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- 1318 CFD Modelling of Aerosol Transport and Deposition Using a Drift-Flux Model—*P. Madhan Kumar (Univ. Manitoba), Geoffrey S. Gray (Univ. Manitoba), Scott J. Ormiston (Univ. Manitoba)*
- 1332 On the Impact of Prandtl Number on Temperature in Parallel Jet Mixing—*John Acierno (Penn State), Elia Merzari (Penn State)*
- 1346 CFD Modeling of Gas-Liquid Vertical Up-Ward Annular Flow with Thin Liquid Film—*Anadi Mondal (Univ. Massachusetts, Lowell), Subash Sharma (Univ. Massachusetts, Lowell)*
- 1359 Numerical Investigate on the Effects of Obstacles and Spatial Scale Changes on Hydrogen Combustion Characteristics—*Tongyu Wu (Harbin Engineering Univ.), Jianfa Li (China Nuclear Power Engineering Co.), Tongyu Zhang (Harbin Engineering Univ.), Xinyan Liu (Harbin Engineering Univ.), Feng Liu (Harbin Engineering Univ.), Haozhi Bian (Harbin Engineering Univ.)*

1373 General Computational Thermal Hydraulics

- 1374 Multiscale Approach for Boiling Flow Simulation—*Wei Ding (HZDR), Jinming Zhang (HZDR), Hamed Setoodeh (HZDR), Dirk Lucas (HZDR), Uwe Hampel (HZDR/TU Dresden)*
- 1382 Thermal-Hydraulic Assessment of the Proposed NIST Neutron Source Design—*Anil Gurgen (National Institute of Standards and Technology), Abdullah G. Weiss (National Institute of Standards and Technology), Joy S. Shen (National Institute of Standards and Technology)*
- 1394 Analysis of Flow Blockage for the Fuel Assembly in Lead-Cooled Fast Reactor and Comparison of Analysis According to the Changed Assembly Design—*J. H. Seo (Ulsan Nat'l Institute Science and Technology), J. Y. Kim (Ulsan Nat'l Institute Science and Technology), I. C. Bang (Ulsan Nat'l Institute Science and Technology)*
- 1407 Effect of Inner Wall Cracking on the Cavitation Bubble Formation in the Mercury Spallation Target at J-PARC—*Gen Ariyoshi (Japan Atomic Energy Agency), Koichi Saruta (Japan Atomic Energy Agency), Hiroyuki Kogawa (Japan Atomic Energy Agency), Masatoshi Futakawa (Japan Atomic Energy Agency), Kohki Maeno (Ibaraki Univ.), Yanrong Li (Ibaraki Univ.), Kihei Tsutsui (Lancemore Co.)*

1421 High Performance Computing

1423 Experimental Thermal Hydraulics

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- 1426 Transient Rod Temperature Distribution Measurement Using Optical Fiber Sensor in Rod Bundle at High Pressure and Temperature—*Takahiro Arai (Central Research Institute of Electric Power Industry), Riichiro Okawa (Central Research Institute of Electric Power Industry), Atsushi Ui (Central Research Institute of Electric Power Industry), Masahiro Furuya (Central Research Institute of Electric Power Industry), Tsugumasa Iiyama (Central Research Institute of Electric Power Industry), Shota Ueda (Central Research Institute of Electric Power Industry), Kenetsu Shirakawa (Central Research Institute of Electric Power Industry)*
- 1437 Experimental Method for Measurement of Density and Viscosity of High Temperature Heat Transfer Fluid—*Jiaqi Chen (Univ. Illinois, Urbana-Champaign), C. S. Brooks (Univ. Illinois, Urbana-Champaign)*
- 1451 RGB Mapping: A Dynamic Approach for Flow Pattern Identification and Classification—*David Kang (Purdue), Drew Ryan (Purdue), Seungjin Kim (Purdue)*

- 1461 Experiments for Advanced and Special Purpose Reactors: I**
- 1462 Local Two-Phase Characterization of a Large-Scale RCCS Operating Under Loss of Forced Cooling Conditions—*Matthew J. Jasica (ANL), Qiuping Lv (ANL), Darius D. Lisowski (ANL)*
- 1476 Design and Construction of the Experiment Facility for the High-Temperature Steam Generation with Helium for 30kW High-Temperature Steam Electrolysis—*S.-Y. Kim (KAERI), S. D. Hong (KAERI), B. H. Park (KAERI), K. J. Kang (KAERI), H. S. Kim (KAERI), C. S. Kim (KAERI)*
- 1488 Experiments on Passive Heat Removal of Immersed Containments by Laminar and Turbulent Convection at very high Rayleigh Numbers—*Martin Freitag (Becker Technologies), Eike W. Schmidt (Becker Technologies), Benjamin von Laufenberg (Becker Technologies), Sanjeev Gupta (Becker Technologies)*
- 1501 Experimental Methods and Instrumentation: II**
- 1502 Recommendations for new Experiments able to Better Characterize Flashing Flows in Nozzles for Improving Critical Flow Modelling in System Codes—*D. Bestion (Consultant), F. D'Auria (Univ. Pisa), K. Umminger (Framatome), P. Fillion (CEA), Seok Kim (KAERI), S. Gupta (Becker-Technologies), Uwe Hampel (Helmholtz-Zentrum Dresden-Rossendorf), Lauri Pyy (LUT Univ.), Giteshkumar Patel (LUT Univ.)*
- 1516 Experimental Velocity Profile Reconstruction in Thin Water Films—*M. Grasso (ETH Zürich), V. Petrov (Univ. Michigan), A. Manera (ETH Zürich), Y. Rivera (Univ. Politècnica de València)*
- 1530 Employment of Proper Orthogonal Decomposition in Analysis of Experimental Measurements in a Hemispherical Upper Plenum—*Blake R. Maher (TAMU), Noah Sutton (TAMU), Yassin A. Hassan (TAMU)*
- 1543 Experiments for Advanced and Special Purpose Reactors: II**
- 1544 Performance Analysis of Water Heat Pipe for Application of the Passive Cooling System in Nuclear Power Plants—*Ye Yeong Park (Ulsan Nat'l Institute Science and Technology), In Cheol Bang (Ulsan Nat'l Institute Science and Technology)*
- 1555 Experimental Investigation of Heat Pipe Flow Dynamics and Performance—*Ilyas Yilgor (Rensselaer Polytechnic Institute), Shanbin Shi (Rensselaer Polytechnic Institute)*
- 1569 Experimental Study on the Start-up of the Annular Wick Type Heat Pipe Using Fiber Optical Temperature Measurement Technique—*Joseph Seo (TAMU), Hansol Kim (TAMU), Yassin A. Hassan (TAMU)*
- 1582 Experimental Study on the Characteristics of Thermal Interaction Between Liquid Metal with Water—*Lin Zhang (Shanghai Jiao Tong Univ.), Chang Deng (Shanghai Jiao Tong Univ.), Xiaojing Liu (Shanghai Jiao Tong Univ.)*
- 1593 Experimental Methods and Instrumentation: III**
- 1594 Characterization of Thermal Time of Flight (TToF) Measurement Technique for Velocity Measurement of Gas Flow Using K-type Thermocouples and Fiber Bragg Grating Temperature Sensor—*Zayed Ahmed (City College of New York), Giorgio Bologna (City College of New York), EIMokhtar Majdoub (City College of New York), Mathieu Davis (City College of New York), Abdullah Abubakar (City College of New York), Dinesh V. Kalaga (City College of New York), Masahiro Kawaji (City College of New York), Zhao Kchao (Univ. Pittsburgh), Yuqi Li (Univ. Pittsburgh), Kevin Chen (Univ. Pittsburgh)*
- 1601 Fiber Optic Flow Meter for High-Temperature Corrosive Nuclear Environments—*M. Leoschke (Penn State), C. Balbier (Penn State), S. Lee (Penn State), F. Scurti (Penn State)*
- 1611 Pressure Field Reconstruction with PIV Experimental Velocity Field Inside Falling Liquid Film—*Ruiqi Wang (Science and Technology on Thermal Energy and Power Lab), Riqiang Duan (Tsinghua Univ.), Zhenhai Zou (Science and Technology on Thermal Energy and Power Lab), Chonghai Huang (Science and Technology on Thermal Energy and Power Lab), Chenyang Wang (Science and Technology on Thermal Energy and Power Lab), Bangming Li (Science and Technology on Thermal Energy and Power Lab)*
- 1620 Design and Development of a Spacer Grids with Minimum Thermal-Hydraulic Impacts for Rod Bundle CHF Testing with Bowed or Ballooned Rods—*Bao-Wen Yang (Delta Energy Group New York), Cameron Dempsey (Delta Energy Group New York), Bin Han (Delta Energy Group New York), Eric Yang (CARP Assoc. USA), Raymond Smith (CARP Assoc. USA), Stephanie H. Yang (CARP Assoc. USA)*
- 1635 Experiments for Advanced and Special Purpose Reactors: III**
- 1636 Design of a High-Temperature Shaft Seal Test Facility for Molten Salt Pumps—*Shuai Che (Univ. Michigan), Adam Burak (Univ. Michigan), Xiaodong Sun (Univ. Michigan), Yuqi Liu (Univ. New Mexico), Minghui Chen (Univ. New Mexico)*

