



## Programme Committee

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Douglas L. Selby, ORNL, United States (*IGORR*)  
Jose Lolic, Balseiro Institute, Argentina (*IGORR*)  
Danas Ridikas, IAEA, Austria (*IGORR*)

## Welcome Addresses

Opening Session Monday 8:30 – 9:00

Mr. Jean-Pol Poncelet, Secretary General ENS, Belgium  
Dr. Martin Ruscak, Director of Research Centre Rez Ltd., Prague  
Dr. Jan Kysela, Scientific Director Research Centre Rez Ltd., Prague



## Sunday 18 March 2012

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

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

## Monday 19 March 2012

**Mon 8.30 - 9.00 Opening Session**

**Welcome Addresses**

### **Mon 9.00 - 10.30 International Programmes I**

Chairman: Edgar Koonen, SCK-CEN, Belgium

9:00 - 9:25	OVERVIEW OF THE INTERNATIONAL GLOBAL THREAT REDUCTION PROGRAM	Staples, P. (1) 1 - U.S. Department of Energy, National Nuclear Security Administration, United States
9:20 - 9:50	LEONIDAS UMO DISPERSION FUEL QUALIFICATION PROGRAM: PROGRESS AND PERSPECTIVES. HIGHLIGHT ON THE E-FUTURE II FUEL PLATE MANUFACTURING.	STEPNIK, B. (1); GRASSE, M.(1); GESLIN, D.(1); JAROUSSE, C.(1); CHAROLLAIS, F. (2); LEMOINE, P.(3); CALZAVARA, Y. (4); GUYON, H. (4); KOONEN, E.(5); VAN DEN BERGHE, S(5) 1 - AREVA-CERCA, France 2 - CEA, DEN, DEC, France 3 - CEA, DEN, DISN, France 4 - ILL, France 5 - SCK-CEN, Belgium
9:50 - 10:05	2012 PROGRESS REPORT ON HEU MINIMIZATION ACTIVITIES IN ARGENTINA	Cristini, P. (1); De Lio, L. (1); Gil, D. (1); Gonzalez, A. G. (1); López, M. (1); Novara, O. (1); Taboada, H. (1) 1 - CNEA, Argentina
10:05-10:30	U.S. PROGRESS IN THE DEVELOPMENT OF VERY HIGH DENSITY LOW ENRICHMENT RESEARCH REACTOR FUELS	Wachs, D. (1); Keiser, D. (1); Gan, J. (1); Rice, F. (1); Robinson, A. (1); Woolstenhulme, N. (1); Medvedev, P. (1); Hofman, G. (2); Kim, Y. S. (2); Meyer, M. (2) 1 - Idaho National Laboratory, United States 2 - Argonne National Laboratory, United States

**10:30 - 11:30 Coffee break and Poster Session**

### **Mon 11.30 - 12.30 International Programmes II**

Chairman: Danas Ridikas, IAEA, Austria

11:30 - 11:50	INTERNATIONAL CENTRES OF EXCELLENCE BASED ON RESEARCH REACTORS	Alldred, K. (1); Tozser, S. (1); Adelfang, P. (1) 1 - International Atomic Energy Agency, Austria
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11:50 - 12:10	THE JULES HOROWITZ REACTOR: A NEW HIGH PERFORMANCES EUROPEAN MTR WITH MODERN EXPERIMENTAL CAPACITIES: TOWARD AN INTERNATIONAL CENTRE OF EXCELLENCE. G. BIGNAN, X. BRAVO; PM LEMOINE (CEA-FRANCE)	Bignan, G. (1); Bravo, X. (1); Lemoine, P.-M. (1) 1 - CEA, France
12:10 - 12:30	THE INTERNATIONAL MBIR REACTOR BASED CENTER OF EXCELLENCE IN DIMITROVGRAD	Trojanov, V.M. (1); Izhutov, A. (1) 1 - RIAR-Dimitrovgrad, Russia

**12:30 – 13:30 Lunch**

**Mon 13.30 - 15.10 Fuel I**

Chairman: Dominique Geslin CERCA, AREVA Group, France

13:30 - 13:50	A NEW METHOD OF PRODUCING U(MO) POWDER PARTICLES FOR MATERIAL TESTING REACTORS (MTR)	Champion, G. (1); Tougait, O. (1); Pasturel, M. (1); Iltis, X. (2); Charollais, F. (2); Anselmet, M.-C. (2); Allenou, J. (1); Noel, H. (1) 1 - Sciences Chimiques de Rennes, UMR-CNRS, France 2 - CEA, DEN, DEC, Cadarache, France
13:50 - 14:10	DIFFERENCES BETWEEN SI-RICH LAYERS DEVELOPED IN AS-FABRICATED SI COATED UMO/AL AND UMO/ALSI FUEL PLATES	Zweifel, T. (1); Palancher, H. (1); Bonnin, A. (1); Charollais, F. (1); Anselmet, M.-C. (1); Van den Berghe, S. (2); Laeneers, A. (2); Jungwirth, R. (3); Petry, W. (3); Lemoine, P. (4) 1 - CEA, DEN, DEC, France 2 - SCK-CEN, Belgium 3 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München, Germany 4 - CEA, DEN, DISN, France
14:10 - 14:30	STATUS REPORT ON PREPARATION OF U-MO MONOLITHIC FUEL QUALIFICATION REPORT FOR RESEARCH REACTORS	Wachs, D. (1) 1 - Idaho National Laboratory, United States
14:30 - 14:50	UPDATE ON FUEL DEVELOPMENT OF MONOLITHIC UMO CORE- ZR ALLOY CLADDING MINIPLATES AND PLATES	López, M. (1); Gonzalez, A. G. (1); Taboada, H. H. (1) 1 - Comisión Nacional de Energía Atómica, Argentina
14:50 - 15:10	PROCESSING WINDOW DESIGN FOR U ALLOYS	Adorno Lopes, D. (1); Gonçalves Gomide, R. (1); Guisard Restivo, T. A. (1); Padilha, A. (2) 1 - CTMSP - Nuclear Technological Centre, Brazil 2 - Polytechnic School - University of São Paulo, Brazil



## Mon 13.30 - 15.10 Operation, Maintenance & Safety Reassessment

Chairman: Jérôme Estrade, CEA, France

13:30 - 13:50	OPAL ENGINEERING STRATEGIES TO MANAGE NEUTRON GUIDE SEAL LEAKS	Humphrey, C. (1); Metcalf, P. (1) 1 - Australian Nuclear Science and Technology Organisation, Australia
13:50 - 14:10	UPDATING THE IAEA DATA BANK ON RESEARCH REACTOR AGEING AND AGEING MANAGEMENT	Roegler, H.-J. (1) 1 - Adviser for the IAEA Initiative on Research Reactor Ageing and Ageing Management, Germany
14:10 - 14:30	THE BERYLLIUM REFLECTOR MANAGEMENT PROGRAMME AT SAFARI-1 RESEARCH REACTOR	Steynberg, B. (1); De Kock, M. (1); Vlok, W. (1) 1 - South African Nuclear Energy Corporation (Necsa), South Africa
14:30 - 14:50	N.N.	
14:50 - 15:10	APPLICATION OF A FAULT SCHEDULE TO THE PERIODIC SAFETY REVIEW OF THE OPAL DETERMINISTIC SAFETY CASE	Summerfield, M. (1) 1 - Australian Nuclear Science and Technology Organisation (ANSTO), Australia

