

RRFM
EUROPEAN RESEARCH
REACTOR CONFERENCE **2017**



Programme

14 – 18 May 2017

Rotterdam, The Netherlands



ENS CONFERENCE

Organised in cooperation with



RRFM
EUROPEAN RESEARCH
REACTOR CONFERENCE **2017**



RRFM 2017 Gold Sponsor

Sunday 14 May 2017

17:00 - 19:00 Pre-registration

18:00 – 19:30 Welcome Reception

Offered by



ROSATOM

Monday 15 May 2017

Mo 9.00 – 11.00 Opening Plenary Session

Chair: S. van Dyck, SCK-CEN, Belgium

	60 YEARS OF INTERNATIONAL ATOMIC ENERGY AGENCY AND EU RESEARCH REACTORS: WHERE WE WERE AND WHERE WE ARE NOW	F. Marshall, IAEA
RRFM2017-A0022	EURATOM ACHIEVEMENTS AND CHALLENGES IN FACILITATING PAN-EUROPEAN INFRASTRUCTURE COLLABORATIVE EFFORTS	Garbil, R. (1) 1 - European Commission, DG Research and Innovation, Euratom Fission Unit, Brussels, Belgium
RRFM2017-A0124	HEU MINIMIZATION: THE EVOLVING U.S. ROLE IN CONVERTING CIVILIAN RESEARCH REACTORS FROM HEU FUEL TO LEU FUEL	Waud, B. (1), J. Chamberlin (1); Landers, C. (1); Ravenhil, S. (1); Dicker4son, J. (1) 1 - NNSA, United States
RRFM2017-A0091	DIVA: DUTCH ISOTOPE VALLEY	Wolterbeek, B. (1) 1 - Delft Technical University, Netherlands
RRFM2017-A0103	REALISING THE PALLAS-REACTOR, STATUS UPDATE OF THE PROJECT	Van der Marel, J. (1) 1 - Pallas, Netherlands

Mo 11.00 – 11.30 Coffee break

Mo 11.30 – 13.30 Parallel session: Fuel Development

Chair: B.Stepnik, AREVA, France

RRFM2017-A0016	MICROSTRUCTURAL CHARACTERIZATION OF U-MO FUELS: UN-IRRADIATED AND IRRADIATED SAMPLE RESULTS	Keiser, jr., D. (1); Jue, J.-F. (1); Gan, J. (1); Miller, B. (1); Trowbridge, T. (1); Robinson, A. (1); Perez, E. (1); He, L. (1); Madden, J. (1); Abir, M. (1) 1 - Idaho National Laboratory, United States
RRFM2017-A0089	USHPRR FUEL FABRICATION CAPABILITY PILLAR BASELINE PROCESS AND ALTERNATIVES	Wight, J. (1) 1 - Pacific Northwest National Laboratory, United States
RRFM2017-A0035	KJRR FUEL(U-7MO DISPERSION) QUALIFICATION ON-GOING STATUS	Yim, J. (1); Tahk, Y. (1); Oh, J. (1); Kim, H. (1); Kong, E. (1); Park, J. (1); Jeong, Y. (1); Lee, K. (1); Beasley, A. (2); Choi, Y. (2); Woolstenhulme, N. (2); Nielson, J. (2); Lee, E. (1); Lee, B. (1); Kim, S. (1); Crawford, D. (2) 1 - KAERI (Korea Atomic Energy Research Institute), Korea, Republic of 2 - INL(Idaho National Lab), United States
RRFM2017-A0052	IRRADIATION PERFORMANCE OF THE HAMP-1 MINI-PLATE FUELS	Park, J. M. (1); Tahk, Y. W. (1); Jeong, Y. J. (1); Lee, K. H. (1); Kim, H. (1); Yoo, B. O. (1); Jung, Y. H. (1); Seo, C. G. (1); Yim, J. S. (1); Kim, Y. S. (2); Bei, Y. (2); Hofman, G. L. (2) 1 - KAERI, Korea, Republic of 2 - ANL, United States
RRFM2017-A0074	PRODUCTION RESULTS OF MONOLITHIC UMO PLATES FOR THE EMPIRE IRRADIATION EXPERIMENT	Steyer, C. (1); Baumeister, B. (1); Breitzkreutz, H. (1); Petry, W. (1); Stepnik, B. (2); Grasse, M. (2); Moyroud, C. (2); Johnson, R. (3); Mayfield, R. (3); Argon, G. (3) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany 2 - AREVA NP (CERCA), France 3 - BWXT Nuclear Operations Group, United States
RRFM2017-A0131	U-Mo Fuel Swelling Analysis	Robinson, A. (1); Williams, W. (1); Rabin, B. (1); Lybeck, N. (1) 1 - Idaho National Laboratory, United States

Mo 11.30 – 13.30 Parallel session: Research reactor operation & maintenance and ageing management

