Sunday 13 September 2015

17:00 - 19:00 Pre-registration

18:00 – 19:00 Welcome Drink

Monday 14 September 2015

Mo 8.30 – 10.30 Opening Session

Chair: M. Streit, PSI, Switzerland; Co-chair: J. Bertsch, PSI, Switzerland

Welcome Addresses
Marco Streit, TopFuel 2015 Conference Chair
Johannes Bertsch, TopFuel 2015 Programme Committee Chair

Keynote Speech
Nuclear in Switzerland - yesterday, today, tomorrow?
Marco Streit, President of Swiss Nuclear Society

Panel Discussion: UPCOMING CHALLENGES OF THE FUEL MARKET
moderated by Tony Williams, Axpo Power AG, Switzerland

with

Amir Vexler	GNF
Sumit Ray	Westinghouse
Marc Chevrel	Areva
Roberto Gonzalez	ENUSA
Andrey Rozhdestvin	Rosatom (tbc)

Overview of the activities of the OECD-NEA Expert Group on Accident Tolerant Fuels for LWRs
Kemal Pasamehmetoglu, INL, US

Introduction to TopFuel 2016
Kemal Pasamehmetoglu, INL, US

10:30 – 11:10 Coffee break

Mo 11.00 - 13.00 Parallel Session: Modelling, analysis, methods

Chair: M. Quecedo, ENUSA, Spain; Co-chair: M. Cherubini, N.I.N.E., Italy

TopFuel2015 -A0058	MODELLING CLADDING RESPONSE TO CHANGING CONDITIONS	Tulkki, V. (1); Ikonen, T. (1) 1 - VTT Technical Research Centre of Finland ltd, Finland
TopFuel2015 -A0067	THERMODYNAMIC MODELLING OF MO AND MOOX BEHAVIOR IN SELECTED MELTS	Nichenko, S. (1); Streit, M. (1) 1 - Paul Scherrer Institut, Switzerland
TopFuel2015 -A0073	EFFECT OF POWER VARIATIONS ACROSS A FUEL BUNDLE AND WITHIN A FUEL ELEMENT ON FUEL CENTERLINE TEMPERATURE IN PHWR BUNDLES IN UNCREPT AND CREPT PRESSURE TUBES	Onder, E. N. (1); Roubtsov, D. (1); Rao, Y. (1) 1 - Canadian Nuclear Laboratories, Canada
TopFuel2015 -A0075	AREVA'S ARCADIA® CODE SYSTEM – IMPLEMENTATION BENEFITS	Maupin, K. (1); Porsch, D. (2); Kuch, S. (2); Le Bars, F. (3); Opel, S. (2); Simonini, G. (3); Brock, R. (1); Deveney, D. (1); Curca-Tivig, F. (2) 1 - AREVA, AREVA Inc., United States 2 - AREVA, AREVA GmbH, Germany 3 - AREVA, AREVA NP, France
TopFuel2015 -A0113	GLOBAL SENSITIVITY ANALYSIS IN FUEL PERFORMANCE MODELLING	Ikonen, T. (1) 1 - VTT Technical Research Centre of Finland, Finland

Mo 11.00 - 13.00 Parallel Session: Accident Tolerant Fuel I

Chair: J. Carmack, Idaho National Laboratory, US; Co-chair: T. Liu, China

TopFuel2015 -A0220	WESTINGHOUSE ACCIDENT TOLERANT FUEL PROGRAM – CURRENT RESULTS & FUTURE PLANS	Ray, S. (1); Lahoda, E. (1); Hallstadius, L. (1); Xu, P. (1); Johnson, S. (1); Boylan, F. (1) 1 - Westinghouse Electric Company, United States
TopFuel2015 -A0022	SCREENING OF REACTOR PERFORMANCE AND SAFETY OF FUEL AND CLADDING CANDIDATES WITH ENHANCED ACCIDENT TOLERANCE	Brown, N. (1); Cheng, L.-Y. (1); Todosow, M. (1); Cuadra, A. (1) 1 - Brookhaven National Laboratory, United States
TopFuel2015 -A0150	ON-GOING STUDIES AT CEA ON CHROMIUM COATED ZIRCONIUM BASED NUCLEAR FUEL CLADDINGS FOR ENHANCED ACCIDENT TOLERANT LWRS FUEL	Brachet, J.-C. (1) 1 - CEA, France
TopFuel2015 -A0204	FEASIBILITY EVALUATIONS OF MO-ALLOY FOR LIGHT WATER REACTOR FUEL CLADDING TO ENHANCE ACCIDENT TOLERANCE	Cheng, B. (1); Chou, P. (1); Kim, Y.-J. (2) 1 - Electric Power Research Institute, United States 2 - GE-GRC, United States

TopFuel2015 -A0172	STEAM OXIDATION BEHAVIOR OF PROTECTIVE COATINGS ON MO FUEL CLADDING FOR ENHANCING ACCIDENT TOLERANCE AT HIGH TEMPERATURES	Kim, Y.-J. (1); Cheng, B. (2); Chou, P. (2) 1 - GE Global Research Center, United States 2 - Electric Power Research Institute, United States
TopFuel2015 -A0035	REVIEW OF A.A. BOCHVAR INSTITUTE ACTIVITIES IN DEVELOPING POTENTIALLY ACCIDENT TOLERANT FUEL FOR LIGHT WATER REACTORS	Savchenko, A. (1); Ivanov, V. (1); Novikov, V. (1); Skupov, M. (1); Vatulin, A. (1); Orlov, V. (1); Uferov, O. (1) 1 - A.A. Bochvar Institute (VNIINM), Russian Federation

Mo 11.00 - 13.00 Parallel Session: PWR Operating Experience

Chair: Nadine Hollasky, Bel V, Belgium; Co-chair: D. Schrire, Vattenfall, Sweden

TopFuel2015 -A0048	IN-REACTOR PERFORMANCE OF HIPER16(TM) FUEL DESIGN	Jeon, S.-Y. (1); Kim, J. I. (1); Jeon, K.-L. (1), Yoo J. S. (1), Kim H. J. (1), Choi, K. S. (1); 1 - KEPCO Nuclear Fuel , Korea, Republic of
TopFuel2015 -A0134	Q12TM ULTRA LOW TIN QUATERNARY ALLOYS FOR STRUCTURAL COMPONENTS IN PWR FUEL ASSEMBLIES	Chabretou, V. (1); Trapp-Pritsching, S. (2) 1 - AREVA NP SAS, France 2 - AREVA GmbH, Germany
TopFuel2015 -A0198	POST IRRADIATION EXAMINATIONS OF GAIA LEAD FUEL ASSEMBLIES	Louf, P.-H. (1); Gentet, G. (1); Lippert, H.-J. (2); Mindt, M. (2); Peucker, J. (2); Schrire, D. (3); Jasiulevicius, A. (3) 1 - AREVA, AREVA SAS, France 2 - AREVA, AREVA GmbH, Germany 3 - VATTENFALL NUCLEAR FUEL AB, Sweden
TopFuel2015 -A0212	PWR FUEL PERFORMANCE AND KEY DEVELOPMENTS IN MATERIAL AND MECHANICAL DESIGN	Halligan, J. (1); Pan, G. (1); Garde, A. (1); Norrell, J. (1) 1 - Westinghouse Electric Co., United States
TopFuel2015 -A0214	PERFORMANCE OF M-MDA, RELIABLE CLADDING MATERIAL FOR ADVANCED FUEL	Watanabe, S. (1); Okada, Y. (1); Sato, D. (1); Teshima, H. (1); Kido, T. (2); Shinohara, Y. (2); Kameda, Y. (3) 1 - Mitsubishi Nuclear Fuel Co. Ltd., Japan 2 - Nuclear Development Co. Ltd., Japan 3 - The Kansai Electric Power Co. Inc., Japan
TopFuel2015 -A0215	FIRST DNB TESTS AT THE WESTINGHOUSE ADVANCED LOOP TESTER (WALT)	Wang, G. (1); Byers, W. (1); Karoutas, Z. (1); Ray, S. (1); Oelrich, R. (1); Burgos, B. (1) 1 - Westinghouse Electric, United States

13.00 – 14.00 Lunch break

Mo 14.00 - 16.00 Parallel Session: Modelling, analysis, methods II

Chair: S. Valance, PSI, Switzerland; Co-chair: P. Raynaud, NRC, USA

TopFuel2015 -A0136	FEM MODELLING OF THE PWR CONTROL ROD DRAG FORCES IN DEFORMED GUIDE TUBES	Klouzal, J. (1); Dostál, M. (1) 1 - ÚJV Řež, a. s., Czech Republic
TopFuel2015 -A0174	A STUDY ON EFFECTS OF CRYSTALLOGRAPHIC TEXTURE ON THE IRRADIATION GROWTH OF ZIRCONIUM ALLOY USING VISCO-PLASTIC SELF CONSISTENT MODELING APPROACH	Liu, W. (1); Tomé, C. (2); Montgomery, R. (3); Stanek, C. (2) 1 - ANATECH Corp., United States 2 - Los Alamos National Laboratory, United States 3 - Pacific Northwest National Laboratory, United States
TopFuel2015 -A0190	FUEL ASSEMBLY SEISMIC AND LOCA SAFETY ANALYSIS UNDER END OF LIFE CONDITIONS AND FLOW WATER DAMPING EFFECTS	Lu, R. (1); Marshall, N. (1); Jiang, J. (1); Evans, P. (1) 1 - Westinghouse Electric Company, United States
TopFuel2015 -A0201	AREVA SOLUTIONS TO LICENSING CHALLENGES IN PWR & BWR RELOAD AND SAFETY ANALYSIS	Curca-Tivig, F. (1) 1 - AREVA GmbH, Germany
TopFuel2015 -A0206	A WESTINGHOUSE LOCAL FUEL DUTY PCI RISK MONITOR AND ANALYSIS TOOL	Boyd, W. (1); Mangham, G. (2) 1 - Westinghouse Electric Company LLC, Nuclear Fuel Methods & Technology, United States 2 - Westinghouse Electric Company LLC, Nuclear Fuel Core Engineering, United States
TopFuel2015 -A0230	EFFECTS OF FUEL ROD UNCERTAINTY IN PWR HZP RIA ANALYSIS	Lee, J. (1); Woo, S. (1) 1 - KINS, Korea, Republic of

