



## Sunday 13 March 2016

**17:00 - 19:00 Pre-registration**

**18:00 - 19:00 Welcome Drink**



Welcome Reception Sponsored by AREVA

## Monday 14 March 2016

**Mo 9.00 - 10.50 Opening & Plenary Session**

Chairs: E. Koonen, SCK-CEN, Belgium; Bignan, G., CEA, France

RRFM2016-A0007	THE CEA SCIENTIFIC AND TECHNICAL OFFER AS A DESIGNATED ICERR (INTERNATIONAL CENTER BASED ON RES) BY THE IAEAS	Bignan, G. (1); Blanc, J.-Y. (1); Bravo, X. (1); Estrade, J. (1) 1 - CEA, France
RRFM2016-A0205	RESEARCH REACTORS FOR DEVELOPMENT OF MATERIALS AND FUELS FOR INNOVATIVE NUCLEAR ENERGY SYSTEMS - A COMPENDIUM	Marshall, F. (1); Khoroshev, M. (1); Borio di Tigliole, A. (1) 1 - International Atomic Energy Agency, Austria
RRFM2016-A0234	EUROPEAN FAST REACTORS WITHIN ESNII	Camarcat, N. (1); Baeten, P. (2); 1 - EDF, France (on behalf of ESNII) 2 - SCK•CEN, Belgium (on behalf of ENSII)
RRFM2016-A0172	IAEA ACTIVITIES ON THE SAFETY REASSESSMENTS OF RESEARCH REACTORS IN LIGHT OF THE FEEDBACK FROM THE FUKUSHIMA DAIICHI NPP ACCIDENT	Sears, D. (1); Shokr, A. (1); Kennedy, W. (1); Rao, D. (1); D'Arcy, A. (1) 1 - Research Reactor Safety Section, Division of Nuclear Installation Safety, IAEA, Austria
RRFM2016-A0219	U.S. COOPERATION ON INTERNATIONAL CONVERSION OF HIGH PERFORMANCE RESEARCH REACTORS	Chamberlin, J. (1) 1 - NNSA, United States

**Mo 10.50 - 11.20 Coffee break**

**RRFM/IGORR Coffee Break Sponsor**





## Mo 11.20 - 13.00 Fuel I- Parallel I

Chair: Breitschütz, H., TUM, Germany

RRFM2016-A0220	STATUS OF THE M3 INTERNATIONAL RESEARCH REACTOR CONVERSION PROGRAM	Waud, B. (1) 1 - NNSA, United States
RRFM2016-A0193	MANUFACTURING PROGRESS STATUS OF EMPIRE UMO IRRADIATION EXPERIMENT	Stepnik, B. (1); Grasse, M. (1); Jarousse, C. (1); Geslin, D. (1); Schulthess, J. (2); Glagolenko, I. (2); Yacout, A. (3); Bhattacharya, S. (3); Wiencek, T. (3); Pellin, M. (3); Van den Berghe, S. (4); Leenaers, A. (4); Breitschütz, H. (5); Huber, T. (5); Zweifel, T. (5); Petry, W. (5); Delpech, M. (6); Palanchar, H. (6); Calzavara, Y. (7); Guyon, H. (7) 1 - AREVA NP (CERCA), France 2 - INL, United States 3 - ANL, United States 4 - SCK-CEN, Belgium 5 - FRM II, Germany 6 - CEA, France 7 - ILL, France
RRFM2016-A0223	THE EFFECT OF INTERACTION LAYER FORMATION, FISSION RATE AND FISSION DENSITY ON FUEL SWELLING	Van den Berghe, S. (1); Leenaers, A. (1); Hofman, G. (2); Keiser, D. (3); Yacout, A. (2); Robinson, A. (3); Williams, W. (3); Wachs, D. (3); Breitschütz, H. (4); Palanchar, H. (5) 1 - SCK•CEN, Belgium 2 - Argonne National Lab, United States 3 - Idaho National Lab, United States 4 - Technische Universität München, Germany 5 - CEA Cadarache, France
RRFM2016-A0095	U-MO FUEL RECRYSTALLIZATION BEHAVIOR AND ITS IMPACT ON FUEL SWELLING	Hofman, G. (1); Ye, B. (1); Kim, Y. S. (1); Leenaers, A. (2); Keiser, D.D. (3); Breitschütz, H. (4); Palanchar, H. (5); Van den Berghe, S. (2) 1 - Argonne national laboratory, United States 2 - SCK, Belgium 3 - Idaho National Laboratory, United States 4 - TUM, Germany 5 - CEA, France
RRFM2016-A0092	ON THE EFFICIENCY OF DIFFUSION BARRIER COATING ON U-MONFUEL PARTICLES IN DISPERSION	Hofman, G. (1); Ye, B. (1); Leenaers, A. (2); Keiser, D.D. (3); Breitschütz, H. (4); Palanchar, H. (5); Van den Berghe, S. (2) 1 - Argonne national laboratory, United States 2 - SCK, Belgium 3 - Idaho National Laboratory, United States 4 - TUM, Germany 5 - CEA, France



## Mo 11.20 - 13.00 Utilisation I- Parallel II

Chair: Williams, R. NIST, USA

RRFM2016-A0224	IAEA ACTIVITIES IN SUPPORT OF NEUTRON ACTIVATION ANALYSIS AT RESEARCH REACTORS	Ridikas, D. (1) 1 - IAEA, Austria
RRFM2016-A0019	PREPARING JHR INTERNATIONAL COMMUNITY THROUGH DEVELOPMENTS OF THE FIRST EXPERIMENTAL CAPACITY	Gonnier, C. (1); Bignan, G. (1); Estrade, J. (1); Santucci, C. (1); Parrat, D. (1); Le Jolu, T. (1); Gaillot, S. (1); Miklos, M. (2); Al-Mazouzi, A. (3); Kinnunen, P. (4) 1 - CEA, France 2 - UJV, Czech Republic 3 - EDF, France 4 - VTT, Finland
RRFM2016-A0062	OUT-OF-PILE TESTING OF THE CALIPSO IRRADIATION DEVICE FOR THE JULES HOROWITZ REACTOR	Moulin, D. J. (1); Charvet, P. (1); Challet, F. (1); Chaumont, G. (1) 1 - CEA, DEN, Department of Nuclear Technology, Cadarache, France
RRFM2016-A0046	CURRENT AND FUTURE UTILISATION OF MARIA RESEARCH REACTOR	Krzysztozek, G. (1) 1 - National Centre for Nuclear Research, Poland
RRFM2016-A0059	DESIGN IMPROVEMENT OF CAPSULE FOR A HIGHER NEUTRON IRRADIATION FLUENCE	Choo, K. (1); Cho, M. (1); Yang, S. (1); Yang, T. (1); Kim, M. (1); Hong, S. (2) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - Chungnam National University, Korea, Republic of

## Mo 13.00 – 14.00 Lunch

## Mo 14.00 - 15.40 Fuel II- Parallel I

Chair: Marshall, F., IAEA

RRFM2016-A0221	STATUS OF U.S. DOMESTIC RESEARCH REACTOR CONVERSION PROGRAM	Ravenhill, S. (1) 1 - NNSA, United States
RRFM2016-A0082	U.S. PROGRESS IN U-MO MONOLITHIC FUEL DEVELOPMENT	Rabin, B. (1); Cole, J. (1); Glagolenko, I. (1); Woolstenhulme, N. (1); Moore, G. (1); Robinson, A. (1); Keiser, D. (1); Ozaltun, H. (1); Meyer, M. (1); Wachs, D. (1); Hofman, G. (2); Kim, Y. S. (2) 1 - Idaho National Laboratory, United States 2 - Argonne National Laboratory, United States
RRFM2016-A0088	USHPRR FUEL FABRICATION CAPABILITY PROGRAM INTEGRATION THROUGH THE USE OF PROCESS FLOW DIAGRAMS	Wight, J. (1); Lavender, C. (1) 1 - Pacific Northwest National Laboratory, United States



RRFM2016-A0207	PLASMA SPRAYED ZIRCONIUM DIFFUSION BARRIER DEVELOPMENT FOR MONOLITHIC U-MO METALLIC FUEL	Hollis, K. (1); Cummins, D. (1); Dombrowski, D. (1) 1 - Los Alamos National Laboratory, United States
RRFM2016-A0102	MULTISCALE SIMULATION OF MICROSTRUCTURAL EVOLUTION IN IRRADIATED U-MO	Liang, L. (1); Mei, Z.-G. (1); Ye, B. (1); Kim, Y. S. (1); Hofman, G. (1); Anitescu, M. (1); Yacout, A. (1) 1 - Argonne National Lab, United States