### 15:10 - 15:40 Coffee break

## Mon 15.40 - 18.00 Fuel II

Chairman: Daniel Wachs, Idaho National Laboratory, United States

15:40 - 16:00	STATUS OF FULL SCALE MONOLITHIC UMO PLATE AND ASSEMBLY FABRICATION METHODS AND EQUIPMENT	Wight, J. (1); Johnson, R. (1) 1 - Babcock & Wilcox, United States
16:00 - 16:20	ION IRRADIATION OF UMO/AL FUEL SAMPLES WITH 7WT% AND 12WT% SI INSIDE THE MATRIX (E-FUTURE II)	Jungwirth, R. (1); Chiang, H.-Y. (1); Zweifel, T. (1); Petry, W. (1); Charollais, F. (2); Lemoine, P. (3); Calzavara, Y. (4); Guyon, H. (4); Koonen, E. (5); Van den Berghe, S. (5); Leenaers, A. (5); Stepnik, B. (6); Jousse, C. (6); Geslin, D. (6) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München, Germany 2 - CEA, DEN, DEC, Cadarache, France 3 - CEA, DEN, DISN, France 4 - ILL, France 5 - SCK-CEN, Belgium 6 - AREVA-CERCA, France





16:20 – 16:40	LEONIDAS E-FUTURE: RESULTS OF THE DESTRUCTIVE ANALYSES OF THE U(MO)-AL(SI) FUEL PLATES	Leenaers, A. (1); Van den Berghe, S. (1); Charollais, F. (2); Lemoine, P. (2); Calzavara, Y. (3); Guyon, H. (3); Jarousse, C. (4); Stepnik, B. (4); Wachs, D. (5); Robinson, A. (5) 1 - SCK•CEN, Belgium 2 - CEA, France 3 - ILL, France 4 - AREVA-CERCA, France 5 - INL, United States
16:40 – 17:00	MICROSTRUCTURAL ANALYSIS OF IRRADIATED U-MO FUEL PLATES: RECENT SEM RESULTS	Keiser, Jr., D. (1); Jue, J.-F. (1); Miller, B. (1); Gan, J. (1); Robinson, A. (1); Medvedev, P. (1) 1 - Idaho National Laboratory, United States
17:00 – 17:20	RECRYSTALLIZATION AND SWELLING U-MO FUEL DURING IRRADIATION	Kim, Y. S. (1); Hofman, G. (1); Cheon, J. S. (2) 1 - Argonne National Laboratory, United States 2 - KAERI, Korea, Republic of
17:20 – 17:40	TEMPERATURE DEPENDANT BEHAVIOUR OBSERVED IN THE AFIP-6 IRRADIATION TEST	Robinson, A. (1); Wachs, D. (1); Rice, F. (1); Perez, D. (1); Meyer, M. (1) 1 - Idaho National Laboratory, United States
17:40 – 18:00	AREVA INVOLVEMENT IN UMO FUEL MANUFACTURING AND RESEARCH TEST REACTOR FUEL RECYCLING	Stepnik, B. (1); Grasse, M. (1); Jarousse, C. (2); Geslin, D. (2); Lefort-Mary, F. (3); Tribout-Maurizi, A. (3) 1 - AREVA-CERCA, Romans Cedex, France 2 - AREVA-CERCA, Lyon Cedex, France 3 - AREVA NC, France

## Mon 15.40 - 17.40 Operation, Maintenance & Safety Reassessment II

Chairman: Greg Storr, ANSTO, Australia

15:40 – 16:00	FACTORS AFFECTING THE DECISION TO DECOMMISSION A RESEARCH REACTOR IN INDONESIA	Wisnubroto, D. S. (1) 1 - National Nuclear Energy Agency of Indonesia - BATAN, Indonesia
16:00 – 16:20	INSPECTION OF THE REACTOR TANK AND INTERNALS AT THE TRIGA FIR 1	Auterinen, I. (1); Koskinen, A. (1); Kivelä, P. (1); Helin, J. (1); Tuhti, A. (1) 1 - VTT Technical Research Centre of Finland, Finland
16:20 – 16:40	RELIABILITY AND REACTOR UTILIZATION IMPROVEMENTS AT OAK RIDGE NATIONAL LABORATORY'S HIGH FLUX ISOTOPE REACTOR (HFIR)	Crone, R. (1); Selby, D. (1); Griffis, E. (1); Bryan, C. (1); Brown, L. (1) 1 - Oak Ridge National Laboratory, United States
16:40 – 17:00	STATUS OF AGEING MANAGEMENT PROGRAM FOR HANARO	Shin, J.-W. (1); Lee, J.-H. (1); Kim, H.-K. (1); Jung, H.-S. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
17:00 – 17:20	REACTIVITY INFLUENCES AFTER A LONGER SHUT DOWN PERIOD OF FRM II	Röhrmoser, A. (1); Kastenmüller, A. (1); Schätzlein, R. (1); Pichlmaier, A. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Germany




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17:20 – 17:40	NEW / UPDATED SAFETY REQUIREMENTS FROM NUCLEAR RESEARCH INSTALLATIONS OPERATORS IN THE RUSSIAN FEDERATION	Sapozhnikov, A. (1) 1 - Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor), Russian Federation
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## Tuesday 20 March 2012

### **Tue 8.30 - 10.10 Fuel III**

Chairman: John Stevens, Argonne National Laboratory, United States

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08:30 – 08:50	CALCULATIONS FOR THE IR-8 REACTOR CONVERSION TO LEU FUEL	Erak, D. (1); Nasonov, V. (1); Pesnya, Y. (1); Taliev, A. (1); Dubovskiy, Y. (1) 1 - NATIONAL RESEARCH CENTRE KURCHATOV INSTITUTE, Russian Federation
08:50 – 09:10	EXTENDED STUDIES OF FRM II CORE CONVERSION WITH UMO DISPERSIVE FUEL AT A PROLONGED FUEL ELEMENT	Röhrmoser, A. (1); Petry, W. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz, Technische Universität München, Germany
09:10 – 09:30	ATR LEU MONOLITHIC FOIL-TYPE FUEL WITH INTEGRAL CLADDING BURNABLE ABSORBER – NEUTRONICS PERFORMANCE EVALUATION	Chang, G. (1) 1 - Idaho National Laboratory, United States
09:30 – 09:50	REACTIVITY PERFORMANCES OF TWO PROTOTYPES HEU FUEL ELEMENTS WITH CADMIUM WIRES IRRADIATED IN THE BR2 REACTOR	Kalcheva, S. (1); Van den Branden, G. (1); Koonen, E. (1) 1 - SCK-CEN, BR2 Reactor, Belgium
09:50 – 10:10	NEUTRON DIFFRACTION ANALYSIS OF IRRADIATED AL-U3SI FUEL FROM NRU	Sears, D. (1); Wang, N. (1); Rogge, R. (2); Swainson, I. (2); Donabarger, R. (2) 1 - Atomic Energy of Canada Limited, Canada 2 - National Research Council, Canada