Mo 14.00 - 16.00 Parallel Session: Enhanced accident tolerant fuel II

Chair: S. Ray, Westinghouse, US; Co-chair: J.C. Brachet, CEA, France

TopFuel2015 -A0203	EVALUATION OF ENHANCED ACCIDENT TOLERANT LWR FUELS	Bragg-Sitton, S.M. (1); Merrill, B. (1); Hales, J. (1); Brown, N. (2); Todosow, M. (2); Robb, K. (3); 1 - Idaho National Laboratory, United States
TopFuel2015 -A0069	PRELIMINARY EVALUATION OF FECRAL CLADDING AND U-SI FUEL FOR ACCIDENT TOLERANT FUEL CONCEPTS	Hales, J. (1); Williamson, R. (1); Medvedev, P. (1); Novascone, S. (1); Pastore, G. (1); Spencer, B. (1); Gamble, K. (1) 1 - Idaho National Laboratory, United States 2 – Brookhaven National Laboratory, United States 3 – Oak Ridge National Laboratory, United States

TopFuel2015 -A0158	PROGRESS TOWARDS THE DEVELOPMENT OF NUCLEAR GRADE FECRAL FUEL CLADDING	Yamamoto, Y. (1); Pint, B. (1); Terrani, K. (1); Field, K. (1); Maloy, S. (2); Gan, J. (3) 1 - Oak Ridge National Laboratory, United States 2 - Los Alamos National Laboratory, United States 3 - Idaho National Laboratory, United States
TopFuel2015 -A0163	RESULTS FROM IN-PILE CREEP TESTING OF HIGH PURITY POLYCRYSTALLINE SIC AND SELECT FECRAL ALLOYS	Terrani, K. (1); Snead, L. (1); Katoh, Y. (1); Karlsen, T. (2) 1 - Oak Ridge National Laboratory, United States 2 - Halden Reactor Project, Norway
TopFuel2015 -A0040	REACTOR PHYSICS MODELLING OF ACCIDENT TOLERANT FUEL FOR LWRS USING ANSWERS CODES	Lindley, B. (1); Kotlyar, D. (2); Parks, G. (2); Lillington, J. (1) 1 - Amec Foster Wheeler, United Kingdom 2 - University of Cambridge, United Kingdom
TopFuel2015 -A0088	LIGHT WATER REACTOR ACCIDENT TOLERANT FUELS IRRADIATION TESTING	Carmack, J. (1); Chichester, H. (1); Barrett, K. (1) 1 - Idaho National Laboratory, United States

Mo 14.00 - 16.00 Parallel Session: BWR Operating Experience

Chair: P. Cantonwine, GNF, US; Co-chair: S. Abolhassani, PSI, Switzerland

TopFuel2015 -A0081	GNF FUEL PERFORMANCE 2015 UPDATE	Schneider, R. (1); Dunavant, R. (1); Ledford, K. (1); Fawcett, R. (1); Cantonwine, P. (1) 1 - Global Nuclear Fuel - Americas, United States
TopFuel2015 -A0183	MONITORING THE INTEGRITY OF CONTROL ROD WITH AN ONLINE HELIUM LEAK DETECTOR	Ammon, K. (1); Loner, H. (1); Bieli, R. (1); Ledergerber, G. (1) 1 - Kernkraftwerk Leibstadt AG, Switzerland
TopFuel2015 -A0187	CORROSION AND HYDROGEN PICKUP IN ZIRCALOY-2 CHANNELS WITH AND WITHOUT PROXIMITY TO CONTROL BLADE	Schrire, D. (1); Karlsson, K. (2); Blomberg, G. (3); Moeckel, A. (4) 1 - Vattenfall Nuclear Fuel, Sweden 2 - Forsmarks Kraftgrupp AB, Sweden 3 - Studsvik, Sweden 4 - Areva, Germany
TopFuel2015 -A0188	ATRIUM™ 11 – VALIDATION OF PERFORMANCE AND VALUE FOR BWR OPERATIONS	Cole, S. (1); Graebert, R.-F. (2); Garner, N. (1); Lippert, H.-J. (2); Mollard, P. (3) 1 - AREVA Inc, United States 2 - AREVA GmbH, Germany 3 - AREVA NP, France
TopFuel2015 -A0219	WESTINGHOUSE BWR FUEL – EXPERIENCE UPDATE AND EVOLUTION OF HARDWARE AND METHODS DEVELOPMENT	Willman, L. (1); Andersson, S. (1); Hallstadius, L. (1); King, J. (1) 1 - Westinghouse Electric Sweden AB, Sweden

TopFuel2015 -A0223	FLAKING OF SHADOW OXIDE ON BWR CLADDING ASSOCIATED WITH PRE-EXISTING SURFACE SCRATCHES	Schrire, D. (1); Ledergerber, G. (2); Karlsson, K. (3); Carling, K. (4) 1 - Vattenfall Nuclear Fuel, Sweden 2 - Kernkraftwerk Leibstadt, Switzerland 3 - Forsmarks Kraftgrupp AB, Sweden 4 - Ringhals AB, Sweden

16.00 – 16.30 Coffee break

Mo 16.30 – 18.10 Parallel Session: Enhanced accident tolerant fuel III

Chair: J.Y. Park, KAERI, Korea; Co-chair: D. Goddard, NNL, UK

TopFuel2015 -A0145	DEVELOPMENT OF CLADDING WITH ENHANCED ACCIDENT TOLERANCE	Bischoff, J. (1); Brachet, J.-C. (2); Lorrette, C. (2); Strumpell, J. (3) 1 - AREVA NP, France 2 - CEA-Saclay, DEN-DMN-SRMA, France 3 - AREVA Inc., United States
TopFuel2015 -A0025	PROGRESS ON THE RESEARCH AND DEVELOPMENT OF INNOVATIVE MATERIAL FOR NUCLEAR REACTOR CORE WITH ENHANCED SAFETY	Okonogi, K. (1); Kakiuchi, K. (1); Katayama, Y. (2); Yoshioka, K. (2); Hinoki, T. (3); Hashimoto, N. (4) 1 - Isogo Nuclear Engineering Center, Toshiba Corporation, Japan 2 - Power & Industrial Systems R&D Center, Toshiba Corporation, Japan 3 - Institute of Advanced Energy, Kyoto University, Japan 4 - Faculty of Engineering, Hokkaido University, Japan
TopFuel2015 -A0102	LONG-TERM CORROSION BEHAVIOR AND MECHANICAL PROPERTY OF SILICON CARBIDE FOR PWR FUEL CLADDING APPLICATIONS	Kim, W.-J. (1); Kim, D. (1); Lee, H. G. (1); Park, J. Y. (1); Park, J. H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
TopFuel2015 -A0130	SIC/SIC COMPOSITE BEHAVIOR IN LWR CONDITIONS AND UNDER HIGH TEMPERATURE STEAM ENVIRONMENT	Lorrette, C. (1); Billaud, P. (1); Hossepied, C. (1); Sauder, C. (1); Loupias, G. (1); Braun, J. (1); Torres, E. (2); Rebillat, F. (2); Michaux, A. (1); Bischoff, J. (3); Ambard, A. (4) 1 - CEA DEN, DMN, France 2 - LCTS, UMR CNRS-UB-CEA-SAFRAN, France 3 - AREVA-NP, France 4 - EDF R&D, MMC Department, France
TopFuel2015 -A0157	INNOVATIVE TESTING METHOD FOR JOINTS OF SILICON CARBIDE TUBES	Gentile, M. (1); Abram, T. (1) 1 - The University of Manchester, United Kingdom

Mo 16.30 – 18.10 Parallel Session: Advances in designs, materials and manufacturing

Chair: P. Mollard, AREVA, France; Co-chair: Z. Hózer, Hungarian Academy of Sciences Centre for Energy Research, Hungary

TopFuel2015 -A0055	THE CF3: AN ADVANCED FUEL ASSEMBLY DESIGN FOR PWR	Yongjun, J. (1); Zhong, X. (1); Xiaoming, G. (1) 1 - Nuclear Power Institute of China, China
TopFuel2015 -A0090	THE MISSION AND ACCOMPLISHMENTS FROM DOE'S FUEL CYCLE RESEARCH AND DEVELOPMENT (FCRD) ADVANCED FUELS CAMPAIGN	Carmack, J. (1); Goldner, F. (2); Braase, L. (1) 1 - Idaho National Laboratory, United States 2 - Department of Energy, United States
TopFuel2015 -A0118	TECHNOLOGY READINESS LEVEL (TRL) ASSESSMENT OF ADVANCED NUCLEAR FUELS	Shepherd, D. (1); Rossiter, G. (1); Palmer, I. (1); Marsh, G. (1); Fountain, M. (1); Mathers, D. (1) 1 - National Nuclear Laboratory, United Kingdom
TopFuel2015 -A0202	ENHANCED VVER DESIGNS	Shah, H. (1); Onneby, C. (2); Dye, M. (1); Norrell, J. (1) 1 - Westinghouse Electric Co, United States 2 - Westinghouse Electric Company, Sweden
TopFuel2015 -A0235	PILOT PROCESS DEVELOPMENT TO CHANGE SURFACE PROPERTIES PROVIDING THE INCREASED STABILITY OF LWR ZIRCONIUM COMPONENTS IN NORMAL OPERATION CONDITIONS AND IN EMERGENCY SITUATIONS	Ivanova, S. V. (1); Glagovskii, E. M. (1); Belugin, I. I. (1); Khazov, I. A. (2); Khomich, M. S. (3); Korogoda, O. P. (3); Khamutovsky, F. N. (3); Pasevich, P. I. (3) 1 - Institute of Industrial Nuclear Technologies of National Research Nuclear University "MEPhI", Russian Federation 2 - FSUE "Krasnaya Zvezda", Russian Federation 3 - "Polishing Technologies" Co., Ltd, Russian Federation

