAERI)
- 12:00 Numerical Investigation on Performance of Coal Gasifier of 150kW under Various Injection Conditions**
Hyeongyeong Choi and Jaeseung Suh(SENTECH)
Taihyeop Lho(NFRI)

IV. 분과별 논제 및 발표자

제7분과B

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

좌 장 최우석(Woo-Seok Choi), 오영국(Yeong-Kook Oh)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P07B01 Nuclear Fusion Fuel Cycle Research Perspectives

Hongsuk Chung, Daeseo Koo, Jongcheol Park, and Yeanjin Kim(KAERI)
Sei-Hun Yun(NFRI)

P07B02 A DU Bed System for Storing and Supplying Hydrogen Isotopes

Daeseo Koo, Jongchul Park, Do-Hee Ahn, and Hongsuk Chung(KAERI)
Sei-Hun Yun(NFRI)

P07B03 Development of a Compact Range-gated Vision System to Monitor Structures in Low-visibility Environments

Yong-Jin Ahn, Seung-Kyu Park, Sung-Hoon Baik, Dong-Lyul Kim, Young-Soo Choi, and
Kyung-Min Jeong(KAERI)

P07B04 Illumination Effect of Laser Light in Foggy Objects Using an Active Imaging System

Seong-Ouk Kwon, Seung-Kyu Park, Yong-Jin Ahn, Sung-Hoon Baik, Young-Soo Choi, and
Kyung-Min Jeong(KAERI)

P07B05 Klystron High Power Operation for KOMAC 100-MeV Proton Linac

Kyung-Tae Seol, Seong-Gu Kim, Hyeok-Jung Kwon, Han-Sung Kim, and Yong-Sub Cho(KAERI)

P07B06 Strength Evaluation of Heat Affected Zone in Electron Beam Welded ARAA for HCCR TBM in ITER

J. S. Yoon, S. K. Kim, H. G. Jin, E. H. Lee, and D. W. Lee(KAERI)
S. Cho(NFRI)

P07B07 Performance Test of High Heat Flux Test Facility for the Calorimetry and Beam Control

Suk-Kwon Kim, Ara Jo, Hyung Gon Jin, Eo Hwak Lee, Jae-Sung Yoon, and Dong Won Lee(KAERI)
Seungyon Cho(NFRI)

P07B08 Electro-magnetic Structural Analysis for the Conceptual Design of Korean HCCR TBM-set

Dong Won Lee, Hyung Gon Jin, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Kyu In Shin(Gentec Tech. Co.)
Jai Hak Park(CBNU)
Seungyon Cho(NFRI)

P07B09 Modal and Spectra Response Analysis for Seismic Events in the Conceptual Design of Korean HCCR TBM-set

Dong Won Lee, Hyung Gon Jin, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Kyu In Shin(Gentec Tech. Co.)
Seungyon Cho(NFRI)

-
- P07B10 Structural Integrity Analysis Considered Load Combination for the Conceptual Design of Korean HCCR TBM-set**
Dong Won Lee, Hyung Gon Jin, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Kyu In Shin(Gentec Tech. Co.)
Seungyon Cho(NFRI)
- P07B11 Thermo-mechanical Analysis for the Conceptual Design of Korean HCCR TBM-set**
Dong Won Lee, Hyung Gon Jin, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Kyu In Shin(Gentec Tech. Co.)
Seungyon Cho(NFRI)
- P07B12 Ion Beam Facilities Installation and Commissioning at KOMAC**
Chan-Young Lee, Bom-Sok Kim, Jae-Ha Kim, Young-Gi Song, Sun-mog Yeo, Jae-Sang Lee, and Yong-Sub Cho(KAERI)
- P07B13 Beam Extraction for 1-MV Electrostatic Accelerator at the 300 kV Test Stand**
Sae-Hoon Park and Yu-Seok Kim(DU)
Hyeok-Jung Kwon and Yong-Sub Cho(KAERI)
- P07B14 Design, Fabrication and Installation of the Steering Magnet with High Uniformity of Magnetic field for KOMAC Beamline**
B. H. Chung, J. H. Kim, H. S. Kim, H. J. Kwon, and Y. S. Cho(KAERI)
- P07B15 Design Study on the Beam Scanning System of the KOMAC RI Production Beam Line**
Hyeok-Jung Kwon, Han-Sung Kim, and Yong-Sub Cho(KAERI)
- P07B16 Test Results of Event Timing System for KOMAC 100-MeV Proton Linac**
Young-Gi Song, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B17 A Study on the Ion Beam Extraction Using Duo-PiGatron Ion Source for Vertical Type Ion Beam Facility**
Bom Sok Kim, Chan young Lee, and Jae Sang Lee(KAERI)
- P07B18 Fabrication of Multi-Harmonic Buncher for Pulsed Proton Beam Generation**
H. S. Kim, H. J. Kwon, and Y. S. Cho(KAERI)
- P07B19 Construction Status and Test Operation of the DIAC at KAERI**
Doh-Yun Jang, Dae-Sik Chang, Jung-Tae Jin, and Byung-Hoon Oh(KAERI)
- P07B20 Status of the GAMMA-FR Code Validation-TES Pipe Rupture Accident of HCCR TBS**
Hyung Gon Jin, Dong Won Lee, Eo Hwak Lee, Jae Sung Yoon, and Suk Kwon Kim(KAERI)
Brad J. Merrill(INL)
Mu-Young Ahn and Seungyon Cho(NFRI)
- P07B21 Partial Alignment for Improvement of Beam Transmission at KOMAC**
Dong-Hyuk Seo, Dae-Il Kim, Tae-Sung Ahn, Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B22 The Study of a Beam Profile Monitor Based on Faraday Cup Array**
K. M. Park, S.H. Park, S.G. Kim, H.J. Kwon, and Y.S. Cho(KAERI)
-