### Mo 14.00 - 15.40 Utilisation II- Parallel II

Chair: Gerstenberg, H., TUM, Germany

RRFM2016-A0156	STATUS AND SCIENTIFIC USE OF THE TRIGA RESEARCH REACTOR AT THE UNIVERSITY OF MAINZ	Geppert, C. (1); Eberhardt, K. (1); Karpuk, S. (1) 1 - Institut für Kernchemie, Johannes Gutenberg-Universität Mainz, Germany
RRFM2016-A0161	RA-6 ONLINE + IRL: AN EFFECTIVE COLLABORATION BETWEEN CNEA AND IAEA FOR THE DEVELOPMENT OF A RESEARCH REACTOR EDUCATION REMOTE TOOL	Cantero, P. (1); Mangiarotti, D. (1); Brollo, F. (1); Sanchez, F. (1); Longhino, J. (1); Chiaraviglio, N. (1); Balumann, H. (1); Borio di Tigliole, A. (2); Vyshniauskas, J. (2) 1 - Nuclear Engineer Division - Nuclear Energy Department - National Atomic Energy Commission (CNEA), Argentina 2 - Research Reactor Section - Division of Nuclear Fuel Cycle and Waste Technology - Department of Nuclear Energy - IAEA, Austria
RRFM2016-A0184	IMPLEMENTATION OF A FISSION GAS RELEASE AND MEASUREMENT LOOP AT THE PULSTAR REACTOR	Hawari, A. (1); Liu, M. (1); Smith, M. (1); Harp, J. (2); Pastore, G. (2); Williamson, R. (2) 1 - Nuclear Reactor Program, Carolina State University, United States 2 - Idaho National Laboratory, United States
RRFM2016-A0185	RECENT PROGRESS IN ADVANCED INSTRUMENTATION IRRADIATIONS AT THE MIT RESEARCH REACTOR	Carpenter, D. (1); Kohse, G. (1); Hu, L.-W. (1) 1 - MIT Nuclear Reactor Laboratory, United States
RRFM2016-A0229	IAEA ACTIVITIES IN ENHANCING AND DEVELOPING EDUCATION AND TRAINING PROGRAMMES AT RESEARCH REACTOR FACILITIES	Borio di Tigliole, A. (1); Ridikas, D. (2); Vyshniauskas, J. (1); Sklenka, L. (3); Foulon, F. (4) 1 - Research Reactor Section, Division of Nuclear Fuel Cycle and Waste Technology, Department of Nuclear Energy, IAEA, Austria 2 - Physics Section, Division of Physical and Chemical Sciences, Department of Nuclear Sciences and Applications, IAEA, Austria 3 - Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering, Czech Republic 4 - Institut national des Sciences et techniques nucléaires (INSTN); Commissariat à l'énergie atomique (CEA), France

### Mo 15.40 – 16.10 Coffee break



## Mo 16.10 - 17.50 Fuel III- Parallel I

Chair: Leenaers, A., SCK-CEN, Belgium

RRFM2016-A0077	RECENT PROGRESS IN THE MICROSTRUCTURAL CHARACTERIZATION OF IRRADIATED U-MO FUELS	Keiser, D. (1); Jue, J.-F. (1); Gan, J. (1); Miller, B. (1); Robinson, A. (1); Williams, W. (1); Hofman, G. (2); Van den Berghe, S. (3); Leenaers, A. (3); Bretkreutz, H. (4); Palancher, H. (5) 1 - Idaho National Laboratory, United States 2 - Argonne National Laboratory, United States 3 - SCK CEN, Belgium 4 - Technical University Munich, Germany 5 - CEA, France
RRFM2016-A0121	MODELING THE PORE FORMATION MECHANISM IN UMO/AL DISPERSION FUEL MEAT	Kim, Y. S. (1); Jamison, L. (1); Hofman, G. (1); Jeong, G.Y. (2); 1 - Argonne National Laboratory, United States 2 - UNIST, Korea, Republic of
RRFM2016-A0148	COMPARISON OF THE MEASURED THERMAL CONDUCTIVITY OF FRESH AND SPENT U-MO FUELS TO A MODEL	Huber, T. (1); Bretkreutz, H. (1); Petry, W. (1); Reiter, C. (1); Elgeti, S. (2); Burkes, D. (3); Casella, A. (3); Casella, A. (3); Smith, F. (3) 1 - Technische Universität München, Germany 2 - Max-Planck-Institute for Plasma Physics,, Germany 3 - Pacific Northwest National Laboratory, United States
RRFM2016-A0170	ECONOMY OF BR2 FUEL CYCLE WITH GADOLINIUM AS BURNABLE ABSORBER	Kalcheva, S. (1); Koonen, E. (1) 1 - SCK-CEN, Belgium
RRFM2016-A0171	CURRENT STATUS OF RESEARCH AND DEVELOPMENT PROGRAM OF SILICIDE AND MOLYBDENUM FUEL IN INDONESIA	Sembiring, T. M. (1); Supardjo, S. (2); Hutagaol, A. G. (2) 1 - Center for Nuclear Reactor Technology and Safety, National Nuclear Energy Agency of Indonesia (BATAN), Indonesia 2 - Center for Nuclear Fuel Technology, National Nuclear Energy Agency of Indonesia (BATAN), Indonesia

## Mo 16.10 - 17.50 Utilisation III - Parallel II

Chair: Böck, H. Atominstytut, Austria

RRFM2016-A0123	LOW POWER RESEARCH REACTOR TO IMPEL CREATION OF NATIONAL INFRASTRUCTURE	Mazzi, R. (1) 1 - INVAP , Argentina
RRFM2016-A0128	FEASIBILITY STUDY OF INSTALLING A THERMAL TO 14 MeV NEUTRON CONVERTER INTO A RESEARCH NUCLEAR REACTOR	Snoj, L. (1); Radulović, V. (1); Trkov, A. (1); Lengar, I. (1); Žerovnik, G. (1); Jazbec, A. (1); Kolšek, A. (2); Sauvan, P. (2); Ogando, F. (2); Sanz, J. (2) 1 - Jozef Stefan Institute, Slovenia 2 - Universidad Nacional de Educacion a Distancia, Ingenieria Energetica, Spain





RRFM2016-A0145	MAXIMIZING UTILIZATION OF NEUTRONS AT A RESEARCH REACTOR BY EMPLOYING AUTOMATION OF IRRADIATION AND COUNTING PROCEDURES FOR THERMAL AND EPITHERMAL NEUTRONS, CYCLIC NAA AND COMPTON SUPPRESSION	Landsberger, S. (1); Biegalski, S. (1); Copple, B. (1); Welch, L. (1); 1 - University of Texas at Austin, Nuclear Engineering Teaching Lab, United States
RRFM2016-A0075	QUALIFICATION OF POWER DETERMINATION FOR F&M EXPERIMENTS IN RESEARCH REACTORS	Volkov, B. (1) 1 - OECD Halden Reactor Project, Norway
RRFM2016-A0236	OPTIMIZING PALLAS REACTOR UTILISATION TO SUPPORT AN ECONOMICALLY VIABLE BUSINESS CASE	Zekveld, D. (1) 1 - Stichting Voorbereiding Pallas-reactor, Netherlands

## Tuesday 15 March 2016

### **Tu 9.00 - 10.40 Fuel IV - Parallel I**

Chair: Stevens, J., ANL, USA

RRFM2016-A0215	US PROGRESS ON PROPERTY CHARACTERIZATION TO SUPPORT LEU U-10 MO MONOLITHIC FUEL DEVELOPMENT	Cole, J. (1); Rabin, B. (1); Smith, J. (1); Scott, C. (1); Benefiel, B. (1); Larsen, E. (1); Lind, P. (1); Sell, D. (1) 1 - Idaho National Laboratory, United States
RRFM2016-A0216	FUEL SWELLING ANALYSIS OF RECENT U-MO FUEL TESTS	Robinson, A. (1); Williams, W. (1); Rabin, B. (1) 1 - Idaho National Laboratory, United States
RRFM2016-A0045	THE EFFECT OF THERMAL CONDUCTIVITY UNCERTAINTIES ON THE OPERATING TEMPERATURE OF U-MO/AL DISPERSION FUEL	Sweidan, F. (1); Mistarihi, Q. (1); Ryu, H. J. (1); Yim, J. S. (2) 1 - Korea Advanced Institute of Science and Technology, Korea, Republic of 2 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0055	PIE ANALYSES OF U-MO/AL DISPERSION FUEL WITH DIFFERENT U-MO PARTICLE SIZES	Ryu, H. J. (1); Mistarihi, Q. M. (1); Lee, K. H. (2); Jeong, Y. J. (2); Jung, Y. H. (2); Yoo, B. O. (2); Park, J. M. (2) 1 - Korea Advanced Institute of Science and Technology, Korea, Republic of 2 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0073	PRELIMINARY EVALUATION ON THE KJRR FUEL INTEGRITY	Yim, J. (1); Kim, H. (1); Tahk, Y. (1); Oh, J. (1); Kong, E. (1) 1 - KAERI(Korea Atomic Energy Research Institute), Korea, Republic of



