



# Programme

12 – 16 February 2017

Vienna, Austria



ENS CONFERENCE

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## TopSafe 2017 Programme Committee

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## **Sunday 12 February 2017**

**17:30 – 19:00 Welcome Drink**

## **Monday 13 February 2017**

**10.30 – 12.30 Opening Plenary Session (room M3)**

Chair: N. Cavlina, University of Zagreb, Croatia

### **Invited Keynote Speeches**

#### **The Role of Nuclear Reactor Safety at IAEA**

**J.C. Lentijo**, Deputy Director General and Head of the IAEA Department of Nuclear Safety and Security, IAEA

#### **Present situation and trend of nuclear power in Japan after the Fukushima Accident**

**S. Matsuura**, President & CEO, JANSI, Japan

#### **Practical challenges arising from recent implementation of Defence-in-Depth as defined by WENRA**

**J. Hyvärinen**, Professor, Lappeenranta University of Technology, Finland

#### **Reduction of operational expenditure and increased safety requirements – not a contradiction**

**N. Kostroun**, Director, AREVA, Germany

**12.30 – 14.00 Lunch break**



### 14.00 – 15.30 Parallel session: Fukushima (room M3)

Chair: A. Kugo, JANSI, Japan

TopSafe2017-A0023	Present Situation and Trends of Nuclear Power in Japan after Fukushima Accident	Matsuura, S. (1); Yamazaki, H. (1); Kugo, A. (1) 1 - Japan Nuclear Safety Institute, Japan
TopSafe2017-A0012	DECOMMISSIONING AND ENVIRONMENTAL REMEDIATION SCENARIO DEVELOPMENT FOR FUKUSHIMA DAIICHI	Kawamura, H. (1); Yashio, S. (2); Mckinley, I. (3) 1 – MCM, Japan, Japan 2 - Obayashi Corporation, Japan 3 - McKinley Consulting, Switzerland
TopSafe2017-A0052	DECISION MAKING METHODOLOGY OF COST-BENEFIT ANALYSIS BASED ON PROBABILISTIC SAFETY ASSESSMENT FOR ACCIDENT MITIGATION ALTERNATIVES	Kim, S. H. (1); Jeong, Y. H. (2); Kang, H. G. (3); Chang, S. H. (4) 1 - Korea Atomic Energy Research Institute, Korea, Republic of 2 - Korea Advanced Institute of Science and Technology, Korea, Republic of 3 - Rensselaer Polytechnic Institute, Korea, Republic of 4 - Handong Global University, Korea, Republic of
TopSafe2017-A0075	SEVERE NPP ACCIDENT MANAGEMENT BY INTEGRATED DRONE-BASED MONITORING SYSTEM	Kharchenko, V. (1); Sachenko, A. (2); Kochan, V. (2); Yanovsky, M. (1); Roth, H. (3) 1 - National Aerospace University KhAI, RPC Radiy, Ukraine 2 - Ternopil National Economic University, Ukraine 3 - University of Siegen, Germany

### 14.00 – 15.30 Parallel session: Research Reactors (room M0E 07)

Chair: D. Sears, IAEA

TopSafe2017-A0063	THE BR2 MATRIX REPLACEMENT AND SAFETY UPGRADES.	Joppen, F. (1); Van Dyck, S. (1); Van den Branden, G. (1) 1 - SCKCEN, Belgium
TopSafe2017 -	ISSUES AND TRENDS AND IAEA ACTIVITIES ON THE SAFETY OF RESEARCH REACTORS	Shokr, A. (1) 1- IAEA
TopSafe2017	REVISIONS OF IAEA SAFETY STANDARDS ON SAFETY OF RESEARCH REACTORS, SSR-3	Sears, D. (1) 1- IAEA