Chair: J. Estrade, CEA, France

RRFM2017-A0001	SUSTAINABLE OPERATIONS OF NUCLEAR RESEARCH REACTORS - A BIBLIOGRAPHICAL STUDY	Kibrit, E. (1); Aquino, A. R. (1); Mello, A. M. (2); Nascimento, P. T. D. S. (2) 1 - Instituto de Pesquisas Energéticas e Nucleares, IPEN-CNEN/SP, Brazil 2 - Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo, Brazil
RRFM2017-A0003	AGEING MANAGEMENT OF PAKISTAN RESEARCH REACTOR-1(PARR-1)	Iqbal, M. (1); Latif, M. (1) 1 - PINSTECH, Pakistan Atomic Energy Commission, Pakistan
RRFM2017-A0032	THE RESTART OF THE BR2 REACTOR AFTER ITS THIRD REFURBISHMENT	Van Dyck, S. (1); Van den Branden, G. (1) 1 - SCKCEN, Belgium
RRFM2017-A0036	FRM II CONVERTER FACILITY: MAJOR MAINTENANCE AND FUEL EXCHANGE	Zill, V. (1); Pichlmaier, A. (1); Gerstenberg, H. (1) 1 - Technische Universität München; FRM II, Germany
RRFM2017-A0061	FRM II: REPLACEMENT OF THIMBLES MADE FROM ALMG3 (EN AW-5754) FORMING A BARRIER BETWEEN HEAVY AND LIGHT WATER AFTER DETECTION OF CORROSION	Pichlmaier, A. (1); Gerstenberg, H. (1); Kastenmüller, A. (1); Krokowski, C. (1); Lichnovsky, U. (1); Schätzlein, R. (1); Schmidt, M. (1) 1 - TU-München, ZWE FRM II, Germany
RRFM2017-A0093	SM REACTOR CORE MODERNIZATION PROGRAM	Izhutov, A. (1); Vinokurov, V. (1); Malkov, A. (1); Petelin, A. (1); Pimenov, V. (1); Sazontov, S. (1); Starkov, V. (1) 1 - JSC "SSC RIAR", Russian Federation

Mo 13.30 – 14.30 Lunch break

Mo 14.30 – 16.10 Parallel session: Fuel Development II

Chair: H. Breitzkreuz, TU Munich, Germany

RRFM2017-A0085	MODELING OF THE INTEGRITY OF THE COATING OF ZRN-COATED U-MO/AL DISPERSION FUEL DURING FABRICATION	Jeong, G. Y. (1); Kim, Y. S. (2); Sohn, D.-S. (1); Cho, T. W. (1); Lee, K. H. (3); Mohamed, W. (2) 1 - UNIST, Korea, Republic of 2 - ANL, United States 3 - KAERI, Korea, Republic of
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RRFM2017-A0027	U.S. PROGRESS IN U-MO MONOLITHIC FUEL DEVELOPMENT	Rabin, B. (1); Cole, J. (1); Glagolenko, I. (1); Robinson, A. (1); Keiser, D. (1); Ozaltun, H. (1); Williams, W. (1); Rice, F. (1); Moore, G. (1); Smith, J. (1); Zhang, Y. (1); Meyer, M. (1); Wachs, D. (1); Hofman, G. (2); Yei, B. (2); Kim, Y. S. (2) 1 - Idaho National Laboratory, United States 2 - Argonne National Laboratory, United States
RRFM2017-A0095	EUROPEAN MINI-PLATE IRRADIATION EXPERIMENT STATUS UPDATE	Glagolenko, I. (1); Housley, G. (1); Nielsen, J. (1); Crawford, D. (1); Hawks, B. (1); Wiest, J. (1); Moore, G. (1); Kraft, N. (1); Cottle, D. (1); Fox, D. (1); Trowbridge, T. (1); Keiser, jr., D. (1); Martinson, S. (1); Schulthess, J. (1) 1 - Idaho National Laboratory, United States
RRFM2017-A0120	IRRADIATION EFFECTS IN Si AND ZrN COATED UMo PARTICLES STUDIED WITH TRANSMISSION ELECTRON MICROSCOPY	Van Renterghem, W. (1); Leenaers, A. (1); Van den Berghe, S. (1); Miller, B. (2); Gan, J. (2); Madden, J. (2); Keiser, D. (2); Palancher, H. (3); Hofman, G. (4); Breitzkreuz, H. (5) 1 - SCK•CEN, Belgium 2 - Idaho National Laboratory, United States 3 - CEA Cadarache, France 4 - Argonne National Laboratory, United States 5 - Technische Universität München, Germany

Mo 14.30 – 16.10 Parallel session: Low power research reactors, critical and subcritical assemblies

Chair: H. Böck, TU Vienna, Austria

RRFM2017-A0023	PC BASED RESEARCH REACTOR SIMULATOR	Snoj, L. (1); Malec, J. (1); Toškan, D. (1) 1 - Jozef Stefan Institute, Slovenia
RRFM2017-A0040	UTILIZING RESEARCH REACTOR SIMULATORS FOR REACTOR OPERATOR TRAINING	Takasugi, C. (1); Schow, R. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States
RRFM2017-A0062	EDUCATIONAL PROGRAMMES IN MARIA REACTOR.	Lipka, M. (1) 1 - National Centre for Nuclear Research, Poland