- 1649 Experimental PIV Measurements in a Randomly Packed Non-Isothermal Pebble Bed Core Prototype—*Abdulaziz Almathami (TAMU), Blake R. Maher (TAMU), Yassin A. Hassan (TAMU)*
- 1661 Integral and Separate Effects Tests: I**
- 1662 Helical Coil Steam Generator Experiments with the MOTEL SMR Test Facility in the EU-McSAFER Project—*J. Telkkä (LUT Univ.), H. Suikkanen (LUT Univ.), A. Räsänen (LUT Univ.), E. Kotro (LUT Univ.), J. Hyvärinen (LUT Univ.)*
- 1676 Integral Effect Test on Operational Performance of PAFS (Passive Auxiliary Feedwater System) for Long Term Cooling Under an SBO (Station Black Out) Condition—*Kyoung-Ho Kang (KAERI), Yusun Park (KAERI), Byoung-Uhn Bae (KAERI), Seok Kim (KAERI)*
- 1687 Experimental Study of Thick Rod Rewetting by a Falling Film—*O. Kabesa (Ben Gurion Univ.), M. Harel (Ben Gurion Univ.), Y. Aharon (Nuclear Research Center Negev)*
- 1698 Advances in Integral and Separate Effects Experiments for Water-Cooled Small Modular Reactors—*Palash K. Bhowmik (INL), Sabharwall Piyush (INL), Justin T. Johnson (INL), James E. O'Brien (INL), Clay Lietwiler (Holtec Int'l)*
- 1715 Integral and Separate Effects Tests: II**
- 1716 Efficiency of Passive Open Loop Heat Removal over Wide Range of Loop Flow Resistances -- PASI Loop Tests in the EU-PASTELS Project—*J. Telkkä (LUT Univ.), V. Riikonen (LUT Univ.), A. Räsänen (LUT Univ.), E. Kotro (LUT Univ.), J. Hyvärinen (LUT Univ.)*
- 1727 Experiments of Helically Rifled Tubing Thermal Performance Using Additively Manufactured Test Sections for Molten Salt Applications—*Ryan P. McGuire (Virginia Commonwealth Univ.), Landon Moore (Virginia Commonwealth Univ.), Arturo Cabral (Virginia Commonwealth Univ.), Connor F. Donlan (Virginia Commonwealth Univ.), James Vulcanoff (Virginia Commonwealth Univ.), Lane B. Carasik (Virginia Commonwealth Univ.)*
- 1738 RPV Top and Bottom Break SBLOCA with Passive Emergency Core Cooling System Using ATLAS Test Facility—*Seok Cho (KAERI), Byoung-Uhn Bae (KAERI), Yu-Sun Park (KAERI), Jae-Bong Lee (KAERI), Jong-Rok Kim (KAERI), Kyong-Ho Kang (KAERI)*
- 1752 A Preliminary Study on Performance Evaluation of 100 kW Printed Circuit Steam Generator for Small Modular Reactor Application—*Hwang Bae (KAERI), Hyun-Gi Yoon (KAERI), Sunil Lee (KAERI), Jin-Hwa Yang (KAERI), Yoon Gon Bang (KAERI), Chanjong Seo (KAERI), Sung-Jae Yi (KAERI), Hyun-Sik Park (KAERI), Sang Ji Kim (KAERI), Sung Won Lim (KAERI)*
- 1763 Experimental Investigation on the Steam-Air Mixture Stratification in PCCS Using Condensation Heat Exchanger of Natural Circulation Loop—*Jin-Hwa Yang (KAERI), Tae-Hwan Ahn (KAERI), Hong-Hyun Son (KAERI), Jin Su Kwon (KAERI), Hwang Bae (KAERI), Hyun-Sik Park (KAERI)*
- 1777 Integral and Separate Effects Tests: III**
- 1778 Development of a High-Prandtl Number Heat Transfer Correlation in the Near-Wall Region of a Pebble Bed—*Sade Campos (Kairos Power), Griffen Latimer (Kairos Power), Seth Cadell (Kairos Power)*
- 1792 Development of an Integral Effects Test Facility for the Kairos Power Fluoride High-Temperature Reactor—*Griffen Latimer (Kairos Power), Floren Rubio (Kairos Power), Seth Cadell (Kairos Power), Craig Gerardi (Kairos Power), David Sprinkle (Kairos Power), Eric Johnson (Kairos Power), Keith Johnson (Kairos Power)*
- 1804 Experimental Investigation of the Effect of RCIC Steam Exhaust Line Design on Suppression Pool Thermal Stratification—*Kenneth Fossum (TAMU), Dallin Keesling (TAMU), Johnathan Smalley (TAMU), Karen Vierow Kirkland (TAMU)*
- 1819 Rod Bundle Experiments: I**
- 1820 Reflood Thermal-Hydraulics Testing Using the NRC-PSU Rod Bundle Heat Transfer (RBHT) Test Facility—*Brian R. Lowery (Penn State), Molly K. Hanson (Penn State), Grant R. Garrett (Penn State), Douglas J. Miller (Penn State), Turki Almudhhi (Penn State), Fan-Bill Cheung (Penn State), Stephen M. Bajorek (U.S. Nuclear Regulatory Commission), Kirk Tien (U.S. Nuclear Regulatory Commission), Chris L. Hoxie (U.S. Nuclear Regulatory Commission)*
- 1834 Towards a Better Understanding of Reflood Thermal-Hydraulics: A Summary of the OECD/NEA RBHT Project—*Stephen M. Bajorek (U.S. Nuclear Regulatory Commission), Brian Lowery (Penn State), Fan-Bill Cheung (Penn State), Alessandro Del Ferraro (NINE), Marco Cherubini (NINE), Alessandro Petrucci (NINE), Jinzhao Zhang (Tractebel Engineering), Martina Adorni (OECD/NEA)*

1848 METERO-V and PRIUS Experimental Programs: Complementary Separate Effects Tests for Core Mixing Validation—*Philippe Fillion (CEA), Seok Kim (KAERI), Clément Melin (CEA), Gilles Bernard-Michel (CEA), Benjamin Cariteau (CEA), Kyoung-Ho Kang (KAERI)*

1863 Integral and Separate Effects Tests: IV

1864 Primary Coolant Apparatus Test (PCAT): An Experimental Facility for MARVEL Microreactor—*C. Parisi (INL), S. Yoon (INL), C. Baily (INL), B. Grover (INL), Y. Arafat (INL), S.J. Kim (LANL)*

1878 Scaling Analysis of a Separate Effects Test Facility for Thermal Performance Investigations of Heat Transfer Enhancements for Molten Salt Applications—*Connor F. Donlan (Virginia Commonwealth Univ.), Arturo Cabral (Virginia Commonwealth Univ.), Lane B. Carasik (Virginia Commonwealth Univ.)*

1892 Multi-Physics Safety Assessment of Core Thermal-Hydraulics Under Loss-of-Coolant Accident and Reactivity Initiated Accident—*Sang-Ki Moon (KAERI), Jongrok Kim (KAERI), Yong-Seok Choi (KAERI), Jae Bong Lee (KAERI), Kihwan Kim (KAERI), Byong Guk Jeon (KAERI), Seok Kim (KAERI), Hyun-Sik Park (KAERI)*

1909 Rod Bundle Experiments: II

1910 Coal Experiments Investigating the Reflooding of a 7 X 7 Rods Bundle During a Loss of Coolant Accident -- Effect of a Partially Blocked Area with Ballooned Rods—*G. Repetto (IRSN), Q. Grando (IRSN), B. Bruyère (IRSN), S. Eymery (IRSN), R. Fortman (STERN Laboratories), R. Van Lochem (STERN Laboratories)*

1924 Experimental Investigation of Minimum Film Boiling Temperature During Reflood Transients—*Turki K. Almudhhi (Penn State), Douglas J. Miller (Penn State), Grant R. Garrett (Penn State), Ian R. Lowery (Penn State), Fan-Bill Cheung (Penn State), Brian R. Lowery (Penn State), Stephen M. Bajorek (U.S. Nuclear Regulatory Commission), Kirk Tien (U.S. Nuclear Regulatory Commission), Chris L. Hoxie (U.S. Nuclear Regulatory Commission)*

1935 Spray Cooling of a Rod Bundle with a Counter-Current Steam Flow in Spent Fuel Pool Conditions—*G. Brilliant (IRSN)*

1946 Uniform and Non-Uniform Flows Through a PWR-Type Rod Bundle with Mixing Grids at Reynolds Number Ranging from 800 up to 70000: Pressure Loss Measurements—*Clément Melin (CEA), Gilles Bernard-Michel (CEA), Benjamin Cariteau (CEA), Philippe Fillion (CEA)*

1957 Critical Heat Flux and DNB Experiments: I

1958 Out-of-Pile Transient Blowdown Experiment—*M. Moussaoui (Oregon State), T. Howard (Oregon State), G. Mignot (Oregon State), A. Weiss (Oregon State), W. Marcum (Oregon State)*

1972 Characteristics of Flow Boiling CHF on a Heater Rod Under Heaving Motion Conditions—*Jin-Seong Yoo (Seoul Nat'l Univ.), Chang Won Lee (Seoul Nat'l Univ.), Heepyo Hong (Seoul Nat'l Univ.), Hyukjae Ko (Seoul Nat'l Univ.), Ja Hyun Ku (Seoul Nat'l Univ.), Goon-Cherl Park (Seoul Nat'l Univ.), Hyoung Kyu Cho (Seoul Nat'l Univ.)*

1985 Wall Convective Heat Transfer Characteristics in the Inverted Annular Film Boiling Regime—*Kyung Mo Kim (Univ. Michigan), Adam Burak (Univ. Michigan), Joseph Kelly (U.S. Nuclear Regulatory Commission), Stephen Bajorek (U.S. Nuclear Regulatory Commission), Xiaodong Sun (Univ. Michigan)*

1999 Transient Critical Heat Flux Experiments in Subcooled Flow—*A. Camargo (Oregon State), G. Mignot (Oregon State), T. K. Howard (Oregon State), W. Marcum (Oregon State), A. Weiss (Oregon State)*

2013 Rod Bundle Experiments: III

2014 Experimental Investigations of Rod Bundle Creep in Fluid-Structure Interaction—*G.A.M. Vidal (CEA), E. Lo Pinto (CEA), V. Faucher (CEA), G. Ricciardi (French Alternative Energies and Atomic), N. Lamorte (Framatome), J. Pacull (Framatome)*