### 15.30 – 16.00 Coffee break



### 16.30 – 17.30 Parallel session: General Safety I (room M3)

Chair: J. Misak, Nuclear Research Institute Rez, Czech Republic

TopSafe2017-A0004	DEVELOPMENT OF DEFENCE-IN-DEPTH EVALUATION METHOD AGAINST EXTERNAL EVENTS	Inagaki, M. (1); Ohtani, M. (1) 1 - Japan Nuclear Safety Institute, Japan
TopSafe2017-A0006	ENISS CONTRIBUTION TO THE HARMONISATION OF THE REGULATORY FRAMEWORK	Vanhoenacker, L. (1); Barbaud, J. (1); Glibert, M. (1) 1 - ENISS, Belgium
TopSafe2017-A0014	BEPU-FSAR: A NEW PARADIGM IN NUCLEAR REACTOR SAFETY	Menzel, F. (1); Sabundjian, G. (1); D'Auria, F. (2) 1 - Instituto de Pesquisas Energéticas e Nucleares (IPEN/CNEN-SP), Brazil 2 - Università degli Studi di Pisa, Italy
TopSafe2017-A0015	JANSI'S SAFETY IMPROVEMENT ACTIVITIES WITH IAEA SRS-46	Tominaga, K. (1); Ohtani, M. (1); Kitagawa, H. (1); Ueda, N. (2) 1 - Japan Nuclear Safety Institute, Japan 2 - Central Research Institute of Electric Power Industry, Japan

### 16.30 – 17.30 Parallel session: External Hazards (room MOE 07)

Chair: M. Pöhlmann, AREVA, Germany

TopSafe2017-A0011	DESIGN FOR PROTECTION AGAINST EXTERNAL EVENTS IN TEPCO'S KASHIWAZAKI-KARIWA NUCLEAR POWER STATION	Watanabe, M. (1); Ooyama, Y. (1) 1 - Tokyo Electric Power Company Holdings, Inc., Japan
TopSafe2017-A0038	ENUSA-JUZBADO PLANT STRESS TEST APPROACH AND ACTIONS TAKEN	Zurron-Cifuentes, O. (1); Escandon-Ortiz, E. (1); Blanco-Fernandez, L. (1) 1 - ENUSA INDUSTRIAS AVANZADAS S.A., Spain
TopSafe2017-A0088	SIMPLIFIED HIGH WINDS RISK ASSESSMENTS	Hope, K. (1); Sivori Alejandra, A. (2) 1 - Westinghouse Electric Company, United States 2 - Westinghouse Electric Belgium, Belgium



## Tuesday 14 February 2017

### **9.00 – 9.30 Plenary Keynote Speech (room M3)**

Chair: N. Aksan, Scientific Consultant, Switzerland

### **Current Research Topics and Further Developments in Nuclear Reactor Safety in Germany**

**U. Stoll**, Director, GRS GmbH, Germany

### **9.30 – 10.30 Parallel session: General Safety II (room M3)**

Chair: N. Aksan, Scientific Consultant, Switzerland

TopSafe2017-A0025	ENHANCE NUCLEAR SAFETY AND RELIABILITY OF NUCLEAR POWER PLANTS THROUGH HUMAN RESOURCE DEVELOPMENT	Kugo, A. (1) 1 - Japan Nuclear Safety Institute, Japan
TopSafe2017-A0040	VIEWS ON DEFENCE IN DEPTH IMPLEMENTATION	Veneau, T. (1); Ferrier, A. (1); Barbaud, J. (2) 1 - EDF DIPNN SEPTEN, France 2 - EDF DIPNN DTI, France
TopSafe2017-A0054	MANAGEMENT OF NUCLEAR SAFETY AND SECURITY SYNERGY	Lucian, B. (1); Aurora, B. (1) 1 - SPAREX Nuclear 3S Ltd., Romania

### **9.30 – 10.30 Parallel session: Severe Accidents I (room M0E 07)**

Chair: A. Shokr, IAEA

TopSafe2017-A0008	EFFECTIVENESS OF DEPRESSURIZATION AND INJECTIONS STRATEGIES DURING EXTENDED SBO FOR BWRS	Wang, T.-Y. (1); Hsu, Y.-T. (1); Chen, S.-W. (1); Wang, J.-R. (2); Shih, C. (2); Chiang, S.-C. (3); Yu, T.-Y. (3); Chang, Y.-F. (1) 1 - National Tsing Hua University, Taiwan 2 - Nuclear and New Energy Education and Research Foundation, Taiwan 3 - Taiwan Power Company, Taiwan
TopSafe2017-A0009	DEVELOPMENT OF ORGANIC IODINE ADSORBENTS	Wang, J. (1); Kobayashi, T. (1); Uzuyama, Y. (1); Endo, K. (2) 1 - Advanced Microelectronics Materials Development Centre, Rasa Industries, Ltd, Japan 2 - Electronic Material Department, Rasa Industries, Ltd, Japan, Japan
TopSafe2017-A0013	ANALYSIS OF EUTECTIC AND METALLIC MELT FLOW AND BLOCKAGE IN BWR CONTROL ROD GUIDE TUBE BY MPS METHOD	Goto, Y. (1); Yamaji, A. (1) 1 - Waseda University, Japan