RRFM2017-A0028	MODELLING AND CALCULATIONS OF CRITICAL CORE CONFIGURATIONS OF THE ANNA ZERO-POWER REACTOR IN KENO-VI/SCALE	Koszuk, L. (1); Klisinska, M. (1) 1 - National Centre for Nuclear Research, Poland
RRFM2017-A0058	INTEGRAL BENCHMARKING AT LR-0 REACTOR	Losa, E. (1); Košťál, M. (1); Koleska, M. (1) 1 - Research Centre Rez, Czech Republic

Mo 16.10 – 16.40 Coffee break

Mo 16.40 – 18.00 Parallel session: Research reactor nuclear fuel cycle

Chair: S. Van den Berghe, SCK-CEN, Belgium

RRFM2017-A0118	MICROSTRUCTURAL CHARACTERIZATION OF THE SELENIUM 1A FUEL PLATE	Leenaers, A. (1); Salvato, D. (1); Van den Berghe, S. (1); Lee, C.-T. (2); Jeong, Y. (2); Kim, K. (2); Lee, K. (2); Kim, S. (2) 1 - SCK•CEN, Belgium 2 - KAERI, Korea, Republic of
RRFM2017-A0021	POST-CONVERSION ACTIVITIES: STANDARDIZATION OF METHODOLOGIES FOR OPTIMAL AND EFFECTIVE UTILIZATION OF MNSR FACILITIES FOR NAA	Jonah, S. (1) 1 - Centre for Energy Research and Training, Ahmadu Bello University, Zaria, Nigeria
RRFM2017-A0110	U.S. HIGH PERFORMANCE RESEARCH REACTOR CONVERSION PROGRAM: AN OVERVIEW ON ELEMENT DESIGN	Wilson, E. H. (1); Bergeron, A. (1); Stillman, J. (1); Heltemes, T. (1); Jaluvka, D. (1); Jamison, L. (1) 1 - Argonne National Laboratory, United States
RRFM2017-A0115	CONVERSION OF THE GHANA'S MINIATURE NEUTRON SOURCE REACTOR FROM HEU TO LEU	Odoi, H. C. (1); Aboh, I. J. K. (2); Abrefah, R. G. (2); Birikorang, S. A. (2); Gbadago, J. K. (1); Osei-Mensah, W. (1); Amponsah-Abu, E. O. (1); Gyamfi, K. (1); Shitsi, E. (1); Ampong, A. G. (1); Quagraine, R. E. (1) 1 - Ghana Atomic Energy Commission, Ghana 2 - Nuclear Regulatory Authority of Ghana, Ghana

Mo 16.40 – 18.00 Parallel session: Utilisation of research reactors I

Chair: D. Schoonen, Idaho National Laboratory, United States

RRFM2017-A0051	PROGRESS IN HIGH DPA IRRADIATION TESTING AT HANARO	Choo, K. (1); Cho, M. (1); Yang, S. (1); Shin, Y. (1); Park, S. (1); Jun, B. (1); Kim, M. (1)
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		1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2017-A0057	LARGE OBJECT IRRADIATION FACILITY IN THE TANGENTIAL CHANNEL OF THE JSI TRIGA REACTOR	Radulović, V. (1); Stepišnik, M. (1); Kaiba, T. (1); Kavšek, D. (1); Cindro, V. (1); Mikuž, M. (1); Snoj, L. (1) 1 - Jožef Stefan Institute, Slovenia
RRFM2017-A0067	COMMISSIONING TESTS OF THE NEW NEUTRON RADIOGRAPHY FACILITY AT THE LVR-15 REACTOR	Soltes, J. (1); Viererbl, L. (1); Krejci, F. (2); Zemlicka, J. (2) 1 - Research Centre Rez Ltd., Czech Republic 2 - Institute of Experimental and Applied Physics, Czech Technical University in Prague, Czech Republic
RRFM2017-A0038	RE-IMAGINED EMERGENCY PLAN DEVELOPMENT AND TRAINING FOR RESEARCH REACTORS	Schow, R. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States

Tuesday 16 May 2017

Tu 9.00 – 10.00 Parallel session: Research reactor nuclear fuel cycle

Chair: F. Marshall, IAEA

RRFM2017-A0117	CONVERSION OF KUCA DRY CORES WITH THE USE OF DISPERSED U7MO FUEL	Aliberti, G. (1); Morman, J. A. (1); Stevens, J. G. (1) 1 - Argonne National Laboratory, United States
RRFM2017-A0013	OXIDATION STUDIES OF MTR FUEL PLATES IN REACTOR CONDITIONS	Valdez Tordoya, D. (1); Haddad, R. (1) 1 - CNEA, Argentina
RRFM2017-A0105	TRIGA FUEL FABRICATION FACILITY UPGRADE - CURRENT STATUS AND RESTART PLAN	Veca, A. (1); Morrell, D. (2); Chorpard, F. (3); Geslin, D. (4); Osborne, K. (5); Quinn, A. (1) 1 - General Atomics Corp., United States 2 - Idaho National Laboratory, United States 3 - AREVA - TA, France 4 - AREVA - CERCA, France 5 - US Department of Energy - Office of Nuclear Energy, United States

