

ICENES-2011 Final Program (5/3/11)

Monday Morning, May 16

8:30 AM Presidio Ballroom			1.0 Plenary	
	Wayne	Meier	Opening Remarks	
1.0.1	Edward	Moses	The National Ignition Facility: Status and Progress Towards Fusion Ignition	Invited
1.0.2	John	Rawls	Capping, Converting and Reducing Future Waste Streams	Invited
10:30 AM Presidio Ballroom			1.1 Inertial Fusion Energy - 1	
1.1.1	Michael	Cuneo	Pulsed-Power Inertial Fusion Energy	Invited
1.1.2	Mike	Dunne	Laser Inertial Fusion Energy (LIFE) - Overview and Pathway to Delivery	Invited
1.1.3	Shalom	Eliezer	The Comeback of Shock Waves in IFE	Invited
1.1.4	John	Sethian	Inertial Fusion Energy with Krypton Fluoride Lasers	Invited
1.1.5	J. Manuel	Perlado	Design of HiPER IFE Chamber Dynamics under Repetitive Operation: interaction with Lasers, Target Injection, Remote Handling and Assessment of Potential Blanket for Power Plant	
10:30 AM C.A. Thayer Room			1.2 Modeling and Simulation - 1	
1.2.1	Mohamed	Sawan	Recent Advances in Development of Fusion Neutronics Predictive Capabilities	Invited
1.2.2	Rakesh	Behera	Investigation of ThO ₂ -Based Mixed Oxide Fuels Using Atomic Level Simulations	
1.2.3	Xue-Nong	Chen	Theoretical Modeling of Radial Standing Wave Reactor	
1.2.4	Huseyin	Ozgener	Coarse Mesh Rebalance Acceleration of Power Iteration in Adjoint Diffusion Calculations	
1.2.5	Pavel	Tsvetkov	Fidelity Needs for Safety, Performance and Fuel Cycle Evaluations in Integrated Simulations of Advanced Nuclear Energy Systems	
1.2.6	Dalin	Zhang	Numerical Studies of Axial Fuel Shuffling	

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1:30 PM Presidio Ballroom			1.3 Advanced Fission - 1	
1.3.1	Shoji	Kotake	Safety Design Approach for a Large-Scale Japan Sodium-Cooled Fast Reactor (JSFR)	Invited
1.3.2	Robert	Schleicher	Configuring EM2 to Meet the Challenges of Economics, Waste Disposition and Non-Proliferation Confronting Nuclear Energy in the U.S.	Invited
1.3.3	Michael	Laufer	Overview of the Technology Development Path and Experimental Program for the Pebble-Bed Advanced High Temperature Reactor	
1.3.4	Aaron	Totemeier	Technical and Economic Advantage of All-Metal Fuel	
1.3.5	Roberto	Zanino	Multi-Physics Modeling of Innovative Lead-cooled Fast Reactors	
1:30 PM C.A. Thayer Room			1.4 Fusion-Fission Hybrids - 1	
1.4.1	Maosheng	Li	The Project of Fusion-Fission Hybrid Energy Reactor in China	
1.4.2	George	Miley	Fusion-Fission Hybrid using a D-D Cylindrical Inertial Electrostatic Confinement (IEC) Driver	
1.4.3	Ralph	Moir	Axisymmetric Magnetic Mirror Fusion-Fission Hybrid	
1.4.4	Sümer	Şahin	Utilization of Reactor Grade Plutonium as Energy Multiplier in the LIFE Engine	
1.4.5	Massimo	Zucchetti	Compact Tokamaks as Convenient Neutron Sources for Hybrid Reactors	
3:30 PM Presidio Ballroom			1.5 Magnetic Fusion Energy - 1	
1.5.1	Jose Carlos	Gascon	Design, Challenges and Key Features for the ITER Electrical Power Distribution	
1.5.2	Keh-Ning	Huang	Relativistic Quantum Collision Theory for Many-Particle Systems	
1.5.3	Arnold	Lumsdaine	Optimal Design of Active Cooling for High Duty Cycle Spherical Tokamak Centerpost	
1.5.4	Richard	Nygren	Science in Fusion Technology	
1.5.5	Ronald	Strykowski	National Spherical Torus Experiment Upgrade	
3:30 PM C.A. Thayer Room			1.6 Fuel Cycles	
1.6.1	Satoshi	Fukada	Tritium Recovery from Liquid Blanket Systems of Fusion Reactor	Invited
1.6.2	Jerome	Verbeke	Monitoring Spent or Reprocessed Nuclear Fuel Using Fast Neutrons	
1.6.3	Lance	Snead	Microencapsulated Fuels: A Transformational Technology for Next Generation Reactors	
1.6.4	Jeffrey	Troutner	Neutron Absorber Material Supplementation	