## 10.30 – 11.00 Coffee break

### 11.00 – 12.30 Parallel session: General Safety III (room M3)

Chair: S. Verlinden, SCK-CEN, Belgium

TopSafe2017-A0037	UNIVERSITY OF UTAH NUCLEAR ENGINEERING PROGRAM'S METAMORPHOSIS OF PUBLIC PERCEPTION OF NUCLEAR ENERGY	Schow, R. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States
TopSafe2017-A0062	DEFENCE IN DEPTH AND PRACTICAL ELIMINATION OF EARLY AND LARGE RELEASES – CONCEPTS AND PRACTICE.	Modro, S. M. (1); Bajcs, T. (2); Lyubarski, A. (3) 1 - N.IN.E. - Nuclear and Industrial Engineering S.r.l., Italy 2 - ENCONET, Croatia 3 - Atomenergoprojekt, Russian Federation
TopSafe2017-A0072	ONGOING ACTIVITIES OF THE WORKING GROUP ON ACCIDENT MANAGEMENT AND ANALYSIS (CSNI/WGAMA)	Herranz, L. E. (1); Jacquemain, D. (2); Sandberg, N. (3) 1 - CIEMAT, Spain 2 - IRSN, France 3 - NEA, France
TopSafe2017-A0048	IDENTIFICATION OF THERMAL-HYDRAULIC PHENOMENA FOR VALIDATION OF BEST-ESTIMATE COMPUTER CODES	Glaeser, H. (1); Aksan, N. (2); D'Auria, F. (3) 1 - Consultancy, Germany 2 - Scientific Consultancy, Switzerland 3 - University of Pisa, Italy

### 11.00 – 12.30 Parallel session: Severe Accidents II (room M0E 07)

Chair: J. Hohorst, Innovative Systems Software, United States

TopSafe2017-A0027	TRENDS IN SEVERE ACCIDENT RESEARCH IN EUROPE: SARNET NETWORK FROM EURATOM TO NUGENIA	Van Dorsselaere, J.-P. (1); Bréchnignac, F. (1); De Rosa, F. (2); Herranz, L. E. (3); Kljenak, I. (4); Miassoedov, A. (5); Piluso, P. (6); Paci, S. (7) 1 - Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France 2 - Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico (ENEA), Italy 3 - Centro de Investigaciones Energeticas Medioambientales y Tecnologicas (CIEMAT), Spain 4 - Institut Jozef Stefan (IJS), Slovenia 5 - Karlsruher Institut fuer Technologie (KIT), Germany 6 - Commissariat à l'Energie Atomique et aux Energies Alternatives, France 7 - University of Pisa, Italy
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TopSafe2017-A0030	SEVERE ACCIDENT CONSEQUENCE ASSESSMENT FOR CHINSHAN NPP IN TAIWAN USING MELCOR2.1 AND WINMACCS	Chiang, Y. (1); Sheu, R.-J. (1); Wang, J.-R. (2); Chen, S.-W. (1); Chen, S.-S. (1); Hsu, W.-S. (3); Ku, Y.-T. (1); Shih, C. (3) 1 - Institute of Nuclear Engineering and Science, National Tsing Hua University, Taiwan 2 - Nuclear and New Energy Education and Research Foundation, Taiwan 3 - Nuclear Science and Technology Development Center, National Tsing Hua University, Taiwan
TopSafe2017-A0044	DEVELOPMENT AND PRELIMINARY APPLICATION OF THE METHODOLOGIES FOR EVALUATING SEVERE ACCIDENT MANAGEMENT PROGRAM	Cho, Y. J. (1); Lim, J. T. (1) 1 - Korea Institute of Nuclear Safety, Korea, Republic of
TopSafe2017-A0053	RE-ASSESSMENT OF RELAP/SCDAPSIM/MOD3.X USING HISTORICAL INTEGRAL EXPERIMENTS	Hohorst, J. (1); Allison, C. (1) 1 - Innovative Systems Software, United States