Tu 9.00 – 10.00 Parallel session: Utilisation of research reactors II

Chair: H. Gerstenberg, TU Munich, Germany

RRFM2017-A0122	THE NEW NUCLEAR HEATING CALORIMETER KAROLINA AND DEDICATED EXPERIMENTAL CAMPAIGN IN MARIA RESEARCH REACTOR	Tarchalski, M.(1); Pytel, K. (1), Prokopowicz, R.(1), Luks, A.(2) 1- NCBJ Institute, MARIA Reactor, Poland 2- Institute of Heat Engineering, Poland
RRFM2017-A0125	OPTIMIZING PALLAS REACTOR UTILISATION TO SUPPORT AN ECONOMICALLY VIABLE BUSINESS CASE	Zekveld, D. (1); Tielens, T. (1) 1 - PALLAS, Netherlands
RRFM2017-A0126	THEORETICAL RESEARCH OF WEAK NEUTRON SOURCE INDUCED BURSTS IN FAST NEUTRON REACTOR	Liu, J.-J. (1); Zhu, J. (1) 1 - Institute of Applied Physics and Computational mathematics, China

Tu 10.00 – 10.30 Coffee break

Tu 10.30 – 12.10 Parallel session: Fuel back end I

Chair: I. Vidovszky, Centre for Energy Research (CER), Hungary

RRFM2017-A0055	MEASURING THE AXIAL PROFILE OF SPENT NUCLEAR FUEL BURN-UP BY SPONTANEOUS-FISSION-NEUTRONS	Prokopowicz, R. (1); Pytel, K. (1); Marcinkowska, Z. (1); Bienkowska, B. (2); Tarchalski, M. (1) 1 - National Centre for Nuclear Research, Poland 2 - Institute of Plasma Physics and Laser Microfusion, Poland
RRFM2017-A0019	USE OF A DEEP AND NARROW POOL TO STORE SPENT FUEL	Novara, O. (1); Beuter, O. (1); Ratner, M. (1); Flores, M. (1) 1 - NATIONAL COMMISSION OF ATOMIC ENERGY (CNEA), Argentina
RRFM2017-A0044	REPROCESSING OF RESEARCH REACTOR SPENT FUEL AND MANAGEMENT OF THE ARISING WASTE	Domingo, X. (1); Valery, J.-F. (1); Vo Van, V. (1); Lefort-Mary, F. (1) 1 - AREVA NC, France
RRFM2017-A0104	SUSTAINABLE MANAGEMENT OF AUSTRALIAN RESEARCH REACTOR SPENT FUEL	Finlay, R. (1); Healy, M. (1); Dimitrovski, L. (1); Halle, L. (2); Domingo, X. (2); Jacot, P. (3); Kalifa, M. (3) 1 - Australian Nuclear Science and Technology Organisation (ANSTO), Australia 2 - AREVA NC, France 3 - AREVA TN, France
RRFM2017-A0059	NUCLEAR AND RADIATION SAFETY ANALYSIS OF DISCHARGE, TEMPORARY STORAGE AND PREPARATION IIN-3M RR LSNF FOR TRANSPORTATION TO REPROCESSING	Komarov, S. (1); Gaiazov, A. (1); Derganov, D. (1); Rozhnovskaia, A. (1); Polovnikov, O. (1); 1 - Sosny

Tu 10.30 – 12.10 Parallel session: Innovative methods in reactor physics and thermo-hydraulics I

Chair: G. Hofman, Argonne National Laboratory, United States

RRFM2017-A0005	THERMAL-HYDRAULIC ANALYSIS OF LOSS OF FLOW ACCIDENT IN THE IAEA 10 MW MTR RESEARCH REACTOR	Altamimi, R. (1); Al-Yahia, O. (2); Albate, M. (1) 1 - Jordan Research and Training Reactor, Jordan Atomic Energy Commission, Jordan 2 - School of Mechanical Engineering, Kyungpook National University, Korea, Republic of
RRFM2017-A0014	IMPROVEMENTS IN THE DETERMINATION OF REACTIVITY COEFFICIENTS OF PARR-1 RESEARCH REACTOR	Khan, R. (1); Ali, M. R. (1); Qayyum, F. (1); Stummer, T. (2) 1 - Pakistan Institute of Engineering and Applied Sciences, Pakistan 2 - Vienna University of Technology, Austria
RRFM2017-A0015	SERPENT-2 REACTOR MODEL VALIDATION AT THE VIENNA TRIGA MARK II REACTOR	Cagnazzo, M. (1); Herzog, H. (1); Böck, H. (1); Villa, M. (1) 1 - Atominstitut, Vienna University of Technology, Austria
RRFM2017-A0039	COUPLING OF NEUTRONICS AND OPTIMIZATION CODES FOR RESEARCH REACTOR OPERATIONAL PARAMETERS	Schow, R. (1); Kim, D. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States
RRFM2017-A0047	IMPROVED ON-LINE FUEL MANAGEMENT METHODOLOGY FOR THE TEST PEBBLE BED HIGH TEMPERATURE REACTOR	Xia, B. (1); Wei, C. (1); Guo, J. (1); Li, F. (1); Zhang, J. (1) 1 - Institute of Nuclear and New Energy Technology, Tsinghua University, China