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### **Tue 8.30 - 10.10 Operation, Maintenance & Safety Reassessment III**

Chairman: Frances Marshall, INL, United States

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08:30 – 08:50	EVALUATION OF THE CONSERVATIVE ASSUMPTIONS - THE CORE INVENTOR AND CONSEQUENCES	Belal, M. (1); Seals, H. (1); Van Graan, H (1) 1 - South African Nuclear Energy Corporation, Necsa, South Africa
08:50 – 09:10	IAEA ACTIVITIES ON RESEARCH REACTOR SAFETY: 2012 UPDATE	Shokr, A. M. (1); Abou Yheia, H. (1) 1 - Research Reactor Safety Section, Department of Nuclear Safety and Security, IAEA, Austria
09:10 – 09:30	IRSN ASSESSMENT OF OPERATING CONDITIONS ANALYSIS FOR PERIODIC SAFETY REVIEWS ON FRENCH RESEARCH REACTORS	Auzas, M. (1); Gupta, F. (1); Corbel, M. (1); Bourgois, T. (1) 1 - French Institute for Radiological Protection and Nuclear Safety (IRSN), France

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09:30 – 09:50	EXPERIMENTAL AND ANALYTICAL STUDIES ON THE SIPHON BREAKERS IN RESEARCH REACTOR	Lee, K.-Y. (1); Seo, K. (1); Chi, D. Y. (1); Kang, S. H. (2); Kim, M. H. (2); Yoon, J. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - Pohang University of Science and Technology, Korea, Republic of
09:50 – 10:10	CORROSION MANAGEMENT FOR SECONDARY COOLING PIPING OF MULTI PURPOSE REACTOR 30MW GA SIWABESSY INDONESIA	Sunaryo, G. R. (1) 1 - BATAN, National Nuclear Energy Agency, Indonesia

### 10:10 – 10:40 Coffee break

### Tue 10.40 - 12.20 Fuel IV

Chairman: Vladimir Broz, NRI Rez, Czech Republic

10:40 – 11:00	OVERVIEW OF THE GLOBAL THREAT REDUCTION'S REACTOR CONVERSION PROGRAM	Landers, C. (1) 1 - U.S. National Nuclear Security Administration, United States
11:00 – 11:20	STATUS REPORT AND FUTURE PLANS REGARDING IRRADIATION TESTING OF LOW ENRICHED MONOLITHIC FUEL DESIGNS	Woolstenhulme, N. (1); Meyer, M. (1); Wachs, D. (1) 1 - Idaho National Laboratory, United States
11:20 – 11:40	OVERVIEW OF THE GTRI FUEL FABRICATION CAPABILITY	Burkes, D. (1); Longmire, H. (2); Dombrowski, D. (3); Cole, L. (4) 1 - Pacific Northwest National Laboratory, United States 2 - Y-12 National Security Complex, United States 3 - Los Alamos National Laboratory, United States 4 - Idaho National Laboratory, United States
11:40 – 12:00	GLOBAL THREAT REDUCTION INITIATIVE'S U.S.-ORIGIN NUCLEAR MATERIAL REMOVAL PROGRAM: 2012 UPDATE	Messick, C. (. (1); Galan, J. (. (1) 1 - U.S. Department of Energy - National Nuclear Security Administration, United States
12:00 – 12:20	COATINGS FOR INCREASED CORROSION RESISTANCE OF ALUMINIUM-CLAD SPENT FUEL IN WET STORAGE	Fernandes, S. M. C. (1); Correa, O. V. (1); Souza, J. A. (1); Ramanathan, L. V. (1) 1 - Instituto de Pesquisas Energéticas e Nucleares-IPEN, Brazil

### Tue 10.40 - 12.20 Utilisation of Research Reactors I

Chairman: Doug Selby, ORNL, United States

10:40 – 11:00	EDUCATION AND TRAINING ON ISIS RESEARCH REACTOR	Foulon, F. (1); Lescop, B. (1); Wohleber, X. (2); Malouch, F. (3) 1 - National Institute for Nuclear science and Technology, CEA, Saclay Research Center, France 2 - Nuclear Reactors and Services Department, CEA, Saclay Research Center, France 3 - SERMA, CEA, Saclay Research Center, France
11:00 – 11:20	MULTIDISCIPLINARY NUCLEAR SCIENCE AND ENGINEERING RESEARCH AND EDUCATION AT THE PENN STATE UNIVERSITY, RADIATION SCIENCE AND ENGINEERING CENTER	Unlu, K. (1) 1 - The Pennsylvania State University, Radiation Science and Engineering Center, United States



11:20 – 11:40	DESIGN IMPROVEMENT OF IN-PILE TEST SECTION FOR PRESSURIZED WATER LOOP IN HANARO	Hong, J. (1); Ahn, S. (1); Joung, C. (1); Jeong, H. (1); Sim, B. (1); Lee, J. (1) 1 - KAERI, Korea, Republic of
11:40 – 12:00	THE IN-CORE EXPERIMENTAL PROGRAM AT THE MIT RESEARCH REACTOR	Kohse, G. (1); Carpenter, D. (1); Hu, L.-W. (1) 1 - Massachusetts Institute of Technology Nuclear Reactor Laboratory, United States
12:00 – 12:20	ADVANCED TEST REACTOR NATIONAL SCIENTIFIC USER FACILITY PARTNERSHIPS	Marshall, F. (1); Allen, T. (2); Cole, J. (1); Benson, J. (1); Thelen, M. C. (1) 1 - Idaho National Laboratory, United States 2 - University of Wisconsin, United States