2026 Particle Image Velocimetry Measurements for Transition Flow Regime Through a Porous Blocked Subchannel in a 61-Pin Wire-Wrapped Bundle—*Trevor Melsheimer (TAMU), Craig Menezes (TAMU), Matthew Kinsky (TAMU), Dalton Pyle (TAMU), Yassin A. Hassan (TAMU)*

2040 Experiment and Analysis on the Multi-Dimensional Flow Behavior Between Sub-Channels in the Rod-Bundle Array—*Seok Kim (KAERI), Jee Min Yoo (KAERI), Byong Guk Jeon (KAERI), Sank-Ki Moon (KAERI)*

2051 Study on the Mixing Vane Grid Effect on Flow Field and Bubble Distribution in a 2x1 Subchannel by PIV and High Speed Camera—*Bin Han (Xi'an Jiaotong Univ.), Bao-Wen Yang (DEQD Institute for Advanced Research in Multiphase Flow and Energy), Xiaoliang Zhu (Southeast Univ.), Aiguo Liu (Delta Energy Group)*

2063 Critical Heat Flux and DNB Experiments: II

2064 Experimental Investigations of Material-Conjugated Subcooled Flow Boiling—*Mingfu He (Univ. New Mexico), Minghui Chen (Univ. New Mexico)*

- 2088 The Effect of Time Varying Axial Power Shape on Transient Critical Power Performance of BWR Fuel—*B. Ward (Global Nuclear Fuel Americas), S. Oh (Global Nuclear Fuel Americas), J. Andersen (Global Nuclear Fuel Americas), C. Heck (Global Nuclear Fuel Americas), D. Rock (Global Nuclear Fuel Americas), M. Sugawara (Global Nuclear Fuel Americas), J. Lamy (Global Nuclear Fuel Americas)*
- 2102 Steady-State and Power Transient Critical Heat Flux Experiments of FeCrAl and Zircaloy Claddings Under Saturated Pool Boiling—*Mingfu He (Univ. New Mexico), Minghui Chen (Univ. New Mexico)*
- 2116 Experimental Research About Corrosion Effect on Boiling Heat Transfer Performance of Plate-Type Samples with Micro-Structures—*Wei Xu (Shanghai Jiao Tong Univ.), Xiaojing Liu (Shanghai Jiao Tong Univ.), Kun Ouyang (Shanghai Jiao Tong Univ.), Xiaoqiang He (Nuclear Power Institute of China)*
- 2127 Tests for Assessment of CFD**
- 2128 PIV Investigation of Jet Mixing Induced by Direct Contact Condensation—*M. Pellegrini (Univ. Tokyo), K. Okamoto (Univ. Tokyo), B. Blaisot (Univ. Tokyo), N. Erkan (Univ. Tokyo)*
- 2140 Flow Rate Measurement Across the Upper Core Structure of a Sodium Fast Reactor—*D. Guenadou (CEA), P. Aubert (CEA), J-P Descamps (CEA)*
- 2152 High-Resolution Experiments for Mixing in Large Enclosures—*J. Mao (Univ. Michigan), V. Petrov (Univ. Michigan), A. Manera (ETH Zürich)*
- 2166 Experimental Study of Stagnant Taylor Bubble in Counter-Current Flow—*Iztok Tiselj (Jožef Stefan Institute), Jan Kren (Jožef Stefan Institute), Blaž Mikuz (Jožef Stefan Institute)*
- 2181 Rod Bundle Experiments: IV**
- 2182 Initial Characterization of Observed Dispersion and Relocation Phenomena During a Loss of Coolant Accident (LOCA)—*Sade Danielle Campos (Oregon State), Trevor Kent Howard (Oregon State), Grant Hendrickson (Oregon State), Aaron Weiss (Oregon State), Guillaume Mignot (Oregon State), Wade Marcum (Oregon State)*
- 2196 Comparison Between High-Resolution Gamma-ray Tomography and Wire-Mesh Sensor for Air-Water Flow in a Rod Bundle Geometry—*Taehwan Ahn (Univ. Michigan), Victor Petrov (Univ. Michigan), Annalisa Manera (Univ. Michigan)*
- 2210 Flow Visualization of a Prototypical Helical Coil Bundle Section Undergoing Flow Induced Vibration—*Noah Sutton (TAMU), Blake R. Maher (TAMU), Rodolfo Vaghetto (TAMU), Yassin Hassan (TAMU)*
- 2223 Experimental Investigation on Distribution of Boric Acid in a Vertical 1x2 Rod Array Channel—*Long Ji (Shanghai Jiao Tong Univ.), Xiaojing Liu (Shanghai Jiao Tong Univ.), Hui He (Shanghai Jiao Tong Univ.)*
- 2233 General Experimental Thermal Hydraulics: I**
- 2234 The STEAM Facility: Design and Analysis—*A. Vannoni (Sapienza Univ. Rome), C. Ciurluini (Sapienza Univ. Rome), F. Giannetti (Sapienza Univ. Rome), P. Lorusso (ENEA), M. Eboli (ENEA), R. Marinari (ENEA), A. Tincani (ENEA), A. Del Nevo (ENEA)*
- 2248 Heat Transfer Characteristic of Natural and Forced Circulations in a Vertical Annulus in a Low Flow Condition—*Youngchang Ko (Pusan National Univ.), Sanggyun Nam (Pusan National Univ.), Byongjo Yun (Pusan National Univ.)*
- 2256 Data-Driven Modeling of the Flow Field Between Two PWR Surrogate Bundles Under Seismic Conditions Using Bagging-Optimized Dynamic Mode Decomposition (BOP-DMD)—*Haidy Ibrahim (Politecnico di Milano), Carolina Introini (Politecnico di Milano), Antonio Cammi (Politecnico di Milano), Roberto Capanna (George Washington Univ.), Philippe Bardet (George Washington Univ.), Guillaume Ricciardi (CEA)*
- 2270 Thermal and Hydraulic Performance Tests on the Factory Premises on a 18 MW Tubular Heat Exchanger to be Installed in a French Nuclear Power Plant—*N. Lancial (EDF), J. Halleguen (EDVANCE), G. Wellenreiter (APAVE)*
- 2282 Aerosol Generation by Continuous Fiber Laser Irradiation of Various Surfaces and Spray Scavenging—*Avadhesh Kumar Sharma (Univ. Tokyo), Ruicong Xu (Univ. Tokyo), Zeeshan Ahmed (Univ. Tokyo), Erdal Ozdemir (Univ. Tokyo), Shuichiro Miwa (Univ. Tokyo)*
- 2295 Critical Heat Flux and DNB Experiments: III**
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- 2310 Experimental Study of Boiling Crisis on Helical Finned Heater Under Rolling Condition—*Chang Won Lee (Seoul Nat'l Univ.), Jin-Seong Yoo (Seoul Nat'l Univ.), Hee-pyo Hong (Seoul Nat'l Univ.), Hyukjae Ko (Seoul Nat'l Univ.), Ja Hyun Ku (Seoul Nat'l Univ.), Goon-Cherl Park (Seoul Nat'l Univ.), Hyoung Kyu Cho (Seoul Nat'l Univ.)*

