



RRFM 2011 - Rome, Italy (2011/03/20 - 2011/03/24)

15th International Topical Meeting on Research Reactor Fuel Management (RRFM)

Mon 8:30 - 9:30 Opening Session

Mon 9:30 - 10:50 - International Programmes

9:30 – 9:50	The supply of medical isotopes - an assessment of the market economics, alternative technologies and proposed policy approaches to achieve sustainability	Cameron, R. (1); Westmacott, C. (1); Lokhov, A. (1) 1 - OECD Nuclear Energy Agency, France
9:50 – 10:10	The Jules Horowitz Reactor: A new European MTR (Material Testing Reactor) open to International collaboration: Description and Status	Bignan, G. (1); Lemoine, P.-M. (1); Bravo, X. (1) 1 - French Atomic Energy Commission, France
10:10 – 10:30	MYRRHA, A FLEXIBLE FAST SPECTRUM IRRADIATION FACILITY	Baeten, P. (1); Fernandez, R. (1); De Bruyn, D. (1); Van den Eynde, G. (1); Malambu, E. (1); Benoit, P. (1); Ait Abderrahim, H. (1) 1 - SCK•CEN, Belgium
10:30 - 10:50	THE INFRASTRUCTURE FOR PALLAS, THE NEW NUCLEAR REACTOR IN THE NETHERLANDS	Van der Schaaf, B. (1); Broekhaus, K. (1); Van der Linden, N. (1); Wijtsma, F. (1) 1 - PALLAS project, NRG, Netherlands

10:50 – 11:20 Coffee break

Mon 11:20 - 13:00 International Programmes

11:20 – 11:40	Jordan's First Research Reactor Project: Driving Forces, Present Status and the Way Ahead	Xoubi, N. (1) 1 - Jordan Atomic Energy Commission (JAEC), Jordan
11:40 – 12:00	OVERVIEW OF THE INTERNATIONAL GLOBAL THREAT REDUCTION PROGRAM	Staples, P. (1) 1 - National Nuclear Security Administration, United States
12:00 – 12:20	2011 PROGRESS REPORT ON HEU MINIMIZATION ACTIVITIES IN ARGENTINA	Bonini, A. (1); Cristini, P. (1); De Lío, L. (1); Dell'Occhio, L. (1); Gil, D. (1); Gonzalez, A. G. (1); González, R. (1); López, M. (1); Novara, O. (1); Taboada, H. (1) 1 - COMISIÓN NACIONAL DE ENERGÍA ATÓMICA, Argentina
12:20 – 12:40	MAIN RESULTS OF THE DEVELOPMENT OF HIGH DENSITY LEU FUEL FOR RUSSIAN RESEARCH REACTORS	Vatulin, A. (1); Dobrikova, I. (1); Suprun, V. (1) 1 - VNIINM, Russian Federation
12:40 – 13:00	US PROGRESS IN THE DEVELOPMENT OF VERY HIGH DENSITY RESEARCH AND TEST REACTOR FUELS	Wachs, D. (1) 1 - Idaho National Laboratory, United States

13:00 – 14:00 Lunch

Mon 14:00 - 16:00 Fuel Research and Development

14:00 – 14:20	N.N.	
14:20 – 14:40	Microstructural Characterization of Burnable Absorber Materials Being Evaluated for Application in LEU U-Mo Fuel Plates	Keiser, D. (1); Jue, J. (1); Glagolenko, I. (1); Moore, G. (1); Clark, C. (1); Rabin, B. (1); Wachs, D. (1); Ewh, A. (2); Yao, B. (2); Sohn, Y. (2); Totev, T. (3); Wiencek, T. (3) 1 - Idaho National Laboratory, United States 2 - University of Central Florida, United States 3 - Argonne National Laboratory, United States
14:40 – 15:00	Coated particle production in the SELENIUM project	Van den Berghe, S. (1); Leenaers, A. (1); Detavernier, C. (2) 1 - SCK•CEN, Belgium 2 - University of Ghent, Belgium
15:00 – 15:20	MICROSTRUCTURAL EVOLUTION OF U-MO MONOLITHIC FUEL UNDER IRRADIATION	Robinson, A. (1); Keiser, D. (1); Wachs, D. (1); Chang, G. (1) 1 - Idaho National Laboratory, United States
15:20 – 15:40	N.N.	
15:40 – 16:00	Analysis of postirradiation metallography of full size-high power UMo/Al dispersion fuel	Hofman, G. (1); Kim, Y. S. (1); Robinson, A. (2) 1 - Argonne National Laboratory, United States 2 - Idaho National Laboratory, United States

Mon 14:00 - 16:00 Innovative Methods in Research Reactor Analysis and Design

14:00 – 14:20	Monte Carlo model of TRIGA reactor to support neutron activation analysis	Žerovnik, G. (1); Snoj, L. (1); Trkov, A. (1) 1 - Jožef Stefan Institute, Slovenia
14:20 – 14:40	Optimization of a potential new core of the TRIGA reactor Vienna	Villa, M. (1); Khan, R. (1); Boeck, H. (1); Steinhäuser, G. (1) 1 - Vienna University of Technology/Atominstute, Austria
14:40 – 15:00	Neutronic Analysis of the Pavia University TRIGA Mark II Reactor Core	Chiesa, D. (1); Borio di Tigliole, A. (2); Scian, G. (2); Cammi, A. (3); Clemenza, M. (1); Pattavina, L. (4); Previtali, E. (4) 1 - Università degli Studi di Milano Bicocca, Italy 2 - Università degli Studi di Pavia, Italy 3 - Politecnico di Milano, Italy 4 - Istituto Nazionale di Fisica Nucleare sez. Milano Bicocca, Italy
15:00 – 15:20	N.N.	
15:20 – 15:40	EFFECT OF THE NEW WIMSD LIBRARIES ON THE NEUTRONIC PARAMETERS OF THE FIRST AND EQUILIBRIUM CORES OF INDONESIAN MULTIPURPOSE RESEARCH REACTOR	Sembiring, T. M. (1); Liem, P. H. (2); Supartina, L. (1) 1 - Center for Reactor Technology and Nuclear Safety, National Nuclear Energy Agency of Indonesia (BATAN), Indonesia 2 - Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, Japan
15:40 – 16:00	Temperature Reactivity Effects Calculations for Needs of Dedicated Instrumentation Design on Zero Power Reactor Using MCNP5	Bily, T. (1); Sklenka, L. (1) 1 - Czech Technical University in Prague, Czech Republic