Mo 16.30 – 18.10 Parallel Session: Transient fuel behavior - PCI/PCMI

Chair: J. Zhang, TRACTEBEL, Belgium; Co-Chair: K. Geelhood, PNNL, USA

TopFuel2015 -A0032	BEHAVIOR OF HIGH BURNUP ADVANCED FUELS FOR LWR DURING DESIGN-BASIS ACCIDENTS	Amaya, M. (1); Udagawa, Y. (1); Narukawa, T. (1); Mihara, T. (1); Sugiyama, T. (1) 1 - Japan Atomic Energy Agency, Japan
TopFuel2015 -A0114	2D SIMULATIONS OF HYDRIDE BLISTER CRACKING DURING A RIA TRANSIENT WITH THE FUEL CODE ALCYONE	Sercombe, J. (1); Leboulch, D. (2); Le Jolu, T. (2); Hellouin de Ménibus, A. (3); Helfer, T. (1); Fédérici, E. (1); Bernaudat, C. (4) 1 - CEA, DEN, DEC/SESC, France 2 - CEA, DEN, DMN/SEMI, France 3 - CEA, DEN, DMN/SRMA, France 4 - EDF, SEPTEN, France

TopFuel2015 -A0128	CALCULATIONAL AND EXPERIMENTAL STUDIES OF THE UO2-GD2O3 DOPED VVER-1000 FUEL RODS DURING THE POWER RAMP TEST IN THE RESEARCH REACTOR MIR	Novikov, V. (1); Kuznetsov, V. (1); Nesterov, B. (1); Shestopalov, A. (1); Chulkin, D. (1); Izhutov, A. (2); Ovchinnikov, V. (2) 1 - OJSC «Academician A.A. Botchvar High-Technology Scientific and Research Institute of Inorganic Materials» (OJSC VNIINM), Russian Federation 2 - JSC "RIAR", Russian Federation
TopFuel2015 -A0207	ENHANCED METHODOLOGY FOR PCI SURVEILLANCE WITH STATISTICAL TREATMENT OF POWER RAMP TESTS	Seltborg, P. (1); Zhou, G. (1); Casal, J. (1); Jourdain, P. (1) 1 - Westinghouse Electric Sweden AB, Sweden
TopFuel2015 -A0112	3D THERMO-CHEMICAL-MECHANICAL SIMULATION OF POWER RAMPS WITH ALCYONE FUEL CODE	Baurens, B. (1); Sercombe, J. (1); Riglet-Martial, C. (1); Desgranges, L. (1); Trotignon, L. (2); Maugis, P. (3) 1 - CEA, DEN, DEC/SESC, France 2 - CEA, DEN, DTN/STRI, France 3 - IM2NP, Aix-Marseille University, France

Tuesday 15 September 2015

Tu 8.30 – 10.30 Parallel Session: Modelling – Experiments and analysis; Neutronics and core physics

Chair: C. Degueldre, PSI, Switzerland; Co-chair: R. Corpa Masa, ENUSA, Spain

TopFuel2015 -A0149	SECONDARY ION MASS SPECTROSCOPY (SIMS) AND NUCLEAR REACTION ANALYSIS (NRA): TWO COMPLEMENTARY TECHNIQUES TO QUANTIFY THE LITHIUM AND BORON CONTENTS IN THE OXIDES FORMED ON ZIRCONIUM ALLOY CLADDING	Bossis, P. (1); Martin, M. (2); Raepsaet, C. (1); Portier, S. (2); Guillermier, P. (3) 1 - Commissariat à l'Energie Atomique, France 2 - Paul Scherrer Institut, Switzerland 3 - AREVA NP, France
TopFuel2015 -A0162	LASER BASED EXPERIMENTAL METHODS FOR VALIDATION OF ATOMIC LEVEL MODELING IN NUCLEAR FUEL.	Khafizov, M. (1); Hurley, D. (2) 1 - The Ohio State University, United States 2 - Idaho National Laboratory, United States
TopFuel2015 -A0225	LITHIUM AND BORON ANALYSIS BY LA-ICP-MS RESULTS FROM A BOWED PWR ROD WITH CONTACT	Puranen, A. (1); Tejland, P. (1); Granfors, M. (1); Schrire, D. (2); Josefsson, B. (2); Bernsson, B. (3) 1 - Studsvik Nuclear AB, Sweden 2 - Vattenfall Nuclear Fuel AB, Sweden 3 - Ringhals AB, Sweden
TopFuel2015 -A0146	CFD SIMULATIONS OF MIXING COEFFICIENT OF CAP1400 REACTOR CORE INLET	Gan, F. (1); Xu, Z. (1); Yang, P. (1); Zhu, L. (1) 1 - Shanghai Nuclear Engineering Research and Design Institute, China
TopFuel2015 -A0209	WESTINGHOUSE BWR CORE ANALYSIS METHODS UPDATE	Lipiec, W. (1); Forslund-Guimarães, P. (1); Johannesson, S.-B. (1); Casal, J. (1) 1 - Westinghouse Electric Sweden, Sweden

TopFuel2015 -A0211	EFFECT OF LATERAL HYDRAULIC FORCES ON FUEL ASSEMBLY BOW	Petrarca, A. (1); Aleshin, Y. (1); Corpa Masa, R. (2); Gomez Palomino, J. (2) 1 - Westinghouse Electric Company, United States 2 - Enusa Industrias Avanzadas, S.A., Spain

Tu 8.30 – 10.30 Parallel Session:
Advances in designs, materials and manufacturing II

Chair:C. Anghel, Westinghouse, Sweden; Co-chair: D. Lutz, Global Nuclear Fuel–Americas, USA

TopFuel2015 -A0148	HIGH-RESOLUTION CHARACTERIZATION OF CORROSION OF NUCLEAR FUEL CLADDING ALLOYS	Hu, J. (1); Setiadinata, B. (1); Aarholt, T. (1); Garner, A. (2); Ni, N. (3); Hulme, H. (4); Lozano-Perez, S. (1); Frankel , P. (2); Pruess, M. (2); Grovenor, C. (1) 1 - Department of Materials, University of Oxford, United Kingdom 2 - Materials Performance Centre, School of Materials, The University of Manchester, United Kingdom 3 - Department of Materials, Imperial College London , Royal School of Mines, United Kingdom 4 - AMEC, United Kingdom
TopFuel2015 -A0159	TEST REACTOR EVALUATION OF ZIRCONIUM ALLOY NOBLECHEM™ CORROSION BEHAVIOR	Lutz, D. (1); Lin, Y.-P. (1); Varela, J. (2); Edsinger, K. (3); Kucuk, A. (3) 1 - Global Nuclear Fuel - Americas, United States 2 - GE Hitachi Nuclear Energy, United States 3 - Electric Power Research Institute, United States
TopFuel2015 -A0160	TEST REACTOR EVALUATION OF ZIRCONIUM ALLOY SHADOW CORROSION BEHAVIOR	Lutz, D. (1); Lin, Y.-P. (1); Varela, J. (2); Edsinger, K. (3); Kucuk, A. (3); Mcgrath, M. (4) 1 - Global Nuclear Fuel - Americas, United States 2 - GE Hitachi Nuclear Energy, United States 3 - Electric Power Research Institute, United States 4 - Halden Reactor Project, Norway
TopFuel2015 -A0216	ADVANTAGES GAINED BY INTRODUCING LOW TIN ZIRLO AS BWR CHANNEL MATERIAL	Andersson, B. (1); Bergmann, U. (1); Dahlbäck, M. (1); Hallstadius, L. (1); Haskins, W. (2); Limbäck, M. (1) 1 - Westinghouse Electric Sweden, Sweden 2 - Westinghouse Electric Company, United States
TopFuel2015 -A0218	EVOLUTION OF HYDROGEN PICKUP FRACTION WITH OXIDATION RATE ON ZIRCONIUM ALLOYS	Romero, J. (1); Partezana, J. (1); Comstock, R. (1); Hallstadius, L. (2) 1 - Westinghouse Electric Company, United States 2 - Westinghouse Electric Sweden, Sweden

TopFuel2015 -A0191	XANES ANALYSIS OF IRON IN ZIRCALOY-4 OXIDES FORMED AT DIFFERENT TEMPERATURES STUDIED WITH MICROBEAM SYNCHROTRON RADIATION	Ensor, B. (1); Motta, A. (1); Bajaj, R. (2); Seidensticker, J. (2); Lucente, A. (3); Cai, Z. (4) 1 - Department of Mechanical and Nuclear Engineering, The Pennsylvania State University, United States 2 - Bettis Atomic Power Laboratory, Bechtel Marine Propulsion Corporation, United States 3 - Knolls Atomic Power Laboratory, Bechtel Marine Propulsion Corporation, United States 4 - Advanced Photon Source, Argonne National Laboratory, United States

Tu 8.30 - 10.30 Parallel Session
Used fuel (storage, transportation and re-use/material recovery)

Chair: D. Hambley, NNL, UK; Co-chair: D. Janin, E.ON Kernkraft GmbH, Germany

TopFuel2015 -A0151	THE EFFECT OF STRESS STATE ON RADIAL HYDRIDE PRECIPITATION DURING SPENT FUEL DRYING	Cinbiz, M. N. (1); Motta, A. (1); Koss, D. (1); Ensor, B. (1); 1 - The Pennsylvania State University, United States
TopFuel2015 -A0068	EFFECT OF THE PH CONDITIONS ON THE OXIDATIVE DISSOLUTION OF FRENCH MOX SPENT FUEL IN AERATED PURE WATER	Magnin, M. (1); Jegou, C. (1); Broudic, V. (1); Peuget, S. (1); Talip, Z. (1) 1 - CEA, France
TopFuel2015 -A0071	IMPACT OF FUEL SWELLING AND DECAY GAS RELEASE ON CLADDING STRESS DURING EXTENDED DRY STORAGE OF HIGH BURNUP FUEL	Raynaud, P. (1); Einziger, R. (2) 1 - Office of Nuclear Regulatory Research; U.S. Nuclear Regulatory Commission Washington, United States 2 - Office of Nuclear Materials Safety and Safeguards; U.S. Nuclear Regulatory Commission Washington, United States
TopFuel2015 -A0084	EVALUATION OF CORROSION BEHAVIOR FOR FUEL ASSEMBLY MATERIALS IN THE DILUTED ARTIFICIAL SEAWATER	Iwanami, M. (1); Ishioka, S. (1); Nakashima, H. (2); Saiki, Y. (3); Etoh, Y. (4) 1 - International Research Institute for Nuclear Decommissioning (Hitachi-GE Nuclear Energy,Ltd), Japan 2 - Global Nuclear Fuel - Japan Co., Japan 3 - Nuclear Fuel Industries, Ltd., Japan 4 - Nippon Nuclear Fuel Development Co., Ltd., Japan
TopFuel2015 -A0165	EFFECTS OF SCRATCH ON HYDRIDE PRECIPITATION BEHAVIOR OF FUKUSHIMA SPENT FUEL CLADDING IN SIMULATED DRY STORAGE CONDITIONS	Aomi, M. (1); Nakashima, K. (1); Iwanami, M. (2); Etoh, Y. (3) 1 - Global Nuclear Fuel - Japan Co., Ltd., Japan 2 - International Research Institue for Nuclear Decomissioning, Japan 3 - Nippon Nuclear Fuel Development Co., Ltd., Japan
TopFuel2015 -A0168	HYDROGEN RELOCATION KINETICS WITHIN ZIRCALOY CLADDING TUBES	Valance, S. (1); Zemek, M. (2); Bertsch, J. (1); Hellwig, C. (2) 1 - Paul Scherrer Institut, Switzerland 2 - AXPO Power AG, Switzerland