## Tu 9.00 - 10.40 Operation & Maintenance I- Parallel II

Chair: De Lorenzo, N., INVAP, Argentina

RRFM2016-A0010	FRM II: NON-DESTRUCTIVE TESTING OF THE PRIMARY COOLING LOOP	Pichlmaier, A. (1); Gerstenberg, H. (1); Kastenmüller, A. (1); Krokowski, C. (1); Kreß, M. (1); Schmidt, M. (1) 1 - TU-München, ZWE FRM II, Germany
RRFM2016-A0037	NUCLIDE DETERMINATION OF TRIGA FUEL ELEMENTS BY GAMMA SPECTROSCOPY	Eichleitner, D. (1); Villa, M. (1); Cagnazzo, M. (1); Boeck, H. (1) 1 - Technical University Vienna - Atominstitut, Austria
RRFM2016-A0065	RADIATION DAMAGE INDUCED IN ZR-4 ALLOYS BY 2.6 MEV PROTON: APPLICATION FOR NUCLEAR RESEARCH REACTOR	Izerrouken, M. (1); Menchi, O. (1); Souami, N. (2); Sari, A. (3); Medjkoun, H. (1) 1 - Nuclear Research Center of Draria, Algeria 2 - Nuclear Research Center of Algiers, Algeria 3 - Nuclear Research Center of Birine, Algeria
RRFM2016-A0120	AN FACILITY INFRASTRUCTURE MANAGEMENT SYSTEM FOR THE JM-1 SLOWPOKE RESEARCH REACTOR	Preston, J. (1); Dennis, H. (1); Cushnie, R. (1) 1 - International Centre for Environmental and Nuclear Sciences, University of the West Indies Mona Campus, Jamaica
RRFM2016-A0143	THE NEW I&C SYSTEM OF THE TRIGA MARK II REACTOR VIENNA	Villa, M. (1); Bergmann, R. (1); Böck, H. (1); Kroc, M. (2); Prokš, M. (2); Valenta, V. (2); Kase, M. (3); Herrmann, J. (3); Matoušek, J. (3) 1 - Vienna University of Technology, Atominstitut, Austria 2 - ŠKODA JS a.s, Czech Republic 3 - dataPartner, Czech Republic

## Tu 9.00 - 10.40 Safety I - Parallel III

Chair: Estrade, J., CEA, France

RRFM2016-A0030	CHARACTERIZATION OF THE OPERATING STRATEGY AND SAFETY MARGIN AT NOMINAL WORKING CONDITIONS OF THE MADISON EXPERIMENTAL SYSTEM IN THE JHR RESEARCH REACTOR.	Weiss, Y. (1); Bourdon, S. (2); Jaeki, P. (2); Bonnier, C. (2); Blandin, C. (2) 1 - Rotem Industries LTD, Mishor Yamin, D.N, Israel 2 - French Atomic Energy Commission (CEA) - Cadarache Centre, France, France
RRFM2016-A0238	ACQUISITION OF A SAFE MULTI-PURPOSE REACTOR	Van der Walt, M. (1) 1 - Stichting Voorbereiding Pallas-reactor, Netherlands
RRFM2016-A0050	ACCIDENT SCENARIO DEVELOPMENT OF THE NUCLEAR RESEARCH REACTOR 'HANARO' FOR A FULL SCALE NUCLEAR EMERGENCY EXERCISE	Goanyup, L. (1); Bongseok, K. (1); Haechoi, L. (1); Jongsu, K. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0125	A CASE STUDY: SAFARI-1 - IMPLEMENTATION OF THE SAFETY CLASSIFICATION IN THE EXISTING FACILITIES USING A GRADED APPROACH	Malaka, S. (1) 1 - Necsa, SAFARI-1, South Africa



RRFM2016-A0175	STUDY OF THE IMPACT OF ION IRRADIATION ON THE CORROSION KINETICS AND THE OXIDE LAYER MICROSTRUCTURE OF ALFENI ALUMINIUM ALLOY	Nabhan, D. (1); Kapusta, B. (1); Colas, K. (1); Dacheux, N. (2) 1 - CEA Saclay, DEN/DANS/DMN/SEMI/LM2E, France 2 - ICSM-LIME, UMR 5257, France
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**Tu 10.40 – 11.10 Coffee break**

**Tu 11.10 - 12.50 Fuel V - Parallel I**

Chair: Keiser, D., INL, USA

RRFM2016-A0119	MCNP CALCULATION OF CORE PHYSICS PARAMETERS OF NIRR-1 LEU CORE USING MANUFACTURER'S RECOMMENDED VALUE OF 13% ENRICHED UO2 FUEL	Ibikunle, K. (1); Ibrahim, Y. (2); Jonah, S. (2) 1 - Department of Physics, Ahmadu Bello University, Zaria, Nigeria 2 - Centre for Energy Research and Training, Ahmadu Bello University, Zaria, Nigeria
RRFM2016-A0181	JM-1 RESEARCH REACTOR CONVERSION DEMONSTRATED AT POLYTECHNIQUE MONTREAL	Chilian, C. (1); Muftuoglu, A. (1) 1 - Polytechnique Montreal, Canada
RRFM2016-A0186	UPDATES ON DESIGN ANALYSIS FOR CONVERSION OF THE MIT RESEARCH REACTOR (MITR) FROM HIGHLY ENRICHED URANIUM TO LOW ENRICHED URANIUM	Sun, K. (1); Hu, L.-W. (1); Wilson, E. (2); Dunn, F. (2); Feldman, E. (2) 1 - MIT Nuclear Reactor Laboratory, United States 2 - Argonne National Laboratory, United States
RRFM2016-A0137	PVD-BASED MANUFACTURING PROCESS OF MONOLITHIC LEU FOIL TARGETS FOR 99MO PRODUCTION	Hollmer, T. (1); Baumeister, B. (1); Steyer, C. (1); Petry, W. (1) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany
RRFM2016-A0241	US NATIONAL ACADEMIES STUDY: REDUCING THE USE OF HIGHLY ENRICHED URANIUM IN CIVILIAN RESEARCH REACTORS	Heimberg, J. (1) 1 - National Academies of Science, United States

**Tu 11.10 - 12.50 Utilisation IV- Parallel II**

Chair: Vidovszky, I., CER, Hungary

RRFM2016-A0204	THE INTERNET REACTOR LABORATORY PROJECT: STATUS AND THE EXPERIENCE OF THE ISIS RESEARCH REACTOR	Foulon, F. (1); Borio-di-Tigirole, A. (2); Vyshniauskas-Gomez, J. (2) 1 - National Institute for Nuclear science and Technology, French Atomic Energy and Alternative Energies Commission (CEA), France 2 - Research Reactor Section, Division of Nuclear Fuel Cycle and Waste Technology, Department of Nuclear Energy, IAEA, Austria
RRFM2016-A0034	ZERO POWER REACTOR AGN-201K FOR UNIVERSITY EDUCATION	Kim, M. H. (1) 1 - Reactor Research & Education Center, Kyung Hee University, Korea, Republic of





RRFM2016-A0070	MEASUREMENT OF POSITIVE TEMPERATURE COEFFICIENTS OF REACTIVITY FOR RACK-LIKE ARRANGEMENTS OF REACTOR FUEL IN THE NEPTUNE ZERO ENERGY FACILITY	Walley, S. (1); Bean, P. (1); Sainsbury, I. (1) 1 - Rolls-Royce (Nuclear), United Kingdom
RRFM2016-A0110	FUTURE EXPERIMENTAL PROGRAMMES IN THE CROCUS REACTOR	Lamirand, V. (1); Hursin, M. (2); Perret, G. (2); Frajtag, P. (1); Pakari, O. (2); Pautz, A. (1) 1 - Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland 2 - Paul Scherrer Institute (PSI), Switzerland

### Tu 11.10 - 12.50 Security - Parallel III

Chair: Domingo, X., AREVA, France

RRFM2016-A0103	MANAGEMENT OF SAFETY AND SECURITY FOR HANARO RESEARCH REACTOR AND NUCLEAR FACILITIES	Jung, H.-S. (1); Kim, B.-H. (1); Kang, M.-J. (1); Hwang, I.-A. (1) 1 - Department of Nuclear Safety and Security, Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0178	HEU MINIMIZATION AND ELIMINATION: SUSTAINING THE MOMENTUM AFTER THE LAST NUCLEAR SECURITY SUMMIT	Pomper, M. (1); Dalnoki-Veress, F. (1); Bieniawski, A. (2) 1 - James Martin Center for Nonproliferation Studies, United States 2 - NTI, United States
RRFM2016-A0039	RESEARCH REACTOR SECURITY INSPECTION – A REGULATORY PERSPECTIVE	Cochrane, D. (1); Brooks, K. (1); 1 - International Atomic Energy Agency, Austria
RRFM2016-A0013	DEVELOPING A NUCLEAR SECURITY PLAN AT A RESEARCH REACTORS AND ASSOCIATED FACILITY (RRAF)	Ryan, E. (1); Brooks, K. (1); 1 - International Atomic Energy Agency, Australia