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8:30 AM Presidio Ballroom			2.0 Plenary	
2.0.1	Yican	Wu	A Practical Way to Fusion Application through Fusion-Fission Hybrid Systems	Invited
2.0.2	Richard	Kurtz	Development of High-Performance Structural Materials for Fusion	Invited
2.0.3	Kathryn	McCarthy	Fusion Technology and Fission Technology - Similarities in R&D Needs	Invited
10:30 AM Presidio Ballroom			2.1 Advanced Fission - 2	
2.1.1	Steven	Aumeier	Nuclear Hybrid Energy Systems	Invited
2.1.2	Barbara	Vezzoni	Optimization of Safety Parameters and Accident Mitigation Measures for Innovative Fast Reactor Concepts	
2.1.3	Rainer	Salomaa	Issues on Application of Commercial LWR Core Areas for Irradiation and for Testing of Advanced Fuels	
2.1.4	Salvatore	Di Maria	Neutronic Assessment and Criticality Analysis of the In-vessel Fuel Storage Facilities in the CDT/FASTEF Reactor Design Project	
2.1.5	Pavel	Tsvetkov	High-Fidelity Modeling of VHTRs for Performance Evaluations	
2.1.6	M.Hadid	Subki	Status, Generic Technical Issues and Prospect of Small and Medium-sized Reactors Development and Deployment	
10:30 AM C.A. Thayer Room			2.2 Improving Performance	
2.2.1	G. Robert	Odette	The Opportunities and Challenges in Developing New Structural Materials that will Enable Advanced Nuclear Energy Systems	Invited
2.2.2	Steven	Pawel	Compatibility Assessment of Advanced Stainless Steels in Sodium	
2.2.3	Byung Chan	Baek	Operating Experiences of Main Steam Flow-Based Power Monitoring to OPR1000 Plants	
2.2.4	Hesham	Khalifa	Investigating the Relationship Between SiC Composite Fabrication Parameters and Mechanical Performance	
2.2.5	Michael	Rieth	The Impact of Refractory Material Properties on the Helium Cooled Divertor Design	
2.2.6	Dennis	Youchison	Evaluation of Heat Transfer in High-Temperature Refractory Foam Heat Exchangers using Computational Fluid Dynamics	