- 2321 Experimental and Numerical Investigation on the Post-Dryout Behaviour of Debris Beds with Annular Downcomer—*Markus Petroff (Univ. Stuttgart), Rudi Kulenovic (Univ. Stuttgart), Michael Buck (Univ. Stuttgart), Jörg Starflinger (Univ. Stuttgart)*
- 2335 Assessment of the Rewetting Phenomenon After DNB Events Under Prototypical PWR Conditions—*Keegan D. Murray (Univ. Wisconsin, Madison), Tiago A. Moreira (Univ. Wisconsin, Madison), Mark H. Anderson (Univ. Wisconsin, Madison)*
- 2347 Critical Heat Flux and DNB Experiments: IV**
- 2348 Critical Power Sensitivity to Axial Power Shapes and Prediction by COBRAG Subchannel Code—*S. Oh (Global Nuclear Fuel), B. Ward (Global Nuclear Fuel), J. Andersen (Global Nuclear Fuel), C. Heck (Global Nuclear Fuel), D. Rock (Global Nuclear Fuel), M. Sugawara (Global Nuclear Fuel), J. Lamy (Global Nuclear Fuel)*
- 2362 A New Paradigm for the Role of Disturbance Waves on Film Dryout in Annular Two-Phase Flow—*Roman W. Morse (Univ. Wisconsin, Madison), Jason Chan (Univ. Wisconsin, Madison), Kristofer M. Dressler (Univ. Wisconsin, Madison), Gregory F. Nellis (Univ. Wisconsin, Madison), Arganthal Berson (Univ. Wisconsin, Madison), Jean-Marie Le Corre (Westinghouse Electric Sweden)*
- 2376 Liquid Level Monitoring and Quenching Front Tracking for SMR Rod Bundle CHF Tests Under Low Pressure, Low Flow, High Quality Conditions—*Bao-Wen Yang (DEGNY Delta Energy Group New York), Cameron Dempsey (DEGNY Delta Energy Group New York), Bin Han (DEQD Institute for Advanced Research in Multiphase Flow and Energy Transfer), Aiguo Liu (DEQD Institute for Advanced Research in Multiphase Flow and Energy Transfer), Eric Yang (CARP Assoc. USA), Raymod Smith (CARP Assoc. USA)*
- 2387 General Experimental Thermal Hydraulics: II**
- 2388 Thermal Hydraulic Experiments and Code Validation for LWR SMRs Within the European McSAFER Project: Overview of Activities and Current Status—*H. Suikkanen (LUT Univ.), J. Telkkä (LUT Univ.), V. Kouhia (LUT Univ.), S. Gabriel (Karlsruhe Institute for Technology), G. Albrecht (Karlsruhe Institute for Technology), W. Heiler (Karlsruhe Institute for Technology), F. Heineken (Karlsruhe Institute for Technology), V. H. Sanchez-Espinoza (Karlsruhe Institute for Technology), H. Li (Royal Institute of Technology), D. Grishchenko (Royal Institute of Technology), M. Bencik (Nuclear Research Institute Rez), L. Vyskocil (Nuclear Research Institute Rez), V. Dolecek (Nuclear Research Institute Rez), C. Queral (Univ. Politécnica de Madrid), K. Fernandez-Cosials (Univ. Politécnica de Madrid), L. Rueda Villegas (Tractebel ENGIE), C. R. Schneidesch (Tractebel ENGIE)*
- 2402 Measurement of Aerosol Mass Transfer and Hydrodynamics in a Bubble Column Using Wire-Mesh Sensors—*Alvaro Ramos Perez (Paul Scherrer Institute), Terttaliisa Lind (Paul Scherrer Institute), Annalisa Manera (Paul Scherrer Institute), Victor Petrov (Paul Scherrer Institute), Horst-Michael Prasser (ETH Zürich)*
- 2416 RIVA: A New Experimental Facility for Fast Blowdown and Pressurization of Small Containment—*Lucia Sargentini (CEA), Constantin Ledier (CEA), Arnaud Chazottes (CEA)*
- 2430 High-Fidelity Experiments of Turbulent Buoyant Jets from Simultaneous Particle Image Velocimetry and Laser Induced Fluorescence—*Valentina Valori (ETH Zurich), Sunming Qin (INL), Victor Petrov (ETH Zürich), Annalisa Manera (ETH Zürich)*
- 2445 Fundamental Thermal Hydraulics**
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- 2448 A Comprehensive Measurement of Bubbly Flow in a 30 mm x 10 mm Rectangular Channel—*Dewei Wang (Virginia Tech), Yucheng Fu (Virginia Tech), Hanxing Sun (Virginia Tech), Yang Liu (Virginia Tech), Qingqing Liu (Univ. Michigan), Yang Liu (Univ. Michigan), Xiaodong Sun (Univ. Michigan), Ted Worosz (Naval Nuclear Laboratory), John Buchanan (Naval Nuclear Laboratory)*
- 2462 A 3-D Imaging System for Bubbly Flow Measurement—*Yucheng Fu (Virginia Tech), Dewei Wang (Virginia Tech), Yang Liu (Virginia Tech), Xiaodong Sun (Univ. Michigan), Ted Worosz (Naval Nuclear Laboratory), John Buchanan (Naval Nuclear Laboratory)*
- 2475 Experimental Study of Air-Water Two-Phase Flow Threshold Velocities in a Vertical Annular Channel—*A. Biton (Nuclear Research Center Negev), E. Rabinovich (Nuclear Research Center Negev), E. Gilad (Ben Gurion Univ. Negev)*
- 2487 Experimental Study and CFD Simulation of Air-Water Bubbly Flow in a Rectangular Channel—*Qingqing Liu (Univ. Michigan), Yang Liu (Univ. Michigan), Xiaodong Sun (Univ. Michigan), Dewei Wang (Virginia Tech), Yang Liu (Virginia Tech), John R. Buchanan (Naval Nuclear Laboratory), Ted Worosz (Naval Nuclear Laboratory)*
- 2504 One-Dimensional Drift Flux Analysis of Bubbly Flows in Horizontal and Inclined-Upward Orientations—*Drew Ryan (Purdue), Seungjin Kim (Purdue)*

2519 Two-Phase Flow and Heat Transfer: II

- 2520 Two Scale Two-Flux Model for Density Wave and Slug Flow Instabilities—*Alejandro Clausse (Purdue), Alexander Lopez-de-Bertodano (Univ. Chicago), Martin Lopez-de-Bertodano (Purdue)*
- 2534 Gas Ingress During Side Vessel Break: Experiments and Numerical Simulations with a Simplified Pool-Type Scaled Water Model—*M. Faruoli (von Karman Institute for Fluid Dynamics), M. Delsipee (von Karman Institute for Fluid Dynamics), Ph. Planquart (von Karman Institute for Fluid Dynamics), G. Scheveneels (SCK CEN), B. Yamaji (SCK CEN)*
- 2549 Vapor Pressure and Temperature Analyses on a Gravity-Assisted Wrapped Screen Wick Annular Heat Pipe—*Daniel Orea (TAMU), N.K. Anand (TAMU), Yassin A. Hassan (TAMU)*
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- 3652 Transient Behavior of Multi-Dimensional Core Cooling by D-DHX in Sodium-Cooled Fast Reactors—*T. Ezure (Japan Atomic Energy Agency), Y. Akimoto (Japan Atomic Energy Agency), T. Onojima (Japan Atomic Energy Agency), A. Kurihara (Japan Atomic Energy Agency), M. Tanaka (Japan Atomic Energy Agency)*
- 3663 Development of a new Thermal-Hydraulic Module for FRENETIC, a Code for the Multiphysics Analysis of Liquid Metal-Cooled Reactors—*A. Lombardo (Politecnico di Torino), G.F. Nallo (Politecnico di Torino), N. Abrate (Politecnico di Torino), S. Dulla (Politecnico di Torino)*
- 3677 Multi-Physic Coupled Simulation of the Loss of Flow WithOut Scram Transient of the Fast Flux Test Facility—*Simon Li (CEA), Héloïse Velardo (CEA), Georis Billo (CEA), Pierre Sciora (CEA), Matteo Monegaglia (CEA)*

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- 3701 Thermal Hydraulic Design of a Heat Removal System for a Fusion Accelerator—*R. Marinari (ENEA), M. Lamberti (ENEA), P. Agostini (ENEA), G. Gadani (ENEA), A. Mancini (ENEA), A. Pietropaolo (ENEA), Massimo Angiolini (ENEA), Ciro Alberghi (Politecnico di Torino), Luigi Candido (Politecnico di Torino), Marco Capogni (ENEA), Mauro Capone (ENEA), Sebastiano Cataldo (ENEA), Flavio Cicconi (ENEA), Gian Marco Contessa (ENEA), Francesco D'Annibale (ENEA), Marco D'Arienzo (ASL Roma 6), Alessio Del Dotto (ENEA), Dario Diamanti (ENEA), Danilo Dongiovanni (ENEA), Mirko Farini (ENEA), Paolo Ferrari (ENEA), Angela Fiore (ENEA), Davide Flammini (ENEA), Manuela Frisoni (ENEA), Gianni Gadani (ENEA), Angelo Gentili (ENEA), Giacomo Grasso (ENEA), Manuela Guardati (ENEA), David Guidoni (ENEA), Marco Lamberti (ENEA), Luigi Lepore (ENEA), Andrea Mariani (ENEA), Giuseppe A. Marzo (ENEA), Bruno Mastroianni (ENEA), Fabio Moro (ENEA), Vincenzo Narcisi (ENEA), Agostina Orefice (ENEA), Valerio Orsetti (ENEA), Tonio Pinna (ENEA), Antonietta Rizzo (ENEA), Alexander Rydzy (ENEA), Stefano Salvi (ENEA), Demis Santoli (ENEA), Alessia Santucci (ENEA), Luca Saraceno (ENEA), Camillo Sartorio (ENEA), Valerio Sermenghi (ENEA), Emanuele Serra (ENEA), Andrea Simonetti (ENEA), Nicholas Terranova (ENEA), Silvano Tosti (ENEA), Alberto Ubaldini (ENEA), Marco Utili (ENEA), Konstantina Voukelatou (ENEA), Danilo Zola (ENEA), Giuseppe Zummo (ENEA)*
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- 3721 Heat Transfer Characteristics Analysis of Supercritical Water in 2x2 Wire-Wrapped Rod Bundles Based on Field Synergy Principle—*Xuebin Zhao (Nuclear Power Institute of China), Hui Xiao (Nuclear Power Institute of China), Jinguang Zang (Nuclear Power Institute of China), Yanping Huang (Nuclear Power Institute of China)*

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- 3746 Investigation of Starting Time Characteristics of Source Term Release for Dissimilar Nuclear Accident Consequence—*Wasin Vechgama (KAERI), Jaehyun Cho (Chung-Ang Univ.)*
- 3759 Methyl Iodide Retention in Ag-Zeolite Material Under Filtered Containment Venting System Condition—*F. Espegren (Paul Scherrer Institute), D. Suckow (Paul Scherrer Institute), T. Lind (Paul Scherrer Institute), J. Mantzaras (Paul Scherrer Institute), J. Theile (Paul Scherrer Institute)*

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- 3785 An Analysis of Effects and a Validation of Pressure Tube Ballooning Model in CAISER—*Keun Sang Choi (KAERI), Jun-young Kang (KAERI), Donggun Son (KAERI), Jun-Ho Bae (KAERI)*
- 3795 Three-Dimensional CFD Analysis of PHWR Exposed Core Under Postulated Severe Accident Condition—*S. Rajaganesh (Homi Bhabha National Institute), Deb Mukhopadhyay (Homi Bhabha National Institute)*

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- 3810 Three-Phase Flow Simulation of Debris Bed Self-Leveling in case of SFR Severe Accident—*Cyriaque Treol (CEA), Rémi Clavier (CEA), Nathalie Seiler (CEA), Benoit Goyeau (Ecole Centrale-Supelec)*
- 3824 New Correlations for Focusing Effect Evaluation of the Light Metal Layer in the Lower Head of a Nuclear Reactor in Case of Severe Accident—*F. Rein (IRSN), F. Fichot (IRSN), L. Carénini (IRSN), M. Le Bars (Aix Marseille Univ.), B. Favier (Aix Marseille Univ.)*
- 3838 Investigation of Reynolds Stress Models for RANS of Natural Convection of a Corium Pool for in-Vessel Retention—*D. Dovizio (Nuclear Research & Consultancy Group)*
- 3851 Dryout Modeling Based on Interfacial Shear Stress of Gas-Liquid Flow—*Cheng Peng (Shanghai Univ. Electric Power), Helin Chen (Shanghai Univ. Electric Power), Dong Li (Shanghai Univ. Electric Power)*