### Tu 12.50 – 13.40 Lunch

### Tu 13.40 – 15.20 Poster Session

### Tu 15.20 - 16.40 Innovative Methods I - Parallel I

Chair: Lim, I.-C., KAERI, Korea

RRFM2016-A0047	OPTIMIZATION OF IRR1 IRRADIATION MODES USING ADVANCED GENETIC ALGORITHMS	Israeli, E. (1); Makmal, T. (2); Hazensprung, N. (2); Gilad, E. (1) 1 - The Unit of Nuclear Engineering, Ben-Gurion University of the Negev, Israel 2 - Nuclear Physics and Engineering Division, Reactor Department Soreq Nuclear Research Centre (SNRC), Israel
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RRFM2016-A0083	COONEUT: ENHANCING NEUTRONIC DESIGN FOR RESEARCH REACTORS	Lacombe, J.-G. (1); Bouret, C. (1); Koubbi, J. (1); Manificier, L. (1) 1 - AREVA TA, CS 50497, France
RRFM2016-A0104	NEUTRONIC PERFORMANCE OF DIFFERENT FUEL TYPES IN MATERIAL TESTING REACTOR	Ali, R. (1); Khan, R. (1); Boeck, H. (2); Stummer, T. (2) 1 - Pakistan Institute of Engineering and Applied Sciences (PIEAS), Pakistan 2 - Vienna University of Technology/Atominstitute, Austria
RRFM2016-A0114	BEST ESTIMATE PLUS UNCERTAINTY APPROACH IN THE ANALYSIS OF TRANSIENTS IN RESEARCH REACTORS	Doval, A. (1); Lupiano Contreras, J. (1) 1 - INVAP S.E., Argentina

### Tu 15.20 -16.40 Safety II - Parallel II

Chair: Summerfield, M. ANSTO, Australia

RRFM2016-A0225	SOME SUGGESTED METHODOLOGIES FOR USE WHEN PERFORMING PERIODIC SAFETY REVIEWS AND SAFETY REASSESSMENTS FOR RESEARCH REACTORS	Summerfield, M. (1) 1 - Australian Nuclear Science and Technology Organisation (ANSTO), Australia
RRFM2016-A0228	DEVELOPMENT OF EVACUATION TIME ESTIMATES ON RESEARCH REACTOR 'HANARO'	Kim, B. (1); Lee, G. (1); 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0020	HIGHLIGHTS OF REGULATORY ASPECTS OF RESEARCH REACTORS IN THE RUSSIAN FEDERATION: FROM FUKUSHIMA TO FUTURE	Sapozhnikov, A. (1) 1 - Federal Environmental, Industrial and Nuclear Supervision Service of Russia, Russian Federation
RRFM2016-A0041	EVALUATION ON SEISMIC INTEGRITY OF HTTR CORE COMPONENTS	Ono, M. (1); Iigaki, K. (1); Shimazaki, Y. (1); Tochio, D. (1); Shimizu, A. (1); Inoi, H. (1); Hamamoto, S. (1); Takada, S. (1); Sawa, K. (1) 1 - Japan Atomic Energy Agency, Japan

### Tu 16.40 – 17.00 Coffee break

### Tu 17.00 - 18.20 Innovative Methods II - Parallel I

Chair: Ayman, H., NCSU, USA

RRFM2016-A0132	ADVANCED SMALL AND LARGE CORE DISTORTIONS MODELING IN ZPR TO ASSESS CORE RECRITICALITY SCENARIOS OF SFR CORE DEGRADATION SEQUENCES	Margulis, M. (1); Blaise, P. (2); Gilad, E. (1) 1 - Department of Nuclear Engineering, Ben Gurion University of the Negev, Israel 2 - Experimental Physics Service, CEA Cadarache, France
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RRFM2016-A0162	COMPARISON OF MEASURED AND CALCULATED NEUTRONIC AND THERMAL HYDRAULIC REACTOR PARAMETERS OF THE LEU-FUELLED JAMAICAN SLOWPOKE-2 RESEARCH REACTOR	Puig, F. (1); Dennis, H. (2) 1 - Argonne National Laboratory, United States 2 - International Centre for Environmental and Nuclear Sciences, University of the West Indies-Mona Campus, Jamaica
RRFM2016-A0189	RECENT DEVELOPMENTS IN THE TRIPOLI-4@ MONTE-CARLO CODE - APPLICATIONS FOR RESEARCH REACTORS	Malouch, F. (1) 1 - CEA, Saclay center, DEN/DANS/DM2S/SERMA, France
RRFM2016-A0218	IN-CORE FUEL MANAGEMENT OPTIMISATION OF THE HOR REACTOR USING THE OSCAR-4 CODE SYSTEM	Schlünz, E. B. (1); Winkelman, A. J. M. (2); Prinsloo, R. H. (3); Bokov, P. M. (3); Van Vuuren, J. H. (4) 1 - Department of Logistics, Stellenbosch University, South Africa 2 - Reactor Institute Delft, Delft University of Technology, Netherlands 3 - Radiation and Reactor Theory, The South African Nuclear Energy Corporation SOC Ltd, South Africa 4 - Department of Industrial Engineering, Stellenbosch University, South Africa

## Tu 17.00 - 18.20 Safety III - Parallel II

Chair: Sears, D., IAEA

RRFM2016-A0085	FRENCH POST-FUKUSHIMA COMPLEMENTARY ASSESSMENTS - GENERAL APPROACH AND RESULTING SAFETY IMPROVEMENTS FOR THE HIGH FLUX REACTOR LOCATED IN GRENOBLE	Grolleau, E. (1); Jouve, A.-C. (1); Kanamori, S. (1) 1 - Institut de Radioprotection et de sûreté Nucléaire, France
RRFM2016-A0087	APPLICATION OF SAFETY REASSESSMENT IN THE LIGHT OF FUKUSHIMA DAIICHI ACCIDENT TO NEW DESIGNS: THE RA-10 REACTOR CASE	Ramirez, P. (1); Cantero, P. (1); Brollo, F. (1); Blaumann, H. (1) 1 - National Atomic Energy Commission (CNEA), Argentina
RRFM2016-A0107	SAFETY REASSESSMENT OF HANARO AND STATUS OF SAFETY IMPROVEMENT MEASURES	Lim, I.-C. (1); Lee, C.-S. (1); Shin, J.-W. (1); Yim, S.-P. (1); Doo, S.-G. (1); Wu, S.-I. (1); Ryu, J.-S. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0129	STATUS OF JRR-3 AFTER GREAT EAST JAPAN EARTHQUAKE	Arai, M. (1); Wada, S. (1); Murayama, Y. (1) 1 - Japan Atomic Energy Agency, Japan

## Conference dinner



## Wednesday 16 March 2016

### **We 9.00 - 10.40 Fuel Back-end - Parallel I**

Chair: Troiani, F., SOGIN, Italy

RRFM2016-A0069	NEW DUAL-PURPOSE CASK CASTOR® MTR 3 FOR DISPOSAL OF SPENT FUEL FROM GERMAN RESEARCH REACTORS	Bozkurt, M. (1); Becker, J. (1); Landsiedel, D. (1) 1 - GNS Gesellschaft für Nuklear-Service mbH, Germany
RRFM2016-A0144	AUSTRALIAN RESEARCH REACTORS SPENT FUEL MANAGEMENT: THE PATH TO SUSTAINABILITY	Finlay, R. (1); Domingo, X. (2); Laloy, V. (3); Dimitrovski, L. (1); Miller, R. (1); Landau, P. (2); Valery, J.-F. (2) 1 - Australian Nuclear Science and Technology Organization (ANSTO), Australia 2 - AREVA NC, France 3 - AREVA TN, France
RRFM2016-A0167	PREPARATIONS AT FIR 1 FOR SPENT TRIGA FUEL EXAMINATION FOR RETURN TO UNITED STATES	Auterinen, I. (1); Kivelä, P. (1); Helin, J. (1); Luke, D. (2); Robb, A. (2) 1 - VTT Technical Research Centre of Finland, Finland 2 - CH2M*WG Idaho, LLC, United States
RRFM2016-A0201	OPTIMIZING APPROACHES TO SPENT NUCLEAR FUEL TRANSPORT	Dewes, J. (1); Bolshinsky, I. (2); Tozser, S. (3) 1 - Savannah River National Laboratory, United States 2 - Idaho National Laboratory, United States 3 - International Atomic Energy Agency, Austria
RRFM2016-A0209	OVERVIEW OF ENVIRONMENTAL MANAGEMENT NONPROLIFERATION AND HIGHLY ENRICHED URANIUM MINIMIZATION MISSION ACTIVITIES	Deleon, G. (1) 1 - US Dept. of Energy, Office of Environmental Management, United States