### 12.30 – 14.00 Lunch break

### 14.00 – 15.30 Parallel session: General Safety IV (room M3)

Chair: M. Trueba, ENUSA, Spain

TopSafe2017-A0070	DEFENCE IN DEPTH INTERNALIZATION IN CAREM PROTOTYPE AND BASIS FOR SAFETY CLASSIFICATION OF STRUCTURES SYSTEMS AND COMPONENTS	Giménez, M. O. (1); Zanoocco, P. G. (1); Quiroga, D. A. (1) 1 - Comisión Nacional de Energía Atómica, Argentina
TopSafe2017-A0077	HAS JAPAN OVERCOME THE IMPACT OF FUKUSHIMA?: INTERACTION BETWEEN THE GOVERNMENT AND THE CIVIL SOCIETY OVER NUCLEAR SAFETY ISSUES	Nakagawa, Y. (1) 1 - Tokyo Institute of Technology, Japan
TopSafe2017-A0089	AP1000® PLANT UNITED KINGDOM GENERIC DESIGN ASSESSMENT (GDA) CLOSEOUT EFFORTS	Friedman, B. (1); Iddings, R. (1); Wick, P. (1); Eisenhauer, J. (1) 1 - Westinghouse Electric Company, United States
TopSafe2017-A0093	PREPARATION OF ROCK FOR SUPPORTING A NUCLEAR POWER PLANT FOUNDATION	Rizzo, P. (1); Schwartz, M. (1) 1 - RIZZO Associates, United States





## 14.00 – 15.30 Parallel session: Severe Accidents III (room M0E 07)

Chair: D. Jacquemain, IRSN, France

TopSafe2017-A0056	NUMERICAL INVESTIGATION OF THE RECRITICALITY OF THE MOLTEN CORIUM BASED ON HEAVY METALS DURING SEVERE ACCIDENT IN LIGHT WATER REACTOR	Popov, D. (1); Runeval, O. (2) 1 - Free Nuclear Safety Consultant, Bulgaria 2 - Royal Institute of Technology, Stockholm, Sweden, Sweden
TopSafe2017-A0058	IN VESSEL MELT RETENTION STRATEGY(IVMR) FOR VVER 1000 – STATUS OF WORK	Zdarek, J. (1) 1 - UJV Rez a.s., Czech Republic
TopSafe2017-A0078	THE FIVE ESSENTIAL ELEMENTS OF SEVERE ACCIDENT MANAGEMENT TO BE DEVELOPED AS PART OF AN INDUSTRY STANDARD	Vayssier, G. (1) 1 - Nuclear Safety Consultancy Netherlands (NSC Netherlands), Netherlands

## 14.00 – 15.30 Poster Session (M01, area 2)

Chair: N. Debrecin, FER, Croatia

TopSafe2017-A0003	INTEGRATED SYSTEMS AND TOOLS FOR REPEATABLE NUCLEAR KNOWLEDGE MANAGEMENT & OPERATING EXPERIENCE IMPLEMENTED AT THE UNIVERSITY OF UTAH NUCLEAR RESEARCH REACTOR FACILITY	Schow, R. (1); Burnham, S. (1); Jevremovic, T. (1) 1 - University of Utah Nuclear Engineering Program, United States
TopSafe2017-A0010	THE ROLE OF IAEA IN HUMAN CAPACITY BUILDING -LEARNING AND TRAINING-BY-DOING EDUCATION PROGRAMMES BASED ON THE BASIC PRINCIPLE REACTOR SIMULATORS	Batra, C. (1); Jevremovic, T. (1) 1 - International Atomic Energy Agency, Austria
TopSafe2017-A0016	THE IMPROVEMENT OF DOWNCOMER AND LOWER-PLENUM MODEL OF CHINSHAN NUCLEAR POWER PLANT BY USING CFD SIMULATION	Ku, Y.-T. (1); Tseng, Y.-S. (1); Chen, S.-W. (2); Wang, J.-R. (3); Shin, C. (3); Chang, Y.-F. (3) 1 - National Tsing Hua University Department of Engineering and System Science, National Tsing Hua University, Taiwan 2 - Institute of Nuclear Engineering and Science, National Tsing Hua University, Taiwan 3 - Nuclear and New Energy Education and Research Foundation, Taiwan