-
- P07B23 Development of the RF System for the KOMAC MEBT**
Seong-Gu Kim, Kyung-Tae Seol, Hyeok-Jung Kwon, Han-Sung Kim, Young-Gi Song, and Yong-Sub Cho(KAERI)
- P07B24 Implementation of Alarm System for Vibration Monitoring of KOMAC Facility**
Jae-Ha Kim, Tae-Sung Ahn, Young-Gi Song, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B25 Design and Configuration of VME EPICS Driver for He RFQ LLRF Control System**
Tae-Sung Ahn, Hae-Seong Jeong, Seong-Gu Kim, Young-Gi Song, Han-Sung Kim, Kyung-Tae Seol, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B26 Residual Nuclide Analysis in a Beamline of a 100-MeV Proton Linac**
Jeong-Min Park, Sang-Pil Yun, Han-Sung Kim, Hyeok-Jung Kwon, and Yong-Sub Cho(KAERI)
- P07B27 Application of ITER Safety Analysis for KSTAR : Tritium Leakage from Fusion Power Termination System Failure Accident with MELCOR**
Sung Bo Moon and In Cheol Bang(UNIST)
- P07B28 Development of RF Non-IQ Sampling Module for Helium RFQ LLRF System**
Hae-Seong Jeong, Tae-Sung Ahn, Seong-Gu Kim, Hyeok-Jung Kwon, Han-Sung Kim, Young-Gi Song, Kyung-Tae Seol, and Yong-Sub Cho(KAERI)
- P07B29 Modification of 300kV RF Ion Source for 1-MV Electrostatic Accelerator at KOMAC**
Dae-Il Kim, Hyeok-Jung Kwon, Sae-Hoon Park, and Yong-Sub Cho(KAERI)
- P07B30 Development of Thermal-hydraulic Analysis Methodology for Multi-module Breeding Blankets in K-DEMO**
Geon-Woo Kim, Jeong-Hun Lee, Goon-Cherl Park, and Hyoung-Kyu Cho(SNU)
Kihak Im(NFRI)
- P07B31 Design Concept of a Seal-off Type 14 MeV Neutron Generator of 10^{11} n/s Range**
S. R. In and B. H. Oh(KAERI)
- P07B32 Design of Solid Targetry System for the Isotope Production at KOMAC**
Sang-pil Yoon, Hyeok-jung Kwon, Han-sung Kim, Yong-sub Cho, Kyung-tae Seol, Young-gi Song, Dae-il Kim, and Yi-sub Min(KAERI)
- P07B33 Characterization of Angle-dependent Focal Spot in a Miniature X-ray Tube**
Hyun Nam. Kim, Jun Mok. Ha, Hyun Jin. Kim, Hamid Saeed. Raza, and Sung Oh. Cho(KAIST)

제8분과A

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), 장영선(Young Sun Jang)

발표장소 303B

일 정 | 5. 7(목)

- 09:00 Test of Poisson Process for Earthquakes in and Around Korea**
Myunghyun Noh and Hoseon Choi(KINS)
- 09:20 Effect of Nonlinear Hardening of Lead Rubber Bearing on Long Term Behavior of Base Isolated Containment Building**
Junhee Park, Young-Sun Choun, and Min-Kyu Kim(KAERI)
- 09:40 A Study on Failure Mode&Limit Strain Range of Crossover Piping in Seismically Isolated Nuclear Power Plants**
Daegi Hahm, In-Kil Choi, and Bub Gyu Jeon(KAERI)
Hyoung Suk Choi and Nam Sik Kim((PNU)
- 10:00 Structural Behavior of SC and RC Panels under Impact Loading**
Hyuk-Kee Lee and Seung-Eock Kim(Sejong Univ.)
- 10:20 A Study on Fluid Dispersion after Liquid Filled Missile Impact**
Sang Shup Shin, Daegi Hahm, and In-Kil Choi(KAERI)
- 10:40 Coffee Break**
- 11:00 Variation Limits in Mechanical Properties of Seismic Isolation Systems Subjected to Long-period Ground Motions**
Young-Sun Choun and Junhee Park(KAERI)
- 11:20 Seismic Analysis of Reactor Coolant System Considering the Effect of Sloshing in Pressurizer**
S. W. Lee, B. C. Hwang, J. Y. Kim , J. H. Jheon, K. K. Sung, and D. H. Lee(KEPCO E&C)
- 11:40 Effect on the Floor Response Spectra by the Initial Stiffness of Seismic Isolators**
Hyung-Kui Park, Jung Han Kim, Min Kyu Kim, and In-Kil Choi(KAERI)
- 12:00 Concrete Hydration Heat Analysis for RCB Basemat Considering Solar Radiation**
Seong-Cheol Lee and Yong-Ki Son(KINGS)
Seong-Cheol Choi(CAU)
- 12:20 Simultaneous Spectrophotometric Determination of Heavy Metal Ions Fe(II), Co(II), Ni(II), Cu(II), and Zn(II) with Br-PADPA in Primary Reactor Coolant System**
Tae-Hyeong Kim and Jong-Il Yun(KAIST)

IV. 분과별 논제 및 발표자

제8분과B

원전 건설 및 운영 기술(Nuclear Power Plant Construction and Operation Technology)-원전 건설/운전/경년열화 (NPP's Construction, Operation and Equipment Aging Management)

좌 장 김영찬(Young Chan Kim), 부명환(Myung-Hwan Boo)

발표장소 303B

일 정 | 5. 8(금)

- 09:00 Density Models for Velocity Analysis of Jet Impinged CEDM Missile**
Won Ho Jo, Tae Kyo Kang, Yeon Ho Cho, Sang Gyoon Chang, and Dae Hee Lee(KEPCO E&C)
- 09:20 A Study of Construction Reactor Oversight Process in US**
I, Yun, S. Y. Kim, G. Y. Jeong, and S. P. Kim(KINS)
- 09:40 Irradiation-Induced Degradation Effects on Baffle-Former-Barrel Assembly of Reactor Vessel Internal**
J. S. Yang, J. G. Lee, S.J. Oh, and S.Y. Won(KHNP)
- 10:00 Integrated Guidelines for Management of Alloy 600 Locations**
Kyung-Hwan Na, Hansub Chung, Jun-Seog Yang, and Kyoung-Soo Lee(KHNP CRI)
- 10:20 Coffee Break**
- 10:40 Economics of Nuclear Power Plant and the Development of Nuclear Power in Viet Nam**
Thuy Nguyen Thi Thanh and Kwang Soon Ha(UST)
JinHo Song(KAERI)
- 11:00 Startup Ramp Rate Analysis for the OPR1000 Using FALCON Code**
Kim Ki-Young, Jung Sung-hwan, and Kim Yong-Deok(KHNP)
- 11:20 A Study on the Properties and Chloride Resistance of Modified Sulfur Concrete for Nuclear Power Plant and Marine Structures**
Wang, Soon Myun, Chang, Hyun Young, and Park, Heung Bae(KEPCO E&C)
- 11:40 Discussion on Integration of Welding Coordinator in Welding Quality System of KEPIC(Korea Electric Power Industry code)**
Hyun-Jae JOO, Myoung-Sung SOHN, Kyoung-Youn CHO, and Jong-Hae KIM(KEPIC)
- 12:00 The Hold-Time Effects on the Low Cycle Fatigue Behaviors of 316 SS in PWR Primary Environment**
Junho Lee, Jong-Dae Hong, Myung-Gyu Seo, and Changheui Jang(KAIST)
- 12:20 Consequence Analysis of Release from KN-18 Cask during a Severe Transportation Accident**
Heoksoon Lim, Giin Bhang, Janghwan Na, Jaeha Ban, and Myungsu Kim(KHNP CRI)
- 12:40 Probability of Neutralization Estimation for APR1400 Physical Protection System Design Effectiveness Evaluation**
Myungsu Kim, Heoksoon Lim, Janghwan Na, and Moongoo Chi(KHNP CRI)

제8분과C

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

-원전 건설/정비 (NPP's Construction and Maintenance)