### **We 9.00 - 10.40 Operation & Maintenance II - Parallel II**

Chair: Heysel, C., McMaster University, Canada

RRFM2016-A0149	IAEA ACTIVITIES IN THE OPERATION AND MAINTENANCE OF RESEARCH REACTORS	Kim, H. K. (1); Morris, C. R. (1) 1 - International Atomic Energy Agency, Austria
RRFM2016-A0153	EXACT POWER EVALUATION DUE TO INTRODUCTION OF MO-99-LEU TARGETS FOR FRM II	Röhrmoser, A. (1) 1 - TU Munich, Germany
RRFM2016-A0197	TRIGA® 250 KW REACTOR I&C SYSTEM REFURBISHMENT	Růžička, P. (1) 1 - ŠKODA JS a.s., Czech Republic
RRFM2016-A0208	OPAL REACTOR CONTROL SYSTEM UPGRADE AND THE CONVERGENCE OF THE INFORMATION TECHNOLOGY AND CONTROL SYSTEM INDUSTRIES	Harrison, S. (1) 1 - Australian Nuclear Science and Technology Organisation, Australia
RRFM2016-A0060	THE THIRD REFURBISHMENT PROGRAMME OF THE BR2 REACTOR IN MOL, BELGIUM	Van Dyck, S. (1); Verpoorten, J. (1); Claes, W. (1); Leysen, P. (1) 1 - SCK CEN, Belgium



## We 10.40 - 11.00 Coffee break

## We 11.00 - 13.00 CNS - Parallel I

Chair: Selby, D., USA

RRFM2016-A0023	DEVELOPMENT OF A COLD NEUTRON SOURCE AND COLD NEUTRON BEAM FACILITIES AT THE PENN STATE BREAZEALE REACTOR	Unlu, K. (1) 1 - Pennsylvania State University, Radiation Science and Engineering Center, United States
RRFM2016-A0066	OPERATIONAL EXPERIENCE ON THE COLD NEUTRON SOURCE AT THE OPAL REACTOR	Sah, A. (1); Walsh, P. (1); Tobin, A. (1); Breslin, S. (1); Abraham, R. (1); Lu, W. (1) 1 - Australia Nuclear Science and Technology Organisation, Australia
RRFM2016-A0084	COLD NEUTRON SOURCES – AN INTERNATIONAL TECHNICAL MEETING IN AIX-EN-PROVENCE	Manificier, L. (1); Koubbi, J. (1); Boyard, M. (1) 1 - AREVA TA, France
RRFM2016-A0093	THE ORNL HIGH FLUX ISOTOPE REACTOR SUPERCRITICAL HYDROGEN COLD SOURCE	Selby, D. (1); Christian, C. (2) 1 - National Resource Management, United States 2 - Oak Ridge National Laboratory, United States
RRFM2016-A0052	12 YEARS OF EXPERIENCE FROM RUNNING A COLD NEUTRON SOURCE AT FRM II RESEARCH REACTOR	Päthe, D. (1); Wirtz, A. (1); Gerstenberg, H. (1); Kastenmüller, A. (1) 1 - Technische Universität München, ZWE FRM-II, Germany
RRFM2016-A0176	STATUS OF THE LIQUID DEUTERIUM COLD NEUTRON SOURCE FOR THE NIST RESEARCH REACTOR	Williams, R. (1); Middleton, M. (1); Kopetka, P. (1); Rowe, M. (1); Brand, P. (1) 1 - National Institute of Standards and Technology, United States

## We 11.00 - 13.00 New Projects I - Parallel II

Chair: Jung, H.-S., KAERI, Korea

RRFM2016-A0009	JULES HOROWITZ REACTOR: PREPARATION OF THE COMMISSIONING PHASE AND NORMAL OPERATION	Estrade, J. (1); Bravo, X. (1); Bignan, G. (1); Fabre, J.-L. (1); Marcille, O. (1) 1 - COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES, France
RRFM2016-A0025	TREAT TRANSIENT TEST REACTOR RESTART STATUS	Bumgardner, J. (1) 1 - Idaho National Laboratory, United States
RRFM2016-A0027	MANAGING CONCURRENT DESIGNS OF NEW RESEARCH REACTORS	De Lorenzo, N. (1) 1 - INVAP S.E., Argentina
RRFM2016-A0064	EXPERIMENTAL R&D INNOVATION FOR GEN-2,3 & IV NEUTRONICS STUDIES IN ZPRS: A PATH TO THE FUTURE ZEPHYR FACILITY IN CADARACHE	Blaise, P. (1); Boussard, F. (1); Ros, P. (1); Leconte, P. (1); Margulis, M. (1); Martin, G. (1); Blandin, K. (1) 1 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France





RRFM2016-A0068	PROGRESS OF KIJANG RESEARCH REACTOR PROJECT	Kwon, T.-H. (1); Lee, K. H. (1); Kim, J. Y. (1); Kim, J. (1); Kim, J.-K. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0109	REVIEW OF POOL TYPE RESEARCH REACTORS DESIGN AND UTILIZATION RELATED FEATURES IN LIGHT OF UP TO DATE PRACTICES	Pascal, C. (1); Estrade, J. (2) 1 - Research Reactors & Installation Department, AREVA TA, France 2 - Nuclear Energy Directorate, French Alternative Energies and Atomic Energy Commission - Cadarache Research Centre, France

### We 13.00 – 13.40 Lunch

### We 13.40 – 15.00 Decommissioning - Parallel I

Chair: Wetzels, S., Helmholtz Gemeinschaft, Germany

RRFM2016-A0118	DISMANTLING OF THE SVAFO-RESEARCH REACTOR R2&R2-0 IN SWEDEN	Clement, G. (1); Arnold, H.-U. (1); Schmidt, N. (1) 1 - AREVA, France
RRFM2016-A0174	AN OPTIMIZED CASK TECHNOLOGY FOR CONDITIONING, TRANSPORTATION, STORAGE UP TO FINAL DISPOSAL OF NUCLEAR WASTE AND MATERIAL	Lefort-Mary, F. (1); Lamouroux, C. (1); Domingo, X. (1); Dumont, B. (2); Kerr, B. (2); Laloy, V. (2) 1 - AREVA NC, France 2 - AREVA TN, France
RRFM2016-A0211	PREPARATION OF OSIRIS REACTOR SHUTDOWN AND DECOMMISSIONING	Zampa, J. S. (1); Lasou, G. (2); Auclair, M. (3) 1 - OSIRIS reactor, DRSN/SEROS, CEA Centre de Saclay, France 2 - DPAD/CPSA, CEA Centre de Saclay, France 3 - DRSN/SIREN, CEA Centre de Saclay, France
RRFM2016-A0227	ANALYSIS OF THE ACTIVATION AT THE END OF OPERATION OF THE BERLIN EXPERIMENTAL REACTOR II	Lapins, J. (1); Guilliard, N. (1); Bernnat, W. (1); Wetzels, S. (2); Rose, M. (2) 1 - Institut for Nuclear Technology and Energy System, University of Stuttgart, Germany 2 - Helmholtz-Zentrum Berlin GmbH, Germany

### We 13.40 - 15.00 New Projects II - Parallel II

Chair: Pascal, C., AREVA, France

RRFM2016-A0111	CONCEPTUAL DESIGN OF A LOW-POWER HYBRID RESEARCH REACTOR FOR EDUCATION AND TRAINING	Lim, I.-C. (1); Hong, S.-T. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0136	THE INVESTIGATION OF THE NEW MULTIPURPOSE RESEARCH REACTOR SUCCEEDING TO JRR-3	Takino, K. (1); Arai, M. (1); Murayama, Y. (1) 1 - Japan Atomic Energy Agency, Japan



RRFM2016- A0159	KEY TECHNICAL CHARACTERISTICS RELATED TO THE DESIGN OF THE RA-10 MULTIPURPOSE REACTOR	Cantero, P. (1); Ramirez, P. (1); Brollo, F. (1); Marinsek, G. (1); Balumann, H. (1); Zalcman, J. (2); Milberg, M. (2); Giuliadori, L. (2); Marzano, L. (2); Quesada, G. (2); Estryk, D. (2); Rios, G. (2); Alarcon, J. (2); Rodriguez, G. (2); Lee, J. (2); Garcia, D. (2); Verrastro, C. (2); Hofer, C. (2)  1 - Nuclear Engineer Division – Nuclear Energy Department – National Atomic Energy Commission , Argentina 2 - I&C Division – Nuclear Energy Department – National Atomic Energy Commission, Argentina
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## We 15.00 – 15.20 Coffee break