### 12:20 – 13:20 Lunch

## Tue 13.20 - 15.20 New Research Reactor Projects I

Chairman: Gilles Bignan, CEA, France

13:20 – 13:40	CRITICALITY OF THE PIK REACTOR	Konoplev, K. A. (1) 1 - Petersburg Nuclear Physics Institute, Department of Reactor Physics and Technology, Russian Federation
13:40 – 14:00	BRIEF DESCRIPTION ON LOW POWER COMMISSIONING IN CARR	Lu , Z. (1); Xiao , S. (1); Yuan , L. (1) 1 - China Institute of Atomic Energy, China
14:00 – 14:20	EXPERIMENTAL DEVICES IN JULES HOROWITZ REACTOR DEDICATED TO THE MATERIAL STUDIES IN SUPPORT TO THE CURRENT AND FUTURE NPPS	Colin, C. (1); Pierre, J. (1); Blandin, C. (1); Gonnier, C. (1); Moulin, D. (2); Auclair, M. (3); Rozenblum, F. (3) 1 - CEA / DEN / DER / SRJH, France 2 - CEA / DEN / DER / STPA, France 3 - CEA / DEN / DER / SIREN, France
14:20 – 14:40	SUPERCritical-WATER EXPERIMENTAL SETUP FOR IN-PILE OPERATION WITH CONVENTIONAL NUCLEAR FUELS	Miletic, M. (1); Pioro, I. (2); Grande, L. (2); Ruzickova, M. (3); Fukac, R. (3) 1 - Czech Technical University in Prague, Czech Republic 2 - University of Ontario Institute of Technology, Canada 3 - Research Centre Rez Ltd., Czech Republic
14:40 – 15:00	EXPERIMENTAL DEVICES IN JULES HOROWITZ REACTOR DEDICATED TO THE FUEL STUDIES IN SUPPORT TO THE CURRENT AND FUTURE NUCLEAR POWER PLANT	Dousson, T. (1); Roux, P. (1); Gonnier, C. (1) 1 - CEA, France
15:00 – 15:20	SUDAN PLANS FOR A FIRST RESEARCH REACTOR: DRIVING FORCES, PRESENT STATUS AND WAY AHEAD	Eltayeb, M. A. (1); Eltayeb, M. (1); Talha, S. (2); Hassan, A. (1); Gibrreel, H. (1); Ibrahim, A. (1); Elamin, A. (1); Ahmed, A. (1); Abd Elbagi, W. (1); Elhibir, M. (1); Kamel, S. (1); Ibrahim, M. (1) 1 - Sudan Atomic Energy Commission, Sudan 2 - Sudan Ministry of Electricity and Dams, Sudan

## Tue 13.20 - 15.20 Utilisation of Research Reactors II

Chairman: Jose Lolich, Balseiro Institute, Argentina

13:20 – 13:40	STATUS OF IRRADIATION TECHNOLOGIES IN HANARO	Cho, M. S. (1); Choo, K. N. (1); Kim, B. G. (1); Lee, C. Y. (1); Yang, S. W. (1); Chung, H. S. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
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13:40 – 14:00	SCIENTIFIC UPGRADES AT THE HIGH FLUX ISOTOPE REACTOR AT OAK RIDGE NATIONAL LABORATORY	Selby, D. (1); Jones, A. (1); Crow, L. (1) 1 - Oak Ridge National Laboratory, United States
14:00 – 14:20	NEUTRONS FOR SERVICE FOR THE SOCIETY	Hampel, G. (1); Gerstenberg, H. (2); Ponsard, B. (3); Zauner, S. (4) 1 - University of Mainz, Germany 2 - TU Munich, FRMII, Germany 3 - SCK-CEN Belgian Nuclear Research Center, Belgium 4 - ctf-homepage, Germany
14:20 – 14:40	PRODUCTION AND DETERMINATION OF <sup>75</sup> SE BY NEUTRON ACTIVATION ANALYSIS FOR SELENIUM REMOVAL STUDIES	Orucoglu, E. (1); Hacıyakupoglu, S. (1) 1 - Istanbul Technical University, Faculty of Mines, Turkey
14:40 – 15:00	ENHANCED NAA SERVICES THROUGH AUTOMATION, QUALITY ASSURANCE - QUALITY CONTROL, AND NETWORKING	Ridikas, D. (1); Adelfang, P. (2) 1 - IAEA, Department of Nuclear Sciences and Applications, Austria 2 - IAEA, Department of Nuclear Energy, Austria
15:00 – 15:20	N.N.	

### 15:20 – 15:50 Coffee break

## Tue 15.50 - 17.50 New Research Reactor Projects II

Chairman: Sangik Wu, KAERI, Republic of Korea

15:50 – 16:10	MYRRHA A FLEXIBLE AND FAST SPECTRUM IRRADIATION FACILITY	Baeten, P. (1); Fernandez, R. (1); De Bruyn, D. (1); Van den Eynde, G. (1); Malambu, E. (1); Ait Abderrahim, H. (1) Van den Berghe, S. (1) 1 - Belgian Nuclear Research Centre (SCK•CEN), Belgium
16:10 – 16:30	THE MASURCA CRITICAL FACILITY REFURBISHMENT AND THE DESIGN OF THE FUTURE GENESIS PROGRAM IN SUPPORT TO THE ASTRID PROTOTYPE	Autran, B. (1) 1 - CEA, France
16:30 – 16:50	LAUNCHING OF A NEW RESEARCH REACTOR PROJECT IN KOREA	Wu, S. I. (1); Lim, I. C. (1); Oh, S. Y. (1); Ha, J. J. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
16:50 – 17:10	THE PRE-LICENSING OF A MULTI-PURPOSE HYBRID RESEARCH REACTOR FOR HIGH-TECH APPLICATIONS "MYRRHA"	Hakimi, N. (1); Dams, C. (1); Wertelaers, A. (1); Nys, V. (1); Schrauben, M. (1); Dresselaers, R. (1) 1 - FANC, Belgium
17:10 – 17:30	N.N.	
17:30 – 17:50	ASSESSING THE ROLE OF RESEARCH REACTORS AND RELATED INFRASTRUCTURE IN THE DEVELOPMENT OF A NUCLEAR POWER PROGRAMME	Bradley, E. (1); Yagi, M. (2); Ferrari, M. (2); Molloy, B. (3); Ridikas, D. (4) 1 - IAEA - Research Reactor Section, Division of Nuclear Fuel Cycle and Waste Technology, Austria 2 - IAEA - Integrated Nuclear Infrastructure Group, Division of Nuclear Power, Austria 3 - IAEA - Nuclear Power Engineering Section, Division of Nuclear Power, Austria 4 - IAEA - Physics Section, Division of Physical and Chemical Sciences, Austria



## Tue 15.50 - 17.50 Innovative Methods in Research Reactor Analysis and Design I

Chairman: Andrea Borio di Tigliole, LENA/University of Pavia, Italy

15:50 – 16:10	STATISTICAL METHODS FOR NEUTRON MULTIPLICATION FACTOR DETERMINATION IN DEEPLY SUBCRITICAL STATES ON SUBCRITICAL ASSEMBLY YALINA-THERMAL	Sadovich, S. (1); Burnos, V. (1); Kiyavitskaya, H. (1); Fokov, Y. (1) 1 - Joint Institute for Power and Nuclear Research - SOSNY, Belarus
16:10 – 16:30	DEVELOPMENT AND VALIDATION OF NEUTRONICS CALCULATION TOOLS FOR SMALL REACTORS – APPLICATION TO THE JHR, CABRI AND OSIRIS REACTORS	Hudelot, J.-P. (1); Colombier, A.-C. (1); D'Aletto, C. (1); Gaubert, L. (1); Gueton, O. (1); Leray, O. (1); Sireta, P. (1); Vaglio-Gaudard, C. (1); Valentini, M. (1) 1 - CEA Cadarache, France
16:30 – 16:50	NODAL EXPANSION METHOD IMPROVED NEUTRON LEAKAGE TREATMENT FOR SMALL REACTORS	Alvim, A. (1); Da Silva, F. (1); Martinez, A. (1) 1 - Nuclear Engineering Programme - COPPE - Federal University of Rio de Janeiro, Brazil
16:50 – 17:10	MODERN APPROACHES FOR THE GENERATION OF LOW ENERGY NEUTRON SCATTERING CROSS SECTIONS	Hawari, A. (1) 1 - North Carolina State University, United States
17:10 – 17:30	NEUTRONICS CORE OPTIMISATION STUDIES OF THE JULES HOROWITZ REACTOR	Wong, L. (1); Pouchin, B. (2) 1 - Australian Nuclear Science and Technology Organisation, Australia 2 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France
17:30 – 17:50	USE OF MONTE-CARLO CODE MORET 5 FOR RESEARCH REACTOR SAFETY ANALYSIS	Chegrani, Y. (1); Tiberi, V. (1); Heulers, L. (1) 1 - Institut de Radioprotection et de Sûreté Nucléaire, France