좌 장 박종석(Jong Seok Park), 주광호(Kwangho Joo)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P08C01 Open-Phase Condition Detecting System for Transformers in Nuclear Power Plant**
Che-Wung Ha and Do-Hwan Lee(KHNP CRI)
- P08C02 Studies on the Needs of Seismic Base Isolation Concept and its Standardization**
Lee, Min-Seok and Kim, Jong-Hae(KEPIC)
- P08C03 Design of the Control System for Engineered Safety Features of KIJANG Research Reactor**
Hagtae Kim, Jun-Yeon Kim, and Hee-Taek Chae(KAERI)
- P08C04 Analysis of Hold Down Force for IVTM in PGSFR**
Nak Hyun Kim and Gyeong-Hoi Koo(KAERI)
- P08C05 A Review on Applicability of Big Data Technology in Nuclear Power Plant : Focused on O&M Phases**
Jae-Min Cha, Junguk Shin, and Choong-Sub Yeom(IAE)
- P08C06 Design Concept of Array ECT Sensor for Steam Generator Tubing Inspection**
Chan Hee Cho, Tae Hun Lee, and Hyun Ju Yoo(KHNP CRI)
- P08C07 Henry's Law Constant for Hydrogen in Li/H₃BO₃ Solution Using a Pd-Ag Sensor**
Eun-Hee Lee, Deok-Hyun Lee, and Do-Haeng Hur(KAERI)
- P08C08 Sludge Lancing and Visual Inspection of Steam Generator for KORI Nuclear Power Plant Unit 3**
Woo-Tae Jeong(KHNP CRI)
Sang-Tae Kim, Jae-Yung Hong, and Yun-Soon Jeong(Sae-An ENG)
- P08C09 Steam Generator Lancing and FOSAR for HANUL Nuclear Power Plant Unit 2**
Woo-Tae Jeong(KHNP CRI)
Sang-Tae Kim, Sang-Jung Yoon, and Hong-Chang Seo(Sae-An ENG)
- P08C10 An Utilization Method Cooperating ISO Drawings and Bookmarks for NDE**
Hyun-Ju Yoo, Chan-Hee Cho, and Tae-Hun Lee(KHNP CRI)
- P08C11 Study on the Management for the Nuclear Power Plant Maintenance and Equipment Reliability**
Kyeongseop Yoon, Sangheon Lee, Myungjin Kim, and Unjang Lee(ORION Enc)
- P08C12 Site Investigation for Detection of KIJANG Reactor Core Center**
Tae-Hyun Kwon, Jun Yeon Kim, and Jeeyoung Kim(KAERI)
- P08C13 Radiation Dose Effects into LCO in Technical Specification by Iodine in Hanul Units 1,2**
Hye Min Lee and Seung Chan Lee(KHNP CRI)

IV. 분과별 논제 및 발표자

제9분과A

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

좌 장 이영일(Youngeal LEE), 정익(Ik JEONG)

발표장소 303A

일 정 | 5. 7(목)

- 09:00 Feasibility Study on the Development of Index that shows Social and Cultural Acceptance of Nuclear Power**
SeongKyung Cho(Myongji Univ.)
Seungho Choi, Hana Yoon, and Jiyeon Song(Brodeur)
- 09:20 Radioisotope Production Plan and Strategy of Kijang Research Reactor**
Kye Hong Lee and Jun Sig Lee(KAERI)
- 09:40 The Study on Progression for Consolidating the Nuclear Security Legislative System**
Jae San Kim and Myung Tak Jung(KINAC)
- 10:00 Measuring Public Acceptance of Nuclear Energy with Big Data**
Seungkook Roh(KAERI)
- 10:20 Selection Methodology Approach to Preferable and Alternative Sites for the First NPP Project in Yemen**
Moath Kassima(KHU)
David S. Kessel(KINGS)
- 10:40 Coffee Break**
- 11:00 Energy Outlook and Nuclear Energy in China**
Mooneon Lee, Jun-young Kang, Kiwon Song, Hyun Sun Park, and Chang Kue Park(POSTECH)
- 11:20 Investigation of Economics of Back-end Nuclear Fuel Cycle Options in the Republic of Korea Based on Once-through**
Seok-Ki Cho and Man-Sung Yim(KAIST)
- 11:40 An Improvement on the Rate Calculation Method of Nuclear R&D Fund**
S.S. Kim, M.K. Lee, S.W. Yun, and K.H. Moon(KAERI)
- 12:00 Examination of Economic Feasibility of Nuclear Weapons in the Republic of Korea**
Young A Suh and Man Sung Yim(KAIST)

일 정 | 5. 8(금)

- 09:00 Physical Protection System Design Analysis Against Insider Threat Based on Game Theoretic Modeling**
Kyo-Nam Kim, Young-A Suh, and Man-Sung Yim(KAIST)
Erich Schneider(University of Texas)
- 09:20 The Development of a Scientific Evaluation System of Force-on-Force (FOF) Exercise for Performance-based Regulation in Nuclear Security**
Moonsung Koh and Myungtak Jung(KINAC)
- 09:40 Quantitative Analysis of the Civilian Bilateral Cooperation in Front-End of the Nuclear Fuel Cycle**
Viet Phuong Nguyen and Man-Sung Yim(KAIST)
- 10:00 A Study on the Export Control System at KAERI**
I.C. Kim, S.H. Lee, B.D. Lee, H.J. Kim, H.S. Kim, and J.A. Jung(KAERI)
- 10:20 Development Proliferation Resistance Assessment Methodology for Regulation Purposes**
Taekyu Ham, Janghoon Seo, Nayoung Lee, and Hosik Yoo(KINAC)
- 10:40 Coffee Break**
- 11:00 Research on Effectiveness Assessment Programs for Physical Protection System**
Janghoon Seo, Hosik Yoo, and Taekyu Ham(KINAC)
- 11:20 Safeguards Culture on 3S Interfaces**
Yon Hong Jeong, Na Young Lee, and Jae-Jun Han(KINAC)
- 11:40 Examination of State-Level Nuclear Security Method**
Chan Kim, Man-Sung Yim, and So Young Kim(KAIST)
- 12:00 Examination of Relationship between Nuclear Transparency and Nonproliferation**
Jee-Min Ha, Man-Sung Yim, Hyeon Seok Park, and So Young Kim(KAIST)
- 12:20 Uncertainties in Nuclear Proliferation Modeling**
Chul Min Kim, Man-Sung Yim, and Hyeon Seok Park(KAIST)

IV. 분과별 논제 및 발표자

제9분과C

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

좌 장 남영미(Youngmi NAM), 장현섭(Hyun Sop CHANG)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P09C01 Development of Nuclear Energy and Radiation Textbooks for Middle School Students

JaeRok Kim, SeungKoo Lee, YoonSeok Choi, YoungKyu Hahm, JiEun Lee, and EunOk Han(KANS)

P09C02 Nuclear Fuel Cycle Analysis by Integrated AHP and TOPSIS Method Using an Equilibrium Model

S. R. Yoon(UST)

S. Y. Choi(UNIST)

W. I. Ko(KAERI)

P09C03 Survey Analysis on Nuclear Security Culture Recognition of Nuclear Facility in 2014

Yunjeong Hong, Jeongho Lee, and Jaekwang Kim(KINAC)

P09C04 Establishment of Management System for Korea Institute of Nuclear Safety

Soon-Kyoo Han, Jong-Tae Ha, Ku-Young Chung, Je-Hang Lee, and Kyung-Im Kim(KINS)

P09C05 Licensing Trends for Construction of New Nuclear Plants

Bae-Hyeuk Kwon, Kyu-Suk Ahn, Young-Gyun Kim, Tae-Wan Kim, and Jong-Hyuk Baek(KAERI)

P09C06 Modeling for Climate Change in the Aspect of Nuclear Energy Priority : Nuclear Power Energy based Convergence Social-Humanity Analysis

Tae Ho Woo(Systemix Global Co., Ltd.)