## We 15.20 - 17.00 Plenary & Closing

Chairs: Koonen, E., SCK-CEN, Belgium; Bignan, G., CEA, France

RRFM2016- A0038	IGORR: THE FIRST TWENTY-FIVE YEARS	Selby, D. (1); Rosenbalm, K. (2) 1 - Retired from Oak Ridge National Laboratory, United States 2 - Oak Ridge National Laboratory, United States
RRFM2016- A0240	THE U.S. DEPARTMENT OF ENERGY'S OFFICE OF MATERIAL MANAGEMENT AND MINIMIZATION NUCLEAR MATERIAL REMOVAL EFFORTS – PAST, PRESENT AND FUTURE.	Dickerson, S. (1) 1 - NNSA, Material Management Minimization, United states
RRFM2016- A0157	AAEA CONTRIBUTION TOWARDS OPTIMAL RESEARCH REACTORS USE IN ARAB COUNTRIES	Mahjoub, A. (1); Mosbah, D. (1) 1 - Arab Atomic Energy Agency , Tunisia
RRFM2016- A0152	DISPOSAL FACILITIES FOR COUNTRIES WITHOUT NUCLEAR POWER PROGRAMME	Feinhals, J. (1); Kemp, D. (2); Savidou, A. (3) 1 - DMT GmbH & Co. KG, Germany 2 - ANSTO, Australia 3 - NSCR DEMOKRITOS, Greece
<p>CLOSING REMARKS BY THE CHAIRMEN Announcement of the winner of the Poster Award</p>		



## POSTER

### Poster CNS

RRFM2016-A0115	A MCNPX TRIGA RC-1 EXPERIMENTAL CHANNELS MODEL FOR THE DESIGN OF A NEW NEUTRONIC DIFFRACTION FACILITY	Falconi, L. (1); Burgio, N. (1); Palomba, M. (1); Santoro, E. (1); Carta, M. (1); Ghigna, P. (2); Prata, M. (3); Salvini, A. (3); Altieri, S. (4); Bortolussi, S. (5); Reversi, L. (6) 1 - ENEA CR Casaccia, Italy 2 - Dipartimento di Chimica - Università degli Studi di Pavia, Italy 3 - L.E.N.A. - Laboratorio Energia Nucleare Applicata - Università degli Studi di Pavia, Italy 4 - Dipartimento di Fisica- Università degli Studi di Pavia, Italy 5 - INFN - Istituto Nazionale di Fisica Nucleare, Italy 6 - Università degli Studi di Firenze, Italy
RRFM2016-A0180	MECHANICAL SIZING METHODOLOGY FOR A COLD NEUTRON SOURCE	Kohler, J. (1); Lecarpentier, B. (1) 1 - AREVA TA, France

### Poster safety

RRFM2016-A0022	EFFECT OF REACTOR REGULATING SYSTEM ON A FLOW BLOCKAGE EVENT OF A RESEARCH REACTOR	Yum, S.-B. (1); Park, S.-K. (1) 1 - Korea Atomic Energy Research Institute (KAERI), Korea, Republic of
RRFM2016-A0032	A SELF-CONTROLLED LOW POWER REACTOR	Boschetti, F. (1); Doval, A. (1); Hergenreder, D. (1); Lupiano Contreras, J. (1); Masriera, N. (1); Sarabia, G. (1) 1 - INVAP S.E., Argentina
RRFM2016-A0043	INFLUENCE OF CRITICAL HEAT FLUX CORRELATIONS ON SAFETY ANALYSIS OF RESEARCH REACTORS WITH NARROW RECTANGULAR FUEL CHANNELS	Rawashdeh, A. (1); Albati, M. (1); Abusaleem, K. (2); Abushqair, A. (1); Omari, M. (1); Alrwashdeh, M. (1); Lee, B. (3); Chung, Y. J. (3) 1 - Jordan Atomic Energy Commission (JAEC), Jordan 2 - The University of Jordan, Jordan 3 - Korea Atomic Energy Research Institute (KAERI), Korea, Republic of
RRFM2016-A0051	A COMPARISON OF THERMO-T SYSTEM CODE WITH EXPERIMENTAL DATA FROM THE SPERT-IV D-12/15 SERIES	Margulis, M. (1); Gilad, E. (1) 1 - The Unit of Nuclear Engineering, Ben-Gurion University of the Negev, Israel
RRFM2016-A0058	DETECTION OF BOILING OCCURRENCE BY SENSING PRESSURE WAVE OF COLLAPSING BUBBLES IN SUBCOOLED WATER	Jo, D. (1); Jo, H. (1) 1 - School of Mechanical Engineering, Kyungpook National University, Korea, Republic of
RRFM2016-A0169	A REVIEW OF THE DESIGN FEATURES OF RESEARCH REACTOR AIR VENTILATION AND CLEANING SYSTEM	Kim, M. (1); Lee, C. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of



RRFM2016-A0190	DYNAMIC ANALYSIS OF A TRIGA REACTOR	Domitry, P. (1); Ramsey, J. (2); Kohut, P. (3) 1 - PAA, National Atomic Energy Agency, Poland, Poland 2 - US Nuclear Regulatory Commission, United States 3 - Brookhaven National Laboratory, United States
RRFM2016-A0198	HYPOTHETICAL ACCIDENT ANALYSES ON THE PROPOSED SPLIT CORE AT NIST USING ANL-PARET CODE	Wu, Z. (1); Williams, R. (1); Rowe, J. M. (1) 1 - NIST Center for Neutron Research, United States
RRFM2016-A0232	SAFETY ANALYSIS FOR PROTOTYPE MNSR HEU CORE UNLOADING	Li, Y. (1); Lu, J. (1); Peng, D. (1); Hao, Q. (1); Hong, J. (1) 1 - China Institute of Atomic Energy, China

### Poster new projects

RRFM2016-A0214	DESIGN AND QUALIFICATION OF JULES HOROWITZ REACTOR CONTROL ROD DRIVE MECHANISMS	Dumanois, C. (1); Valy, R. (1); Ropke, P. (1); Donnier, F. (1), Ranc, L. (1) 1 - AREVA TA, France
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### Poster decommissioning

RRFM2016-A0080	SAFETY AND REGULATORY ASPECTS OF SHUTDOWN OPERATIONS AND DECOMMISSIONING OF PHÉNIX REACTOR	Masseau, X. (1); Massieux, S. (1) 1 - Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France
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### Poster innovative methods

RRFM2016-A0054	DESIGN OF A DRY BEAM RADIATION SHIELDING PLUG FOR RESEARCH REACTORS	Meier, H. (1); Hergenreder, D. (1) 1 - INVAP S.E., Argentina
RRFM2016-A0078	CALCULATION METHODS FOR SAFETY ASSESSMENTS OF RESEARCH REACTORS	Koubbi, J. (1); Bayol, C. (1); Lacombe, J.-G. (1); Bouret, C. (1); Manificier, L. (1); Krohn, H. (2); Welzel, S. (2) 1 - AREVA TA, CS 50497, France 2 - Helmholtz-Zentrum Berlin für Materialien und Energie, Germany
RRFM2016-A0081	COCONeut: FIRST VALIDATION STEPS OF THE AREVA TA NEUTRONIC SCHEME FOR RESEARCH REACTOR DESIGN	Bouret, C. (1); Lacombe, J.-G. (1); Bayol, C. (1); Koubbi, J. (1); Manificier, L. (1); Vidal, J.-F. (2); Gastaldi, B. (2) 1 - AREVA TA, CS 50497, France 2 - CEA/DEN/DER/SPRC CEA Cadarache, France