Tu 12.10 – 13.00 Lunch break

Tu 13.00 – 14.00 Plenary session: Poster session

Tu 14.00 – 16.00 Parallel session: Fuel back end II

Chair: X. Domingo, AREVA, France

RRFM2017-A0100	CURRENT STATUS OF IAEA CRP "OPTIONS AND TECHNOLOGIES FOR MANAGING THE BACK END OF THE RESEARCH REACTOR NUCLEAR FUEL CYCLE"	Marshall, F. (1); Mayer, S. (1); Jinchuk, D. (1) 1 - International Atomic Energy Agency, Austria
RRFM2017-A0045	RESEARCH REACTOR SILICIDE FUEL REPROCESSING AT AREVA LA HAGUE	Domingo, X. (1); Valery, J.-F. (1); Hallé, L. (1); Pechard, C. (2); Renault, X. (2); Vo Van, V. (1) 1 - AREVA NC, France 2 - AREVA NC La Hague, France

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RRFM2017-A0072	ALTERNATIVE OPTIONS FOR THE TRANSPORT AND INTERMEDIATE STORAGE OF SPENT NUCLEAR FUEL FROM THE FINNISH TRIGA REACTOR FIR 1 TO THE DOMESTIC FINAL REPOSITORY OF POSIVA	Auterinen, I. (1); Suolanen, V. (1) 1 - VTT Technical Research Centre of Finland, Finland
RRFM2017-A0097	DESIGN FOR LONG-TERM STORAGE OF HLW AND RRF IN THE NETHERLANDS	Verhoef, E. (1); Berntsen, M. (1) 1 - COVRA, Netherlands
RRFM2017-A0026	COATINGS TO PROTECT SPENT ALUMINIUM-CLAD RESEARCH REACTOR FUEL DURING EXTENDED WET STORAGE	Fernandes, S. M. (1); Correa, O. V. (1); De Souza, J. A. (1); Ramanathan, L. (1); Antunes, R. (2); Oliveira, M. (3) 1 - Instituto de Pesquisas Energéticas e Nucleares, Brazil 2 - Engineering, Modeling and Applied Social Sciences Center (CECS), Federal University of ABC, Brazil 3 - Electrocell Ind. Com. Equip. Elet. LTDA, CIETEC, Brazil
RRFM2017-A0041	UNIVERSITY OF UTAH RESEARCH REACTOR WASTE MANAGEMENT	Takasugi, C. (1); Schow, R. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States

Tu 14.00 – 16.00 Parallel session: Innovative methods in reactor physics and thermo-hydraulics

Chair: M. Cagnazzo, TU Vienna, Austria

RRFM2017-A0066	GAMMA IRRADIATION IN THE JSI TRIGA REACTOR	Ambrožič, K. (1); Radulović, V. (1); Snoj, L. (1) 1 - F8, Reactor physics department, "Jožef Stefan" Institute, Slovenia
RRFM2017-A0064	HIGH PRECISION NEUTRONIC CALCULATIONS FOR TRANSIENT SIMULATIONS FOR FRM II	Reiter, C. (1); Breikreutz, H. (1); Röhrmoser, A. (1); Seubert, A. (2); Petry, W. (1) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany 2 - Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH, Germany
RRFM2017-A0065	BERYLLIUM POISONING MODEL FOR RESEARCH REACTORS	Wróblewska, M. (1); Boettcher, A. (1); Marcinkowska, Z. (1); Pytel, K. (1); Jagielski, J. (1); Sireta, P. (2); Blaise, P. (2) 1 - National Centre For Nuclear Research, Poland 2 - French Alternative Energy and Atomic Energy Commission, France

RRFM2017-A0009	SWAP EXPERIMENTS ON CONTROL RODS AND BERYLLIUM REFLECTOR ELEMENTS AT HOR	Winkelman, A. (1) 1 - TUDelft/RID, Netherlands
RRFM2017-A0069	A MULTI-PHYSICS ANALYSIS FOR THE ACTUATION OF THE SSS IN OPAL REACTOR	Ferraro, D. (1); Alberto, P. (1); Villarino, E. (1); Doval, A. (1) 1 - INVAP S.E., Argentina
RRFM2017-A0080	NEUTRONIC UNCERTAINTIES ANALYSIS IN OPAL REACTOR	Villarino, E. (1) ; Fabisik, J.J. (1) 1 - INVAP SE, Argentina