P09C07 Preliminary Analysis on the Management Options of IRT-DPRK Research Reactor

Jung-Hyun LEE, Minsoo Kim, and Yongsoo Hwang(KINAC)

P09C08 Examining Prospects of Public Acceptance of Nuclear Power in the Republic of Korea

Ji-eun Joo and Man-Sung Yim(KAIST)

P09C09 Discussion on Safety Analysis Regulatory Framework for the Future Fusion Reactors

Myoung-suk Kang, Kyemin Oh, and Gyunyoung Heo(KHU)

제9분과D

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

좌 장 이나영(Na Young LEE), 문주현(Joohyun MOON)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

P09D01 The KINAC Capabilities to Support Environmental Sampling for Safeguards

Gil Hoon Ahn, Jong-ho Yoon, Hana Seo, Ki-tek Han, and Jung Youn Choi(KINAC)

P09D02 The Study on the Analysis of the Revised Regulation on the Special Nuclear Materials

Seung Ho AHN, Byung Marn KOH, and Ki Hyun KIM(KINAC)

P09D03 Consideration on Measures against Insiders Threats in ROK

Seungmin Lee, Hobin Yim, and Yoonjeong Hong(KINAC)

P09D04 Safeguards Implementation at KAERI

Juang Jung, Sung Ho Lee, Byung-Doo Lee, and Hyun-Sook Kim(KAERI)

P09D05 Development of Training Aids for Nuclear Forensics Exercises

Sangjun Lee, Seungmin Lee, Hobin Lim, Sangcheol Hyung, and Jaekwang Kim(KINAC)

P09D06 Extracting Uranium from Seawater : Benefits, Risks and Policy Implication

Aznan Fazli Ismail, Man-Sung Yim, and Matthew L. Marsh(KAIST)

P09D07 Review on Korea Participation of Generation IV International Forum (GIF)

Jewhan LEE, Ji-Young JEONG, and Dohee HAHN(KAERI)

P09D08 The Status of Implementation on Additional Protocol at KAERI

Hyun-Jo Kim, Sung-Ho Lee, Byung-Doo Lee, and Hyun-Sook Kim(KAERI)

P09D09 Study on Interpretation of the Physical Protection Regulatory Aspects in CPPNM for International Transport of Nuclear Material

Woo-jin Kim, Seong-hyo Yang, and Sang-chul Hyung(KINAC)

IV. 분과별 논제 및 발표자

제10분과A

원자력계측제어 및 자동원격(MMIS & Remote Control)

좌 장 정유희(Yun Hyung Chung), 이광대(Kwangdae Lee)

발표장소 302

일 정 | 5. 7(목)

09:00 Study on Performance Shaping Factors (PSFs) Quantification Method in Human Reliability Analysis (HRA)

Ar Ryum Kim, Inseok Jang, and Poong Hyun Seong(KAIST)
Jinkyun Park(KAERI)
Jong Hyun Kim(KINGS)

09:20 Determination of the Optimized Automation Rate Considering Effects of Automation on Human Operators in Nuclear Power Plants

Seung Min Lee and Poong Hyun Seong(KAIST)
Jong Hyun Kim(KINGS)
Man Cheol Kim(CAU)

09:40 Lessons Learned from Applying Human Factor Engineering Program

Yeonsub Jung, Sungkon Kang, and Jung ho Kim(KHNP CRI)

10:00 Development of a Novel Nuclear Safety Culture Evaluation Method for an Operating Team Using Probabilistic Safety Analysis

Sangmin Han, Seung Min Lee, and Poong Hyun Seong(KAIST)

10:20 A Study on Requirements of Data Base Translator for APR1400 Computerized Procedure System at Shin-Hanul Unit 1&2

Nokyu Seong and Sungjin Lee(KHNP CRI)

10:40 Coffee Break

11:00 Comparative Study of Communication Error between Conventional and Digital MCR Operators in NPPs

Seung Geun Kim and Poong Hyun Seong(KAIST)

11:20 The Basic Framework for Robot Applicability Enhancement of Nuclear Risk Management in Nuclear Power Plants

Young Choi and Kyungmin Jeong(KAERI)
Inn Seock Kim(ISSA Technology, Inc.,)

11:40 COLSS Axial Power Distribution Synthesis Using Artificial Neural Network with Simulated Annealing

K.W. Shim, D.Y. Oh, D.S. Kim, Y.J. Choi, and Y.K. Park(KEPCO NF)

12:00 Quantification of Safety-Critical Software Test Uncertainty

M.Khalaquzaman, Jaehyun Cho, Seung Jun Lee, and Wondea Jung(KAERI)

일 정 | 5. 8(금)

- 09:00 Investigation of Reactivity Feedback Mechanism of Axial and Radial Expansion Effect of Metal-Fueled Sodium-Cooled Fast Reactor**
Seung-Hwan Seong, Chi-Woong Choi, Tae-Kyung Jeong, and Gi-seok Ha(KAERI)
- 09:20 A Suggestion about Framework to Evaluate Operating Support Systems in NPPs**
Moon Kyoung Choi and Poong Hyun Seong(KAIST)
- 09:40 Knowledge Representation Using Multilevel Flow Model in Expert System**
Wenlin WANG and Ming YANG(Harbin Engineering Univ.)
- 10:00 Development of Operation Strategy for Hybrid-SIT in SBO**
In Seop Jeon and Hyun Gook Kang(KAIST)
- 10:20 Prediction of Golden Time for Recovering the Safety Injection System in Severe LOCA Circumstances**
Kwae Hwan Yoo, Dong Young Kim, Geon Pil Choi, Ju Hyun Back, and Man Gyun Na(CSU)
- 10:40 Coffee Break**
- 11:00 Systematic Elicitation of Cyber-security Controls for NPP I&C System**
M.S. LEE and T.H. KIM(Formal Works Inc.,)
S.P. PARK(AhnLab Inc.,)
Y.M. KIM(KINS)
- 11:20 Perspective on Secure Development Activities and Features of Safety I&C Systems**
Youngdoo Kang, Yeong Jin Yu, Hyungtae Kim, Yong il Kwon, Yeunsoo Park, Jaeyul Choo, Jun young Son, and Choong heui Jeong(KINS)
- 11:40 Considerations on Safety Evaluation of Safety grade Smart Transmitter in Nuclear Power Plants**
Hyung Tae Kim and Choong heui Jeong(KINS)