RRFM2016-A0090	HEAT TRANSFER ANALYSIS OF MICROSCALE UO <sub>2</sub> PARTICLE-GRAPHITE SYSTEM IN TREAT FUEL	Mo, K. (1); Miao, Y. (1); Yacout, A. (1); Wright, A. (1); Connaway, H. (1) 1 - Argonne National Laboratory, United States
RRFM2016-A0113	FIRST STEPS TOWARDS A COUPLED CODE SYSTEM FOR TRANSIENT CALCULATIONS	Reiter, C. (1); Breitzkreutz, H. (1); Röhrmoser, A. (1); Petry, W. (1) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München, Germany
RRFM2016-A0116	IMPROVEMENTS IN NEUTRON AND GAMMA MEASUREMENTS FOR MATERIAL TESTING REACTORS	Villard, J.-F. (1); Destouches, C. (1); Barbot, L. (1); Fourmentel, D. (1) 1 - CEA, DEN, DER, Instrumentation Sensors and Dosimetry Laboratory, France
RRFM2016-A0117	FLAT REACTIVITY OPERATION COURSE WHEN CONVERTING FRM II	Röhrmoser, A. (1) 1 - TU Munich, Germany
RRFM2016-A0139	THE ANET CODE: FROM HIGH ENERGY PHYSICS TO STOCHASTIC DYNAMIC NEUTRONICS WITH THERMAL HYDRAULIC FEEDBACK	Xenofontos, T. (1); Mylonakis, A. (1); Savva, P. (1); Varvayanni, M. (1); Silva, J. (2); Maillard, J. (3); Catsaros, N. (1) 1 - Institute of Nuclear and Radiological Sciences & Technology, Energy & Safety, NCSR "DEMOKRITOS", Greece 2 - Université Pierre et Marie Curie, Campus Jussieu, France 3 - Inst. du Dévelop. et des Ressources en Inform. Scient., CNRS, France
RRFM2016-A0142	ENHANCED COMPUTATIONAL MODELS OF THE UNIVERSITY OF FLORIDA TRAINING REACTOR (UFTR)	Springfels, D. (1); Jordan, K. (1) 1 - University of Florida, United States
RRFM2016-A0163	NEUTRON SHIELDING CALCULATION FOR NEUTRON IMAGING FACILITY AT MAÂMORA TRIGA REACTOR	Ouardi, A. (1) 1 - Centre National de L'énergie des Scinces et des Techniques Nucléaires, Morocco
RRFM2016-A0177	NDT TECHNIQUE APPLIED TO DIRECT MEASURING OF THERMAL CONDUCTIVITY IN UMo FUEL MINIPLATE	Lisboa, J. (1); Marin, J. (1); Barrera, M. (1); Gutierrez, C. (1); Salinas, P. (2); Olivares, L. (1) 1 - CHILEAN COMMISSION FOR NUCLEAR ENERGY, Chile 2 - UNIVERSIDAD DE SANTIAGO DE CHILE - USACH, Chile
RRFM2016-A0188	VALIDATION OF THE NEUTRON CALCULATION TOOL ANUBIS V3 FOR THE OSIRIS MATERIAL TESTING REACTOR	Malouch, F. (1); Lopez, F. (1) 1 - CEA, Saclay Center, DEN/DANS/DM2S/SERMA,, France
RRFM2016-A0191	DEVELOPMENT OF AN ADVANCED RELAP/SCDAPSIM/MOD4.0 U-AL FUEL PLATE COMPONENT MODEL FOR THE ANALYSIS OF DESIGN BASIS AND SEVERE ACCIDENTS IN RESEARCH REACTORS	Shumski, S. (1); Delbianco, D. (2); Pericas, R. (3); Allison, C. (4); Hohorst, J. (4) 1 - Warsaw University of Technology , Poland 2 - INVAP, SE, Argentina 3 - Technical University of Catalonia, Spain 4 - Innovative Systems Software, United States





RRFM2016-A0196	EXPERIMENTAL DATA ON CRITICALITY OF URANIUM-ZIRCONIUM HYDRIDE SYSTEMS WITH 21 AND 36 % ENRICHED URANIUM-235	Sikorin, S. (1); Polazau, S. (1); Hryharovich, T. (1) 1 - Joint Institute of Power and Nuclear Research-Sosny of the National Academy of Science of Belarus, Belarus
RRFM2016-A0235	THERMAL-HYDRAULIC MODELING OF A TYPICAL MULTI-PURPOSE RESEARCH REACTOR (MPRR)	Mousavian, S. K. (1); Khoshnevis, T. (1); Bahrevar, M. H. (1) 1 - Atomic Energy Organization of Iran, Islamic Republic of

### Poster utilisation

RRFM2016-A0008	DEVELOPMENT OF HIGH-DENSITY DISPERSION TARGET IN KAERI - UPDATES	Jeong, Y. (1); Lee, K. (1); Kim, S. (1); Kim, K. (1); Lee, C.T. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0017	JULES HOROWITZ REACTOR, FRANCE. DEVELOPMENT OF AN EXPERIMENTAL LOOP INTEGRATING AN OPTIMIZED IRRADIATION PROCESS	Gaillot, S. (1); Diaz, L. (1); Dousson, T. (1); Gay, S. (1); Vitry, S. (1); Delassalle, F. (1); Waeckel, N. (2) 1 - CEA Cadarache, France 2 - EDF, SEPTEN, France
RRFM2016-A0029	DEVELOPMENT OF IRRADIATION TARGETS FOR 99MO PRODUCTION BY NUCLEAR FISSION	Durazzo, M. (1); Conturbia, G. (1); Souza, J. A. B. (1); Urano de Carvalho, E. F. (1); Riella, H. G. (1) 1 - Nuclear and Energy Research Institute - IPEN-CNEN/SP, Brazil
RRFM2016-A0040	EFFECTIVE UTILISATION OF THE REZ'S RESEARCH REACTOR LVR-15 IN BASIC, INTERDISCIPLINARY AND APPLIED RESEARCH	Mikula, P. (1); Strunz, P. (1) 1 - Nuclear Physics Institute ASCR, v.v.i., Czech Republic
RRFM2016-A0057	SILICON INGOT THERMAL PERFORMANCE DURING IRRADIATION AND EFFECTS ON ELECTRONIC PARAMETER	Othman, M. (1); Agamy, S. (2); Nagy, M. (2); Sultan, M. (1) 1 - Egypt Atomic Energy Authority (EAEA), Egypt 2 - Alexandria University, Egypt
RRFM2016-A0130	Performance test of SPND for the development of LLICI at the UCI TRIGA reactor	Yang, S. W. (1); Park, S. J. (1); Cho, M. S. (1); Wallick, J. (2); Miller, G. E. (2); Shin, H. C. (3); Cha, K. H. (3) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - The University of California, Irvine, United States 3 - Korea Hydro & Nuclear Power co., Ltd, Korea, Republic of
RRFM2016-A0140	THE POWER CONTROL BASED SUBCRITICALITY MONITORING (PCSM) METHOD FOR ADS REACTORS	Burgio, N. (1); Carta, M. (1); Fabrizio, V. (1); Falconi, L. (1); Gandini, A. (2); Iorio, M. G. (1); Peluso, V. (3); Santoro, E. (1) 1 - ENEA CR Casaccia, Italy 2 - Dipartimento DIAEE - Università degli Studi di Roma 'La Sapienza', Italy 3 - ENEA C.R. BOLOGNA, Italy



RRFM2016-A0147	NEUTRON ACTIVATION ANALYSIS IN SUPPORT OF UNDEGRADUATE RESEARCH	Landsberger, S. (1); Tamalis, D. (2); Tipping, T. (1); Biegalski, S. (1) 1 - University of Texas at Austin, Nuclear Engineering Teaching Lab, United States 2 - Florida Memorial University, Department of Health and Natural Sciences, United States
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## Poster operation & maintenance

RRFM2016-A0014	NEUTRON FLUX MEASUREMENTS SYSTEMS FOR RESEARCH REACTORS	Doerfler, T. (1); Guettler, A. (1) 1 - AREVA GmbH, Germany
RRFM2016-A0031	GRADED APPROACH OF COMPONENT CLASSIFICATION IN NUCLEAR RESEARCH REACTORS	Ellethy, Y. (1) 1 - Egyptain Atomic Energy Authority (EAEA), Egypt
RRFM2016-A0074	DEVELOPMENT OF TRANSPORTATION CONTAINER FOR THE NEUTRON STARTUP SOURCE OF HIGH TEMPERATURE ENGINEERING TEST REACTOR (HTTR)	Shimazaki, Y. (1); Sawahata, H. (1); Kawamoto, T. (1); Shinohara, M. (1); Ono, M. (1); Tochio, D. (1); Hamamoto, S. (1); Takada, S. (1) 1 - Japan Atomic Energy Agency, Japan
RRFM2016-A0108	USE OF UNICORN ANALOGUE I&C PLATFORM FOR RPS IN RESEARCH REACTOR	Lobry, C. (1) 1 - AREVA TA, France
RRFM2016-A0122	GAMMA AND NEUTRON RADIATION FIELDS ABOVE THE REACTOR POOL OF THE LVR-15 RESEARCH REACTOR	Viererbl, L. (1); Lahodová, Z. (1); Mojžíš, Z. (1); Klupák, V. (1); Voljanskij, A. (1) 1 - Research Centre Rez Ltd., Czech Republic
RRFM2016-A0182	ADVANCES IN MATERIALS SURVEILLANCE PROGRAMME FOR THE RA10 RESEARCH REACTOR	Versaci, R. (1); Bertolino, G. (1); Yawny, A. (1); Arias, G. (1); Blaumann, H. (1) 1 - Comisión Nacional de Energia Atómica , Argentina
RRFM2016-A0210	QUALITY ASSURANCE AND QUALIFICATION OF NEW DIGITAL I&C SYSTEMS AFTER REFURBISHMENT OF THE TRIGA AND LVR-15 REACTORS	Matoušek, J. (1); Herrmann, J. (1); Kochová, M. (1) 1 - dataPartner s.r.o, Czech Republic