16:00 – 16:20 Coffee break

Mon 16:20 - 18:20 Fuel Research and Development

16:20 – 16:40	COMPLEMENTARY CHARACTERIZATION OF SI-RICH LAYER IN IRIS3, IRIS4 AND E-FUTURE FRESH FUEL PLATES	Bonnin, A. (1); Palancher, H. (1); Charollais, F. (1); Anselmet, M.-C. (1); Honkimäki, V. (2); Tucoulou, R. (2); Lemoine, P.-M. (3) 1 - CEA, DEN, DEC, Cadarache, France
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		2 - ESRF, France 3 - CEA, DEN, DISN, Saclay, France
16:40 – 17:00	Modeling of interdiffusion layer growth in U-Mo/Al-Si dispersion fuel during irradiation	Kim, Y. S. (1); Hofman, G. (1); Park, J. M. (2); Ryu, H. J. (2); Robinson, A. (3); Medvedev, P. (3) 1 - Argonne National Laboratory, United States 2 - KAERI, Korea, Republic of 3 - Idaho National Laboratory, United States
17:00 – 17:20	THERMAL STABILITY OF γ -U(MO, X) FUEL ALLOYS WITH X= TI, CR AND ZR	Allenou, J. (1); Tougait, O. (2); Pasturel, M. (2); Noël, H. (2); Iltis, X. (1); Charollais, F. (1); Anselmet, M.-C. (1); Lemoine, P. (3) 1 - CEA, DEN, DEC, Cadarache, France 2 - Sciences Chimiques de Rennes, France 3 - CEA, DEN, DISN, Saclay, France
17:20 – 17:40	HOMOGENEIZATION OF U-Zr-Nb AND U-Nb ALLOYS BY REMELTING PROCESS	Aguiar, B. (1); Kniess, C. (1); Pais, R. (2); Riella, H. (3); Ferraz, W. (2) 1 - Nuclear and Energy Research Institute - IPEN/CNEN, Brazil 2 - Nuclear Technology Development Center – CDTN/CNEN, Brazil 3 - Chemical Engineering Department - Federal University of Santa, Brazil
17:40 – 18:00	Screening of different kinds of UMo/Al samples using heavy ion irradiation	Jungwirth, R. (1); Breitzkreutz, H. (1); Schmid, W. (1); Petry, W. (1); Palancher, H. (2); Bonnin, A. (2); Grasse, M. (3); Jarousse, C. (3); Stepnik, B. (3) 1 - TUM-FRM II, Germany 2 - CEA Cadarache, France 3 - AREVA CERCA Romans, France
18:00 – 18:20	New Opportunities for Enhanced Research Reactor Utilization through Research Reactor Coalitions and Networks	Ridikas, D. (1); Adelfang, P. (2); Alldred, K. (2); Ferrari, M. (2) 1 - IAEA, Austria 2 - IAEA, Austria

Mon 16:20 - 18:20 Utilisation of Research Reactors

16:20 – 16:40	International courses on Nuclear Reactor operation and applications in the framework of the CHERNE Network	Ródenas, J. (1) 1 - Polytechnic University of Valencia, Spain
16:40 – 17:00	Utilization of AGN-201K for Education and Research in Korea	Kim, M.-H. (1) 1 - Kyung Hee University, Korea, Republic of
17:00 – 17:20	Education and Training Programme at the Research Reactor TRIGA Mainz	Hampel, G. (1); Eberhardt, K. (1) 1 - University of Mainz, Institute for Nuclear Chemistry, Germany
17:20 – 17:40	OPTIMISATION OF THE CORE MANAGEMENT SCENARIO TO REACH HIGH FUEL BURNUP IN THE MYRRHA RESEARCH REACTOR	Ait Abderrahim, H. (1); Baeten, P. (1); Van den Eynde, G. (1); Sobolev, V. (1); Nishihara, K. (2) 1 - SCK•CEN, Belgium 2 - JAEA, Japan
17:40 – 18:00	Biological tests for the Boron Neutron Capture Therapy research at the TRIGA Mark II reactor in Pavia	Protti, N. (1); Ballarini, F. (2); Bortolussi, S. (1); Bruschi, P. (2); Stella, S. (1); Altieri, S. (2); De Bari, A. (2); Bakeine, J. G. (3); Cansolino, L. (3); Clerici, A. M. (3); Zonta, C. (3); Ferrari, C. (3); Conte, V. (4); Esposito, J. (4); De Nardo, L. (5); Moro, D. (5); Fabris, C. (6); Soncin, M. (6); Colautti, P. (4); Jori, G. (6); Geninatti Crich, S. (7); Alberti, D. (7); Aime, S. (7) 1 - Nuclear Physics National Institute (INFN), Italy 2 - University of Pavia, Italy 3 - Laboratory of Experimental Surgery, Italy 4 - Physics National Institute (INFN), Legnaro National Laboratories (LNL), Italy 5 - University of Padova, Italy 6 - University of Padova, Italy

18:00 – 18:20	Radiation Transport Simulation for Boron Neutron Capture Therapy (BNCT)	Ziegner, M. (1); Khan, R. (2); Böck, H. (2); Bortolussi, S. (3); Altieri, S. (4); Schmitz, T. (5); Hampel, G. (5); Blaickner, M. (1) 1 - AIT Austrian Institute of Technology GmbH, Austria 2 - Vienna University of Technology, Austria 3 - University of Pavia, Italy 4 - National Institute of Nuclear Physics (INFN) Pavia Section, Italy 5 - Johannes Gutenberg Universität Mainz, Germany
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Tue 8:50 - 10:50 Fuel Fabrication, Irradiation and Conversion