Tu 10.30 – 11.00 Coffee break

Tu 11.00 – 12.40 Parallel Session: Neutronics and core physics

Chair: A.Del Nevo, ENEA, Italy; Co-chair: E. Georgieva, Risk Enineering LTD, Bulgaria

TopFuel2015 -A0039	DOUBLE-HETEROGENEITY MODELLING OF HIGH TEMPERATURE REACTORS CONTAINING PARTICULATE FUEL	Lindley, B. (1); Mohamed, H. (2); Hosking, G. (1); Al-Mashouk, S. (2); Parks, G. (2); Lillington, J. (1) 1 - Amec Foster Wheeler, United Kingdom 2 - University of Cambridge, United Kingdom
TopFuel2015 -A0062	MODELLING OF TVSA FUEL ASSEMBLIES WITH HELIOS LATTICE PHYSICS CODE IN THE FRAME OF OECD/NEA KALININ-3 COOLANT TRANSIENT BENCHMARK	Georgieva, E. (1); Georgieva, E. (2); Ivanov, K. (3); Stieglitz, R. (2) 1 - Risk Engineering Ltd., Bulgaria 2 - Karlsruhe Institute of Technology, Germany 3 - The Pennsylvania State University, United States
TopFuel2015 -A0107	AREVA'S ADVANCED PWR CHF CORRELATION: ORFEO	Wieckhorst, O. (1); Gabriel, H. (1); Bär, M. (1); Martinie, O. (2); Anghelescu, M. (3); Harne, R. (3) 1 - AREVA, AREVA GmbH, Germany 2 - AREVA NP France 3 - AREVA NP Inc., United States
TopFuel2015 -A0126	ADVANCED PREDICTIVE TOOL FOR FUEL ASSEMBLY BOW BASED ON A 3D COUPLED FSI APPROACH	Lascar, C. (1); Champigny, J. (2); Châtelain, A. (2); Chazot, B. (2); Goreaud, N. (2); Méry de Montigny, E. (2); Salaün, H. (2) 1 - AREVA GmbH, Germany 2 - AREVA NP, France

Tu 11.00 - 12.40 Parallel Session Advances in designs, materials and manufacturing III

Chair: K. Sakamoto, Nippon Nuclear Fuel Development, Japan; Co-Chair: T. Forgeron, CEA, France

TopFuel2015 -A0109	POSITRON ANNIHILATION SPECTROSCOPY STUDY OF LATTICE DEFECTS IN NON-IRRADIATED DOPED AND UN-DOPED FUELS	Chollet, M. (1); Krsjak, V. (1); Vitkovska, E. (2); Okál, M. (2) 1 - Paul Scherrer Institut, Switzerland 2 - Slovak Institute of Technology, Slovakia
TopFuel2015 -A0117	MODELLING OF POWDER DIE COMPACTION FOR PRESS CYCLE OPTIMIZATION	Bayle, J.-P. (1) 1 - CEA-Marcoule, DEN/DTEC/SDTC/LTAP, France
TopFuel2015 -A0012	ELIMINATION OF SOLUBLE BORON IN PWR DESIGNS WITH THE BIGT BURNABLE ABSORBERS	Yahya, M.-S. (1); Yu, H. (1); Kim, Y. (1); Kim, H. H. (2) 1 - Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of 2 - KEPCO Engineering & Construction Company (KEPCO E&C), Korea, Republic of

TopFuel2015 -A0045	RESEARCH ON MANUFACTURING TECHNOLOGY OF LARGE GRAIN TVS-2M FUEL PELLETS	Wang, P. (1); Xiaoxiang, C. (1) 1 - CNNC Jianzhong Nuclear Fuel CO.,Ltd., China
TopFuel2015 -A0245	HIGH TEMPERATURE DECOMPOSITION OF URANIUM-BASED MIXED NITRIDES	Mikhalchik, V. (1); Tenishev, A. (1); Baranov, V. (1); A.V. Lunev (1); D.P. Shornikov (1); 1 - National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Russian Federation

Tu 11.00 - 12.40 Parallel Session
Transient fuel behaviour - LOCA Test Session

Chair N. Waeckel, EDF, France; Co-chair: F. Nagase, JAEA, Japan

TopFuel2015 -A0120	LOCA TEST WITH HIGH BURNUP VVER FUEL IN MIR REACTOR	Fedotov, P. (1); Kumachev, A. (1); Kuznetsov, V. (1); Novikov, V. (1); Salatov, A. (1); Sypchenko, M. (1); Alexeev, A. (2); Goryachev, A. (2); Dreganov, O. (2); Izhutov, A. (2); Kisseleva, I. (2); Shulimov, V. (2); Pimenov, Y. (3); Chulkin, D. (1); 1 - JSC "VNIINM", Russian Federation 2 - JSC "SSC-RIAR", Russian Federation 3 - JSC "TVEL", Russian Federation
TopFuel2015 -A0008	MECHANICAL TESTING OF BALLOONED E110 AND E110G CLADDINGS AFTER HIGH TEMPERATURE OXIDATION IN STEAM	Hózer, Z. (1); Nagy, I. (1); Kunstár, M. (1); Szabó, P. (1); Novotny, T. (1); Perez_Feró, E. (1); Horváth, M. (1); Pintér-Csordás, A. (1); Vimi, A. (1) 1 - Centre for Energy Research, Hungarian Academy of Sciences, Hungary
TopFuel2015 -A0137	OXYGEN SEGREGATION IN PRE-HYDRIDED ZIRCALOY-4 CLADDING DURING A SIMULATED LOCA TRANSIENT	Torres, E. (1); Desquines, J. (1); Guilbert, S. (1); Lacote, P. (1); Baietto, M.-C. (2); Coret, M. (3); Blat, M. (4); Ambard, A. (4) 1 - IRSN, France 2 - INSA Lyon, France 3 - Ecole Centrale Nantes (ECP), France 4 - EDF, France
TopFuel2015 -A0051	EFFECT OF NITRIDING DURING AN AIR INGRESS SCENARIO	Park, S. (1); Fernandez-Moguel, L. (1); Steinbrück, M. (2); Prasser, H.-M. (3); Seifert, H. J. (2) 1 - Paul Scherrer Institute, Switzerland 2 - Karlsruhe Institute of Technology, Germany 3 - ETH Zürich, Switzerland
TopFuel2015 -A0243	ANALYTICAL AND EXPERIMENTAL ASSESSMENT OF TVS-2006 FUEL ASSEMBLY THERMAL-MECHANICAL SHAPE DEFORMATION AT TEMPERATURE MODELING OF A LOSS-OF-COOLANT ACCIDENT	Afanasiev, A. (1); Semishkin, V. (1); Makarov, V. (1); Puzanov, D. (1); Matvienko , I. (1) 1 - JSC OKB "GIDROPRESS", Podolsk , Russian Federation

12.40 – 13.30 Lunch break

Tu 13.30 – 14.30 Poster session

Tu 14.30 - 15.50 Parallel Session: Multiphysics and thermomechanical modelling I

Chair: C. Muñoz-Reja, ENUSA, Spain; Co-chair: T. Ikonen, VTT Technical Research Centre of Finland, Finland

TopFuel2015 -A0083	MODELLING OF FUEL BEHAVIOUR DURING LOSS-OF-COOLANT ACCIDENTS USING THE BISON CODE	Pastore, G. (1); Novascone, S. (1); Williamson, R. (1); Hales, J. (1); Spencer, B. (1); Stafford, S. (1) 1 - Idaho National Laboratory, United States
TopFuel2015 -A0104	MODELING OF THE RIM-STRUCTURE THERMAL ANNEALING EXPERIMENTS WITH A NEW FGR MODEL FOR START-3A CODE	Chulkin, D. (1); Shestopalov, A. (1); Kuznetsov, V. (1); Novikov, V. (1) 1 - OJSC «Academician A.A. Botchvar High-Technology Scientific and Research Institute of Inorganic Materials» (OJSC VNIINM), Russian Federation
TopFuel2015 -A0110	MULTIPHYSICS SIMULATION OF FAST TRANSIENTS WITH THE FINIX FUEL BEHAVIOUR MODULE	Ikonen, T. (1); Syrjälahti, E. (1); Valtavirta, V. (1); Loukusa, H. (1); Leppänen, J. (1); Tulkki, V. (1) 1 - VTT Technical Research Centre of Finland, Finland
TopFuel2015 -A0213	MICRO-MECHANISTIC MODELING OF BLADE WING SWELLING OF THE WESTINGHOUSE BWR CONTROL ROD CR 99	Jinnestrand, M. (1); Seltborg, P. (1); Rebensdorff, B. (1) 1 - Westinghouse Electric Sweden, Sweden

Tu 14.30 – 15.50 Parallel Session: Advances in designs, materials and manufacturing IV

Chair: Y.-H. Koo, KAERI, Korea; Co-chair: D. Goddard, National Nuclear Laboratory, UK

TopFuel2015 -A0029	A NEW THIN-FILM APPROACH TO MAKING NUCLEAR FUEL RESEARCH ACCESSIBLE.	Adamska, A. (1); Liu, W. (1); Scott, T. (1); Payton, O. (1); Picco, L. (1) 1 - Interface Analysis Centre, School of Physics, University of Bristol, United Kingdom
TopFuel2015 -A0217	CORROSION BEHAVIOUR OF ALLOY X-750 IN BWR FUEL AT HIGH FLOW RATES	Göransson, K. (1); Gustafsson, C. (2); Lai, H. (3); Tuzi, S. (3); Thuvander, M. (3); Stiller, K. (3); Hallstadius, L. (1); Kucuk, A. (4); Josefsson, B. (5) 1 - Westinghouse Electric Sweden AB, Sweden 2 - Studsvik Nuclear AB, Sweden 3 - Chalmers University of Technology, Sweden 4 - Electric Power Research Institute, United States