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- 3864 Coolability of a Corium Pool in a Debris Bed -- Impact of Debris Size, Steam and Liquid Flowrate, Tilting Angle and Pressure on Critical Heat Flux (CHF)—*C. Sartoris (IRSN), T. Garcin (IRSN), F. Fichot (IRSN)*

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- 3892 Analysis of Corium Coolability in MCCI Conditions for Two Types of Concrete, Using ASTEC Calculations—*C. Bouillet (IRSN)*
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- 3917 Transient Cooling Investigation of a Conceptual Core Catcher Design with Embedded Cooling Tubes Using a GOTHIC 3D Model—*Zhuo Liu (China Nuclear Power Engineering Co.), Wei Li (China Nuclear Power Engineering Co.), Qiang Guo (China Nuclear Power Engineering Co.), Yidan Yuan (China Nuclear Power Engineering Co.), Ningxi Jia (China Nuclear Power Engineering Co.), Yu Jin (China Nuclear Power Engineering Co.), Weimin Ma (Royal Institute of Technology)*

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- 3932 Determination of Effective Heat Transfer Coefficients Using the Decomposition Parameters of Silicate Concrete, the Melt Composition, and the Heating Power with AC²-COCOSYS—*Maximilian Hoffmann (Ruhr Univ. Bochum), Marco K. Koch (Ruhr Univ. Bochum)*
- 3945 The Role of Zr-Oxidation During Molten Core-Concrete Interaction—*Xiaoyang Gaus-Liu (Karlsruhe Institute of Technology)*
- 3956 Mesh Sensitivity Analysis of the CFD Model of the Core Catcher of the ALLEGRO Reactor—*Jan Komrska (Czech Technical Univ. Prague), Pavel Zacha (Czech Technical Univ. Prague), Petr Vacha (UJV Rez)*
- 3970 Steam Explosion Retardant for Long-Term Coolability—*Masahiro Furuya (Waseda Univ.), Takahiro Arai (CRIEPI)*

- 3978 Thermodynamic Calculation Methodology of Specifically Designed Sacrificial Material for Ex-Vessel Core Catcher—*Erhui Chen (China Nuclear Power Engineering Co.), Li Zhang (China Nuclear Power Engineering Co.), Nan Li (China Nuclear Power Engineering Co.), Xiao Zeng (China Nuclear Power Engineering Co.), Qiang Guo (China Nuclear Power Engineering Co.), Yidan Yuan (China Nuclear Power Engineering Co.), Xiao-Gang Lu (Shanghai Univ.), Yeqing Ding (Shanghai Univ.)*

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- 3994 Analysis of Hydrogen Diffusion Ignition in Oxygen-Nitrogen Mixtures—*Odai Nassar (Tel Aviv Univ.), Surya Kaundinya Oruganti (Tel Aviv Univ.), Marcel Martins Alves (Tel Aviv Univ.), Sergey Kudriakov (CEA), Etienne Studer (CEA), Liel Ishay (Nuclear Research Center Negev), Yoram Kozak (Tel Aviv Univ.)*
- 4006 PANDA Experiment Addressing the Thermal Effects in a Large Water Pool Caused by Steam and a Lighter Non-condensable Gas Release from a Multi-Hole Sparger—*Domenico Paladino (Paul Scherrer Institute), Ralf Kapulla (Paul Scherrer Institute), Myeong Seon Chae (Paul Scherrer Institute), Sidharth Paranjape (Ostschweizer Fachhochschule), Guillaume Mignot (Oregon State), Pavel Kudinov (Royal Institute of Technology)*
- 4020 Recombination of Hydrogen and Carbon Monoxide on Silver-Based Zeolites in the Presence of Steam and at Pressures up to 3 Bar—*J. Mantzaras (Paul Scherrer Institute), V.K. Arumugam (Paul Scherrer Institute), J. Theile (Paul Scherrer Institute), D. Suckow (Paul Scherrer Institute), F. Espegren (Paul Scherrer Institute), T. Lind (Paul Scherrer Institute)*
- 4034 Experiments on the Impact of Carbon Monoxide on the Efficiency of Catalysts used for Hydrogen Mitigation in the Late Phase of a Severe Accident—*Ernst-Arndt Reinecke (Forschungszentrum Juelich), Gabriela Nobrega (IRSN), Michael Klauck (Forschungszentrum Jülich)*

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- 4046 Influence of Iodine Chemistry in I2 Scrubbing Modeling—*Adolf Rydl (INSET), Taizo Kanai (Central Research Institute of Electric Power Industry)*
- 4059 Analyses of Jet-Buoyant Flow in a Multi-Compartment Containment Using an Open-Source Solver—*Myeong-Seon Chae (Paul Scherrer Institute), Domenico Paladino (Paul Scherrer Institute), Stephan Kelm (Forschungszentrum Juelich)*

- 4073 The SAAB Project: Experimental Studies on Several Phenomena Related to the Assessment of Aerosol Behavior in Severe Accidents—*Michael Klauck (Forschungszentrum Jülich), Yihui Wu (Forschungszentrum Jülich), Rene Vennemann (Ruhr-Univ. Bochum), Hans-Josef Allelein (RWTH Aachen Univ.)*
- 4086 Main Outcomes of OECD/NEA THAI-2 Project and its Use for Code Validation and Containment Safety Assessment Under Accident Conditions—*S. Gupta (Becker Technologies), M. Freitag (Becker Technologies), Z. Liang (Canadian Nuclear Laboratories), F. Funke (Framatome), G. Langrock (Framatome), S. Beck (GRS), H. Nowack (GRS), A. Bentaib (IRSN), L. Cantrel (IRSN), J. Ishikawa (Japan Atomic Energy Agency), S.W. Hong (KAERI), P. Kostka (Nuclear Safety Research Institute), J. Glover (Office for Nuclear Regulation), C. Linde (Swedish Radiation Safety Authority), M. Kotouč (ÚJV Řež), V. Taivassalo (VTT Technical Research Centre)*
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- 4102 Sensitivity Analysis of Consequential Steam Generator Tube Rupture (C-SGTR) of Typical Korean NPP—*Byeonghee Lee (KAERI), Jin Ho Song (KAERI), Kwang Soon Ha (KAERI)*
- 4114 A Methodology for Real-Time Identification of a PWR Accident and Predictive Analysis—*Paul McMinn (Fauske & Assoc.), Nick Karancevic (Fauske & Assoc.), Chan Y. Paik (Fauske & Assoc.), Wei Wei (China Nuclear Power Operation Technology Corp.), Ma Guoyang (China Nuclear Power Operation Technology Corp.)*
- 4124 Hysteresis Impacts in Steady Flow Transitions of the Rayleigh Bénard Problem with Internal Heating; Implications on Heat Transfer Margin in External Reactor Vessel Cooling Strategies—*A. Lentner (George Washington Univ.), E. Balaras (George Washington Univ.)*
- 4137 Source Term Uncertainty Analysis of Severe Accidents in Nordic BWRs—*Govatsa Acharya (Royal Institute of Technology), Ioannis Komlikis (Royal Institute of Technology), Dmitry Grishchenko (Royal Institute of Technology), Pavel Kudinov (Royal Institute of Technology), Sergey Galushin (Vysus Group)*
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- 4190 Ensuring Comparability of Measured Results in Aerosol-Related Experiments: Exemplary Approach Using Experiments on Water-Induced Particle Retention—*Hans-Josef Allelein (RWTH Aachen Univ.), Michael Klauck (Forschungszentrum Jülich), Kathrin Trollmann (Forschungszentrum Jülich), Yihui Wu (Forschungszentrum Jülich), Rene Vennemann (Ruhr-Univ. Bochum)*
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- 4220 The iPWR MELCOR 2.2 Parametric Sensitivity Analysis—*Mateusz Malicki (Paul Scherrer Institute), Piotr Darnowski (Warsaw Univ. Technology), Terttaliisa Lind (Paul Scherrer Institute)*
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- 4248 Advanced FCVS System Using Silver Zeolite AgX, AgR and XeA—*Yoshihiro Ishikawa (Rasa Industries), Koji Endo (Rasa Industries), Tadashi Narabayashi (Tokyo Institute of Technology), D. Suckow (Paul Scherrer Institute), F. Espegren (Paul Scherrer Institute), T. Lind (Paul Scherrer Institute), J. Mantzaras (Paul Scherrer Institute), V.K. Arumugam (Paul Scherrer Institute), J. Theile (Paul Scherrer Institute), Yuta Nakasaka (Hokkaido Univ.), Yasuhiro Kawahara (Kimura Chemical Plants Co.)*
- 4256 Sensitivity Analysis of Heat Transfer Limit Under IVR-ERVC Condition Based on a Newly Developed CHF Model—*Gang Wang (Shanghai Jiao Tong Univ.), Shilei Han (Shanghai Jiao Tong Univ.), Bo Kuang (Shanghai Jiao Tong Univ.), Pengfei Liu (Shanghai Jiao Tong Univ.)*

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4281 Canadian Nuclear Laboratories Experiments and Modeling of Water-Cooled SMR Severe Accidents to Inform Level 4 and 5 Defence-in-Depth—*Luke Lebel (Canadian Nuclear Laboratories), Andrew Morreale (Canadian Nuclear Laboratories), Eric Jia (Canadian Nuclear Laboratories), Feng Zhou (Canadian Nuclear Laboratories), David Hummel (Canadian Nuclear Laboratories), Scott Ormiston (Univ. Manitoba), Geoffrey Gray (Univ. Manitoba)*

4295 Preliminary Analysis of Severe Accident in Sodium-Cooled Fast Reactor Using Eutectic Reaction Model of Boron-Carbide Control-Rod Material—*Hidemasa Yamano (Japan Atomic Energy Agency), Koji Morita (Kyushu Univ.)*