8:50 – 9:10	The Lessons Learned from Conversion of 10 Mw Research Reactor to Low Enriched Fuels	Yuldashev, B. (1); Baitelesov, S. (1); Dosimbaev, A. (1); Kungurov, F. (1); Salikhbaev, U. (1) 1 - Institute of Nuclear Physics, Uzbekistan Academy of Sciences, Uzbekistan
9:10 – 9:30	The structural changes of irradiated dispersed U-Mo fuel	Izhutov, A. (1) 1 – Research Reactor Complex SSC RIAR JSC, Russia
9:30 – 9:50	A consideration for uranium high density plate type target of uranium metal particles dispersion in aluminum matrix for 99Mo production	Kim, C-K. (1); Kim, K-H. (1); Lee, Y-S. (1); Ryu, H-J (1); Woo, Y-M. (1); Jang, S-J (1); Park, J-M (1); Choi, S-J. (1) 1 – Research Reactor Fuel Development, KAERI, Republic of Korea
9:50 – 10:10	Qualification of Uranium-Molybdenum Alloys for Research Reactor Community	Schaaff, T. (1); Joyce, K. (1); Likens, A. (1); Belt, V. (1); Barry, J. (1) 1 - Y-12 National Security Complex, United States
10:10 – 10:30	Qualification irradiation of new high density UMo LEU fuel plates and operating conditions during irradiation at the BR2 high flux materials testing reactor	Kuzminov, V. (1); Koonen, E. (1) 1 - SCK-CEN, Belgium
10:30 – 10:50	The Y-12 National Security Complex Foreign Research Reactor Uranium Supply Production	Nelson, T. (1); Keller, T. (1) 1 - Y-12 National Security Complex, United States

Tue 8:50 - 10:50 Utilisation of Research Reactors

8:50 – 9:10	NEW EXPERIMENTAL INSTRUMENTATION FOR STUDY OF REACTOR DYNAMICS AT ZERO POWER REACTOR VR-1	Rataj, J. (1); Sklenka, L. (1) 1 - Czech Technical University in Prague, Czech Republic
9:10 – 9:30	"Upgrading of the Halden Reactor Experimental Capabilities for Innovative Fuel and Material Testing"	Volkov, B. (1); Minagawa, Y. (1); Elisenberg, T. (1); McGrath, M. (1) 1 - Insitutt for Energiteknikk, OECD, Norway
9:30 – 9:50	Status of the MELODIE experiment, an advanced device for online biaxial study of the irradiation creep of LWR cladding	Guimbal, P. (1); Villard, J.-F. (1); Auclair, M. (2); Carassou, S. (2); Moilanen, P. (3); Huotilainen, S. (3); Patalainen, M. (3); Tähtinen, S. (3) 1 - CEA, DEN, France 2 - CEA, DEN, France 3 - VTT Technical Research centre of Finland, Finland
9:50 – 10:10	The Ultra-Cold Neutron Laboratory at the FRM-II	Stoeppler, R. (1); Paul, S. (1); Petry, W. (2); Frei, A. (1); Gerstenberg, H. (2) 1 - Technische Universität München, Germany 2 - Forschungs- Neutronenquelle Heinz Maier-Leibnitz (FRMII), Germany
10:10 – 10:30	Safety aspects and security levels concerning the installation of a source for ultracold neutrons at the reactor TRIGA Mainz	Plonka-Spehr, C. (1); Heil, W. (2); Lauer, T. (2); Sobolev, I. (2); Hampel, G. (1); Kratz, J.-V. (1); Breuel, J. (1) 1 - University Mainz, Institute for Nuclear Chemistry, Germany 2 - University Mainz, Department of Physics,

Germany

10:30 – 10:50	Noise Thermometer at the FRM II Hot Neutron Source	Müller, C. (1); Gerstenberg, H. (1); Gutmiedl, E. (2) 1 - Technische Universität München, Forschungsneutronenquelle FRM II, Germany 2 - Technische Universität München, Physik-Department E18, Germany
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10:50 – 11:20 Coffee break

Tue 11:20 - 13:00 Fuel Fabrication, Irradiation and Conversion

11:20 – 11:40	FUEL MANAGEMENT AT THE DALAT NUCLEAR RESEARCH REACTOR	Pham, V. L. (1); Nguyen, N. D. (1); Luong, B. V. (1); Le, V. V. (1); Huynh, T. N. (1); Nguyen, K. C. (1) 1 - Nuclear Research Institute, Vietnam
11:40 – 12:00	A ROADMAP FOR MATERIALS REMOVAL AND DISPOSITION THROUGH THE GTRI GAP MATERIALS PROGRAM	Hirsch, K. (1); Dickerson, S. (1); Andes, T. (2); Iyer, N. (3) 1 - U.S. Department of Energy – National Nuclear Security Administration, United States 2 - Y-12 National Security Complex, United States 3 - Savannah River National Laboratory, United States
12:00 – 12:20	Conversion of reactor LVR-15 in Czech Republic from HEU to LEU fuel	Broz, V. (1); Ernest, J. (1); Koleska, M. (1); Vins, M. (1); Miletic, M. (1) 1 - Nuclear Research Institute Rez, Czech Republic
12:20 – 12:40	GLOBAL THREAT REDUCTION INITIATIVE REACTOR CONVERSION PROGRAM: CONVERTING CHALLENGES INTO OPPORTUNITIES	Landers, C. (1) 1 - National Nuclear Security Administration, United States
12:40 – 13:00	PROGRESS AND STATUS OF TRIGA REACTOR CONVERSION CARRIED OUT BY TRIGA INTERNATIONAL	Macias, J. (1); Colomb, P. (1); Veca, T. (2) 1 - AREVA-CERCA, France 2 - General Atomics, United States