## Wednesday 21 March 2012

### **Wed 9.00 - 11.00 Innovative Methods in Research Reactor Analysis and Design II**

Chairman: Helmuth Boeck, ATI, Austria

9:00 – 9:20	IN-PILE CALORIMETRY: A THERMAL POINT OF VIEW	Reynard Carette, C. (1); Lyoussi, A. (2); Brun, J. (1); Carette, M. (1); Muraglia, M. (1); Janulyte, A. (1); Zerega, Y. (1); Andre, J. (1); 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 - Aix-Marseille Univ, LCP UMR 6264, France 2 - CEA, France
9:20 – 9:40	ADVANCED METHODOLOGY AND INSTRUMENTATION FOR ACCURATE ON LINE MEASUREMENTS OF NEUTRON, PHOTON AND NUCLEAR HEATING PARAMETERS INSIDE JULES HOROWITZ MTR REACTOR	Lyoussi, A. (1); Reynard-Carette, C. (2); Fourmentel, D. (1); Brun, J. (2); Villard, J.-F. (1); Malo, J.-Y. (1); Guimbal, P. (1); Bignan, G. (1); Gonnier, C. (1); Chauvin, J.-P. (1); Merroun, O. (2); Carette, M. (2); Janulyte, A. (2); Zerega, Y. (2); Muraglia, M. (2); André, J. (2) 1 - CEA, France 2 - Laboratoire Chimie Provence, CNRS, Université Aix Marseille I, II et III, France
9:40 - 10:00	OPERATING AN IRRADIATION EXPERIMENT USING NEW NEUTRON TRANSPORT SIMULATIONS AND ENHANCED ANALYSIS OF GAMMA-SPECTROMETRY MEASUREMENTS: APPLICATION TO THE GRIFFONOS DEVICE IN THE OSIRIS REACTOR	Chevallier, F. (1); Dolci, F. (1); Marchand, L. (2); Delacour, P. (2); Salmon, L. (2); Tiratay, X. (2) 1 - CEA (Commissariat à l'Energie Atomique et aux Energies Alternatives), DEN/DANS/DM2S/SERMA, France 2 - CEA (Commissariat à l'Energie Atomique et aux Energies Alternatives), DEN/DANS/DRSN/SIREN, France
10:00 – 10:20	HEAT TRANSFER DURING OUT PILE CALIBRATION OF A CALORIMETER USED FOR NUCLEAR HEATING MEASUREMENTS: INFLUENCE OF CONVECTIVE BOUNDARY CONDITIONS	Brun, J. (1); Reynard, C. (1); Lyoussi, A. (2); Carette, M. (1); Muraglia, M. (1); Merroun, O. (1); Janulyte, A. (1); Zerega, Y. (1); André, J. (1); 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 - Aix-Marseille Univ, LCP, UMR 6264, France 2 - CEA, France
10:20 – 10:40	REVIEW OF RETROSPECTIVE DOSIMETRY TECHNIQUES AND THEIR APPLICATION TO EXPERIMENTAL REACTORS	Destouches, C. (1); Thiollay, N. (1); Gregoire, G. (1); Beretz, D. (1); Nowosad, J. (2) 1 - CEA Cadarache DER/SPEX/LDCI, France 2 - POLATOM Instytut Energii Atomowej, Poland



10:40 – 11:00	THERMAL HYDRAULIC AND NEUTRONIC CORE MODEL FOR POWER TRANSIENT ANALYSES OF REFLECTOR EXPERIMENTAL DEVICES DURING SHUTDOWNS IN JULES HOROWITZ REACTOR (JHR)	Console Camprini, P. (1); Sumini, M. (1); Artioli, C. (2); Gonnier, C. (3); Pouchin, B. (3); Bourdon, S. (3) 1 - University of Bologna, Italy 2 - National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Italy 3 - Atomic Energy Agency, France
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## Wed 9.00 - 11.00 Worldwide Activities by Stakeholders following the Fukushima-Daiichi NPPs Accident I

Chairman: Yacov Barnea, IAEA, Austria

9:00 – 9:20	A PRELIMINARY SURVEY ON WORLDWIDE RECENT ACTIVITIES IN RESEARCH REACTORS CENTRES FOLLOWING FUKUSHIMA-DAIICHI NPPS ACCIDENT	Barnea, Y. (1); Peld, N. (1); Adelfang, P. (1); Ridikas, D. (2); Shokr, A. (3) 1 - Research Reactors Section - NEFW/IAEA, Austria 2 - Physics Section - NACP/IAEA, Austria 3 - Research Reactors Safety Section - NSNI/IAEA Austria
9:20 – 9:40	REASSESSMENT OF RESEARCH REACTORS - THE APPROACH IMPLEMENTED BY THE IRSN BASED ON THE SO-CALLED "GRADED APPROACH" AND TAKING INTO ACCOUNT THE FIRST LESSONS LEARNED FROM THE FUKUSHIMA EVENTS	Gallet, J. (1); Bourgois, T. (1); De Bellabre, C. (1) 1 - Institut de Radioprotection et de Sûreté Nucléaire, France
9:40 - 10:00	EUROPEAN RESEARCH REACTORS AFTER THE ACCIDENT OF FUKUSHIMA DAIICHI	Hampel, G. (1) 1 - Association for Research Reactors (AFR), University of Mainz, Germany
10:00 – 10:20	ASSESSMENT OF THE CONSEQUENCES OF THE FUKUSHIMA ACCIDENT ON THE GERMAN ENERGY POLICY	Joel, G. (1) 1 - CEA, France
10:20 – 10:40	HOW RESEARCH REACTORS CAN COPE WITH FUKUSHIMA-TYPE EVENTS	Doval, A. (1); Mazufri, C. (1) 1 - INVAP, Nuclear Projects Division, Nuclear Engineering Department, Argentina
10:40 – 11:00	N.N.	