TopSafe2017-A0026	FEATURES OF THE RADIAL REFLECTOR SIMULATION FOR GENERATION OF TWO-GROUP XS FOR THE VVER REACTOR CORE IN SERPENT MONTE CARLO CODE	Usheva, K. (1); Kuten, S. (1); Khruschinsky, A. (1); Babichev, L. (2) 1 - Institute for Nuclear Problems, Belarusian State University, Belarus 2 - Joint Institute for Power and Nuclear Research - Sosny, National Academy of Sciences of Belarus, Belarus
TopSafe2017-A0032	THERMAL HYDRAULIC ANALYSIS ON THE TRANSIENT PHENOMENA IN THE PRESSURE BALANCING LINE OF THE HYBRID SAFETY INJECTION TANK	Hong, S. (1); Huh, J. (1); Yi, K. (1); Choi, H. (1); Lee, B. (1); Chung, C. (1); Lee, J. (1); Kim, D. (1); Im, I. (1); Park, S. (1) 1 - KEPCO Engineering & Construction Co., Inc., Korea, Republic of
TopSafe2017-A0051	ANALYSIS OF MOLTEN-CORIUM CONCRETE INTERACTION FOR SMALL MODULAR REACTOR	Kim, S. H. (1); Park, J. H. (1); Kim, H. Y. (1); Park, R.-J. (1) 1 - Korea Atomic Energy Research Institute, Korea, Republic of
TopSafe2017-A0079	PERFORMANCE EVALUATION OF SAFETY INJECTION TANK FOR APR1400 PLANT	Yoo, S. H. (1); Bang, Y. S. (1) 1 - Korea Institute of Nuclear Safety, Korea, Republic of
TopSafe2017-A0080	REGULATORY CONSIDERATIONS ON SITE RELEASE OF NUCLEAR FACILITIES AFTER THE COMPLETION OF DECOMMISSIONING	Lee, J. (1); Choi, K. (1); Ahn, S. (1) 1 - Korea Institute of Nuclear Safety, Korea, Republic of
TopSafe2017-A0082	THE JOURNEY TO A CERTIFIED EQUIPMENT QUALIFICATION LABORATORY – WESTINGHOUSE APPROACH AND LESSONS LEARNED	Wretsäter, E. (1); Ekelund, M. (1); Götberg, J. (1); Ståhl, G. (1); Andrén, A. (1); Finne, J. (1) 1 - Westinghouse Electric Sweden AB, Sweden
TopSafe2017-A0097	ENHANCED NUCLEAR ENGINEERING SIMULATORS (ENES)	Negrenti, E. (1); D'Auria, F. (2) 1 - ENEA, Italy 2 - UNIVERSITY OF PISA, Italy

### 15.30 – 16.00 Coffee break

### 16.00 – 17.30 Parallel session: Safety Risk (room M3)

Chair: J.-L Gauthier, Westinghouse Electric Corporation, United States

TopSafe2017-A0022	DEVELOPMENT OF A NEW SEISMIC PRA CODE FOR UNCERTAINTY ANALYSIS	Muramatsu, K. (1); Uchiyama, T. (2); Muta, H. (1); Nishida, A. (3) 1 - Tokyo City University, Japan 2 - CSA of Japan Co., Ltd., Japan 3 - Japan Atomic Energy Agency, Japan
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TopSafe2017-A0028	SAFETY AND STANDARDIZATION ISSUES ON ISO12100 OF SAFETY DESIGN AND OPERATION PRINCIPLE FOR NUCLEAR POWER PLANTS	Mori, M. (1) 1 - Hokkaido University, Japan
TopSafe2017-A0064	APPLYING PROBABILISTIC CONCEPTS IN EXTERNAL FLOODING APPLICATIONS AT NUCLEAR POWER PLANTS	Dababneh, A.(1); Schwartz, M. (1) 1 - RIZZO Associates, United States
TopSafe2017-A0091	REACTOR COOLANT PUMP SEAL ENHANCEMENTS INCLUDING POST-FUKUSHIMA SOLUTIONS	Lapresti, M. (1); Skocik, M. (1); Gauthier, J.-L. (2) 1 - Westinghouse Electric Corporation, United States 2 - Westinghouse Electric Belgium, Belgium