Tue 11:20 - 13:00 Utilisation of Research Reactors

11:20 – 11:40	Activities related to TRIGA 14 MW research reactor utilization for 99Mo production technology development at Institute for Nuclear Research , Pitesti Romania	Paunoiu, C. (1); Toma, C. (1); Ciocanescu, M. (1) 1 - Institute for Nuclear Research Pitesti, Romania
11:40 – 12:00	Enhancement of irradiation capabilities of MOLY targets in OSIRIS Reactor	Malouch, F. (1); Poinot-Salanon, C. (1); Wohleber, X. (2); Durande-Ayme, P. (2) 1 - CEA, Saclay, DEN/DANS/DM2S/SERMA, France 2 - CEA, Saclay, DEN/DANS/DRSN/SEROS, France
12:00 – 12:20	DEVELOPMENT, QUALIFICATION, AND MANUFACTURING OF LEU-FOIL TARGETRY FOR THE PRODUCTION OF MO-99	Solbrekken, G. (1); Allen, C. (1); Turner, K. (1); Makarewicz, P. (1); Govindarajan, S. (1) 1 - University of Missouri, United States
12:20 – 12:40	GTRI's Efforts to Minimize the Use of HEU in Medical Isotope Production	Staples, P. (1); Hamilton, R. (1); Dix, J. (2) 1 - National Nuclear Security Administration, United States 2 - Pacific Northwest National Laboratory, United States
12:40 – 13:00	THE U.S. GLOBAL THREAT REDUCTION INITIATIVE GAP MATERIAL PROGRAM STATUS UPDATE	Dickerson, S. (1); Kristin, H. (1); Iyer, N. (2); Andes, T. (3) 1 - U.S. Department of Energy – National Nuclear Security Administration, United States 2 - Savannah River National Laboratory, United States 3 - Y-12 National Security Complex, United States

13:00 – 13:55 Lunch

13:55 – 14:40 Poster Session – Possibility to discuss with authors**Tue 14:40 - 16:20 Fuel Cycle Backend**

14:40 – 15:00	SERBIAN SNF REPATRIATION OPERATION.ISSUES, SOLVING, LESSON	Smirnov, A. (1) 1 - R&D Company "Sosny", Russian Federation
15:00 – 15:20	Nuclear Fuel Repatriation from the Republic of Serbia	Šotić, O. (1); Pešić, R. (1) 1 - Public Company "Nuclear Facilities of Serbia", Serbia and Montenegro
15:20 – 15:40	THE GLOBAL THREAT REDUCTION INITIATIVE'S RETURN OF HIGHLY ENRICHED URANIUM FROM CHILE	Messick, C. (1); Dickerson, S. (1); Greenberg jr., R. (1); Andes, T. (2) 1 - U.S. Department of Energy - National Nuclear Security Administration, United States 2 - B&W Y-12 L.L.C., United States
15:40 – 16:00	RETURN TO RUSSIA OF THE FRESH AND IRRADIATED FUEL OF THE ROSSENDORF RESEARCH REACTORS	Helwig, U. (1); Boeßert, W. (1) 1 - Nuclear Engineering and Analytics, VKTA, Germany
16:00 – 16:20	The Shipment of Russian-origin Highly Enriched Uranium Research Reactor Spent Nuclear Fuel from Belarus	Sikorin, S. (1); Polazau, S. (1); Hryharovich, T. (1); Bolshinsky, I. (2); Thomas, J. (3) 1 - Joint Institute for Power and Nuclear Research - Sosny, Belarus 2 - Idaho National Laboratory, United States 3 - Savannah River National Laboratory, United States

Tue 14:40 - 16:20 Research Reactor Operation and Maintenance

14:40 – 15:00	THE HOR NUCLEAR INSTRUMENT CHANNEL REFIT	Kaaijk, C. (1) 1 – Reactor Institute Delft, Delft University of Technology, Netherlands
15:00 – 15:20	The Repair of the High Flux Reactor in Petten	De Widt, E. J. (1) 1 - NRG, Nuclear Research and consultancy Group, Netherlands
15:20 – 15:40	The implementation of an Integrated Management System for TRIGA Research Reactor at LENA (Laboratory of Applied Nuclear Energy), University of Pavia (Italy)	Cagnazzo, M. (1); Borio di Tigliole, A. (1); Giordano, M. (2); Magrotti, G. (1); Manera, S. (1); Marchetti, F. (1); Prata, M. (1); Salvini, A. (1); Boogaard, J. P. (3); Bradley, E. (3); Vincze, P. (3) 1 - Laboratory of Applied Nuclear Energy (LENA), University of Pavia, Italy 2 - Division of Innovation & Management Systems, University of Pavia, Italy 3 - International Atomic Energy Agency (IAEA), Austria
15:40 – 16:00	IAEA's technical advisory support of Vinca's SNF repatriation in the final preparatory stage of the shipment	Tozser, S. (1); Adelfang, P. (1); Kelly, J. (1); Šotić, O. (2); Pešić, R. (2) 1 – International Atomic Energy Agency, Austria 2 – Public Company Nuclear Facilities of Serbia, Serbia and Montenegro
16:00 – 16:20	Research reactors as sources of atmospheric radioxenon	Böck, H. (1); Lechermann, M. (1); Ringbom, A. (2); Saey, P. R. J. (1); Schlosser, C. (3); Steinhauser, G. (1); Villa, M. (1) 1 - Vienna University of Technology, Atominstitut, Austria 2 - Swedish Defence Research Agency, Sweden 3 - Bundesamt für Strahlenschutz, Germany