### 11:00 – 11:20 Coffee break

## Wed 11.20 - 12.40 Medical Applications I

Chairman: István Vidovszky, AEKI, Hungary

11:20 – 11:40	CONVERSION OF MO-99 PRODUCTION TO LEU IN SOUTH AFRICA	Ball, G. (1) 1 - NTP Radioisotopes (Pty) Ltd, South Africa
11:40 – 12:00	IRRADIATIONS OF URANIUM TARGETS IN MARIA RR FOR MO-99 PRODUCTION	Krzysztosek, G. (1) 1 - National Centre for Nuclear Research, Poland
12:00 – 12:20	OECD-NUCLEAR ENERGY AGENCY'S POLICY APPROACH FOR A RELIABLE SUPPLY OF 99MC	Cameron, R. (1); Westmacott, C. (1) 1 - OECD- Nuclear Energy Agency, France
12:20 – 12:40	SUPPLY OF LEU BASED MO99 FROM ANSTO	Storr, G. J. (1) 1 - Australian Nuclear Science and Technology Organisation (ANSTO), Australia





## Wed 11.20 - 12.50 Worldwide Activities by Stakeholders following the Fukushima-Daiichi NPPs Accident II

Chairman: Yacov Barnea, IAEA, Austria

11:20 – 11:40	CONSIDERATION OF FUKUSHIMA ACCIDENT IN THE DESIGN OF RESEARCH REACTOR	Pascal, C. (1) Pelletier, M. (1); Jones, D. (1) 1 - AREVA TA, France
11:40 – 12:00	REQUIREMENTS FROM US RTRS	Adams, A. (1) 1 - NRC, United States
12:00 – 12:20	REQUIREMENTS FROM RUSSIAN FEDERATION RRS	Sapozhnikov, A. (1) 1 - ROSTECHNADZOR, Russian Federation
12:20 – 12:35	STATUS OF JOYO RR AND THE FUTURE OF RR FOLLOWING THE ACCIDENT AT TEPCO'S (F-D) NPPS	Maeda - JOYO/o-ARAI, Y. (1) 1 - JAEA, Japan
12:35 – 12:50	STATUS OF JRR-3 OF JAEA	Murayama, Y. (1) 1 - JAEA, Japan

### 12:40 – 13:30 Lunch

## Wed 13.30 - 14.50 Medical Applications II

Chairman: Mark Summerfield, ANSTO, Australia

13:30 – 13:50	OVERVIEW OF ARGONNE PROGRESS IN TECHNOLOGY DEVELOPMENT FOR (1) CONVERSION OF 99MO PRODUCTION TO LOW ENRICHED URANIUM AND (2) IMPLEMENTING DOMESTIC PRODUCTION OF MO-99	Vandegrift, G. (1); Alford, K. (1); Bakel, A. (1); Gelis, A. (1); Hafenrichter, L. (1); Bowers, D. (1); Byrnes, J. (1); Hebden, A. (1); Jerden, J. (1); Krahn, E. (1); Makarashvili, V. (1); Quigley, K. (1); Smith, N. (1); Stepinski, D. (1); Tkac, P. (1); Youker, A. (1); Kalensky, M. (1); Krebs, J. (1) 1 - Argonne National Laboratory, United States
13:50 – 14:20	NEUTRONIC CALCULATION IN SUPPORT OF RESEARCH REACTOR OPERATION FOR MOLYBDENUM-99 PRODUCTION	Hergenreder, D. (1); Gaheen, M. (2) 1 - Nuclear Engineering Division INVAP SE, Argentina 2 - Egypt Second Research Reactor (ETRR-2), Egyptian Atomic Energy Authority (EAEA), Egypt
14:20 – 14:50	RADIOISOTOPES PRODUCTION FOR MEDICAL USE: PRELIMINARY DESIGN OF THE JULES HOROWITZ REACTOR FACILITIES	Coulon, J.-P. (1); Antony, M. (1); Gaillot, S. (1); Alberman, A. (1) 1 - CEA Commissariat à l'Energie Atomique et aux Energies Alternatives, France

## Wed 13.30 - 14.30 Innovative Methods in Research Reactor Analysis and Design III

Chairman: Abdallah Lyoussi, CEA, France



13:30 – 13:50	BURN UP CALCULATIONS AND VALIDATION BY GAMMA SCANNING OF A TRIGA HEU FUEL ELEMENT	Khan, R. (1); Karimzadeh, S. (2); Boeck, H. (2); Villa, M. (2); Stummer, T. (2) 1 - Pakistan Institute of Engineering and Applied Sciences, Pakistan 2 - Vienna University of Technology/Atominstut, Austria
13:50 – 14:10	POSSIBILITY OF A REPRESENTATIVE SFR FUEL PIN IRRADIATION AT THE JHR	Stummer, T. (1); Pouchin, B. (2); Blanc, M. (2) 1 - TU Vienna - Atominstut, Austria 2 - CEA/DEN/SRJH, France
14:10 – 14:30	SIMULATION OF THE TIME-EVOLUTION OF OXIDE LAYERS SURROUNDING CLADDING-MEAT CONTACT FAULTS (NON-BONDS) AND THEIR THERMAL-HYDRAULIC IMPLICATIONS	Breitkreutz, H. (1); Petry, W. (1) 1 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München, Germany

#### 14:50 – 15:10 Coffee break

### Wed 15.10 - 16.10 International Programmes III

Chairman: Pablo Adelfang, IAEA, Austria

15:10 – 15:30	OPERATIONAL EXPERIENCE WITH LEU IRT-4M FUEL AFTER THE CONVERSION OF LVR 15 REACTOR	Koleska, M. (1); Broz, V. (1); Ernest, J. (1); Kysela, J. (1); Marek, M. (1); Rychucky, J. (1) 1 - Research Centre Rez, Czech Republic
15:30 – 15:50	CER & AFR: COLLABORATION FOR A SUCCESSFUL FUTURE FOR RESEARCH REACTORS IN EUROPE	Hampel, G. (1); Estrade, J. (2); Chabre, A. (2) 1 - J. GUTENBERG UNIVERSITY MAINZ, Germany 2 - CEA, France
15:50 – 16:10	10 YEARS OF IAEA COOPERATION WITH THE RUSSIAN RESEARCH REACTOR FUEL RETURN PROGRAMME	Tozser, S. (1); Adelfang, P. (1); Bradley, E. (1) 1 - International Atomic Energy Agency, Austria