### 16.00 – 17.30 Parallel session: Fuel (room M0E 07)

Chair: K. Tominaga, Japan Nuclear Safety Institute, Japan

TopSafe2017-A0029	AN ASSESSMENT ON THE STABILITY PERFORMANCE OF A PWR WITH ATF	Riverola Gurruchaga, J. (1); Alvarez Manzanedo, S. (1) 1 - ENUSA Industrias Avanzadas, S.A., Spain
TopSafe2017-A0036	FRACTIONATED DOSAGE OF HYDROGENATED ADDITIVES IN UO <sub>2</sub> POWDER BLENDING PROCESS	Zurron-Cifuentes, O. (1); Lopez-Marquez, J. (1); Escandon-Ortiz, E. (1) 1 - ENUSA INDUSTRIAS AVANZADAS S.A., Spain
TopSafe2017-A0045	RELAP/SCDAPSIM/MOD 3.5. ANALYSIS OF KIT'S QUENCH-14 EXPERIMENT USING M5® CLADDING MATERIAL	Dutkiewicz, O. (1); Marcinkiewicz, K. (1); Shumski, S. (1); Allison, C. (1); Hohorst, J. (1) 1 - Innovative Systems Software, United States
TopSafe2017-A0042	MANAGING NUCLEAR POWER PLANT SAFETY WITH FECRAL ALLOY FUEL CLADDING	Rebak, R. (1); Gassmann, W. (2); Terrani, K. (3) 1 - GE Global Research, United States 2 - Exelon Generation Company, LLC, United States 3 - Oak Ridge National Laboratory, United States

### 16.00 – 18.00 Poster Session (M01, area 2)

Chair: N. Debrecin, FER, Croatia

Please see above for papers presented.



### 19.30 TopSafe Conference Dinner

The Conference Dinner will take place at the Fuhrgassl-Huber, a “Heuriger” restaurant where Viennese wine is traditionally served. Heuriger is both the term for the wine of the last grape harvest and the name of the tavern or restaurant where this wine is served.

Heurigers are as much part of Vienna as the Spanish riding school or St Stephan’s cathedral. There are no less than 700 hectares of vineyards within the city limits! The Viennese wines are primarily white, with Riesling and white Burgundy varieties the most well-known. But the red wine Blaue Zwieggel is popular too.

The many “heuriger” districts in Vienna are located in areas that are now part of Vienna, but were actually wine-growing villages until the late 19th century. The origins of the Fuhrgassl-Huber tavern date back to the 17th century. The hot and cold buffet will include typical Viennese delicacies, accompanied by the young, fresh white wine produced by the tavern’s own vineyards!

The return bus transfer to the Fuhrgassl-Huber tavern will depart in front of the IAEA at 19.00 (Gate 1).

TopSafe Delegates can attend the Conference Dinner upon pre-registration. An additional fee applies.

## Wednesday 15 February 2017

### 9.00 – 9.30 Plenary Session (room M3)

Chair: N. Debrecin, FER, Croatia

### Poster Summary

### 9.30 – 10.30 Parallel session: Safety Assessment (room M3)

Chair: S. Monti, IAEA

TopSafe2017-A0024	ANALYSIS OF AN POSTULATED ELAP EVENT IN MAANSHAN NPP USING TRACE CODE	Huang , C.-F. (1); Yang, J.-H. (1); Chen, S.-W. (1); Wang, J.-R. (1); Shih, C. (1) 1 - National Tsing Hua University, Taiwan
TopSafe2017-A0071	ATWS CONTROL BY A BORON INJECTION SYSTEM IN CAREM-25	Hegoburu, P. (1); Giménez, M. (1); Zanocco, P. (1) 1 - Comisión Nacional de Energía Atómica, Argentina
TopSafe2017-A0085	THERMAL ANALYSIS TO ASSESS SPENT FUEL SAFETY: FROM THE CFD MODELLING TO THE ENGINEERING APPROACH	Penalva, J. (1); Feria, F. (1); Herranz, L. E. (1) 1 - CIEMAT, Spain