IV. 분과별 논제 및 발표자

제10분과C

원자력계측제어 및 자동원격(MMIS & Remote Control)-Poster

좌 장 허섭(Seop Hur), 박기수(Kisoo Park)

발표장소 3층 로비

일 정 | 5. 7(목) 13:00-15:00

- P10C01 Test and Replacement of the HANARO Neutron Detectors**
Youngsan Choi, Seunggyu Doo, Minwoo Lee, and Junghee Lee(KAERI)
- P10C02 Significance of Multi-Component Risk Importance Measures in Risk-Informed Design of I&C Systems**
Rahman Khalil ur, Kyungho Jin, Moath kassim, and Gyuntoung Heo(KHU)
- P10C03 SG Tube Leakage Monitoring System Using Capillary Ion Chromatography**
Seban Lee, Seungil Kim, Jongsuk Park, Hyunki Kim, Jun Heo, Youngsoo Jo, and Dukwon Kang(Huvis Water Co.,)
- P10C04 The Study on the Lidar's Detection Limit for Iodine Gas**
Dong-Iyul kim, Seung-Hoon Baik, Seung-Kyu Park, Nak-Gyu Park, and Yong-Jin Ahn(KAERI)
- P10C05 The Visualization of the Flowfield Using Lidar's Range Detection and Digital Image Correlation**
Nak-Gyu Park, Seung-Hoon Baik, Seung-Kyu Park, Dong-Iyul Kim, and Young-Jin Ahn(KAERI)
- P10C06 The Measurement of Cloud Velocity Using the Pulsed Laser and Image Tracking Technique**
Seong-Ouk Kwon, Seung-Hoon Baik, Seung-Kyu Park, Nak-Gyu Park, Dong-Iyul Kim, and Young-Jin Ahn(KAERI)
- P10C07 KHNP Safety Culture Framework Based on Global Standard, and Lessons Learned from Safety Culture Evaluation**
Younggab Kim, Nam Young Hur, and Hyeon Jong Jeong(KHNP CRI)
- P10C08 Study on Instrument Fault Detection Using OLM Techniques for PHM Application in NPPs**
Jae Hwan Kim, Gee Yong Park, Jung Taek Kim, and Seop Hur(KAERI)
- P10C09 A Study on the Construct Validity of Safety Culture Oversight Model for Nuclear Power Operating Organization**
Su Jin Jung, Young Sung Choi, and Jang Jin Oh(KINS)
- P10C10 Study of Simplification of Markov Model for Analyzing System Dependability**
Gwang Seop Son(KAERI)
Dong Hoon Kim and Jong Gyun Choi(KAIST)
- P10C11 Power Control Method for Research Reactor**
Dane Baang, Yongsuk Suh, and Cheol Park(KAERI)
- P10C12 An Integrated Test Design for Information Processing System of MMIS**
Jaekwan Park, Sangmun Seo, Yongsuk Suh, and Cheol Park(KAERI)
- P10C13 Survey on Prognostics Techniques for Updating Initiating Event Frequency in PSA**
Hyeoumin Kim and Gyunyoung Heo(KHU)

일 정 | 5. 8(금)

- 09:00 Analysis of Design Variables of Annular Linear Induction Electromagnetic Pump Using an MHD Model**
Jae Sik Kwak and Hee Reyoung Kim(UNIST)
- 09:20 Simple Analysis of an External Vessel Cooling Thermosyphon for a Sodium-cooled Fast Reactor**
Jae Young Choi and Yong Hoon Jeong(KAIST)
Sub Lee Song(HGU)
- 09:40 Estimation of Minimum DNBR Using Cascaded Fuzzy Neural Networks**
Dong Yeong Kim, Kwae Hwan Yoo, and Man Gyun Na(Chosun Univ.)
- 10:00 Turbulent Heat Transfer of a Finned Plate in a Duct as Tip Clearance Changes**
Hae-Kyun Park and Bum-Jin Chung(KHU)
- 10:20 A Component-Scale Thermal-Hydraulic Analysis of the Flow in a CANDU Moderator Tank**
Su Ryong Choi and Jae Jun Jeong(PNU)
Han Young Yoon(KAERI)
- 10:40 Coffee Break**
- 11:00 Fuzzy Uncertainty Evaluation for Fault Tree Analysis**
Ki Beom Kim and HyungJin Shim(SNU)
Moo Sung Jae(HYU)
- 11:20 Growth of Bubble Layer and Onset of Flow Instability in a Vertical Narrow Rectangular Channel**
Juhung Lee, Soon Heung Chang, and Yong Hoon Jeong(KAIST)

IV. 분과별 논제 및 발표자

학생/청년

Competition Session B

좌 장 박창제(Chang Je PARK), 반치범(Chi Bum BAHN)

발표장소 301A

일 정 | 5. 8(금)

- 09:00 Effect of Heat Treatment and Aging Conditions on the Microstructure and Mechanical Properties of HT9 Steel for Fuel Cladding Tube**
Hyeong Min Heo and Jong Lyeol Kim(HYU)
Sung Ho Kim(KAERI)
- 09:20 The Effect of the Reinforcement Volume Fraction on the Properties of Vitreous Carbon-ZrO₂ Composites**
Qusai M. Mistarihi, Malik Adeel Umer, and Ho Jin Ryu(KAIST)
- 09:40 Effect of the Boron and Nitrogen on Precipitation Behavior in Modified 9Cr Steel for SFR Fuel Cladding After Aging**
Eun-Hee Jeong and Young-Do Kim(HYU)
Sung-Ho Kim(KAERI)
- 10:00 The Effect of Protective Coating on the LOCA Simulation of Zircaloy-4 Cladding**
Faris B. Sweidan, You Ho Lee, and Ho Jin Ryu(KAIST)
- 10:20 The Effects of CO₂ Pressure on Corrosion and Carburization Behaviors of Chromia-Forming Austenitic Alloys**
Ho Jung Lee, Sung Hwan Kim, and Changheui Jang(KAIST)
- 10:40 Coffee Break**
- 11:00 Multi-Group Covariance Data Generation from Continuous-Energy Monte Carlo Transport Calculations**
Dong Hyuk Lee and Hyung Jin Shim(SNU)
- 11:20 Performance Evaluation of CMFD with Superhistory Method on Continuous Energy Monte Carlo Eigenvalue Simulation**
Hyunsuk Lee and Deokjung Lee(UNIST)
- 11:40 New Small LWR Core Designs Using Particle Burnable Poisons for Low Boron Concentration**
Ho Seong Yoo, Dae Hee Hwang, and Ser Gi Hong(KHU)
- 12:00 Uranium Enrichment Reduction in the PGSFR Core Design**
Chihyung Kim, Donny Hartanto, and Yonghee Kim(KAIST)

일 정 | 5. 8(금)