### Wed 16.10 - 16.30 Closing Session



## Poster

RRFM2012-A0004	USE OF SPECIALIZED MEASURING SYSTEM FOR RADIATION SITUATION MONITORING AT MR RESEARCH REACTOR IN NRC "KURCHATOV INSTITUTE"	Volkov, V. (1); Gerasov, A. (1); Zverkov, Y. (1); Lemus, A. (1); Fadin, S. (1); Semenov, S. (1); Chesnokov, A. (1); Shisha, A. (1) 1 - NRC "Kurchatov Institute", Russian Federation
RRFM2012-A0005	METHODOLOGY FOR GAP MEASUREMENT IN THE FUEL ELEMENT FABRICATED AT IPEN	Durazzo, M. (1); Gomes da Silva, D. (1); Santos, L. R. (1); Urano de Carvalho, E. F. (1); Riella, H. G. (1) 1 - Nuclear and Energy Research Institute - IPEN/CNEN-SP, Brazil
RRFM2012-A0008	ELASTIC-PLASTIC THERMO-MECHANICAL ANALYSES OF AN AL-U10MO FUEL ELEMENT	Leitch, B. (1); Wang, N. (1) 1 - Atomic Energy of Canada Ltd, Canada
RRFM2012-A0012	A METHOD OF HIGH FLUX ENGINEERING TEST REACTOR OPERATION	Li, G. (1) 1 - The First Institute of Nuclear Power Institute of China, China
RRFM2012-A0014	DULCINEE. BEYOND NEUTRON KINETICS, A POWERFUL ANALYSIS SOFTWARE	Ritter, G. (1); Berre, R. (1); Pantera, L. (1); Jeury, F. (1) 1 - CEA / DEN / DER / SRES, France
RRFM2012-A0022	VALIDATION OF THE 3-D VENTURE AND MCNP UMLRR CORE MODELS USED IN SUPPORT OF THE WPI FUEL TRANSFER PROJECT	White, J. (1); Gocht, R. (1); Pike, M. (1); Marcyoniak, J. (1) 1 - Nuclear Engineering Program, University of Massachusetts Lowell, United States
RRFM2012-A0027	METHODS FOR VERIFYING ACCURATE MEASUREMENTS IN RESEARCH REACTORS	Gaheen, M. (1) 1 - Egypt Second Research Reactor (ETRR-2), Egyptian Atomic Energy Authority (EAEA), Egypt
RRFM2012-A0028	HORIZONTAL CHANNEL FOR NEUTRON RADIOGRAPHY AND TOMOGRAPHY IN LVR 15 RESEARCH REACTOR	Viererbl, L. (1); Košťál, M. (1); Lahodová, Z. (1); Šoltés, J. (1); Vinš, M. (1) 1 - Nuclear Centre Řež Ltd., Czech Republic
RRFM2012-A0031	IN-CORE OPTICAL THERMOMETRY FOR THE FUTURE LORELEI LOCA TEST DEVICE OF THE JULES HOROWITZ REACTOR (MTR)	Ramiandrisoa, L. (1); Cheymol, G. (1); Horny, N. (2); Duvaut, T. (2); Vandenberghe, V. (1); Gonnier, C. (3) 1 - CEA/Saclay, France 2 - GRESPI - Université de Reims, France 3 - CEA/Cadarache, France
RRFM2012-A0034	IMPACT OF THE NEW JAPANESE NUCLEAR DATA LIBRARY ON THE CRITICALITY OF MPR-30 (RSG GAS) REACTOR	Sembiring, T. M. (1); Liem, P. H. (2) 1 - Center for Reactor Technology and Nuclear Safety, National Nuclear Energy Agency (BATAN), Indonesia 2 - Nippon Advanced Information Service (NAIS Co., Inc.), Japan
RRFM2012-A0038	MONTE CARLO SIMULATION IN SHIELDING DESIGN OF THE MOROCCAN NEUTRON IMAGING FACILITY	Ouardi, A. (1); Machmach, A. (2); Alami, R. (1); Machmachbensitel, A. (1) 1 - Centre National de l'Energie des Sciences et des Techniques Nucleaires (CNESTEN), Morocco 2 - Physic Department, University Hassan II Faculty of Sciences Ain chock -Casablanca, Morocco



RRFM2012-A0040	PRELIMINARY THERMOHYDRAULICS DESIGN OF LORELEI, AN EXPERIMENTAL DEVICE OF JHR	Nitti, F. S. (1); Bourdon, S. (2); Gonnier, C. (2); Roux, P. (2); Estrade, J. (2); Bignan, G. (2); Wong, L. (3) 1 - ENEA Brasimone Research Centre, Camugnano(BO), Italy 2 - CEA Cadarache Research Centre, France 3 - Australian Nuclear Science and Organisation (ANSTO), Australia
RRFM2012-A0045	FORCED CONVECTIVE HEAT TRANSFER CHARACTERISTICS IN A THIN RECTANGULAR CHANNEL FOR DOWNWARD AND UPWARD FLOWS	Jo, D. (1); Park, J. (1); Chae, H. (1); Lee, B. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2012-A0047	EFFECTS OF BURNABLE ABSORBERS ON THE FUEL FABRICATION AND IRRADIATION PERFORMANCE OF U-MO DISPERSION FUEL	Ryu, H. J. (1); Park, J. M. (1); Kim, C. K. (1); Lee, Y. S. (1); Seo, C. G. (1); Kim, Y. S. (2) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - Argonne National Laboratory, United States
RRFM2012-A0048	A MEASUREMENT OF HOMOGENEITY OF SIMULATED RESEARCH REACTOR FUEL PLATE USING REAL TIME X-RAY	Lee, Y.-S. (1); Lee, H.-I. (1); Lee, D.-B. (1); Jeong, Y.-J. (1); Park, J.-M. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
RRFM2012-A0050	AN EXPERIMENTAL FACILITY TO QUALIFY THE CALIPSO MOCK-UP AND NAK PROCESSES FOR THE JULES HOROWITZ REACTOR	Moulin, D. J. (1); Delassalle, F. (1); Ayrault, L. (1) 1 - CEA, DEN, Department of Nuclear Technology, France
RRFM2012-A0051	JULES HOROWITZ REACTOR PROJECT. FUEL IRRADIATION DEVICE THROUGH ENGINEERING PROCESS DESCRIPTION	Gaillot, S. (1); Dousson, T. (1); Vitry, S. (1); Gay, S. (1); Garnier, C. (1) 1 - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives, France
RRFM2012-A0054	EVALUATION AND MODELING OF THE NEUTRONS FLUX IN THE CAROUSEL CHANNELS OF THE TRIGA MARK I IPR-R1 REACTOR, BRAZIL, USING MONTE CARLO (MCNP) CODE	Salomé, J. A. D. (1); Silva, C. A. M. (1); Pereira, C. (1); Menezes, M. Â. B. C. (2); Veloso, M. A. F. (1); Costa, A. L. (1) 1 - Universidade Federal de Minas Gerais, Brazil 2 - Centro de Desenvolvimento da Tecnologia Nuclear, Brazil
RRFM2012-A0055	AN INITIAL VERIFICATION AND VALIDATION STUDY OF CFD NUMERICAL SIMULATIONS OF THE IPR-R1 TRIGA REACTOR	Silva, V. V. A. (1); Schweizer, F. L. A. (2); Santos, A. A. C. (1); Mesquita, A. Z. (1); Pereira, C. (2); Miró, R. (3); Costa, A. L. (2); Veloso, M. A. F. (2); Verdu, G. (3) 1 - Centro de Desenvolvimento da Tecnologia Nuclear, Brazil 2 - Universidade Federal de Minas Gerais, Brazil 3 - Universidad Politécnica de Valencia, Spain
RRFM2012-A0057	UTILIZATION OF THE RELAP5-3D CODE FOR RESEARCH REACTOR ANALYSES	Costa, A. L. (1); Pereira, C. (1); Veloso, M. A. F. (1); Reis, P. A. L. (1); Silva, V. V. A. (1); Mesquita, A. Z. (2) 1 - Universidade Federal de Minas Gerais, Brazil 2 - Centro de Desenvolvimento da Tecnologia Nuclear/Comissão Nacional de Energia Nuclear, Brazil