### 9.30 – 10.30 Parallel session: Long Term Operation I (room M0E 07)

Chair: J. Riverola, ENUSA, Spain

TopSafe2017-A0002	RETROFITTING OF PASSIVE SAFETY SYSTEMS FOR PLANT LIFE-TIME EXTENSION	Pöhlmann, M. (1) 1 - AREVA GmbH, Germany
TopSafe2017-A0021	NOVEL APPROACH TO IMPROVED CONCRETE STRENGTH FOR ENHANCED SAFETY AND DURABILITY OF THE NUCLEAR POWER PLANT OPERATION	Burnham, S. (1); Jevremovic, T. (1) 1 - The University of Utah, United States
TopSafe2017-A0031	INTERNATIONAL DATABASE ON HEAVY WATER REACTOR PRESSURE TUBE DIAMETRAL CREEP	Krause, M. (1); Bickel, G. (2) 1 - International Atomic Energy Agency (IAEA), Austria 2 - Canadian Nuclear Laboratories (CNL), Canada

### 10.30 – 11.00 Coffee break

### 11.00 – 12.30 Parallel session: Trends in Nuclear Safety (room M3)

Chair: T. Veneau, EDF, France

TopSafe2017-A0018	LESSONS LEARNT FROM THE UK GENERIC DESIGN ASSESSMENT PROCESS	Moscrop, R. (1); Jones, J. (1); Tehrani, A. (1); Exley, R. (1) 1 - Office for Nuclear Regulation (ONR), United Kingdom
TopSafe2017-A0034	IAEA COLLABORATIONS ON ADVANCING WATER COOLED REACTOR TECHNOLOGIES	Jevremovic, T. (1); Yamada, K. (1); Krause, M. (1) 1 - IAEA, Austria
TopSafe2017-A0076	THE PATH TOWARDS A GERMANE SAFETY AND LICENSING APPROACH FOR MODULAR HIGH TEMPERATURE GAS-COOLED REACTORS	Reitsma, F. (1) 1 - International Atomic Energy Agency (IAEA), Austria
TopSafe2017-A0086	INDEPENDENT ASSESSMENT FOR NEW NUCLEAR REACTOR SAFETY	D'Auria, F. (1); Glaeser, H. (2); Debrecin, N. (3) 1 - University of Pisa, Italy 2 - formerly at GRS, Germany 3 - University of Zagreb, Croatia



## 11.00 – 12.30 Parallel session: Long Term Operation II (room M0E 07)

Chair: J. Zdarek,

TopSafe2017-A0050	ON THE ROLE OF THE SAFETY ANALYSIS IN THE PLANT LIFE EXTENSION STRATEGY	Riverola Gurruchaga, J. (1); Corisco Carmona, M. (1) 1 - ENUSA Industrias Avanzadas, S.A., Spain
TopSafe2017-A0081	WESTINGHOUSE EXPERIENCE ON AGING MANAGEMENT IN THE NORDIC REGION AND GENERAL OVERVIEW OF THE METHODOLOGY	Stenlund, M. (1); Eriksson, J. (1); Larsson, P. (1); Götberg, J. (1); Ståhl, G. (1); Olsson, M. (1); Finne, J. (1) 1 - Westinghouse Electric Sweden AB, Sweden
TopSafe2017-A0084	AGEING MANAGEMENT AND LONG TERM OPERATION IN VVER440	Nozdrovicky, J. (1) 1 - Junoz & Partners Engineering, s.r.o., Slovakia
TopSafe2017-A0090	STRATEGIC REFURBISHMENT PROGRAM FOR REACTOR COOLANT PUMPS AND MOTORS	Gauthier, J.-L. (1); Eric, C. (2); Michael, L. (2) 1 - Westinghouse Electric Belgium, Belgium 2 - Westinghouse Electric Corporation, United States

## 12.30 – 14.00 Lunch break

## 14.00 – 15.30 Plenary Session (room M3)

Chair: F. D'Auria, University of Pisa, Italy

### Panel Discussion: International Developments in Safety and Safety Harmonisation

With

**F. Jiang**, Senior Safety Officer, Department of Nuclear Safety and Security, IAEA

**R. Schene**, President, European Nuclear Society

**J.Regaldo**, Chairman, World Association of Nuclear Operators

**H. Wanner**, Chairperson, Western European Nuclear Regulators Association

**M. Maschi**, Chairman, NUGENIA

## 15.30 – 16.00 Conference Closing (room M3)

Chair: F. D'Auria, University of Pisa, Italy





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