- 09:00 The Capability of Isotopic Uranium Analysis in Nuclear Material at KINAC**
Jong-Ho Yoon, Jung Youn Choi, and Gil Hoon Ahn(KINAC)
- 09:20 The Effect of Calcium Ions on Uranium(VI) Sorption onto Kaolinite**
Yongheum Jo, Jun-Yeop Lee, and Jong-Il Yun(KAIST)
- 09:40 Monte Carlo Design and Simulation of a Grid-Type Multi-layer Pixel Collimator for Radiotherapy : Feasibility Study**
Han-Back Shin, Do-Kun Yoon, and Tae Suk Suh(Catholic Univ.)
- 10:00 Two Dimensional Raman Mapping with Respect to Carbon Bonds of Radiochromic Films : An Approach to Micro-dosimetry**
Taemin Heo, Hyeonsuk Park, and Sung-Joon Ye(SNU)
- 10:20 GPU-based Prompt Gamma Ray Imaging from Boron Neutron Capture Therapy**
Do-Kun Yoon, Joo-Young Jung, and Tae Suk Suh(Catholic Univ.)
- 10:40 Coffee Break**
- 11:00 Statistical Analysis for Discrimination of Prompt Gamma Ray Peak Induced by High Energy Neutron : Monte Carlo Simulation Study**
Moo-Sub Kim, Joo-Young Jung, and Tae Suk Suh(Catholic Univ.)
- 11:20 Measuring Dose Profiles and Surface Dose Rates of Sealed Pure-beta Sources to Determine Radioactivity**
Seongmoon Jung, Chang Heon Choi, and Sung-Joon Ye(SNU)
- 11:40 Quantitative Analysis of Proton Boron Fusion Therapy (PBFT) in Various Conditions**
Joo-Young Jung, Do-Kun Yoon, and Tae Suk Suh(Catholic Univ.)

IV. 분과별 논제 및 발표자

한국연구재단

2014년도(제13기) 원자력대학생 논문연구회

발표장소 3층 로비

번호 | 5. 7(목) 13:00-15:00

- 1 **Analysis of Neutral Beam Injection Characteristics by Considering Plasma Particle Motions**
B.J. Kang, D.H. Na, and Y.S. Na(SNU)
- 2 **Development of Transport Cross Section based on Inflow Neutron Current Conservation**
Jun Su Kang and Han Gyu Joo(SNU)
- 3 **Animal Hospital of Gwangju Area according to the X-ray Generator Used Pipokryang Investigation of Animal Carers and Radiation Workers**
Kang ji seung, Yeo hwa yeon, and Yun seon yeong(The Nambu Univ.)
- 4 **Experimental Study of Forced Convective Heat Transfer for the Tes Tsection Simulated with Non-uniform PWR Power Distributions**
Jinsu Kwon(HYU)
- 5 **Design of Large-scale Compton Camera for Radioactive Contamination Monitoring**
Heungrok Kwon(HYU)
- 6 **Development of Reconstruction Module for ENDF Resonance Cross Sections**
Jun Hyoung Gil, Dong Hyuk Lee, and Hyung Jin Shim(SNU)
- 7 **Evaluation of Radiation Damage in First-wall of Fusion Reactor Using Monte Carlo Code**
Kyung-Jun Kim, San Chae, and Yong-soo Kim(HYU)
- 8 **Study on VEST Glow Discharge System and Tokamak Wall Cleaning**
Doyeon Kim, Jeong-hun Yang, and Y.S. Hwanga(SNU)
- 9 **Evaluation of Radiation Dose for Health Professional Using Angle Change in the C-arm**
Dongku Kim and Sungjin Go(Catholic Univ.)
- 10 **A Study on Comparative Analysis of Mammography and Tc-99m MIBI Scintimammography for Dense Breast**
Ba-UI Kim, Eun-Mi Jeong, Ho-Sung Kim, Il-Bong Moon, and Kyung-Rae Dong(GHU)
- 11 **A Study to Decrease Exposure Dose for the Radiotechnologist in PET/CT**
Bit-Na Kim and Hoon-Hee Park(Shingu College)
- 12 **Evaluation of Images Depending on an Attenuation Correction in a Brain PET/CT Scan**
Seong-Jin Kim, Eun-Jin Choi, Il-Bong Moon, and Kyung-Rae Dong(GHU)
- 13 **An Application of T-PEN Method to Pin Power Reconstruction**
Seong Chan Kim and Han Gyu Joo(SNU)

-
- 14 A Study on the Medical X-ray Detection by Using CMOS Camera of Smartphone**
Se Eun KIM, Han Gyu KANG, and Ho Chul KIM(Eulji Univ.)
 - 15 Benchmark Analysis for ADS KUCA Experiment: Reactivity and Indium Wire Reaction Rate**
Wonkyeong Kim and Deokjung Lee(UNIST)
 - 16 Development of Combining Energy and Front-tracking Navier-Stokessolvers for Direct Numerical Simulations Using MATLAB**
iljin Kim and Hyungdae Kim(KHU)
 - 17 The Usability Evaluation of Application that is Developed the Dynamic Kidney Phantom System in Nuclear Medicine**
Jae-Hyun Kim, Juyoung Lee, and Hoon-Hee Park(Shingu College)
 - 18 Proposal for Wiser Control Policy on Radioactivity in Japanese Produce**
JongHeon Kim(HYU)
 - 19 Design of a Wireless Radiation Monitoring System in Water Based on a Compact Semiconductor**
Tae Wan Kim, Hye Min Park, and Koan Sik Joo(University of Myongji)
 - 20 A Study on Behavior of Precipitate in the Ferritic/Martensitic Steel Cladding under Ultra-long Cycle Fast Reactor Environment at 650 °C**
Tae Yong Kim, Sang Hun Shin, Jeong Hyeon Lee, Jung Ki Lee, and Ji Hyun Kim(UNIST)
 - 21 Molecular Dynamics Study on Thermal Conductivity of Th_{0.8}Ce_{0.2}O₂**
Jinho Ryu and Takuji Oda(SNU)
 - 22 Study on Comparative Analysis of Domestic Media Reports about Radiation**
Yoon Hee MO, Sang Hyun KIM, Mi Hwa LEE, and Ho Chul KIM(EJU)
 - 23 Safety Analysis Study on Passive Cooling System of a Small Modular Reactor**
Da Ham Park and Hyoung Kyu Cho(SNU)
 - 24 The Comparison of Resolution and Quantitative Indices by Reconstruction Methods in Tl-201 Myocardial Perfusion SPECT**
Bo-Kyung Park, Soon-Sang Yoon, and Kyung-Rae Dong(GHU)
 - 25 A Study for Stratification Mechanism of Fraction of Non-condensable Gas**
Yeon-Ha Park and Yeon-gun Lee(JNU)
 - 26 Effect of Energy Groups and Dimension on Convergence Behavior of 2-N CMFD Method for Neutron Diffusion Equation**
Jinsu Park, Yongjin Jeong, and Deokjung Lee(UNIST)
 - 27 X-ray Spectrum Analysis inside Semiconductor Using MCNPX Code**
C. J. Park and K. S. Joo(University of Myongji)
 - 28 A Study on the Reliability Assurance in PET/CT Standardized Uptake Values**
Han-Sol Park, Ju-young Lee, and Hoon-Hee Park(Shingu College)
-