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4310 Application of Artificial Neural Network to Identify Severe Accident State from Plant Signal Data—*Paul McMinn (Fauske and Assoc.), Nick Karancevic (Fauske and Assoc.), Chan Y. Paik (Fauske and Assoc.), Wei Wei (China Nuclear Power Operation Technology Corp.), Ma Guoyang (China Nuclear Power Operation Technology Corp.)*

4322 Simulating the Power Noise Response due to Voiding in the NBSR During the February 3rd Incident—*Lap-Yan Cheng (Brookhaven), Athi Varuttamaseni (Brookhaven), Peter Kohut (Brookhaven), Anil Gurgen (Nat'l Institute of Standards & Technology), Dagistan Sahin (Nat'l Institute of Standards & Technology), Abdullah G. Weiss (Nat'l Institute of Standards & Technology)*

4336 Simulation of QUENCH-06 Experiment by MELCOR v2.2 with Uncertainty Analysis—*M. Garbarini (Politecnico di Milano), G. Agnello (Univ. Palermo), A. Bersano (ENEA), F. Gabrielli (Karlsruhe Institute for Technology), L. Luzzi (Politecnico di Milano), F. Mascari (ENEA)*

4350 Evaluation of Accident Tolerant Fuel Performance Under Long-Term Station Blackout Conditions—*Chris Faucett (Sandia), Bradley Beeny (Sandia), Jesse Phillips (Sandia), Karen Vierow Kirkland (TAMU)*

4364 Application of Lower Head Thermal-Mechanical Creep Failure Module in LHF Experiment—*Hao Yang (Xi'an Jiaotong Univ.), Bin Zhang (Xi'an Jiaotong Univ.), Pengcheng Gao (Xi'an Jiaotong Univ.), Jianqiang Shan (Xi'an Jiaotong Univ.)*

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4384 Validation in Water of a New Methodology for the Vibrational Analysis of Rotating Components in a High-Density Fluid—*Kamiel Ceusters (Ghent Univ.), Michiel Van Damme (Ghent Univ.), Henri Dolfen (Ghent Univ.), Nicolas Delaissé (Ghent Univ.), Tom Verstraete (Ghent Univ.), Joris Degroote (Ghent Univ.), Kirill Makhov (SCK CEN), Mikhail Iarmonov (SCK CEN), Katrien Van Tichelen (SCK CEN)*

4397 Sensor Selection for the Measurement of Fuel Plate Deflections—*Michael Legatt (Oregon State), Aaron Weiss (Oregon State), Trevor Kent Howard (Oregon State), Wade Marcum (Oregon State), Cezary Bojanowski (ANL), Guanyi Wang (ANL), Andrew Hebden (ANL)*

4411 Fluid-Structure Interaction Analysis of University of Missouri Research Reactor Low-Enriched Uranium Fuel Element—*Guanyi Wang (ANL), Cezary Bojanowski (ANL), Wilson Cowherd (ANL), Walid Mohamed (ANL), Erik Wilson (ANL), Maria Pinilla (University of Missouri-Columbia Research Reactor)*

4425 PWR Nuclear Fuel Rod Flow Induced Vibration Simulation Using VITRAN Code for Hexagonal Fuel Assembly—*Alireza Mofidi (Westinghouse Electric Co.), Roger Y. Lu (Westinghouse Electric Co.)*

4435 NEAMS Thermal-Hydraulics IRP

4436 Building a Multiscale Framework: An Overview of the NEAMS Thermal-Hydraulics Integrated Research Project—*Elia Merzari (Penn State), Arsen Iskhakov (NCSU), Igor Bolotnov (NCSU), Nam Dinh (NCSU), Emilio Baglietto (MIT), Annalisa Manera (Univ. Michigan), Dillon Shaver (ANL), Yassin Hassan (TAMU)*

- 4450 NEAMS IRP Challenge Problem 1: Flexible Modeling for Heat Transfer for Applications in Advanced Reactors—*Igor A. Bolotnov (NCSU), Arsen S. Iskhakov (NCSU), Tri Nguyen (Penn State), Cheng-Kai Tai (NCSU), Ralph Wiser (MIT), Emilio Baglietto (MIT), Nam Dinh (NCSU), Dillon Shaver (ANL), Elia Merzari (Penn State)*
- 4464 NEAMS IRP Challenge Problem 2: Thermal Stripping of Reactor Internals—*Emilio Baglietto (MIT), John Acierno (Penn State), Annalisa Manera (Univ. Michigan), Quynh M. Nguyen (Univ. Michigan), Victor Petrov (Univ. Michigan), Monica Pham (MIT), Yu-Jou Wang (MIT), Yue Jin (MIT), Jinyong Feng (MIT), Wayne Strasser (Liberty Univ.), Dillon Shaver (ANL), Elia Merzari (Penn State)*
- 4476 NEAMS IRP Challenge Problem 3: Mixing in Large Enclosures and Thermal Stratification—*A. Manera (Univ. Michigan), A.S. Iskhakov (NCSU), V.C. Leite (Penn State), Jiaxin Mao (Univ. Michigan), C. Tai (NCSU), V. Vishwakarma (Univ. Michigan), R. Wiser (MIT), E. Baglietto (MIT), I.A. Bolotnov (NCSU), N.T. Dinh (NCSU), Y. Hassan (TAMU), V. Petrov (Univ. Michigan), E. Merzari (Penn State)*
- 4489 Challenge Problem 4: Building a Flexible Multiscale Framework for Core Modeling—*Yassin Hassan (TAMU), Craig Menezes (TAMU), David Reger (Penn State), Adam Kraus (Penn State), Elia Merzari (Penn State)*
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- 4530 Using Machine Learning to Assess Spill Fire Data for use in Fire PRA—*Elvan Sahin (Virginia Tech), Mehran Islam (Virginia Tech), Brian Y. Lattimer (Virginia Tech), Juliana P. Duarte (Univ. Wisconsin, Madison)*
- 4544 Machine Learning from LES Data to Improve Coarse Grid RANS Simulations—*Arsen S. Iskhakov (NCSU), Taylor Grubbs (NCSU), Nam T. Dinh (NCSU), Victor Coppo Leite (Penn State), Elia Merzari (Penn State)*
- 4559 Thermal Hydraulics of Fusion Reactors**
- 4560 Fully Implicit Conjugate Heat Transfer Analysis of the ARC-Class Vacuum Vessel—*Arpan Sircar (ORNL), Katarzyna Borowiec (ORNL), Jin Whan Bae (ORNL), Vittorio Badalassi (ORNL), Jerome Solberg (LLNL)*
- 4574 Design and Analysis of a Novel Molten Salt Fusion Breeder Blanket System Using SAM—*Trevor C. Franklin (Virginia Commonwealth Univ.), Ryan P. McGuire (Virginia Commonwealth Univ.), Amelie M. Lutz (Virginia Commonwealth Univ.), Sierra A. Tutwiler (Virginia Commonwealth Univ.), Lane B. Carasik (Virginia Commonwealth Univ.)*
- 4588 Simulations of Heat Transfer Using Tight Fitting Twisted Tape Inserts for 1st Wall Cooling in Molten Salt Breeder Blankets—*Sierra Tutwiler (Virginia Commonwealth Univ.), Ryan P. McGuire (Virginia Commonwealth Univ.), Trevor C. Franklin (Virginia Commonwealth Univ.), Amelie M. Lutz (Virginia Commonwealth Univ.), Lane B. Carasik (Virginia Commonwealth Univ.), Carter E. Steward (Virginia Military Institute)*
- 4602 Thermal Hydraulic and Mechanical Assessment of the DTT ICRH Antenna—*Ranieri Marinari (ENEA), Pietro Maccari (ENEA), Alessandro Del Nevo (ENEA), Nicolò Badodi (Politecnico di Milano), Silvio Ceccuzzi (ENEA), Gianluca Camera (Università degli Studi di Napoli Federico II), Giuseppe Di Gironimo (Università degli Studi di Napoli Federico II)*
- 4617 Flow Induced Vibrations in (GO-)VIKING: I**
- 4618 The European GO-VIKING Project on Flow-Induced Vibrations—*A. Papukchiev (GRS), K. Zwijsen (Nuclear Research & Consultancy Group), D. Vivaldi (IRSN), H. Hadzic (Framatome), S. Benhamadouche (EDF R&D), W. Benguigui (EDF R&D), P. Planquart (von Karman Institute for Fluid Dynamics)*
- 4632 Wall-Resolved LES and URANS Simulations of an Axial Flow on a Cantilevered Rod at a Moderate Reynolds Number—*Thomas Norddine (EDF R&D), Sofiane Benhamadouche (EDF R&D)*
- 4646 Experiments on Axial-Flow-Induced Vibration of a Free-Clamped Rod for Light Water Nuclear Reactor Applications—*Hao Li (Univ. Manchester), Shanying Zhang (Univ. Manchester), Mostafa R.A. Nabawy (Univ. Manchester), Hector Iacovides (Univ. Manchester), Andrea Cioncolini (Guangdong Technion-Israel Institute of Technology)*
- 4659 Numerical Simulation of Flow-Induced Vibration of Nuclear Fuel Assemblies—*H. Hadzic (Framatome), M. Ren (Framatome), B. Dressel (Framatome), D. Tumbajoy Spinel (Framatome), M. Quenehen (Framatome), B. Painter (Framatome), H. Marr (Framatome), K. Duggan (Framatome)*

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- 4688 Wall-Resolved LES and Low-Reynolds Number URANS Combined to an Arbitrary Lagrangian Eulerian Approach for Predicting Water Cross-Flow Induced Vibrations of a Single Flexible Tube in a Normal Square Tube Array—*Sofiane Benhamadouche (EDF R&D), William Benguigui (EDF R&D)*
- 4702 Modeling of Flow-Induced Vibrations of a BWR Instrumentation Guide Tube Experiment—*K. Zwijsen (Nuclear Research & Consultancy Group), S. Tajfirooz (Nuclear Research & Consultancy Group), F. Roelofs (Nuclear Research & Consultancy Group), A. Papukchiev (GRS), N. Edh (Vattenfall), E. Lillberg (Vattenfall)*
- 4716 URANS and Hybrid URANS/LES Coupled Fluid-Structure Simulations of Fluid-Induced Vibrations in a Square-Pitch Tube Bundle Subjected to Water Cross-Flows—*Daniele Vivaldi (IRSN), Jean Baccou (IRSN)*