		5 - Vattenfall Nuclear Fuel AB, Sweden
TopFuel2015 -A0131	PROGRESS IN NUCLEAR FUEL SELF-RELIANT DEVELOPMENT IN CHINA	Zhu, L. (1); Ding, J. (1); Gan, F. (1); Zeng, Q. (1); Ding, Y. (1); Zhang, X. (1); Lu, J. (1); Zhou, Q. (1); Liu, J. (1) 1 - Shanghai Nuclear Engineering Research and Design Institute, China

Tu 14.30 – 15.50 Parallel Session: Transient fuel behaviour - LOCA Modelling

Chair: J. Zhang, TRACTEBEL, Belgium; Co Chair: P. Clifford, US-NRC, USA

TopFuel2015 -A0192	A NEW LOCA SAFETY DEMONSTRATION IN FRANCE	Boutin, S. (1); Graff, S. (1) 1 - Institute for Radiological protection and Nuclear Safety, France
TopFuel2015 -A0116	A STRENGTH BASED APPROACH TO DEFINE LOCA LIMITS	Cabrera , A. (1); Waeckel, N. (1) 1 - EDF, France
TopFuel2015 -A0127	AN ATTEMPT FOR A UNIFIED DESCRIPTION OF MECHANICAL TESTING ON ZIRCALOY-4 CLADDING SUBJECTED TO SIMULATED LOCA TRANSIENT	Desquines, J. (1); Drouan, D. (1); Torres, E. (1) 1 - IRSN, France

Tu 15.50 – 16.10 Coffee break

Tu 16.10 – 17.50 Parallel Session: Multiphysics and thermomechanical modelling II

Chair: G. Kuri, PSI, Switzerland; Co-chair: R. Gardner, Idaho National Laboratory, United States.

TopFuel2015 -A0017	MODELLING OF FISSION GAS RELEASE IN IRRADIATED UO2 UNDER TRANSIENT CONDITIONS	Veshchunov, M. (1); Tarasov, V. (1) 1 - Nuclear Safety Institute (IBRAE), Russian Academy of Sciences, Russian Federation
TopFuel2015 -A0020	ASSESSMENT OF STAINLESS STEEL FUEL ROD PERFORMANCE AGAINST LITERATURE AVAILABLE DATA	Giovedi, C. (1); Cherubini, M. (2); Abe, A. (3); D'Auria, F. (4) 1 - AMAZUL, Brazil 2 - NINE, Italy 3 - IPEN/CNEN-SP, Brazil 4 - UNIPI, Italy
TopFuel2015 -A0038	MODELING OF AXIAL DISTRIBUTION OF RELEASED FISSION GAS IN KKL BWR FUEL RODS DURING BASE IRRADIATION	Brankov, V. (1); Khvostov, G. (2); Mikityuk, K. (2); Pautz, A. (1); Ledergerber, G. (3); Wiesenack, W. (4) 1 - Swiss Federal Institute of Technology Lausanne, Switzerland 2 - Paul Scherrer Institute, Switzerland 3 - Kernkraftwerk Leibstadt, Switzerland

		4 - OECD Halder Reactor Project, Norway
TopFuel2015 -A0070	IMPROVING THE ACCURACY OF PCMI SIMULATIONS WITH MORE REALISTIC GEOMETRY AND MATERIAL MODELS	Novascone, S. (1); Perez, D. (1); Hales, J. (1); Williamson, R. (1); Pastore, G. (1); Liu, W. (2); Spencer, B. (1); Gardner, R. (1) 1 - Idaho National Laboratory, United States 2 - Anatech Corp., United States

Tu 16.10 – 17.50 Parallel Session:
Pellet behaviour

Chair:David Schrire, Vattenfall, Sweden; Co-chair: M. Chollet, PSI, Switzerland

TopFuel2015 -A0031	MICRO-HARDNESS AND LOCAL PROPERTIES OF HIGH BURNUP UO2 FUEL	Cappia, F. (1); Schubert, A. (1); Van Uffelen, P. (1); Papaioannou, D. (1); Macián-Juan, R. (2); Rondinella, V. (1) 1 - European Commission, Joint Research Centre, Institute for Transuranium Elements, Germany 2 - Technische Universität München, Germany
TopFuel2015 -A0033	MOX IRRADIATION TEST UP TO HIGH BURNUP	Nakae, N. (1); Akiyama, H. (1) 1 - Nuclear Regulatory Authority, Japan
TopFuel2015 -A0099	AREVA CR2O3-DOPED FUEL: INCREASE OPERATIONAL FLEXIBILITY AND LICENSING MARGINS	Delafoy, C. (1); Arimescu, I. (2); Hengstler-Eger, R. M. (3); Landskron, H. (3); Moeckel, A. (3); Miles, T. (2) 1 - AREVA NP SAS, France 2 - AREVA Inc., United States 3 - AREVA GmbH, Germany
TopFuel2015 -A0121	PCI MITIGATION USING FUEL ADDITIVES	Jadernas, D. (1); Matsunaga, J. (2); Corleoni, F. (1); Tejland, P. (1); Puranen, A. (1); Granfors, M. (1) 1 - Studsvik Nuclear AB, Sweden 2 - Nippon Nuclear Fuel Development Co., Ltd., Japan

Tu 16.10 – 17.50 Parallel Session:
Transient fuel behaviour - LOCA Analysis, Fuel fragmentation

Chair: N. Waeckel, EDF, France; Co-chair: M. Petit, IRSN, France

TopFuel2015 -A0003	IDENTIFYING THE NEED TO REVISE INDUSTRY AND STAFF GUIDANCE FOR THE EVALUATION OF FUEL ASSEMBLY STRUCTURAL RESPONSES TO EXTERNALLY APPLIED FORCES BASED ON RECENT REVIEW EXPERIENCE	Schmidt, J. (1) 1 - United States Nuclear Regulatory Commission, United States

TopFuel2015 -A0059	AXIAL RELOCATION OF FRAGMENTED AND PULVERIZED FUEL AND ITS EFFECTS ON FUEL ROD HEAT LOAD DURING LOCAS	Jernkvist, L. O. (1); Alvestav, A. (2); Massih, A. (1) 1 - Quantum Technologies AB, Sweden 2 - Swedish Radiation Safety Authority, Sweden
TopFuel2015 -A0072	MOBILITY ANALYSES FOR FUEL PARTICLES DISPERSED DURING A LOCA	Phillips, J. (1); Porter, I. (2); Raynaud, P. (2) 1 - Severe Accident Analysis, Department 6232; Sandia National Laboratories , United States 2 - Office of Nuclear Regulatory Research; U.S. Nuclear Regulatory Commission Washington, United States
TopFuel2015 -A0140	USE OF A MICROMECHANICAL APPROACH TO INVESTIGATE TRANSIENT FUEL FRAGMENTATION MECHANISMS	Esnoul, C. (1); Largenton, R. (1); Petry, C. (1); Michel, J.-C. (2); Bouloré, A. (3); Michel, B. (3) 1 - EDF R&D - Renardière, France 2 - CNRS Laboratoire de Mécanique et d'Acoustique, France 3 - CEA Cadarache, France
TopFuel2015 -A0185	AN INSIGHT ON FUEL FRAGMENTATION, RELOCATION AND DISPERSAL DURING LOSS-OF-COOLANT ACCIDENTS FROM COMPUTER-SIMULATION	Govers, K. (1); Verwerft, M. (1) 1 - SCK-CEN, Belgium

19.30 – 23.00 Conference Dinner

Wednesday 16 September 2015

Wed 8.30 - 10.30 Parallel Session:
Used fuel (storage, transportation and re-use/material recovery) II

Chair: A-M. Hahl, GE Hitachi Nuclear Energy, Sweden; Co-chair: D. Hambley, NNL, UK

TopFuel2015 -A0037	PERFORMANCE CHARACTERISATION OF AGR FUEL CLADDING RELEVANT TO LONG-TERM IN-POND STORAGE IN PH-MODERATED AQUEOUS ENVIRONMENT	Chan, C. M. (1); Engelberg, D. L. (2); Walters, W. S. (3) 1 - Materials Performance Centre, University of Manchester, United Kingdom 2 - Research Centre for Radwaste and Decommissioning, University of Manchester, United Kingdom 3 - National Nuclear Laboratory, United Kingdom
TopFuel2015 -A0105	PWR IN-CORE FUEL MANAGEMENT OPTIMIZATION OF NON-STANDARD CYCLES	Janin, D. (1); Seidl, M. (1); Wensauer, A. (1); Verhagen, F. (2); Guenther, P. (1) 1 - E.ON Kernkraft GmbH, Germany 2 - NRG, Netherlands

TopFuel2015 -A0135	AN INNOVATIVE TESTING PROTOCOL TO STUDY SPENT NUCLEAR FUEL VIBRATION INTEGRITY UNDER NORMAL CONDITION OF TRANSPORTATION	Wang, J.-A. (1); Wang, H. (1); Jiang, H. (1); Bevard, B. (1) 1 - Oak Ridge National Laboratory, United States
TopFuel2015 -A0224	AN ASSESSMENT OF IRRADIATED FUEL ROD FAILURE AFTER VERTICAL DROP ACCIDENT DURING FUEL ASSEMBLY TRANSPORTATION	Muñoz, J. (1); Carrilho, L. A. (2); Cerracín, A. (1) 1 - ENUSA Industrias Avanzadas S.A., Spain 2 - Westinghouse Electric Company, United States
TopFuel2015 -A0226	HANDLING OF FAILED RODS AT STUDSVIK	Askeljung, P. (1); Lafchiev, K. (1); Lundström, J. (1); Martinsson, J. (1) 1 - Studsvik Nuclear AB, Sweden
TopFuel2015 -A0239	PRE-HYDRIDED PWR CLADDING WITH RADIAL HYDRIDES: OPERATIVE FAILURE CRITERIA	Ruiz-Hervias, J. (1); Martin-Rengel, M. A. (1); Gomez-Sanchez, F. J. (2) 1 - Universidad Politecnica de Madrid. ETSI Caminos Madrid, Spain 2 - Advanced Material Simulation Bilbao, Spain