16:20 – 16:40 Coffee break**Tue 16:40 - 18: 20 Fuel Cycle Backend**

16:40 – 17:00	REPROCESSING OF LEU U-MO DISPERSION AND MONOLITHIC FUELS	Vandegrift, G. (1); Stepinski, D. (1); Figueroa, J. (1); Williamson, M. (1); Van Kleeck, M. (1); Blaskovitz, R. (1); Jerden, J. (1); Ziegler, A. (1); Maggos, L. (1); Swanson, J. (1); Fortner, J. (1); Bakel, A. (1) 1 - Argonne National Laboratory, United States
17:00 – 17:20	INTERNATIONAL TOPICAL MEETING ON RESEARCH REACTOR FUEL MANAGEMENT (RRFM) - GLOBAL THREAT REDUCTION INITIATIVE'S U.S.-ORIGIN NUCLEAR MATERIAL REMOVAL PROGRAM: 2011 UPDATE	Messick, C. (1); Galan, J. (1) 1 - US-DOE National Nuclear Security Administration, United States
17:20 – 17:40	IAEA'S SAFETY REVIEW ACTIVITIES OF VINCA'S SPENT NUCLEAR FUEL REAPATRIATION OPERATION	Boogaard, J. (1); Tozser, S. (1) 1 - IAEA, Austria
17:40 – 18:00	PROTECTIVE COATINGS FOR WET STORAGE OF ALUMINIUM-CLAD SPENT FUEL	Fernandes, S. M. (1); Correa, O. (1); Souza, J. A. (1); Ramanathan, L. (1) 1 - Instituto de Pesquisas Energéticas e Nucleares, IPEN - CNEN/SP, Brazil
18:00 – 18:20	WATER CHEMISTRY CONTROL SYSTEM FOR RECOVERY OF DAMAGED AND DEGRADED SPENT NUCLEAR FUEL	Fisher, D. (1); Sindelar, R. (1); Thomas, J. (1); Iyer, N. (1); Sotic, O. (2); Pesic, M. (2); Bradley, E. (3); Samanta, S. (3); Adelfang, P. (3); Kelly, J. (3); Hirsch, K. (4) 1 - SAVANNAH RIVER NATIONAL LABORATORY, AIKEN, SC, United States 2 - VINCA INSTITUTE FOR NUCLEAR SCIENCE, BELGRADE, Serbia and Montenegro 3 - INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, Austria 4 - U.S DEPARTMENT OF ENERGY - NATIONAL NUCLEAR SECURITY ADMINISTRATION, WASHINGTON, DC, United States

Tue 16:40 - 18:20 Research Reactor Operation and Maintenance

16:40 – 17:00	IMPACT OF BERYLLIUM REFLECTOR AGEING ON SAFARI-1 REACTOR CORE PARAMETERS	Moloko, L. E. (1); Korochinsky, S. (1); Van Rooyen, J. (1) 1 - NECSA, South Africa
17:00 – 17:20	Investigation of Fuel Defects in the NRU Reactor	Sears, D. (1); Montin, J. (1); Wang, N. (1) 1 - Atomic Energy of Canada Limited, Canada
17:20 – 17:40	MANAGING PREVENTIVE MAINTENANCE, IN-SERVICE INSPECTION, AGEING MANAGEMENT WITHIN A PRODUCTION ENVIRONMENT	Tillwick, D. (1); Du Bruyn, J. (1); D'Arcy, A. (1) 1 - Safari-1, NECSA, South Africa
17:40 – 18:00	A high Operability Supervisory Digital System for TRIGA-type Research Reactors	Aronica, O. (1); Bove, R. (1); Cappelli, M. (1); Conte, G. (2); Falconi, L. (1); Memmi, F. (2); Palomba, M. (1); Santoro, E. (1); Sepielli, M. (1) 1 - ENEA - UTFISST, Italy 2 - University of Rome, Italy
18:00 – 18:20	NRU Vessel Repair Project	Drumhiller, H. (1) 1 - AECL, Canada

Conference Dinner

Wed 8:40 - 10:40 New Research Reactor Projects

8:40 – 9:00	THE ORNL HIGH FLUX ISOTOPE REACTOR AND NEW ADVANCED FUEL TESTING CAPABILITIES	McDuffee, J. (1); Ott, L. (1) 1 - Oak Ridge National Laboratory, United States
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9:00 – 9:20	REVIEW OF MAIN SPECIFICATIONS AND ALLOWANCES FOR RESEARCH REACTOR MATERIALS AIMING DECOMMISSIONING	de Oliveira Lainetti, P. E. (1) 1 - Nuclear and Energetic Research Institute - IPEN-CNEN, Brazil
9:20 – 9:40	The Boron Neutron Capture Therapy (BNCT) Project at the TRIGA reactor in Mainz, Germany	Hampel, G. (1); Schütz, C. (1); Schmitz, T. (1); Grunewald, C. (1); Kratz, J.-V. (1); Brochhausen, C. (1); Bortolussi, S. (2); Altieri, S. (2); Kudejova, P. (3); Appelman, K. (4); Moss, R. (4); Bassler, N. (5); Blaickner, M. (6); Sharpe, P. (7); Palmans, H. (7); Otto, G. (1) 1 - Johannes Gutenberg-University of Mainz, Germany 2 - National Institute of Nuclear Physics (INFN) Pavia, Italy 3 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), TU Munic, Germany 4 - Joint Research Centre (JRC) of the European Commission, Petten, Netherlands 5 - University of Aarhus, Denmark 6 - AIT Austrian Institute of Technology GmbH, Austria 7 - National Physical Laboratory, Teddington, United Kingdom
9:40 – 10:00	R&D on Control Rod Magnetic Suspension Drive Mechanism of CARR	Xinxin, W. (1); Huijie, Y. (1) 1 - Institute of Nuclear Energy Technology, Tsinghua University, China
10:00 – 10:20	APPROXIMATION OF FAST REACTOR SPECTRA AT THE JULES HOROWITZ REACTOR	Stummer, T. (1); Blanc, M. (2); Pouchin, B. (2) 1 - TU Vienna, Atominsttitut, Austria 2 - CEA, DEN/SRJH, France
10:20 – 10:40	The design of a Prompt Gamma Neutron Activation Analysis Facility for BNCT purpose at Triga Mark II reactor in Pavia	Stella, S. (1); Ballarini, F. (1); Bortolussi, S. (2); Protti, N. (2); Bazani, A. (1); Bruschi, P. (1); Altieri, S. (1) 1 - University of Pavia, Italy 2 - Istituto Nazionale di Fisica Nucleare (INFN), Italy