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- 4732 Lead Fast Reactor Thermal Hydraulic Testing Facilities in Support of the UK Advanced Modular Reactor Program—*J. Liao (Westinghouse Electric Co.), C. A. Stansbury (Westinghouse Electric Co.), M. E. Durse (Westinghouse Electric Co.), D. L. Wise (Westinghouse Electric Co.), E. Tatli (Westinghouse Electric Co.), T. G. Loebig (Westinghouse Electric Co.), R. F. Wright (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.), S.J. Lee (Fauske & Assoc.), M. Epstein (Fauske & Assoc.), M. Caramello (Ansaldo Nucleare), M. Frignani (Ansaldo Nucleare), M. Tarantino (ENEA), G. Grasso (ENEA), I. Di Piazza (ENEA), S. Bassini (ENEA), P. Lorusso (ENEA), A. Antonelli (ENEA), D. Martelli (ENEA), A. Wimshurst (Frazer-Nash Consultancy), R. Watkins (Frazer-Nash Consultancy), G. Macpherson (Frazer-Nash Consultancy), D. Wilson (Univ. Manchester), H. Iacovides (Univ. Manchester), A. Cioncolini (Univ. Manchester), J. Francis (Univ. Manchester), J. Buckley (Univ. Manchester)*
- 4745 Evaluation of Steam Explosion in the Lead-Water Interaction Test Facility for Westinghouse Lead Fast Reactor Development—*M. Epstein (Fauske & Assoc.), S.J. Lee (Fauske & Assoc.), M. Tarantino (ENEA), F. Hattab (ENEA), P. Ferroni (Westinghouse Electric Co.)*

- 4761 Testing Innovative Decay Heat Removal System Through the Passive Heat Removal Facility (PHRF): Facility Description and Early Testing in Support to Lead Fast Reactor Development—*M. Caramello (Ansaldo Nucleare), M. Frignani (Ansaldo Nucleare), A. Cocucci (Ansaldo Nucleare), M. Tarantino (ENEA), J. Liao (Westinghouse Electric Co.), R.F. Wright (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.)*
- 4771 Testing Key Lead Fast Reactor Components Through the Versatile Loop Facility (VLF): Facility Description and Early Testing in Support to Lead Fast Reactor Development—*M. Caramello (Ansaldo Nucleare), M. Frignani (Ansaldo Nucleare), A. Cocucci (Ansaldo Nucleare), M. Tarantino (ENEA), C. Stansbury (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.)*

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- 4782 Main Outputs from the OECD/NEA ARC-F Project—*Yu Maruyama (Japan Atomic Energy Agency), Tomoyuki Sugiyama (Japan Atomic Energy Agency), Asako Shimada (Japan Atomic Energy Agency), Terttaliisa Lind (Paul Scherrer Institute), Ahmed Bentaib (IRSN), Martin Sogalla (GRS), Marco Pellegrini (Univ. Tokyo), Lucas Albright (Sandia), Daniel Clayton (Sandia)*
- 4796 OECD/NEA ARC-F Project: Summary of Fission Product Transport—*Terttaliisa Lind (Paul Scherrer Institute), Jarmo Kalilainen (Paul Scherrer Institute), Catherine Marchetto (IRSN), Sara Beck (GRS), Koichi Nakamura (CRIEPI), Chiaki Kino (IAE), Yu Maruyama (Japan Atomic Energy Agency), Kentaro Kido (Japan Atomic Energy Agency), Sung Il Kim (KAERI), Yoonhee Lee (KINS), Luis E. Herranz (CIEMAT), Kirill Dolganov (IBRAE)*
- 4810 OCDE/NEA-ARC-F Project: Unit1 and Unit3 Hydrogen Explosion Analysis -- Lessons Learned and Perspectives—*A. Bentaib (IRSN), A. Bleyer (IRSN), E. Studer (CEA), S. Kudriakov (CEA), T. Nishimura (NRA), K. Motegi (Japan Atomic Energy Agency), K.S. Dolganov (IBRAE RAN)*
- 4823 Analysis of the Long Term Interaction Between Molten Core and Dry Concrete at Fukushima Daiichi Unit 1—*M. Pellegrini (Univ. Tokyo), C. Journeau (CEA), N. Seiler (CEA), L.E. Herranz (CIEMAT), C. Spengler (GRS), C. Bouillet (IRSN), M. Barrachin (IRSN), D. Luxat (Sandia), L. Albright (Sandia)*

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- 4838 GOTHIC Thermal Hydraulic Analysis of the Passive Heat Removal Facility to Support the Westinghouse Lead Fast Reactor Development—*M.E. Durse (Westinghouse Electric Co.), D.L. Wise (Westinghouse Electric Co.), J. Liao (Westinghouse Electric Co.), R.F. Wright (Westinghouse Electric Co.), C.A. Stansbury (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.), M. Caramello (Ansaldo Nucleare), A. Wimshurst (Frazer-Nash Consultancy)*
- 4851 Numerical Analysis and Codes Qualification Based on SIRIO Experiments Within the PIACE Project—*P. Lorusso (ENEA), M. Tarantino (ENEA), F.S. Nitti (ENEA), A. Achilli (SIET), M. Cauzzi (SIET), M. Caramello (Ansaldo Nucleare), T. Hamidouche (SCK CEN), R. Fernandez (SCK CEN), D. Rozzia (SCK CEN), I. Kljenak (Jozef Stefan Institute), R. Krpan (Jozef Stefan Institute), G. Jimenez (Univ. Politécnica de Madrid), C. Queral (Univ. Politécnica de Madrid), T. Del Moro (Sapienza Univ. Rome)*
- 4865 Analysis of Steady State and Operational Transients of the Versatile Loop Facility in Support to Lead Fast Reactor Development—*C. Ciurluini (Sapienza Univ. Rome), M. Principato (Sapienza Univ. Rome), F. Giannetti (Sapienza Univ. Rome), M. Caramello (Ansaldo Nucleare), M. Tarantino (ENEA)*
- 4880 Application Development and Verification of Lead Cooling System Safety Analysis Program based on RELAP5 MOD4.0—*Xiangyang Wang (Lanzhou Univ.), Liu Yang (Lanzhou Univ.), Su Xingkang (Lanzhou Univ.), Qijian Chen (Lanzhou Univ.), Lu Zhang (Chinese Academy of Science), Xianwen Li (Chinese Academy of Science), Bin Han (Southeast Univ.), Aiguo Liu (DEQD Institute for Advanced Research in Multiphase Flow and Energy Transfer), Bao-Wen Yang (DEQD Institute for Advanced Research in Multiphase Flow and Energy Transfer), Gu Long (Lanzhou Univ.)*

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- 4906 The Round Robin Debris Analysis Activity Conducted Under the OECD-NEA FACE Project—*Andrew C. Morreale (Canadian Nuclear Laboratories), Mitchell T. Farmer (ANL), Joy Rempe (Rempe and Assoc.), Christophe Journeau (CEA), Damian Peko (U.S. Dept. of Energy)*

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- 4920 CFD Modelling of Lead Solidification and Natural Convection for the Westinghouse Lead-Cooled Fast Reactor—*D. Wilson (Univ. Manchester), H. Iacovides (Univ. Manchester), E. Tatli (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.), S.J. Lee (Fauske & Assoc.)*
- 4934 CFD and STH Thermal-Hydraulic Analyses in Support of the CIRCE-THETIS Experimental Campaign—*P. Stefanini (Univ. Pisa), A. Pucciarelli (Univ. Pisa), N. Forgione (Univ. Pisa), I. Di Piazza (ENEA Brasimone R.C.)*
- 4948 CFD Analysis of the Passive Heat Removal System in the Conceptual Design Phase of the Westinghouse Lead-Cooled Fast Reactor Under Air Cooling Conditions—*Aidan Wimshurst (Frazer-Nash Consultancy), Graham Macpherson (Frazer-Nash Consultancy), Rhodri Watkins (Frazer-Nash Consultancy), Carolyn Howlett (Frazer-Nash Consultancy), Jun Liao (Westinghouse Electric Co.), Emre Tatli (Westinghouse Electric Co.), Cory Stansbury (Westinghouse Electric Co.), Megan Durse (Westinghouse Electric Co.), Richard Wright (Westinghouse Electric Co.), Marco Caramello (Ansaldo Nucleare)*
- 4962 Thermal-Hydraulic Analysis of a Representative Westinghouse Lead-Cooled Fast Reactor Fuel Bundle Using CFD—*D. Wilson (Univ. Manchester), H. Iacovides (Univ. Manchester), E. Tatli (Westinghouse Electric Co.), C. Stansbury (Westinghouse Electric Co.), P. Ferroni (Westinghouse Electric Co.)*

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- 4991 Deep Generative Modeling for Augmentation of the Steady-State Void Fraction Dataset in the BFBT Benchmark—*Farah Alsafadi (NCSU), Xu Wu (NCSU)*
- 5004 Data-Driven RANS Turbulence Modeling of Mixed Convection in Reactor Downcomer Geometry—*Arsen S. Iskhakov (NCSU), Cheng-Kai Tai (NCSU), Igor A. Bolotnov (NCSU), Nam T. Dinh (NCSU), Elia Merzari (Penn State)*
- 5018 Data-Driven Augmentation of a Second Order Heat Flux Model to Extend it to Heavy Liquid Metals—*Matilde Fiore (von Karman Institute for Fluid Dynamics), Lilla Koloszar (von Karman Institute for Fluid Dynamics), Miguel Alfonso Mendez (von Karman Institute for Fluid Dynamics), Matthieu Duponcheel (Univ. Catholique de Louvain), Yann Bartosiewicz (Univ. Catholique de Louvain)*