## Poster fuel cycle

RRFM2016-A0021	A CLADDING THICKNESS MEASUREMENT OF RESEARCH REACTOR FUEL PLATE USING NONDESTRUCTIVE TESTING METHOD	Lee, Y.-S. (1); Joo, Y.-S. (1); So, W. (1); Park, S. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2016-A0042	ADDITIONAL EVALUATION OF ORDERED U(Al,Si) <sub>3</sub> CRYSTAL STRUCTURE USING FIRST PRINCIPALS CALCULATIONS	Rafailov, G. (1); Zenou, V. (1); Dahan, I. (1); Meshi, L. (2); Fuks, D. (2) 1 - Nuclear Research Center of Negev (NRCN), Israel 2 - Ben Gurion Iniversityof the Negev (BGU), Israel



RRFM2016-A0061	Y-12 NATIONAL SECURITY COMPLEX U-MO FABRICATION FOR MP-1	Demint, A. (1); Henkel, J. (1); Pehrson, B. (1); Longmire, H. (1) 1 - Consolidated Nuclear Security LLC. - Y-12 National Security Complex, United States
RRFM2016-A0076	STATUS UPDATE ON MINIPLATE EXPERIMENTS DESIGNS PLANNED FOR IRRADIATION IN ATR	Glagolenko, I. (1); Woolstenhulme, N. (1); Lillo, M. (1); Nielsen, J. (1); Choe, D. (1); Navarro, J. (1); Jensen, C. (1); Crawford, D. (1); Jones, W. (1); Snow, S. (1); Hawkes, B. (1); Wiest, J. (1); Keiser, D. (1); Holdaway, K. (1); Schulthess, J. (1); Rabin, B. (1) 1 - Idaho National Laboratory, United States
RRFM2016-A0091	ION IRRADIATION AND SYNCHROTRON MICRODIFFRACTION ANALYSIS OF UMO-AL INTERACTION LAYER	Jamison, L. (1); Mo, K. (1); Ye, B. (1); Miao, Y. (1); Bhattacharya, S. (2); Xu, R. (1); Yacout, A. (1) 1 - Argonne National Laboratory, United States 2 - Northwestern University, United States
RRFM2016-A0094	CHARACTERIZATION OF PHASE REVERSION AND GAS BUBBLE MORPHOLOGY IN HIGH-ENERGY-ION-IRRADIATED U-MO	Ye, B. (1); Miao, Y. (1); Jamison, L. (1); Mo, K. (1); Bhattacharya, S. (2); Hofman, G. (1); Kim, Y. S. (1); Yacout, A. (1) 1 - Argonne national laboratory, United States 2 - Northwestern university, United States
RRFM2016-A0096	OPTIMIZATION OF A THIN U-10MO FUEL PLATE CASTING BY MODELING AND EXPERIMENT	Aikin, R. (1); Dombrowski, D. (1) 1 - Los Alamos National Laboratory, United States
RRFM2016-A0097	CAN-LESS HIP METHOD FOR PRODUCING FUEL PLATES	Lienert, T. (1); Dvornak, M. (1); Dombrowski, D. (1) 1 - Los Alamos National Laboratory, United States
RRFM2016-A0098	ELECTROPLATING OF ZIRCONIUM ON URANIUM-MOLYBDENUM ALLOY FUEL FOR HIGH PERFORMANCE RESEARCH REACTORS	Meinhardt, K. (1); Lavender, C. (1); Coffey, G. (1); Smirnov, A. (2); Shchetkovskiy, A. (2); O'Dell, S. (2) 1 - Pacific Northwest National Laboratory, United States 2 - Plasma Processes, United States
RRFM2016-A0135	BURNABLE ABSORBER OPTIMIZATION IN A SUPER-FLUX RESEARCH REACTOR UTILIZING PLATE-TYPE FUEL	Nguyen, X. H. (1); Venneri, P. (1); Kim, Y. (1); Beeley, P. (3) 1 - Korea Advanced Institute of Science and Technology, Korea, Republic of 2 - Korea Atomic Energy Research Institute, Korea, Republic of 3 - Khalifa University, United Arab Emirates
RRFM2016-A0138	ALL-IN-ONE CHEMICAL CLEANING AND DEOXIDATION PROCESS FOR MONOLITHIC URANIUM-MOLYBDENUM FOILS	Schwarz, C. (1); Dirks, T. (1); Baumeister, B. (1); Steyer, C. (1); Petry, W. (1) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Germany



RRFM2016-A0165	NUMERICAL MODELLING AND SIMULATIONS IN SUPPORT OF U-MO/MG RESEARCH AND DEVELOPMENT	Hibbins, S. (1); Wang, N. (1); Piro, M. H. A. (2); Williams, A. (2); Welland, M. J. (2); Kulakov, M. (3); Saoudi, M. (3) 1 - Nuclear Fuel Fabrication Facility, Canadian Nuclear Laboratories, Canada 2 - Fuel and Fuel Channel Safety Branch, Canadian Nuclear Laboratories, Canada 3 - Fuel Development Branch, Canadian Nuclear Laboratories, Canada
RRFM2016-A0168	HEAT TRANSFER PROPERTIES OF U-7MO/MG AND U-10MO/MG FUELS	Hibbins, S. (1); Wang, N. (1); Piro, M. H. A. (2); Kulakov, M. (3); Saoudi, M. (3) 1 - Nuclear Fuel Fabrication Facility, Canadian Nuclear Laboratories, Canada 2 - Fuel and Fuel Channel Safety Branch, Canadian Nuclear Laboratories, Canada 3 - Fuel Development Branch, Canadian Nuclear Laboratories, Canada
RRFM2016-A0173	NEUTRONIC ANALYSIS FOR A U-MO-AL DISPERSION FUEL WITH ADDITION OF EUROPIUM AS BURNABLE POISON	Oliveira Rondon Muniz, R. (1); Dos Santos, A. (1); Yamaguchi, M. (1); Russo Rossi, P. C. (1); Borges Domingos, D. (1); Felipe Mura, L. (1); Teixeira e Silva, A. (1) 1 - IPEN-CNEN/SP, Brazil
RRFM2016-A0179	THERMAL-MECHANICAL PROPERTIES OF URANIUM-MOLYBDENUM MONOLITHIC COMPARED WITH CLASSICAL DISPERSIONS	Gomes, D. D. S. (1); Silva, A. T. (1) 1 - Instituto de Pesquisas Energéticas e Nucleares (IPEN/CNEN - SP), Brazil
RRFM2016-A0183	DESIGN, FABRICATION AND CALIBRATION OF THE SLOWPOKE-2 LEU COMMISSIONING ROD ASSEMBLY	Koclas, C. (1); Muftuoglu, A. (1); Teyssedou, A. (1); Grant, C. (2); Chilian, C. (1) 1 - Polytechnique Montreal, Canada 2 - ICENS, Jamaica
RRFM2016-A0187	HOT ISOSTATIC PRESS CLADDING PROCESS OPTIMIZATION AND HIP CAN SCALE-UP FOR THE PRODUCTION OF MONOLITHIC FUEL PLATES	Clarke, K. (1); Tucker, L. (1); Aikin, B. (1); Vargas, V. (1); Dvornak, M. (1); Strandy, M. (1); Hudson, R. (1); Dombrowski, D. (1) 1 - Los Alamos National Laboratory, United States
RRFM2016-A0194	INDUSTRIAL NUMERICAL X RAY INSPECTION FOR RESEARCH REACTOR FUELS	Stepnik, B. (1); Mahé, M. (1); Ferraz, G. (1) 1 - AREVA NP (CERCA), France
RRFM2016-A0195	PVD COATING AND C2TWP FOR MONOLITHIC UMO: CURRENT STATUS	Stepnik, B. (1); Grasse, M. (1); Jarousse, C. (1); Geslin, D. (1); Breikreutz, H. (2); Steyer, C. (2); Baumeister, B. (2); Petry, W. (2) 1 - AREVA NP (CERCA), France 2 - FRM II, Germany
RRFM2016-A0200	PROGRESS OF THE U-MO FOIL ROLLING DEMONSTRATION LINE AT BWX TECHNOLOGIES	Johnson, R. (1); Mayfield, R. (1); Navolio, D. (1) 1 - BWX Technologies, United States



RRFM2016-  
A0233

IMPLEMENTATION OF REACTOR CORE  
CONVERSION PROGRAM OF GHARR-1

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