-
- 29 Source Determination Algorithm to Evaluate the Exposed Dose Due to the Use of NORM Added Consumer Products**
Hyo Jun Park, Do Hyeon Yoo, Wook Geun Shin, Jae Gook Lee, and Chul Hee Min(YSU)
- 30 A Study on Skin dose of Radiological Technologists at Coronary Angiography**
Ah-rum Sau and Chang-su Kim(Catholic Univ.)
- 31 Preliminary Study for Development of Double Wall Nuclear Fuel Cladding**
Seongmin Son, Youho Lee, and Jeong Ik Lee(KAIST)
- 32 A Study on The Enhancement of Critical Heat Flux Using Graphene Deposition**
Myung Ju Song, Sung Seek Park, and Nam Jin Kim(JNU)
- 33 Study on the Structure of the Leech Using Synchrotron Radiation**
Jaekwang Shin, Hyunjong Yu, Jiwon Lee, and Onseok Lee(GCU)
- 34 Limit Load Analyses of Multiple Flaws in a SG Tube**
Jae-Min Sim and Yoon-Suk Chang(KHU)
- 35 The Study of NaI(Tl) Detector Application for Environmental Radiation Monitor**
Woo Seok Yang, Tae-Woo Kang, and Jae Woo Park(JNU)
- 36 Study on Radioactive Metallic Surface Decontamination Using CF₄/O₂ Plasma**
Ik-Jun Yang, Jong-Keun Yang, and Heon-Ju Lee(JNU)
- 37 Influence of the Geometry on the Natural Convection Heat Transfer inside a Vertical Pipes**
Seung-Min Ohk and Bum-Jin Chung(KHU)
- 38 Assessment of Neutron and Photon Fluence of Radiotherapy Room**
Gwanju Yoo and Sesik Kang(Catholic Univ.)
- 39 Study on the Hydrophilic Improvement of a Nuclear Fuel Rod Using a DBD Furnuclear Reactor Safety**
So-Won Yoon, Jong-Keun Yang, and Heon-Ju Lee(JNU)
- 40 A Study on the Evaluation of Exposure Dose and Image Quality as a Function of Exposure Conditions in Head Radiography for Children**
Seung-Wan Yun, Sung-Hyun Choi, Chang-Bok Kim, and Kyung-Rae Dong(GHU)
- 41 Fatty Liver Quantitative MRS Analysis According to the Administration Period of High Fat Diet in Rat Model**
Dong-Kyu Lee and Seung-Man Yu(GCU)
- 42 Development of an Optimal Condition for Post Heat-treatment of Ferritic Steel Pipe Bends Manufactured by High-frequency Induction Bending**
Min-Suk Lee and Jin-Weon Kim(CSU)
- 43 Subchannel Analysis of Nano-Fluid Application to APR-1400 Benchmark**
MinHo Lee and In Cheol Bang(UNIST)
-

-
- 44 Confirmation of Applicability of Small Punch Test to the Evaluation of Thermal Aging for Cast Stainless Steels**
Sang Bong Lee and Jin Weon Kim(CSU)
- 45 Dose Comparison on Variable Planning Parameter in Volumetric Modulated Arc Therapy**
Yu Ri Lee, Min Hyuk Choi, Dong Kyun Han, and Jung Seong Ahn(EJU)
- 46 Development of Evaluation Methods in the Sodium Filling State of Sodium-cooled Fast Reactor by Using Digital X-ray Images**
Hyeon-rim Lee, Hye-rim Kim, Woori Choi, A-reum Han, and Youl-hun Seoung(CJU)
- 47 Simultaneous Gamma/Near-Infrared Imaging Using IVIS-Spectrum**
Hyung Seok Lee and Seong Jong Hong(EJU)
- 48 A Study of Adverse Reactions to Computed Tomography Contrast Media**
Dae-Jin Jang, In-Jang Cho, Tae-Hwan Bak, Min-Cheol Lee, and Il-Bong Moon(GHU)
- 49 Measurement of Rn-222 Gas Concentration of Newly Constructed Apartment in Gwangju Gwangsan-Gu**
Hee jun Jang and Sang bock Lee(The Nambu Univ.)
- 50 Analysis of Exposure Dose of Patients and Scatter Radiation by Mobile X-ray**
JEON YOUNG(BAEKSEOK Culture Univ.)
- 51 Accident Interpretation by Analyzing Thermal Variables for LOCA Using MARS Code**
Joon Goo Jeon, Yongjae Lee, and Sung Joong Kim(HYU)
- 52 Measuring Absorbed Dose from Medical X-ray Equipment Using Optically Stimulated Luminescence Dosimetry**
Jung Sook Jin, and Ghjin Gwe Hwan(The Nambu Univ)
- 53 Experimental Investigation of Microlayer Geometry during Single Bubble Nucleate Boiling of Saturated Water**
Seunghyuck Jeong, Satbyoul Jung, and Hyungdae Kim(KHU)
- 54 I-131 Internal Dose Assessment Using the MATLAB Program**
Keunsang Choi, Seongjin Maeng, Han-Ki Jang, and Sang Hoon Lee(KPNU)
- 55 Acquisition Parameters in Chest Digital Tomosynthesis (CDT) System Considering Effective Dose and Imaging Characteristics**
Seungyeon Choi, Sunghoon Choi, Pil-Hyun Jeon, Dong-Hyuk Jang, and Hee-Joung Kim(YSU)
- 56 A Study of the Change of Breast Uptake in Menstrual Cycleon 18F-FDGPET/CT**
Yeo-Jin Tak, Min Soo Park, Juyoung Lee, and Hoon-Hee Park(Shingu College)
- 57 A Study on the Protein Modification of the Eye Lens in Fish by Proton Beam Irradiation**
Do-young Pyeon, Yoonjin OH, and Samyol Lee(DSU)
-

-
- 58 Feasibility Study on the Mass Separation Based on Pitch Angle Diagnostic for Magnetized Ion Energy Measurement**
Se Dong Han, Nam Kyun Kim, Sung Ryul Huh, and Gon Ho Kim(SNU)
- 59 Potential Structure of Constricted DC Plasma Operated at Layered-glow Mode**
Seung Gi Ham, Yuna Lee, Kyoung-Jae Chung, and Y. S. Hwang(SNU)
- 60 Investigation of Microstructure Along Dissimilar Metal Welds Alloy 600 – Alloy 182 – A508 Gr. 3 with Thermal Aging Effect**
Jun Hyuk Ham, Kyoung Joon Choi, Seung Chang Yoo, and Ji Hyun Kim(UNIST)
- 61 Study on Dose Calculation in Dental Panoramic Radiography System and design of X-ray Protective Device for Eyes by Using Monte Carlo Simulation(MCNPXcode)**
Girang HONG, Yoonjin OH, and Samyol Lee(DSU)
- 62 Analysis of KASTAR RMP Characteristics According to Particle Simulation**
Seul-Chan Hong, Min-Gu yoo, and Young-Su Na(SNU)
- 63 Analysis of the AP1000 PWR Initial Core with the Direct Whole Core Calculation Code nTRACER and the Monte Carlo Code McCARD**
Hyun Sik Hong and Han Gyu Joo(SNU)
- 64 Development of Android Smart Personal Radiation Detector Using Arduino**
Jung geun Hwang, Hyun uk Jeon, Da ae Lee, and Sung hwan Kim(CJU)