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- 5048 Comparison of System Thermal Hydraulic and CFD Analyses of E-SCAPE at Forced Circulation and Under Isothermal Conditions—*F. S.L. Pangukir (Nuclear Research & Consultancy Group), D. C. Visser (Nuclear Research & Consultancy Group), F. Roelofs (Nuclear Research & Consultancy Group), J. Pacio (SCK CEN), K. Van Tichelen (SCK CEN)*
- 5058 Review on Heat Transfer Performance of High Temperature Heat Pipe—*Haojie Zhang (Beijing Jiaotong Univ.), Zhuqian Zhang (Beijing Jiaotong Univ.), Lixin Yang (Beijing Jiaotong Univ.)*
- 5072 Direct Numerical Simulation of Liquid Metal Forced and Mixed Convection in a Square Rod Bundle—*Diego Angeli (Univ. Modena and Reggio Emilia), Danila Trane (Univ. Modena and Reggio Emilia), Andrea Cimarelli (Univ. Modena and Reggio Emilia), Roberto Corsini (Univ. Modena and Reggio Emilia), Enrico Stalio (Univ. Modena and Reggio Emilia)*

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- 5095 Introducing the OECD/NEA WPRS Benchmark on Artificial Intelligence and Machine Learning for Scientific Computing in Nuclear Engineering—*Xu Wu (NCSU), Gregory Delipei (NCSU), Maria Avramova (NCSU), Kostadin Ivanov (NCSU), Oliver Buss (OECD/NEA)*
- 5108 Application of a Physics-Informed Convolutional Neural Network for Temperature Field Monitoring in Advanced Reactors—*Victor Coppo Leite (Penn State), Elia Merzari (Penn State), April Novak (ANL), Roberto Ponciroli (ANL), Lander Ibarra (ANL)*
- 5122 Prediction of Turbulent Flow Regime Boundary and Pressure Drop for Hexagonal Wire-Wrapped Rod Assemblies Using Artificial Neural Networks—*Hansol Kim (TAMU), Joseph Seo (TAMU), Yassin A. Hassan (TAMU)*

- 5136 Physics-Informed Forecasting of NPPs Operating Parameters Using Machine Learning—*Houde Song (Shanghai Jiao Tong Univ.), Meiqi Song (Shanghai Jiao Tong Univ.), Yanjie Tuo (Shanghai Jiao Tong Univ.), Xiaojing Liu (Shanghai Jiao Tong Univ.)*

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- 5218 Once-Through Steam Generator Health Management Based on Adaptive Relevance Vector Machine: Remaining Useful Life Prediction—*Mudi Jiang (Southeast Univ.), Tianyang Xing (Southeast Univ.), Bin Han (Southeast Univ.), Junlin Huang (Southeast Univ.), Shenghui Liu (Southeast Univ.), Xiaoliang Zhu (Southeast Univ.)*

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- 5242 Integrated Energy System Model in OpenModelica for Producing Energy, Powering a Desalination Plant and for District Heating—*Md Akhlak Bin Aziz (Univ. Illinois, Urbana-Champaign), Caleb Brooks (Univ. Illinois, Urbana-Champaign), CT Callaway (Univ. Tennessee, Knoxville), Nicholas Brown (Univ. Tennessee, Knoxville)*
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- 5295 Coarse-Grid Data-Driven Navier-Stokes / Interface Capturing Model Development for Engineering-Scale Simulations—*Anna Iskhakova (NCSU), Arsen S. Iskhakov (NCSU), Yoshiyuki Kondo (Mitsubishi Heavy Industries), Koichi Tanimoto (Mitsubishi Heavy Industries), Nam T. Dinh (NCSU), Igor A. Bolotnov (NCSU)*
- 5309 Multi-Objective Optimization of Fractal-Tree Microchannels for Printed Circuit Heat Exchangers by Improved Genetic Algorithms—*Fan Yu (Helmholtz-Zentrum Dresden-Rossendorf), Wei Ding (Helmholtz-Zentrum Dresden-Rossendorf), Sebastian Unger (Helmholtz-Zentrum Dresden-Rossendorf), Xiaoping Luo (South China Univ. Technology), Uwe Hampel (Helmholtz-Zentrum Dresden-Rossendorf)*
- 5320 Machine Learning Anomaly Data Detection and Accident Diagnosis Methodology Using MARS-KS Design Basis Event Analysis Database of APR1400 Nuclear Power Plant—*J.Y. Lee (Environment & Energy Technology), S.M. Park (Environment & Energy Technology), Y.K. Kwack (Environment & Energy Technology), Y.S. Kim (Environment & Energy Technology), N.H. Hoang (Environment & Energy Technology), S.K. Sim (Environment & Energy Technology)*

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- 5371 Validation Against a Small Break LOCA Scenario on ACME Test Facility: Summary of the ISP-51 Open Phase—*Xueyan Zhang (Huazhong Univ. Science and Technology), Shiqi Wang (Huazhong Univ. Science and Technology), Cuiting Peng (Huazhong Univ. Science and Technology), Yuhang Huang (Huazhong Univ. Science and Technology), Zhipeng Luo (Huazhong Univ. Science and Technology), Lin Li (Huazhong Univ. Science and Technology), Yixuan Zhang (Huazhong Univ. Science and Technology), Chengcheng Deng (Huazhong Univ. Science and Technology), Jun Yang (Huazhong Univ. Science and Technology)*

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- 5426 Assessment of the Choked Flow Model of RELAP5 for the Application of Inverse Quantification Methods—*Jordi Freixa (Univ. Politècnica Catalunya), Víctor Martínez-Quiroga (Univ. Politècnica Catalunya), Gregory Perret (Paul Scherrer Institute)*
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5734 Application of SAPIUM Guidelines to Input Uncertainty Quantification: The ATRIUM Project—*A. Ghione (CEA), L. Sargentini (CEA), G. Damblin (CEA), P. Fillion (CEA), J. Baccou (IRSN), R. Sueur (EDF R&D), B. Iooss (EDF R&D), A. Petrucci (NINE), K. Zeng (NINE), J. Zhang (Tractebel ENGIE), R. Mendizábal (CSN), T. Skorek (GRS), X. Wu (NCSU), J. Freixa (Univ. Politècnica Catalunya), M. Adorni (OECD NEA)*

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5764 Uncertainty Analysis in the OECD/NEA Rod Bundle Heat Transfer Project—*Kaiyue Zeng (NINE), Marco Cherubini (NINE), Alessandro Petrucci (NINE), Stephen M. Bajorek (U.S. Nuclear Regulatory Commission), Jinzhao Zhang (Tractebel ENGIE), Martina Adorni (OECD NEA)*

5778 State of the Art for Thermal-Hydraulic Analysis of Pressurised Thermal Shock Scenarios—*Ivor Clifford (Paul Scherrer Institute), Pavel Kral (Nuclear Research Institute Rez), Ladislav Vyskocil (Nuclear Research Institute Rez), Vladislav Pistora (Nuclear Research Institute Rez), Richard Trewin (Framatome), Yuliia Filonova (IPP-CENTRE), Vladislav Filonov (IPP-CENTRE), Lukasz Sokolowski (Kiwa Technical Consulting), Jürgen Hartung (GRS), Szabolcs Szávai (Bay Zoltán Foundation for Applied Research), Andrej Prošek (Jožef Stefan Institute), Jerome Roy (IRSN), Markku Puustinen (LUT Univ.), Maksym Vyshemirskyi (State Scientific and Technical Center for Nuclear and Radiation Safety), Richard Bass (Oakridge Consulting Int'l), Paul Williams (Oakridge Consulting Int'l), Takeshi Takeda (Japan Atomic Energy Agency), Carlos Cueto-Felgueroso (Tecnatom)*

5791 Evaluation of Uncertainties in Thermal-Hydraulic Analyses of PTS for the APAL European Project—*Richard Trewin (Framatome), Andrej Prošek (Jožef Stefan Institute), Pavel Kral (Nuclear Research Institute Rez), Ivor Clifford (Paul Scherrer Institute), Gregory Perret (Paul Scherrer Institute), Jürgen Hartung (GRS), Inés Mateos Canals (GRS), Jerome Roy (IRSN), Vladislav Filonov (IPP-Centre), Yuliia Filonova (IPP-Centre)*

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5824 BWRX-300 SMR Chimney Evaluations (2): Strategy for Qualifying TRACG Evaluations of Chimney Void Fractions—*A. Povolny (Hitachi-GE Nuclear Energy), K. Katono (Hitachi-GE Nuclear Energy), C. Heck (Global Nuclear Fuel), Z. Zhang (GE Hitachi Nuclear Energy)*

5838 BWRX-300 SMR Chimney Evaluations (3): HUSTLE Testing in Large Diameter Chimney at Nominal Pressure and Temperature—*Kenichi Katono (Hitachi-GE Nuclear Energy), Antonin Povolny (Hitachi-GE Nuclear Energy), Hajime Furuichi (Hitachi-GE Nuclear Energy), Kiyoshi Fujimoto (Hitachi-GE Nuclear Energy), Kenichi Yasuda (Hitachi-GE Nuclear Energy), Kazuaki Kito (Hitachi-GE Nuclear Energy)*

5847 BWRX-300 SMR Chimney Evaluations (4): Measurement of Void Fraction and Velocity Distributions in Large Diameter Chimney at Nominal Pressure and Temperature Using Double-Plane Wire-Mesh Sensor—*Hajime Furuichi (Hitachi-GE Nuclear Energy), Antonin Povolny (Hitachi-GE Nuclear Energy), Kenichi Katono (Hitachi-GE Nuclear Energy), Kenichi Yasuda (Hitachi-GE Nuclear Energy), Kazuaki Kito (Hitachi-GE Nuclear Energy)*

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