Wed 8:40 - 10:40 Innovative Methods in Research Reactor Analysis and Design

Abstract	Abstract	Authors/Affiliations
8:40 – 9:00	VIBRATION CHARACTERISTICS OF A PLATE TYPE FUEL ASSEMBLY	Yim, J.-S. (1); Lee, B.-H. (1); Oh, J.-Y. (1); Tahk, Y.-W. (1); Kim, H. (1) 1 - Korea Atomic Energy Research Institute(KAERI), Korea, Republic of
9:00 – 9:20	Design of high thermal flux LEU research reactor with assembly-integral flux traps	Kempf, S. (1); Hu, L.-W. (1); Forget, B. (1) 1 - Massachusetts Institute of Technology, United States
9:20 – 9:40	Safety of experiments prior to a test campaign and associated reactivity injection characterization	Ritter, G. (1); Cadiou, T. (1); Rondeaux, A. (2) 1 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France 2 - Under contract with CEA, France
9:40 – 10:00	COUPLED HYDRO-MECHANICAL ANALYSIS OF U-10MO FUEL PLATES FOR MANUFACTURING TOLERANCE RISK ASSESSMENT	Solbrekken, G. (1); Kennedy, J. (1) 1 - University of Missouri, United States
10:00 – 10:20	A Microstructural Model of the Thermal Conductivity of Dispersion Type Fuels with a Fuel Matrix Interaction Layer. A.F. Williams, B.W. Leitch, and N. Wang	Williams, A. (1); Leitch, B. (1); Wang, N. (1) 1 - Atomic Energy of Canada Limited, Canada
10:20 – 10:40	NUMERICAL STUDY OF HEAT TRANSFER IN A RADIOMETRIC CALORIMETER DEDICATED TO NUCLEAR HEATING MEASUREMENTS	Reynard-Carette, C. (1); Merroun, O. (1); Brun, J. (1); Carette, M. (1); Janulyte, A. (1); Zerega, Y. (1); Andre, J. (1); Lyoussi, A. (2); Bignan, G. (2); Chauvin, J.-P. (2);

Fourmentel, D. (2); Gonnier, C. (2);
Guimbal, P. (2); Malo, J.-Y. (2); Villard,
J.-F. (2)
1 - LCP UMR 6264 – University of Provence, France
2 - CEA Cadarache, France

10:40 – 11:00 Coffee break

Wed 11:00 - 12:00 International Programmes

11:00 – 11:20	EXPERIENCE IN COMMISSIONING STAGE OF CARR'S DIGITAL CONTROL AND PROTECTION SYSTEM	Luzheng, Y. (1); Mingkui, Z. (1); Xiao, D. (1) 1 - CIAE, China
11:20 – 11:40	IMPLEMENTATION OF INTEGRATED MANAGEMENT SYSTEMS FOR OPERATING ORGANIZATION OF RESEARCH REACTORS	Boogaard, J. (1); Bradley, E. (1) 1 - IAEA, Austria
11:40 – 12:00	Considerations and Infrastructure Milestones for a Research Reactor Project	Allred, K. (1); Adelfang, P. (1); Shokr, A. (1); Bradley, E. (1) 1 - IAEA, Austria

Wed 12:00 - 12:30 Closing Session

Poster Session

RRFM2011-A0007	Development of the ES-4100 Container for the Transportation of Fresh Research Reactor Fuel	Arbital, J. (1); Winder, D. (1); Mann, P. (2) 1 - Y-12 National Security Complex, United States 2 - U. S. Department of Energy, United States
RRFM2011-A0014	CONTROL ROD EJECTION ACCIDENT WHILE USING 6- AND 8-TUBE IRT-4M FUEL ASSEMBLIES IN WWR-SM RESEARCH REACTOR CORE	Baytelesov, S. (1); Kungurov, F. (1); Safarov, A. (1); Salikhbaev, U. (1) 1 - Institute of Nuclear Physics AS RUZ, Uzbekistan
RRFM2011-A0020	Quantitative Determination of Uranium Distribution Homogeneity in Dispersion Fuel Plates	Ferrufino, F. B. J. (1); Saliba-Silva, A. M. (1); Urano de Carvalho, E. F. (1); Riella, H. G. (2); Durazzo, M. (2) 1 - Nuclear and Energy Research Institute (IPEN/CNEN-SP), Brazil 2 - Brazilian Institute of Science and Technology for Innovating Nuclear Reactors, Brazil
RRFM2011-A0022	Full-Scale Irradiation Test of HANARO U3Si Fuel using Lead Bundle	Lee, C. S. (1); Park, J. M. (1); Kim, H. M. (1); Lim, I. C. (1); Chae, H.T. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2011-A0025	RECOVERY OF URANIUM FROM SLAG GENERATED IN THE PRODUCTION OF URANIUM METAL	Fornarolo, F. (1); Urano de Carvalho, E. (1); Saliba-Silva, A. (1); Durazzo, M. (1); Riella, H. (2) 1 - Institute of Energy and Nuclear Research - IPEN/CNEN-SP, Brazil 2 - Federal University of Santa Catarina, Brazil
RRFM2011-A0031	COMPOSITE FUEL ELEMENT FOR PROJECTED RESEARCH REACTOR MFRR	Popov, V. V. (1); Birzhevov, G. A. (1); Gibadullin, R. H. (1); Kochetkov, L. A. (1); Rusanov, A. E. (1) 1 - State Scientific Center - Institute for Physics and Power Engineering, Russian Federation