Tu 16.00 – 16.30 Coffee break

Tu 16.30 – 17.10 Parallel session: Research reactor safety

Chair: B. Vidal, TechnicAtome, France

RRFM2017-A0053	IMPLEMENTATION OF SAFEGUARDS AND SECURITY OF NUCLEAR MATERIALS	Kraikaew, J. (1); Phenboanmee, T. (2) 1 - Bureau of Nuclear Safety Regulation, Office of Atoms for Peace, Thailand 2 - Safety Unit, Thailand Institute of Technology (Public Organization), Thailand
RRFM2017-A0109	LICENSING THE PALLAS-REACTOR, TO DUTCH SAFETY REQUIREMENTS BY ENSURING THE DESIGN AND LICENSING INTERFACE	Van der Linden, N. (1); Visser, M. (1); 1 - PALLAS, Netherlands

Tu 16.30 – 17.30 Parallel session: Innovative methods in reactor physics and thermo-hydraulics

Chair: A. Winkelman, TU Delft, the Netherlands

RRFM2017-A0096	REFLECTOR FEATURES AND PHYSICS CONSIDERATION OF THE JULES HOROWITZ REACTOR	Privas, E. (1); Chabert, L. (1) 1 - TechnicAtome, France
RRFM2017-A0098	DART-2D – A FUEL PERFORMANCE CODE FOR FULL-SIZE U-MO DISPERSION FUEL SIMULATION	Ye, B. (1); Bergeron, A. (1); Hofman, G. (1); Kim, Y. S. (1); Leenaers, A. (2); Van den Berghe, S. (2); Kuzminov, V. (2) 1 - Argonne National Laboratory, United States 2 - SCK·CEN, Belgium
RRFM2017-A0113	ADVANCED MULTIPHYSICS COMPUTATIONAL FLUID DYNAMICS MODELS FOR THE HIGH FLUX ISOTOPE REACTOR	Jain, P. (1); Freels, J. (1); Cook, D. (1); Popov, E. (1); Renfro, D. (1) 1 - Oak Ridge National Laboratory, United States

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Tu 19.00 Conference Dinner at the Wereldmuseum Rotterdam

Wednesday 17 May 2017

We 9.00 – 10.20 Decommissioning and dismantling of research reactors and waste management I

Chair: V. Vo Van, AREVA, France

RRFM2017-A0031	THE DECOMMISSIONING OF A PWR EXPERIMENTAL FACILITY DURING THE REFURBISHMENT OF THE BR2 RESEARCH REACTOR	Van den Dungen, K. (1) 1 - SCK-CEN, Belgium
RRFM2017-A0042	PRE-DECOMMISSIONING OF L-54M RESEARCH REACTOR: RADIOLOGICAL PRE-CHARACTERISATION OF STRUCTURES, SYSTEMS AND COMPONENTS	Baldassarre, L. (1); Simone, G. (1); Codispoti, L. (2); Porta, A. (2); Campi, F. (2); Ricotti, M. (2) 1 - Nucleco SpA, Italy 2 - Politecnico di Milano, Italy
RRFM2017-A0046	CESAR5.3: ISOTOPIC DEPLETION FOR RESEARCH AND TESTING REACTOR DECOMMISSIONING	Ritter, G. (1); Eschbach, R. (1); Girieud, R. (1); Soulard, M. (1) 1 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France
RRFM2017-A0049	ACTIVATION ANALYSIS OF DECOMMISSIONING OPERATIONS FOR RESEARCH REACTOR	Meier, H. (1); Brizuela, M. (1); Maître, A. (1); Albornoz, F. (1) 1 - INVAP S.E., Argentina

We 9.00 – 10.20 Parallel session: Research reactor safety & security

Chair: L. Dimitrovski, ANSTO, Australia

RRFM2017-A0048	MAXIMUM POWER FOR A SELF-CONTROLLED LOW POWER REACTOR	Lupiano Contreras, J. (1); Doval, A. (1); Hergenreder, D. (1); Bellino, F. (1) 1 - INVAP S.E., Argentina
RRFM2017-A0084	SAFETY ANALYSIS FOR THE OPTIMIZATION OF THE MOLYBDENUM TARGET IN THE RSG-GAS REACTOR BY USING NEUTRONIC-THERMAL HYDRAULIC COUPLED CODE	Sembiring, T. M. (1); Pinem, S. (1) 1 - Center for Nuclear Reactor Technology and Safety - BATAN, Indonesia
RRFM2017-A0092	STATUS AND FUTURE PLANS OF HANARO RESEARCH REACTOR	Jung, H. S. (1); Lee, C. S. (1); Lee, C. H. (1); Shin, J. W. (1); Hwang, B. H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of

We 10.20 – 10.50 Coffee break

We 10.50 – 12.50 Decommissioning and dismantling of research reactors and waste management II