Wed 8.30 - 10.30 Parallel Session: ASGARD I

Chair: C. Ekberg, Chalmers, Sweden; Co-chair: F. Delage, CEA, France

TopFuel2015-A0249	CONVERSION OF ACTINIDES INTO OXIDE PRE-CURSORS FOR INNOVATIVE FUEL FABRICATION	Schreinemachers, C. (1); Middendorp, R. (1); Bukaemskiy, A. (1); Modolo, G. (1); Brykala, M. (2); Rogowski, M. (2); Deptula, A. (2); Čuba, V. (3); Pavelková, T. (3); Šebesta, F. (3); John, J. (3) 1 - Institute of Energy and Climate Research, IEK-6, Forschungszentrum Jülich GmbH, Germany 2 - Institute of Nuclear Chemistry and Technology, Poland 3 - Department of Nuclear Chemistry, Czech Technical University, , Czech Republic
TopFuel2015-A0247	DISSOLUTION BEHAVIOUR OF INERT MATRIX FUELS	De Visser - Týnová, E. (1); Ebert, E. (2); Cheng, M. (3); Ménard, G. (1); Mareš, K. V. (4); Geist, A. (5) 1 - Nuclear Research and consultancy Group, Netherlands 2 - Forschungszentrum Jülich GmbH, Germany 3 - Leibniz University Hannover , Germany 4 - Czech Technical University , Czech Republic 5 - Karlsruhe Institute of Technology , Germany
TopFuel2015-A0255	DISSOLUTION OF FRESH AND IRRADIATED (Pu,Zr)N FUELS WITHIN THE ASGARD PROJECT	Aneheim, E. (1); Menard, G. (2); Potthast, H.-D. (3) 1 - Chalmers University of Technology, Sweden 2 - NRG, Netherlands 3 - Paul Scherrer Institute, Switzerland

TopFuel2015-A0257	PRODUCTION AND CHARACTERIZATION OF NITRIDE BASED MATERIALS FOR NUCLEAR FUEL APPLICATIONS	Hedberg, M. (1); Johnson, K. (2); Wallenius, J. (2); Ekberg, C. (1) 1 - Chalmers University of Technology, Sweden 2 - Royal Institute of Technology, Sweden
TopFuel2015-A0248	SYNTHESIS OF URANIUM CARBIDES FROM SALT–POLYMER PRECURSORS	Saravia, A. (1); Deschanels, X. (2); Szenknect, S. (2); Fiquet, O. (1); Brothier, M. (1) 1 - CEA, DEN, DEC, SPUA, LCU, France 2 - ICSM, UMR 5257 CEA/CNRS/UM2/ENSCM, France
TopFuel2015-A0256	DISSOLUTION OF URANIUM CARBIDE FUEL PELLETS IN NITRIC ACID	Sarsfield, M. (1); Griffiths, T. (1); Maher, C. (1) 1 - National Nuclear Laboratory, United Kingdom

Wed 10.30 – 11.00 Coffee break

Wed 11.00 - 13.00 Parallel Session: Used fuel (storage, transportation and re-use/material recovery) III

Chair: D. Janin, E.ON Kernkraft GmbH, Germany; Co-chair: A-M. Hahl, GE Hitachi Nuclear Energy, Sweden;

TopFuel2015-A0014	ESTIMATION OF THE RADIONUCLIDE INVENTORIES IN LWR SPENT FUEL ASSEMBLY STRUCTURAL MATERIALS FOR LONG-TERM SAFETY ANALYSIS	Caruso, S. (1) 1 - National Cooperative for the Disposal of Radioactive Waste (NAGRA), Switzerland
TopFuel2015-A0103	EVOLUTION OF SPENT FUEL DRY STORAGE	Standring, P. (1); Takats, F. (2) 1 - International Atomic Energy Agency, Austria 2 - TS ENERCON KFT, Hungary
TopFuel2015-A0133	INTERNAL PRESSURE OF SPENT PWR FUEL ROD AT HIGH BURNUP: PREDICTION ENHANCEMENT THROUGH FRAPCON-3 UNCERTAINTY ANALYSIS	Feria, F. (1); Herranz, L. E. (1) 1 - CIEMAT, Spain
TopFuel2015-A0155	Fuel Rod Uncertainty Analysis of Chinshan NPP spent fuel pool by TRACE and FRAPTRAN/DAKOTA/SNAP	Li, W. (1); Wang, J. R. (1); Lin, W. K. (1); Chang, H. C. (1); Lin, H. T. (2); Chen, S. W. (1); Shih, C. (1) 1 - National Tsing Hua University, Taiwan 2 - Institute of Nuclear Energy Research, Taiwan
TopFuel2015-A0200	MEASUREMENT OF GAS PERMEABILITY ALONG THE AXIS OF A SPENT FUEL ROD	Rondinella, V. (1); Papaioannou, D. (1); Nasyrow, R. (1); Goll, W. (2); Rehm, M. (2) 1 - JRC-ITU, Germany 2 - AREVA GmbH, Germany

Wed 11.00 - 13.00 Parallel Session:
ASGARD II

Chair: F. Delage, CEA, France; Co-chair: C. Ekberg, Chalmers, Sweden

TopFuel2015-A0250	OUTCOMES FROM INVESTIGATIONS OF OXIDE SPHEREPACKED FUELS SYNTHESIS	Somers, J. (1); Cozzo, C. (2); Delage, F. (3); Freis, D. (1); Picart, S. (3); Pouchon, M. (2) 1 - JRC ITU, Germany 2 - PSI, Switzerland 3 - CEA, France
TopFuel2015-A0253	OUTCOMES FROM THE IMPLEMENTATION OF IRRADIATION TESTS ON MINOR ACTINIDES BEARING OXIDE FUELS	Béjaoui, S. (1); D'Agata, E. (2); Hania, R. (3); Somers, J. (4); Freis, D. (4); Delage, F. (1) 1 - CEA, France 2 - JRC/IE, Netherlands 3 - NRG, Netherlands 4 - JRC/ITU, Germany
TopFuel2015-A0252	MODELING AND SIMULATION OF FAST REACTOR MINOR ACTINIDE BEARING OXIDE FUELS IN SUPPORT OF MABB AND MADF CONCEPTS	Lemehov, S. (1); Calabrese, R. (2); Delage, F. (3); Fedorov, A. (4); Pouchon, M. (5); Van Uffelen, P. (6) 1 - SCK•CEN , Belgium 2 - ENEA, Italy 3 - CEA, France 4 - NRG, Netherlands 5 - PSI, Switzerland 6 - JRC-ITA, Germany
TopFuel2015-A0251	SIMPLIFIED DESIGN AND SAFETY PERFORMANCE ASSESSMENT OF AN ADVANCED SPHERE-PAC (U,PU,MA)O2 SFR CORE	Maschek, W. (1); Andriolo, L. (1); Matzerath Boccaccini, C. (1); Delage, F. (2); Parisi, C. (3); Del Nuevo, A. (3); Abbate, G. (3); Schmitt, D. (4) 1 - KIT, Germany 2 - CEA, France 3 - ENEA, Italy 4 - EDF, France
TopFuel2015-A0061	EVALUATION OF CARBIDE FUEL PROPERTY MODELS USING LOW BURNP IRRADIATION DATA	Choi, H. (1) 1 - General Atomics, United States
TopFuel2015 -A0042	BENCHMARK ON BEHAVIOR OF MOX FUEL PIN UNDER POWER OPERATION IRRADIATION IN SODIUM FAST REACTOR	Kriventsev, V. (1); Rineiski, A. (1); Pfrang, W. (1); Perez-Martin , S. (1); Mikityuk, K. (2); Zhang, Y. (2); Suzuki, M. (3); Ishizu, T. (4) 1 - Karlsruhe Institute of Technology (KIT), Germany 2 - Paul Scherrer Institute (PSI), Switzerland 3 - Japan Atomic Energy Agency (JAEA), Japan 4 - Nuclear Regulation Authority (NRA), Japan

Wed 13.00 – 14.00 Lunch break and farewell

Poster

Poster - Modelling, analysis and methods

TopFuel2015 -A0005	THERMOCHEMICAL MODELLING OF THE OXYGEN POTENTIAL OVER URANIUM OXIDE FUEL PELLETS UNDER IRRADIATION	Loukusa, H. (1); Ikonen, T. (1) 1 - VTT Technical Research Centre of Finland, Finland
TopFuel2015 -A0011	TRANSURANUS BURN-UP EXTENSION FOR (TH,PU)O2 TYPE FUEL IN LIGHT WATER REACTORS	Tijero Cavia, J. I. (1); Macián-Juan, R. (1); Seidl, M. (2); Van Uffelen, P. (3); Schuber, A. (3); Brémier, S. (3); Poeml, P. (3) 1 - Lehrstuhl für Nukleartechnik, Technische Universität München, Germany 2 - E.On Kernkraft GmbH, Germany 3 - European Commission, Joint Research Centre, Institute for Transuranium Elements, Germany
TopFuel2015 -A0018	MODELLING OF FUEL POROSITY EVOLUTION IN UO2 FUEL BY MFPR CODE	Tarasov, V. (1); Veshchunov, M. (1) 1 - Nuclear Safety Institute (IBRAE), Russian Academy of Sciences, Russian Federation
TopFuel2015 -A0024	DELTA METHOD BASED QUANTIFICATION OF PHYSICAL UNCERTAINTIES IN THE METHOD OF CHARACTERISTICS SOLUTION TO THE BOLTZMANN NEUTRON TRANSPORT OF THE AGENT METHODOLOGY	Jevremovic, T. (1); Simpson, J. (1); Schow, R. (1); Sisson, R. (1); Wu, T. (1); Nguyen, B. (1) 1 - The University of Utah, United States
TopFuel2015 -A0026	THE INFLUENCE OF FUEL ASSEMBLY CHARACTERISTICS ON REACTOR SAFETY	Xu, L. (1); Ren, C. (1) 1 - Nuclear Power Institute of China, China
TopFuel2015 -A0027	ATWT ANALYSIS OF ROD EJECTION ACCIDENT	Wang, Y. (1); Ren, C. (1) 1 - Nuclear Power Institute of China, China
TopFuel2015 -A0049	FUEL ROD PERFORMANCE AND UNCERTAINTY ANALYSIS DURING LBLOCA BY FRAPTRAN/TRACE CODE	Yang, J. H. (1); Wang, J. R. (1); Lin, H. T. (2); Shin, C. (1); Chen, S. W. (1) 1 - Institute of Nuclear Engineering and Science, Taiwan 2 - Institute of Nuclear Energy Research Atomic Energy Council, Taiwan
TopFuel2015 -A0065	ADVANCED MECHANICAL RESOLUTION IN CYRANO3 FUEL PERFORMANCE CODE USING MFRONT GENERATION TOOL	Pétry, C. (1); Helfer, T. (2) 1 - EDF R&D, France 2 - CEA, France
TopFuel2015 -A0082	FINITE ELEMENT MODELLING OF PELLET-CLAD INTERACTION DURING OPERATIONAL TRANSIENTS	Haynes, T. (1); Wenman, M. (1) 1 - Imperial College London, United Kingdom
TopFuel2015 -A0091	DESIGN OF THE INNER CLADDING THICKNESS PREVENTING A BALLOONING FAILURE OF A DUAL COOLED FUEL	Kim, H.-K. (1); Lee, Y.-H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of