RRFM2012-A0058	THERMAL HYDRAULIC ANALYSES OF THE BRAZILIAN MULTIPURPOSE REACTOR BY RELAP5 Code	Soares, H. V. (1); Costa, A. L. (1); Pereira, C. (1); Aronne, I. D. (2); Veloso, M. A. F. (1); Silva, V. V. A. (1) 1 - Universidade Federal de Minas Gerais, Brazil 2 - Centro de Desenvolvimento da Tecnologia Nuclear/Comissão Nacional de Energia Nuclear, Brazil
RRFM2012-A0062	NUMERICAL SIMULATIONS OF THE SIPHON BREAK EXPERIMENTS	Park, S. (1); Kim, H. (1); Park, C. (1); Lee, K.-Y. (1); Yoon, J. (1) 1 - KAERI, Korea, Republic of
RRFM2012-A0065	LEONIDAS E-FUTURE-II: CHARACTERISTICS OF THE FRESH FUEL PLATES	Iltis, X. (1); Palancher, H. (1); Bonnin, A. (1); Charollais, F. (1); Van den Berghe, S. (2); Stepnik, B. (3); Calzavara, Y. (4) 1 - CEA, DEN, DEC, Cadarache, France 2 - SCK.CEN, Belgium 3 - AREVA-CERCA, France 4 - ILL, France
RRFM2012-A0067	ANALYSIS OF REACTIVITY INDUCED ACCIDENTS IN MTR CORE FOR VARIOUS PROTECTION SYSTEM PARAMETERS	Gaheen, M. (1); Mahmoud Badry, F. (1); Aly, M. N. (2); Nagy, M. (2); Elaraby, S. (1) 1 - Egypt Second Research Reactor (ETRR-2), Egyptian Atomic Energy Authority (EAEA), Egypt 2 - Department of Nuclear Engineering, Alexandria University, Egypt
RRFM2012-A0075	NUMERICAL STUDY OF THE GEOMETRY IMPACT ON THE HEAT TRANSFER IN A RADIOMETRIC CALORIMETER DEDICATED TO NUCLEAR HEATING MEASUREMENTS	Muraglia, M. (1); Reynard, C. (1); Brun, J. (1); Carette, M. (1); Janulyte, A. (1); Zerega, Y. (1); André, 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 - Aix-Marseille Univ, LCP UMR 6264 - CNRS, France 2 - CEA, France
RRFM2012-A0077	AN EXAMPLE OF TRAINING AND AUTHORIZATION PROGRAM FOR RESEARCH REACTOR PERSONNEL	Gaheen, M. (1) 1 - Egypt Second Research Reactor (ETRR-2), Egyptian Atomic Energy Authority (EAEA), Egypt
RRFM2012-A0079	HEU AND LEU 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, M. T. (1); Nguyen, K. C. (1) 1 - NUCLEAR RESEARCH INSTITUTE, Vietnam
RRFM2012-A0080	MICROSTRUCTURAL CHARACTERIZATION OF THE MEAT IN AS-FABRICATED U(MO) DISPERSION MINIPLATES WITH AL (SI) MATRIX	Mirandou, M. (1); Aricó, S. (1); Balart, S. (1); Fabro, J. (2) 1 - UAM, GAEN, Comisión Nacional de Energía Atómica, Argentina 2 - ECRI, GCN, Comisión Nacional de Energía Atómica, Argentina
RRFM2012-A0084	IMPROVED AGEING MANAGEMENT AND MAINTENANCE SYSTEM FOR THE FIR 1 TRIGA INSTRUMENTATION	Auterinen, I. (1); Kivelä, P. (1); Helin, J. (1); Palmén, H. (2); Katajisto, M. (2) 1 - VTT Technical Research Centre of Finland, Finland 2 - VTT Expert Services, Finland



RRFM2012-A0085	THE USE OF LASER ABLATION HIGH RESOLUTION INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY FOR SWIPE SAMPLES ANALYSIS: A VIEWPOINT OF SAFEGUARD AND NUCLEAR FORENSICS	Marin, R. (1); Sarkis, J. (1) 1 - IPEN (Instituto de Pesquisas Energéticas e Nucleares), Brazil
RRFM2012-A0107	EXPERIMENTAL AND CALCULATED DATA ON CRITICALITY OF URANIUM-ZIRCONIUM-HYDRIDE SYSTEMS WITH 21 % ENRICHED URANIUM-235	Sikorin, S. (1); Mandzik, S. (1); Polazau, S. (1); Hryharovich, T. (1); Palahina, Y. (1) 1 - Joint Institute for Power and Nuclear Research - Sosny of National Academy of Sciences of Belarus, Belarus
RRFM2012-A0117	THE DESIGN OF ADDITIONAL SAFETY RODS FOR NIRR-1 HEU AND PROPOSED LEU CORES USING MCNP CODE	Jonah, S. (1); Ibrahim, Y. (1) 1 - Centre for Energy Research and Training, Ahmadu Bello University, Nigeria
RRFM2012-A0124	AN ALTERNATIVE CHEMICAL CLEANING PROCEDURE FOR BLANK MONOLITHIC U-MO FOILS	Baumeister, B. (1); Schmid, W. (1); Kraus, F. (2); Petry, W. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz, Technische Universität München, Germany 2 - Department Chemie, Technische Universität München, Germany
RRFM2012-A0125	POWDER COATING BY DC AND RF MAGNETRON SPUTTERING	Steyer, C. (1); Schmid, W. (1); Schenk, R. (1); Breitzkreutz, H. (1); Reintl, S. (1); Petry, W. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz, Technische Universität München, Germany
RRFM2012-A0137	"CEA AND TNI: A COMMON FLEET OF PACKAGINGS AT YOUR SERVICE"	Claverie-Forgues, S. (1); Laloy, V. (2); Cherezy, S. (2) 1 - CADARACHE CEA Center , France 2 - TN INTERNATIONAL, France
RRFM2012-A0141	COUPLED NEUTRONIC AND THERMAL-HYDRAULIC SIMULATION OF FRM II COMPACT CORE USING TRACE/PARCS	Däubler, M. (1); Breitzkreutz, H. (1); Röhrmoser, A. (1); Petry, W. (1); Macian-Juan, R. (2) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Germany 2 - Lehrstuhl für Nukleartechnik, Technische Universität München, Germany
RRFM2012-A0142	THERMOGRAPHY – A NEW SET-UP FOR MACROSCOPIC THERMAL DIFFUSIVITY MEASUREMENTS	Petry, W. (1); Wachs, D. (2); Mackowiak, B. (2); Huber, T. (1) 1 - Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München, Germany 2 - Fuel Performance and Design, Idaho National Laboratory, United States