Chair: A. Dodaro, Nucleco, Italy

RRFM2017-A0119	DECOMMISSIONING CONSORT – CONTROL ROD REMOVAL	Phillips, H. (1); Chambers, T. (1); 1- Imperial College London
RRFM2017-A0056	SAFETY ANALYSIS AND ENVIRONMENTAL IMPACT ASSESSMENT FOR FOTON RTC DECOMMISSIONING	Komarov, S. (1); Gaiazov, A. (1); Rozhnovskaia, A. (1); Kuzmin, I. (1); Polovnikov, O. (1); Salikhbaev, U. (2) 1 - Sosny Research and Development Company, Russian Federation 2 - International Atomic Energy Agency, Austria
RRFM2017-A0073	FINNISH EXPERIENCE IN SAFE SHUTDOWN AND DECOMMISSIONING LICENSING OF THE FIR 1 TRIGA RESEARCH REACTOR	Auterinen, I. (1) 1 - VTT Technical Research Centre of Finland, Finland
RRFM2017-A0108	AN INSIDE VIEW IN PLANNING AND EXECUTION OF DECOMMISSIONING PROJECTS OF RESEARCH REACTORS	Pohl, H. (1); Ruff, C. (1); Starke, H. (1) 1 - Babcock Noell GmbH, Germany
RRFM2017-A0112	THE FENOSOL™ PHENOLIC FOAM: A ROBUST SOLUTION FOR NUCLEAR-GRADE SHOCK ABSORBERS	Garnier, T. (1); Patru, J. (1); Dane, C. (1) ; Joudon, A.(2) 1 - ROBATEL Industries, France 2 - CEA, France
RRFM2017-A0127	ADVANCED DECOMMISSIONING COSTING CALCULATION TOOLS FOR PILOT VIENNA TRIGA MARK-II RESEARCH REACTOR	Kristofova, K. (1); Hornacek, M. (1); Zachar, M. (2); Stummer, T. (3); Böck, H. (3); Slugen, V. (1) 1 - Institute of Nuclear and Physical Engineering, FEI STU Bratislava, Slovakia 2 - DECOM, a.s., Slovakia 3 - Vienna University of Technology, Atominstitute Vienna, Austria

We 12.50 – 13.40 Lunch break

We 13.40 – 15.40 New research reactor projects

Chair: F. Marshall, IAEA

RRFM2017-A0078	THE OYSTER EXPERIENCE OUR NATIONAL RESEARCH REACTOR INFRASTRUCTURE	Linssen, R. (1) 1 - Reactor Institute Delft at the Delft University of Technology, Netherlands
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RRFM2017-A0006	JULES HOROWITZ REACTOR: PREPARATION OF THE COMMISSIONING PHASE AND NORMAL OPERATION	Estrade, J. (1); Bravo, X. (1); Bignan, G. (1); Fabre, J. L. (1); Pillot, F. (1); Marcille, O. (1) 1 - French Alternative Energies and Atomic Energy Commission, France
RRFM2017-A0060	OPAL, FROM IDEA TO REALITY	Summerfield, M. (1); Vittorio, D. (1); Iturbe, E. (2); De Lorenzo, N. (2) 1 - Australian Nuclear Science and Technology Organisati, Australia 2 - INVAP S.E., Argentina
RRFM2017-A0088	INTERNATIONAL RESEARCH CENTER BASED ON THE MULTIPURPOSE SODIUM FAST RESEARCH REACTOR MBIR	Zagornov, A. (1) 1 - State atomic energy corporation ROSATOM, Russian Federation
RRFM2017-A0099	PALLAS-REACTOR DESIGN	Van der Walt, M. (1) 1 - Stichting Voorbereiding Pallas-reactor , Netherlands