TopFuel2015 -A0094	STRUCTURAL INTEGRITY ASSESSMENT OF CHASNUPP-1 FUEL ASSEMBLYUNDER TENSILE LOADING CONDITION	W. (1); Murtaza, G. (1); Ahmad Siddiqui, A. (1); Akhtar, S. W. (1) 1 - Pakistan Atomic Energy Commission, Pakistan
TopFuel2015 -A0125	NUMERICAL STUDY ON THE PRESSURE-EQUALIZING PROCESS BETWEEN NUCLEAR FUEL CHANNEL AND GUIDE TUBE CHANNEL TO ACCURATE PREDICT BYPASS MASS FLOW IN PWR FUEL ASSEMBLY	Sheng, D.-Y. (1); Seidl, M. (2) 1 - Westinghouse Electric Sweden AB, Sweden 2 - E.ON Kernkraft GmbH, Germany
TopFuel2015 -A0147	ANALYSIS OF DUPIC FUEL CYCLE USING THE MCNPX CODE	Silva, C. (1); Gallardo, S. (2); Pereira, C. (1); Veloso, M. (1); Verdú, G. (2) 1 - Universidade Federal de Minas Gerais, Brazil 2 - Universitat Politècnica de València, Spain
TopFuel2015 -A0152	PARCS/RELAP COUPLED CALCULATION OF PWR STEADY-STATE SCENARIO	Hamers, A. (1); Reis, P. (1); Costa, A. (1); Silva, C. (1); Pereira, C. (1) 1 - Universidade Federal de Minas Gerais, Brazil
TopFuel2015 -A0154	CRITICALITY ANALYSIS OF IPEN/MB-01 REACTOR USING MCNP AND KENO-VI	Salomé, J. (1); Cardoso, F. (1); Faria, R. (1); Pereira, C. (1); Silva, C. (1); 1 - Universidade Federal de Minas Gerais, Brazil
TopFuel2015 -A0175	IMPACT OF STEADY STATE UNCERTAINTIES OF A FULL-LENGTH FUEL ROD MODELING	Sagrado, I. C. (1); Herranz, L. E. (1) 1 - CIEMAT, Spain
TopFuel2015 -A0182	KATHY: AREVA'S TEST FACILITY FOR CRITICAL HEAT FLUX MEASUREMENTS	Kreuter, D. (1); Wieckhorst, O. (1); Berger, T. (2) 1 - AREVA GmbH, Germany 2 - AREVA GmbH, Germany
TopFuel2015 -A0189	UNCERTAINTY ANALYSIS FOR CHINSHAN BWR/4 SPENT FUEL POOL SEVERE ACCIDENT BY MELCOR2.1/SNAP AND DAKOTA	Chiang, Y. (1); Wang, J.-R. (2); Lin, H.-T. (3); Chen, S.-W. (1); Shih, C. (2); Li, W.-Y. (1) 1 - Institute of Nuclear Engineering and Science, National Tsing Hua University, Taiwan 2 - Nuclear and New Energy Education and Research Foundation, Taiwan 3 - Institute of Nuclear Energy Research, Atomic Energy Council, Taiwan
TopFuel2015 -A0193	THE EFFECTS OF HIGH BURNUP ON EVALUATION MODEL IN RELAP5/MOD3.3 FOR LARGE BREAK LOCA ANALYSIS WITH REVISED CRITERIA	Lee, K. M. (1); Lee, S. I. (1); Lee, J. I. (1) 1 - KEPCO Nuclear Fuel Co., Korea, Republic of
TopFuel2015 -A0222	DEVELOPMENT OF OPEN THERMODYNAMIC DATABASE ON MCCI BY COMBINING NULEAR FUEL AND SLAG DATABASES.	Kurata, M. (1); Shirasu, N. (1); Kawakami, K. (2); Tanaka, M. (2) 1 - Japan Atomic Energy Agency, Japan 2 - Nippon Steel Sumitomo Metal Corporation, Japan

Poster - Enhanced accident tolerant fuel (ATF)

TopFuel2015 -A0021	EVALUATION OF CORROSION ON THE FUEL PERFORMANCE OF IRON-BASED ALLOYS CLADDING	Gomes, D. (1); Giovedi, C. (2); Abe, A. (1); Silva, A. (1) 1 - IPEN/CNEN-SP, Brazil 2 - AMAZUL, Brazil
TopFuel2015 -A0050	THERMODYNAMIC MODELLING OF A SINGLE-STAGE PRODUCTION ROUTE FOR U3SI2 ACCIDENT TOLERANT FUEL.	Foxhall, H. (1); Goddard, D. (1); Owens, S. (1) 1 - National Nuclear Laboratory, United Kingdom
TopFuel2015 -A0087	OXIDATION RESISTANCE OF AL3TI-BASED COATING MATERIALS FOR ACCIDENT TOLERANT FUEL CLADDINGS	Park, J.-Y. (1); Kim, I.-H. (1); Kim, H.-G. (1); Jung, Y.-I. (1); Park, D.-J. (1); Park, J.-H. (1); Koo, Y.-H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
TopFuel2015 -A0093	A PRELIMINARY ASSESSMENT OF APPLICABILITY OF FERRITIC ODS FE-CR-AL ALLOY TO ACCIDENT TOLERANT FUEL AND CONTROL ROD FOR LWRS	Sakamoto, K. (1); Ouchi, A. (1); Hirai, M. (1) 1 - Nippon Nuclear Fuel Development, Co., Ltd., Japan
TopFuel2015 -A0095	A FEASIBILITY STUDY ON THE WEAR BEHAVIORS OF CR-COATED ZIRCONIUM FUEL RODS FOR ACCIDENT-TOLERANT FUEL	Lee, Y.-H. (1); Kim, I.-H. (1); Kim, H.-G. (1); Kim, H.-K. (1); Koo, Y.-H. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
TopFuel2015 -A0123	AN ESTIMATION OF BLOWDOWN PCT DURING A LBLOCA FOR VARIOUS ATF	Riverola, J. (1) 1 - ENUSA Industrias Avanzadas, S.A., Spain
TopFuel2015 -A0153	IMPACT OF SOLUBLE BORON IN FUEL ELEMENT PWR WITH CLADDINGS ZIRCALOY AND SILICON CARBIDE	Faria, R. (1); Silva, F. (1);Salomé, J. (1); Da Silva, C. (1); Fortini, Â. (1); Pereira, C. (1) 1 - Universidade Federal de Minas Gerais, Brazil
TopFuel2015 -A0205	A DOUBLE-WALL LWR CLADDING CONCEPT WITH MULTI-CYLINDER MISFITTING	Lee, Y. (1); Son, S. (1); Lee, J. I. (1) 1 - Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

Poster - Operation and Experience

TopFuel2015 -A0013	AN EMERGENCY CORE DESIGN EXPERIENCE DUE TO FUEL DAMAGE DURING A MID-TERM OVERHAUL IN A WEC TYPE 2-LOOP NUCLEAR POWER PLANT	Son, S.-B. (1); Kim, H.-S. (1); Woo, H.-S. (1); Jung, Y.-S. (1) 1 - KEPCO Nuclear Fuel, Korea, Republic of
TopFuel2015 -A0166	AN INVESTIGATION ON THE GROWTH CHARACTERISTICS OF NUCLEAR FUEL IN REACTOR	Jang, Y. K. (1) 1 - KEPCO Nuclear Fuel, Korea, Republic of
TopFuel2015 -A0171	DETERMINATION OF THRESHOLD STRESS INTENSITY FACTOR K1H IN DHC TESTS OF FUEL CLADDINGS BY METHOD OF "CONSTANT DISPLACEMENT"	Markelov, V. (1); Saburov, N. (1); Bekrenev, S. (1); Novikov, V. (1) 1 - JSC «VNIINM», Russian Federation

TopFuel2015 -A0180	OPERATING EXPERIENCE WITH SHIELDING FUEL ASSEMBLIES AT RINGHALS 3 AND 4	Jasiulevicius, A. (1); Nylén, H. (2); Sandberg, U. (2); Peucker, J. (3) 1 - Vattenfall Nuclear Fuel AB, Sweden 2 - Ringhals AB, Sweden 3 - AREVA GmbH, Germany
TopFuel2015 -A0229	SURVEILLANCE OF HIPER16 FUEL FOR PWR NUCLEAR POWER PLANT	Choi, K.-S. (1); Jeon, S.-Y. (1); Kim, J.-I. (1); Kim, Y.-H. (1); Kim, J.-U. (1) 1 - KEPCO Nuclear Fuel, Korea, Republic of
TopFuel2015 -A0232	PLATINUM DEPOSITION ON A BOILING STAINLESS STEEL SURFACE (SIMULATING A FUEL ROD)	Veleva, L. (1); Grundler , P. (1); Streit, M. (1); Ritter, S. (1) 1 - Paul Scherrer Institut , Switzerland
TopFuel2015 -A0234	COMPARATIVE ANALYSIS OF THE EVOLUTION OF ZIRCALOY-2 CLADDING IRRADIATED IN BWR	Abolhassani, S. (1); Restani, R. (1); Hallstadius, L. (2) 1 - Nuclear Energy and Safety department, PSI, Switzerland 2 - Westinghouse Electric Sweden AB, Sweden
TopFuel2015-A242	THE OXIDATION OF ZRY-4 AND ZIRLO TUBE CONTAINING THE CRUD IN STEAM AND IN AIR CONDITION	Ha, S. (1); Park, G. (1); Choi, J. (1) 1 - Kyunghee University, Korea, Republic of