1. 행사장 교통안내 (공항→제주 국제컨벤션센터(ICC JEJU))

제주 국제컨벤션 센터 : 서귀포시 중문관광로 224 대표번호 : 064-735-1000

▶ 렌트카 이용시

경로	이용노선
1코스 (1135번 도로 : 50분)	공항 → 신제주 → 제주경마장 → 평화로 → 중문관광단지 → ICC JEJU
2코스 (1139번 도로 : 45분)	공항 → 신제주 → 한라수목원 → 신비의 도로 → 어리목 → 탐라대학교 → ICC JEJU
3코스 (1131 도로 : 70분)	공항 → 삼성혈 → 제주대학교 → 성판악 → 돈내코유원지 → 16번 도로 → 중문관광단지 → ICC JEJU

▶ 공항리무진 버스 이용시 (600번 제주공항↔중문관광단지)

운행일정	06:20~22:00
소요시간	약 18~20분 간격(ICC JEJU까지 소요시간 : 50분)
운행구간 (*삼영교통 600번)	공항 → 제주더호텔 → 여미지식물원 → 하얏트호텔 → 신라호텔 → 롯데호텔 → 한국콘도 → ICC JEJU → 뉴경남호텔 → 서귀포 칼호텔
승차지점	* 공항 : 현관 1층 게이트 왼쪽 리무진 버스 승차장(*삼영교통 600번) * ICC JEJU : 정문국기계양대 20M 지나 로터리 정류장에 정차
이용요금	공항에서 ICC JEJU까지 4,500원(편도/성인)
문의사항	삼영교통 064-746-3036

▶ 택시 이용시

승차지점	이용요금	소요시간
장거리 승차장에서 출발	약 3만원	약 45분

2. 항공예약

항공편 문의 및 예약	보람21 여행사 T. 02-2248-7040
-------------	--------------------------

V. 행사장 안내

3. 행사장 배치도

- 등록 및 접수 : 5. 6(수)~5. 8(금) / 3층 로비
- 개회식 및 특별강연 : 5. 7(목) 15:30~18:00 / 한라홀 (3층)
- 포스터 발표 : 5. 7(목) 13:00~15:00 / 3층 로비
- 만찬 : 5. 7(목) 18:00 / 탐라홀 B+C (5층)
- 중식 : 5. 7(목)~5. 8(금) 12:00~13:30 / 탐라홀 B+C (5층)

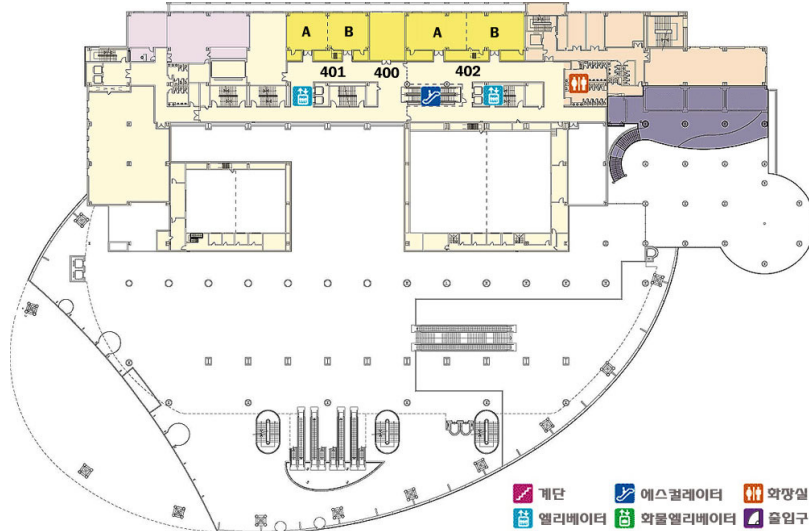
2F



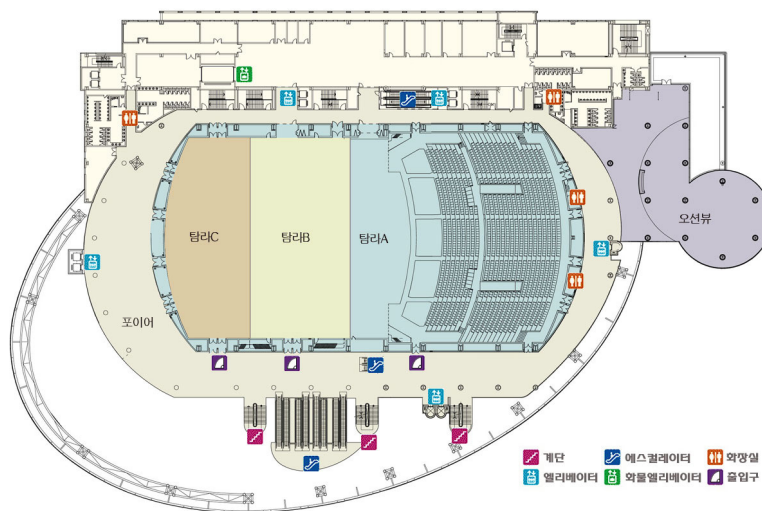
3F



4F



5F



Ⅵ. 연구부회 모임 일정

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

• 일 시 : 2015년 5월 7일(목) 13:30 ~ 14:30

[연구부회별 모임 장소]

구분	연구부회명	모임 장소	위치
1	원자로시스템기술	삼다홀A	3층
2	원자로물리 및 계산과학	202A	2층
3	방사성폐기물관리	300	3층
4	핵연료 및 원자력재료	201B	2층
5	원자력열수력 및 안전	400	4층
6	방사선이용 및 방호	201A	2층
7	양자공학 및 핵융합기술	203	2층
8	원전건설 및 운영기술	303B	3층
9	원자력정책, 인력 및 협력	303A	3층
10	원자력계측제어 및 자동원격	302	3층

VII. 행운권(경품) 행사

www.kns.org

우리 학회에서는 2015 춘계학술발표회 행사와 더불어 회원분들을 위하여 아래와 같이 행운권(경품) 행사를 마련하였사오니, 많은 참여 바랍니다.

▶ 추첨 일정

구분	일시	장소	비고
1차	2015. 5. 7(목) 18:30	탐라홀 B+C	만찬시
2차	2015. 5. 8(금) 12:40	탐라홀 B+C	중식시

▶ 대 상 자 : 학술발표회 등록 회원(사전등록 및 현장등록)

▶ 운영방법 : 추첨을 통하여 추첨시 참석한 회원에게 경품 지급