We 15.40 – 16.00 Closing

Chair: S. van Dyck, SCK-CEN, Belgium

Announcement of the winner of the Poster Award

Poster

RRFM2017-A0008	STUDY OF THERMOMECHANICAL TREATMENT FOR MANUFACTURING UAlx/Al DISPERSION TARGETS	Romeiro Conturbia, G. (1); Durazzo, M. (1) 1 - Nuclear and Energy Research Institute, Brazil
RRFM2017-A0020	COMPARISON OF THERMOMECHANICAL PROPERTIES OF MONOLITHIC URANIUM-MOLYBDENUM FUELS AND CLASSICAL DISPERSIONS	Gomes, D. D. S. (1); 1 - Instituto de Pesquisas Energéticas e Nucleares (IPEN/CNEN - SP), Brazil
RRFM2017-A0029	HANARO IRRADIATION TEST OF LEU DISPERSION TARGET DEVELOPED BY KAERI	Jeong, Y. (1); Kim, S. (1); Kim, K. (1); Lee, K. (1); Park, J. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2017-A0030	ON THE SCIENTIFIC UTILISATION OF LOW POWER RESEARCH REACTORS	Mikula, P. (1); Strunz, P. (1) 1 - Nuclear Physics Institute ASCR, Czech Republic
RRFM2017-A0033	MOLYBDENUM BEHAVIOUR DURING U-AL RESEARCH REACTOR SPENT FUEL DISSOLUTION	Hérès, X. (1); Sans, D. (1); Brackx, E. (1); Domenger, R. (1); Bertrand, M. (1); Excoffier, E. (1); Eysseric, C. (1); Valery, J. F. (2) 1 - French Alternative Energies and Atomic Energy Commission (CEA), France 2 - AREVA NC, France
RRFM2017-A0037	PROVEN TECHNOLOGY AND INNOVATION AT THE SERVICE OF SAFETY AND VERSATILITY: THE R83 TYPE B(U) TRANSPORT PACKAGE FOR USED LEU FUEL	Garnier, T. (1); Patru, J. (1); Dane, C. (1) 1 - ROBATEL Industries, France
RRFM2017-A0043	INCREASING THE NEUTRON FLUX DENSITY OF EPITHERMAL BEAM BY OPTIMIZE SIDE BERYLLIUM REFLECTOR	Dan, P. (1); Jin, L. (1); Qian, H. (1); Yiguo, L. (1) 1 - China Institute of Atomic Energy, China
RRFM2017-A0054	THE EXPERIMENT RESEARCH OF PROTOTYPE MNSR WITH LEU CORE	Li, Y. (1); Peng, D. (1); Hong, J. (1); Wu, X. (1); Hao, Q. (1); Lu, J. (1) 1 - China Institute of Atomic Energy, China
RRFM2017-A0068	THERMAL CONDUCTIVITY MEASUREMENT OF U-MO/AL AND U-MO/AL-5SI DISPERSION FUELS	Cho, T. W. (1); Kim, Y. S. (2); Sohn, D.-S. (1); Park, J. M. (3); Lee, C. T. (3); Lee, K. H. (3); Yang, J. H. (3) 1 - Ulsan National Institute of Science and Technology (UNIST), Korea, Republic of 2 - Argonne National Laboratory (ANL), United States 3 - Korea Atomic Energy Research Institute (KAERI), Korea, Republic of

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RRFM2017-A0070	BENCHMARK EXPERIMENTS ON THE CRITICALITY OF THE HEXAGONAL LATTICE WITH 21% ENRICHED URANIUM FUEL RODS AND THE BORON ABSORBER RODS IN WATER	Sikorun, S. (1); Mandzik, S. (1); Kuzmin, A. (1); Polazau, S. (1); Hryharovich, T. (1); Damarad, Y. (1); Razmyslovich, Y. (1) 1 - The Joint Institute for Power and Nuclear Research – Sosny of the National Academy of Science of Belarus, Belarus
RRFM2017-A0075	CHARACTERIZATION OF MONOLITHIC UMO FOILS AND ZR COATINGS FOR THE EMPIRE IRRADIATION EXPERIMENT	Steyer, C. (1); Baumeister, B. (1); Breitzkreutz, H. (1); Petry, W. (1); Stepnik, B. (2); Grasse, M. (2); Moyroud, C. (2) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany 2 - AREVA NP (CERCA), France
RRFM2017-A0081	ON HOW AN UNCERTAINTY ANALYSIS CAN IMPROVE REACTOR PERFORMANCE	Doval, A. (1); Lupiano Contreras, J. (1) 1 - INVAP S.E., Argentina
RRFM2017-A0083	ON THE MULTIPLICATIVE EFFECT OF OPAL FOR FUTURE DESIGNS OF RESEARCH REACTORS	Doval, A. (1); Villarino, E. (1); Hergenreder, D. (1) 1 - INVAP S.E., Argentina
RRFM2017-A0094	SM REACTOR CHARACTERISTICS AFTER CORE MODERNIZATION	Izhutov, A. (1); Starkov, V. (1); Pimenov, V. (1); Marikhin, N. (1) 1 - JSC "SSC RIAR", Russian Federation
RRFM2017-A0101	EFFECT OF RECRYSTALLIZATION ON INTERGRANULAR BUBBLE SWELLING IN IRRADIATED U-MO	Liang, L. (1); Mei, Z.-G. (1); Yacout, A. (1) 1 - Argonne National lab, United States
RRFM2017-A0116	TESTING NEWLY DEVELOPED THERMAL NEUTRON DETECTORS AT THE ENEA TRIGA RC-1 RESEARCH REACTOR	Palomba, M. (1); Bedogni, R. (2); Carta, M. (1); Falconi, L. (1); Costa, M. (3); Durisi, E. (4); Monti, V. (3); Pola, A. (5); Romano, M. (2); Sans Planell, O. (2); Treccani, M. (2); Visca, L. (4) 1 - ENEA Centro Ricerche Casaccia, Italy 2 - INFN - LNF, Italy 3 - Università - Torino, via P. Giuria 1, 10125, Torino, Italy, Italy 4 - INFN - Torino, Italy 5 - INFN - Milano, Italy

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RRFM2017-
A0130

POROSITY ASSESSMENT ON IRRADIATED
U(MO) SELENIUM 1A FUEL PLATE

Salvato, D. (1); Leenaers, A. (1);
Van den Berghe, S. (1); Detavernier,
C. (2)

1 - SCK•CEN, Belgium

2 - Ghent University, Belgium

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