Poster - Advances in designs, materials and manufacturing

TopFuel2015 -A0006	DOG-BONE STUDIES IN U-Mo-Zry-4 MINIPLATES FABRICATION PROCESS	López, M. (1); Taboada, H. (1); Picchetti, B. (1); Gribaldo, F. (1); Olivar, E. (1) 1 - Comisión Nacional de Energía Atómica (CNEA), Argentina
TopFuel2015 -A0010	FABRICATION OF 3D CARBON NETWORK REINFORCED ZIRCONIA COMPOSITE PELLETS BY SPARK PLASMA SINTERING	Mistarihi, Q. (1); Umer, M. A. (1); Hong, S. H. (1); Ryu, H. J. (1) 1 - Korea Advanced Institute of Science and Technology, Korea, Republic of
TopFuel2015 -A0034	THE INFLUENCE OF HYDROGEN ON HIGH TEMPERATURE OXIDATION OF ZR1NB CLADDING TUBES	Weishauptová, Z. (1); Navrátilová, J. (2); Vrtílková, V. (3) 1 - Institute of Rock Structure and Mechanics, Academy of Sciences of the Czech Republic,v.v.i., Czech Republic 2 - Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague, Czech Republic 3 - UJP-Praha, Inc., Czech Republic
TopFuel2015 -A0036	ZIRCONIUM MATRIX ALLOYS FOR HIGH URANIUM CONTENT DISPERSION TYPE FUEL	Savchenko, A. (1); Konovalov, Y. (1); Laushkin, A. (1); Uferov, O. (1) 1 - A.A. Bochvar Institute (VNIINM), Russian Federation
TopFuel2015 -A0047	CHF CHARACTERISTICS OF ADVANCED 37-ELEMENT FUEL BUNDLE IN CREPT PRESSURE TUBES	Park, J. H. (1); Song, Y. M. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
TopFuel2015 -A0053	THE RESEARCH AND APPLICATION OF USW FUEL RODS WELDING TECHNOLOGY	Chen, K. (1) 1 - CNNC Jianzhong Nuclear Fuel Co., Ltd, China

TopFuel2015 -A0057	MICROSCOPIC EXAMINATION OF OXIDE LAYERS FORMED ON ZIRLOTM	Bae, H. Y. (1); Bahn, C. B. (1) 1 - School of Mechanical Engineering, Pusan National University (PNU), Korea, Republic of
TopFuel2015 -A0100	MICROSTRUCTURE DEVELOPMENT BY AN ACCELERATED STEPWISE OXYGEN POTENTIAL PROCESS DURING ISOTHERMAL SINTERING IN CR_2O_3 DOPED UO_2	Lee, S. (1); Jung, T. (1); Jo, Y. (1); Park, B. (1); Koh, S. (1); Kim, J. (1); Yang, J. (2) 1 - KNFC(KEPCO Nuclear Fuel Company), Korea, Republic of 2 - KAERI(Korea Atomic Energy Research Institute), Korea, Republic of
TopFuel2015 -A0101	EVALUATION OF CHIPPING RESISTANCE FOR UO2 PELLETS BY MEANS OF FREE-FALL-IMPACT TESTING	Jung, T. (1); Lee, S. (1); Jo, Y. (1); 1 - KNFC(KEPCO Nuclear Fuel Company), Korea, Republic of
TopFuel2015 -A0111	PROGRESS ON NEW ZIRCONIUM ALLOYS FOR CAP1400 FUEL ASSEMBLY	Zeng, Q. (1); Zhu, L. (1); Liu, J. (1); Wang, L. (2); Gao, B. (2) 1 - Shanghai Nuclear Engineering Research & Design Institute, China 2 - State Nuclear Baoti Zirconium Industry Company, China
TopFuel2015 -A0132	IN-PILE INVESTIGATION RESULTS OF RADIATION CREEP FOR URANIUM DIOXIDE FUEL WITH LARGE GRAINE SIZE AT TEMPERATURES 700-1050 C.	Mikheev, Y. (1); Fedotov, A. (1); Novikov, V. (1); Malygin, V. (2); Izhutov, A. (3); Rogozyanov, A. (3); Ilynykh, G. (3) 1 - JSC High Technological Research Institute of Inorganic Materials named after A.A. Bochvar (VNIINM), Russian Federation 2 - National Research Nuclear University Moscow Engineering Physics Institute (MEPhI), Russian Federation 3 - JSC State National Center Research Institute of Atomic Reactor (NIIAR), Russian Federation
TopFuel2015 -A0161	ELECTRONIC MODEL FOR OXIDE SCALE ON ZIRCONIUM CLADDING	Alekseev, P. (1); Shimkevich, A. (1) 1 - NRC Kurchatov Institute, Russian Federation
TopFuel2015 -A0169	PROPERTIES OF ZIRCONIUM ALLOY MODIFIED BY MOLYBDENUM	Nikulina, A. (1); Novikov, V. (1); Sablin, M. (1); Konkov, V. (1); Balashov, V. (1); Khohunova, T. (1) 1 - JSC VNIINM, Russian Federation
TopFuel2015 -A0173	NUCLEAR PRODUCTION PLANT - MANAGEMENT OF FUTURE	Loktev, I. (1); Goncharov,Y. (1); Strukov, A. (1) 1 - JSC "Novosibirsk Chemical Concentrates Plant", Russian Federation
TopFuel2015 -A0186	INFLUENCE OF ZR, MO AND NB ON MICROSTRUCTURE OF TERNARY URANIUM ALLOYS.	Morais, N. (1); Tunes, M. (1); Dos Santos, V. (1); Gomide, R. (2); Schön, C. (1) 1 - USP, Brazil 2 - CTMSP-CEA, Brazil
TopFuel2015 -A0231	NEUTRONICS DESIGNS OF PWR INITIAL CORES WITH THE BIGT BURNABLE ABSORBERS	Yahya, M.-S. (1); Kim, Y. (1); Chung, C. K. (2) 1 - Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of 2 - KEPCO Engineering & Construction Company (KEPCO E&C), Korea, Republic of

TopFuel2015 -A0240	ANALYSIS OF THERMAL SHOCK BEHAVIOR OF CLADDING WITH SICF/SIC COMPOSITE PROTECTIVE FILMS	Lee, D. (1); Park, K. (1); Kim , W. (2); Park , J. (2); Kim , D. (2); Lee , H.-G. (2) 1 - Kyunghee Univ., Korea, Republic of 2 - Korea Atomic Energy Research Institute , Korea, Republic of

Poster - Used fuel (storage, transportation and re-use/material recovery

TopFuel2015 -A0092	CURRENT APPLICATIONS OF THREE MILE ISLAND-2 CORE AND DEBRIS HANDLING AT THE IDAHO NATIONAL LABORATORY	Carmack, J. (1); Braase, L. (1) 1 - Idaho National Laboratory, United States
TopFuel2015 -A0124	TRANSPORT OF LEAKING FUEL RODS	Boeckx, W. (1) 1 - Transnubel, Belgium
TopFuel2015 -A0139	EXAMINATION OF LONG STORED AGR FUEL CLADDING	Hambley, D. (1); Morgan, S. (1) 1 - National Nuclear Laboratory, United Kingdom
TopFuel2015 -A0208	FUEL DATA MANAGEMENT IN THE 21ST CENTURY	Cooney, B. (1); Gunther, D. (1) 1 - Westinghouse Electric Co LLC, Core Engineering, United States

Poster - Transient fuel behaviour

TopFuel2015 -A0052	IRRADIATION OF MATERIALS INTENDED FOR CHEMICAL AND THERMAL STABILIZATION OF THE MOLTEN NUCLEAR FUEL	Lahodová, Z. (1); Viererbl, L. (1); Voljanskij, A. (1); Vinš, M. (1); Šrank, J. (2) 1 - Research Centre Řež Ltd., Czech Republic 2 - ÚJV Řež, a. s., Czech Republic
TopFuel2015 -A0063	CAPABILITIES OF UNIQUE EXPERIMENTAL REACTOR BASIS OF JSC "SSC RIAR" FOR FEASIBILITY OF NEW NUCLEAR FUEL	Burukin, A. (1); Izhutov, A. (1); Ilyenko, S. (1); Kalygin, V. (1); Ovchinnikov, V. (1); Starkov, V. (1); Zhemkov, I. (1) 1 - JSC "SSC RIAR", Russian Federation
TopFuel2015 -A0066	DOSE AND TEMPERATURE DISTRIBUTION IN SPENT FUEL CONTAINING MATERIAL	Viererbl, L. (1); Lahodová, Z. (1); Zmítková, J. (1); Vinš, M. (1); Šrank, J. (2) 1 - Research Centre Rez, Ltd., Czech Republic 2 - ÚJV Řež, a. s., Czech Republic
TopFuel2015 -A0119	PROPOSAL OF NEW OXIDATION KINETICS FOR SPONGE BASE E110 CLADDING TUBES MATERIAL	Krejci, J. (1); Vrtilkova, V. (2); Gajdos, P. (2); Rada, D. (2) 1 - CTU in Prague, Faculty of Nuclear Sciences and Physical Engineering, Czech Republic 2 - UJP PRAHA a.s., Czech Republic
Topfuel2015 -A0167	TRANSIENT TEST DESIGN AND PREPARATIONS AT THE INL TRANSIENT REACTOR TEST (TREAT) FACILITY	Wachs, D. (1); Woolstenhulme, N. (1); O'brien, R. (1); Chichester, D. (1); Beasely, A. (1); Bayes, S. (1); Jensen, C. (1); Ban, H. (1) 1 - Idaho National Laboratory

TopFuel2015 -A0233	LIQUEFACTION INTERACTION BETWEEN OXIDIZED ZIRCALOY AND OTHER FUEL ASSEMBLY COMPONENTS OF BWR IN THE EARLY STAGE OF FUEL ASSEMBLY DEGRADATION	Tokushima, K. (1); Sawada, A. (2); Sakamoto, K. (3); Shibata, H. (1); Kurata, M. (1) 1 - Japan Atomic Energy Agency, Japan 2 - Global Nuclear Fuel Japan, Co., Ltd., Japan 3 - Nippon Nuclear Fuel Development, Co., Ltd., Japan

Thursday 17 September 2015

Technical visits based on pre-registration

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