RRFM2011-A0034	Detailed Burnup Calculations for Research Reactors	Leszczynski, F. (1) 1 - COMISION NACIONAL DE ENERGIA ATOMICA (CNEA, Argentina)
RRFM2011-A0044	An ideal tool for criticality level prediction	Ritter, G. (1); Fache, J. (2); Pantera, L. (1) 1 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France 2 - On contract with CEA, France
RRFM2011-A0050	Application of Non Destructive Methods for Qualification of High Density Fuels in the IEA-R1 Reactor	Rosa da Silva, J. E. (1); Teixeira e Silva, A. (1); Borges Domingos, D. (1); Albiac Terremoto, L. A. (1) 1 - IPEN-CNEN/SP, Brazil
RRFM2011-A0051	Development of Computer Codes for Loss of Coolant Analysis of IEA-R1 Reactor	Borges Domingos, D. (1); Maprelian, E. (1); Teixeira e Silva, A. (1) 1 - IPEN-CNEN/SP, Brazil
RRFM2011-A0052	Neutronic Analysis for Production of Fission Molybdenum-99 at IEA-R1 e RMB Research Reactors	Borges Domingos, D. (1); Teixeira e Silva, A. (1); Rosa da Silva, J. E. (1); Garcia João, T. (1) 1 - IPEN-CNEN/SP, Brazil
RRFM2011-A0061	A Prediction Study on Oxidation of Aluminum Alloy Cladding of U3Si2-Al Fuel Plate	Tahk, Y. W. (1); Oh, J. Y. (1); Lee, B. H. (1); Park, J. H. (1); Yim, J. S. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2011-A0062	Special emergency preparedness arrangements for 14 MW TRIGA Research Reactor	Margeanu, S. (1); Margeanu, C. A. (1); Ciocanescu, M. (1); Paunoiu, C. (1) 1 - Institute for Nuclear Research Pitesti, Romania
RRFM2011-A0067	HEAVY ION IRRADIATION ON UMO/AL SYSTEMS: TEMPERATURE INFLUENCE	Zweifel, T. (1); Jungwirth, R. (1); Petry, W. (1); Palancher, H. (2); Bonnin, A. (2) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Germany 2 - CEA, DEN, DEC, France
RRFM2011-A0070	Utilization of Research Reactors in Standard Reference Material Certification	Capannesi, G. (1); Rosada, A. (1); Avino, P. (2) 1 - UTFISST, ENEA, Italy 2 - DIPIA, INAIL, Italy
RRFM2011-A0071	Preparing for Transportation and Removing of Spent Nuclear Fuel of Research Reactors from RRC "Kurchatov institute"	Volkov, V. (1); Volkovich, A. (1); Drozdov, A. (1); Evstigneev, V. (1); Potapov, V. (1); Semenov, S. (1); Chesnokov, A. (1); Shisha, A. (1) 1 - RRC "Kurchatov Institute", Russian Federation
RRFM2011-A0078	Observations in the sequence of UMo monolithic miniplates preparation.	López, M. (1); Gonzalez, A. G. (1); Taboada, H. (1) 1 - National Commission of Atomic Energy, Argentina
RRFM2011-A0081	MODELING AND ANALYSES OF ROSE AND GIACINT EXPERIMENTS WITH 36% AND 21% ENRICHED URANIUM FUELS	Sikorin, S. (1); Mandzik, S. (1); Polazau, S. (1); Gohar, Y. (2); Zhong, Z. (2) 1 - Joint Institute for Power & Nuclear Research-Sosny of the National Academy of Sciences, Belarus 2 - Argonne National Laboratory, United States
RRFM2011-A0084	DEVELOPING AGEING MANAGEMENT FOR THE FIR 1 TRIGA REACTOR IN FINLAND	Auterinen, I. (1); Kivelä, P. (1) 1 - VTT Technical Research Centre of Finland, Finland
RRFM2011-A0089	Nitriding U-Mo fuel particles and its effect of nitride powder on the out-of-pile interaction layer growth	Yang, J. H. (1); Park, J. S. (1); Cho, W. H. (1); Lee, Y. S. (1); Kim, C. K. (1); Ryu, H. J. (1); Park, J. M. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2011-A0094	Research Reactor Spent Fuel Transfer/Storage Cask with application to TRIGA fuel – designed cask shielding independent evaluation	Margeanu, C. A. (1); Ciocanescu, M. (1); Prava, M. (1); Preda, M. (1); Margeanu, S. (1); Iorgulis, C. (1) 1 – Institute for Nuclear Research Pitesti, Romania
RRFM2011-A0095	THE ONGOING STATUS OF THE PROJECT ON FEASIBILITY STUDIES FOR THE	Nasonov, V. (1); Erak, D. (1); Taliev, A. (1); Pesnya, Y. (1); Dubovskiy, Y. (1)

	CONVERSION OF THE IR-8 REACTOR TO LEU FUEL	1 – National Research Center «Kurchatov Institute », Russian Federation
RRFM2011-A0097	NPP Safety Model	Quartieri, G. (1); Avino, P. (1); Bessirè, O. (1) 1 - DIPIA, INAIL, Italy
RRFM2011-A0101	A ZERO DIMENSIONAL MODEL FOR SIMULATION OF TRIGA MARK II DYNAMIC RESPONSE	Cammi, A. (1); Fusar Poli, A. (1); Ponciroli, R. (1); Borio di Tigliole, A. (2); Magrotti, G. (2) 1 - Politecnico di Milano, Italy 2 - Laboratorio Energia Nucleare Applicata (L.E.N.A) of the University of Pavia, Italy
RRFM2011-A0103	Assessment of the Critical Flow Velocities of MTR Fuel Elements	De Oliveira, C. A. (1); Marcolin, G. (1); Mattar Neto, M. (1) 1 - IPEN-CNEN/SP, Brazil
RRFM2011-A0106	BRAZILIAN STRATEGIES TO OVERCOME MOLYBDENUM CRISIS: PRESENT AND FUTURE PERSPECTIVES OF THE MULTIPURPOSE RESEARCH REACTOR	Alberto Osso Júnior, J. (1); Teodoro, R. (1); Roberta de Barros Rodrigues Dias, C. (1); Ribeiro Lima Bezerra, R. (1); Antônio Villela, L. (1); Luiz Correia, J. (1); Augusto Perrota, J. (1); Alves Pereira, G. (1); Leonel Zapparoli Júnior, C. (1); Mengatti, J. (1) 1 - Instituto de Pesquisas Energéticas e Nucleares, Brazil
RRFM2011-A0107	A TRAINING EXPERIENCE OF OPERATORS WITH THE AGN-201 "COSTANZA" RESEARCH REACTOR OF PALERMO UNIVERSITY	Tomarchio, E. (1); Casamirra, M. (1); Chiovaro, P. (1); D'aleo, F. (1); Di Maio, P. A. (1); Giardina, M. (1); Vella, G. (1) 1 - Università di Palermo - Dipartimento di Ingegneria Nucleare, Italy
RRFM2011-A0108	Out-of-pile study on the influence of Si present as coating layer or matrix element on the U(Mo)-Al interaction	Leenaers, A. (1); Van den Berghe, S. (1); Detavernier, C. (2) 1 - SCK•CEN, Belgium 2 - UGent, Belgium
RRFM2011-A0111	The New Neutron imaging facility at TRIGA reactor in Morocco.	Ouardi, A. (1); Alami, R. (1); Bensitel, A. (1) 1 - Centre National de l'Energie des Science et des Techniques Nucléaires, Morocco
RRFM2011-A0112	Simulation of a Channel Blockage Transient in the IPR-R1 Research Reactor Using the RELAP5 Code	A. I. Reis, P. (1); L. Costa, A. (1); Pereira, C. (1); A. m. Silva, C. (1); F. Veloso, M. A. (1); Z. Mesquita, A. (2) 1 - UFGM and Instituto Nacional de Ciências e Tecn de Reatores Nucleares Inovadores, Brazil 2 - Comissão Nacional da Tecnologia Nuclear, Brazil
RRFM2011-A0113	Simulation of the TRIGA IPR-R1 Research Reactor using the RELAP5-3D	L. Costa, A. (1); A. I. Reis, P. (1); Claubia, P. (1); A. m. Silva, C. (1); F. Veloso, M. A. (1); Z. Mesquita, A. (2) 1 - UFGM and Instituto Nacional de Ciências e Tecn de Reatores Nucleares Inovadores, Brazil 2 - Comissão Nacional da Tecnologia Nuclear, Brazil
RRFM2011-A0114	SECONDARY COOLING WATER QUALITY MANAGEMENT FORMULTI PURPOSE REACTOR 30MW GA SIWABESSY INDONESIA	Sunaryo, G. R. (1) 1 - PTRKN BATAN, Indonesia
RRFM2011-A0116	ANALYSES OF AN HYPOTETICAL LOSS OF COOLANT ACIDENT ON RMB RESEARCH REACTOR USING THE RELAP5 CODE	V. Soares, H. (1); L. Costa, A. (1); Pereira, C. (1); F. Veloso, M. A. (1); A. M. da Silva, C. (1); D. Aronne, I. (2); H. Almeida, Y. (2) 1 - UFGM and Instituto Nacional de Ciências e Tecn de Reatores Nucleares Inovadores, Brazil 2 - Comissão Nacional da Tecnologia Nuclear, Brazil
RRFM2011-A0128	THERMAL/MECHANICAL DEVELOPMENT OF A LEU-FOIL BASED TARGET FOR PRODUCTION OF MO-99	Solbrekken, G. (1); Turner, K. (1); Makarewicz, P. (1); Govindarajan, S. (1); Allen, C. (2) 1 - University of Missouri, United States 2 - University of Missouri Research Reactor, United States
RRFM2011-A0130	Thermal-hydraulic analysis of the Moroccan	Boulaich, Y. (1)

	TRIGA MARK II reactor containing 12 wt. % fuel elements with PARET code.	1 - CNESTEN, Morocco
RRFM2011-A0132	Si coating on atomized U-Mo particles as a barrier of U-Mo/Al interdiffusion	Lee, Y.-S. (1); Park, J.-M. (1); Ryu, H.-J. (1); Yang, J.-H. (1); Jeong, Y.-J. (1); Park, J.-S. (1); Park, E.-K. (1); Cho, W.-H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2011-A0133	WATER FLOW RATE EFFECT ON ALUMINUM ALLOYS CORROSION	Golosov, O. A. (1) 1 - Institute of Nuclear Materials, Russian Federation
RRFM2011-A0139	Fuel Performance Evaluation of Rod-type U-Mo Dispersion Fuel Irradiated at HANARO	Ryu, H. J. (1); Park, J. M. (1); Yang, J. H. (1); Kim, C. K. (1); Kim, Y. S. (2) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - Argonne National Laboratory, United States
RRFM2011-A0140	Synchrotron X-ray Diffraction Measurements of Spatially Resolved Strain Fields in RERTR Fuel Plates	Okuniewski, M. (1); Brown, D. (2); Medvedev, P. (1); Ozaltun, H. (1); Balogh, L. (2); Neal, J. (2); Terry, J. (3); Olive, D. (3); Trenikhina, Y. (3); Okasinski, J. (4); Jue, J.-F. (1) 1 - Idaho National Laboratory, United States 2 - Los Alamos National Laboratory, United States 3 - Illinois Institute of Technology, United States 4 - Argonne National Laboratory, United States
RRFM2011-A0141	TAILORED MODEL SYSTEMS FOR IDL INVESTIGATION AND DIFFUSION BARRIER OPTIMIZATION	Schmid, W. (1); Dirndorfer, S. (1); Jungwirth, R. (1); Juranowitsch, H. (1); Petry, W. (1); Zweifel, T. (1) 1 - Technische Universität München, Germany
RRFM2011-A0159	METALLIC URANIUM PRODUCTION FOR IRRADIATION TARGET ALLOYS	A.M. Saliba-Silva (1), I.C. Martins (1), L.R. dos Santos (1), D.G. da Silva (1), E.F. Urano de Carvalho (1), H.G. Riella (1), M. Durazzo (1) 1 - Centro de Combustível Nuclear, Instituto de Pesquisas Energéticas e Nucleares (IPEN/CNEN-SP), Brasil
RRFM2011-A0160	SYNTHETIC REVIEW OF THE IRIS 3 EXPERIMENT	Ripert, M. (1); Marelle, V. (1); Illtis, X. (1); Palancher, H. (1); Valot, C. (1); Charollais, F. (1); Anselmet, M. C. (1); Tiratay, X. (2); Lemoine, P. (2); Van den Berghe, S. (3); Leenaers, A. (3); Jarousse, C. (4) 1 - Commissariat à l'Energie Atomique (CEA) Cadarache, France 2 - Commissariat à l'Energie Atomique (CEA) Saclay, France 3 - SCK•CEN, Nuclear Materials Science Institute, Belgium 4 - AREVA-CERCA, France
RRFM2011-A0161	Branching treatment of n-capture to isomer states in ORIGEN depletion code and necessary correction	Röhrmoser, A. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz, Technische Universität München, Germany
RRFM2011-A0164	USE OF BEST ESTIMATE TOOLS FOR RESEARCH REACTOR SAFETY ANALYSIS	Adomi, M. (1); Hamidouche, T. (2); Bousbia-Salah, A. (1); D'Auria, F. (1) 1 - Dipartimento di Ingegneria Meccanica, Nucleari e della Produzione – Facoltà di Ingegneria, Università di Pisa, Italy 2 - Division de l'Environnement, de la Sûreté et des Déchets Radioactifs, Centre de Recherche Nucléaire d'Alger, Algeria