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1:30 PM Presidio Ballroom			2.3 Fusion-Fission Hybrids - 2	
2.3.1	Jieqiong	Jiang	Conceptual Design of Fusion-Fission Hybrid Multi-Functional Experimental Reactor (FDS-MFX)	
2.3.2	Terry	Kammash	A Fusion Hybrid Reactor Based on The Gasdynamic Mirror (GDM)	
2.3.3	Kevin	Kramer	Overview of Fusion-Fission Hybrid Blankets for Laser Inertial Fusion Energy (LIFE) Engine	
2.3.4	Markus	Roth	Development of High-Power Laser Based Nuclear Applications	
2.3.5	Leonid	Zakharov	Fusion-Fission Research Facility as a Practical Step Toward Hybrids	
1:30 PM C.A. Thayer Room			2.4 Modeling and Simulations - 2	
2.4.1	Sümer	Şahin	Comparisons of the Calculations Using Different Codes implemented in MCNPX Monte Carlo Transport Code for Accelerator Driven System Target	
2.4.2	Bilge	Ozgener	An Assessment of Acceleration Techniques in Scattering Source Iterations	
2.4.3	Yan	Peng	Study on Hydrodynamic Characteristics of Two-Component Two-Phase Flow in Anti-siphon Equipment of China Experimental Fast Reactor	
2.4.4	Lina	Quintieri	Photo-neutron Source by High Energy Electron on High Z Targets: Comparison Between Monte Carlo Codes and Experimental Data	
2.4.5	Laura	Savoldi	Thermal-Hydraulic Simulation of 80 kA Safety Discharge in the ITER Toroidal Field Model Coil (TFMC) using the 4C Code	
3:30 PM Presidio Ballroom			2.5 Inertial Fusion Energy - 2	
2.5.1	J. Manuel	Perlado	Progress In Advanced Materials Under Extreme Conditions For Nuclear Fusion	
2.5.2	Daniel	Goodin	Inertial Fusion Energy (IFE) Programs at General Atomics	
2.5.3	Jeff	Latkowski	Integrated Chamber Design for the Laser Inertial Fusion Energy (LIFE) Engine	
2.5.4	Antonio	Lafuente	Neutronic Studies on the Impact of Wall Shielding Penetrations for Laser IFE Systems	
2.5.5	Susana	Reyes	Licensing Approach and Initial Safety Studies for the LIFE Power Plant	
3:30 PM C.A. Thayer Room			2.6 Transmutation	
2.6.1	Yunqing	Bai	Conceptual Design of Lead-Bismuth Cooled Accelerator Driven Subcritical Reactor (LEBCAR)	
2.6.2	Jung-Hoon	Han	Preliminary Design Study of Fusion Transmutation Reactor based on ITER Platform	
2.6.3	Kazuo	Imasaki	High Brightness Gamma Ray Generation for Nuclear Transmutation	
2.6.4	Arnd	Junghans	The nELBE Neutron Time of Flight Facility	
2.6.5	Vincenzo	Romanello	Comparison of the Waste Transmutation Potential of Different Innovative Dedicated Systems and Impact on the Fuel Cycle	

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8:30 AM Presidio Ballroom			3.0 Plenary	
3.0.1	Charles	Forsberg	Nuclear Energy beyond Base-Load Electricity: The Other 75% of U.S. Energy Demand	Invited
3.0.2	Hiroshi	Azechi	IFE/ Inertial Fusion R&D at Osaka	Invited
3.0.3	Ned	Sauthoff	ITER Project: Progress and Plans	Invited
10:30 AM Presidio Ballroom			3.1 Magnetic Fusion Energy - 2	
3.1.1	Neil	Morley	Fusion Nuclear Science Research to Establish the Basis for Fusion Nuclear Science Facility	Invited
3.1.2	Andrea	Garofalo	A Fusion Nuclear Science Facility Based on the Advanced Tokamak to Enable DEMO	Invited
3.1.3	Klaus	Hesch	Technology Developments at KIT towards a Magnetic Confinement Fusion Power Plant	Invited
3.1.4	George	Neilson	Pilot Plant Options for Magnetic Fusion Development	Invited
3.1.5	Martin	Peng	Fusion Nuclear Science and Engineering Research Motivation and Required Capabilities	Invited
10:30 AM C.A. Thayer Room			3.2 Cogeneration and Other Fission	
3.2.1	Satoshi	Konishi	Waste Biomass Conversion by Nuclear Energy	Invited
3.2.2	Xing Zhong	Li	A Clean Nuclear Energy Using Hydrogen and Condensed Matter Nuclear Science	
3.2.3	Hideaki	Matsuura	Study for Tritium Production for Fusion Reactor using High-Temperature Gas-Cooled Reactor	
3.2.4			Withdrawn	
3.2.5	Nurul	Mukul	One Mega Electrical Power Grid Based on Nuclear Energy	
3.2.6	Eric	Robertson	Integration of High Temperature Gas Reactors with In Situ Oil Shale Retorting	

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NIF Tour and Banquet in Livermore
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8:30 AM Presidio Ballroom			4.0 Plenary	
4.0.1	Sherrell	Greene	Fluoride Salt-Cooled High Temperature Reactors – Technology Status and Development Strategy	Invited
4.0.2	Farrokh	Najmabadi	Fusion Power Plants: Visions and Development Pathway	Invited
4.0.3	Jean-Luc	Biarrotte	High Power Hadron Accelerators: Applications in Support of Nuclear Energy	Invited
10:30 AM Presidio Ballroom			4.1 Accelerator Applications	
4.1.1	Michael	Fluss	Single and Multi-ion Beam Facilities and their Application to Nuclear Energy	Invited
4.1.2	Angel	Ibarra	Irradiation Facilities for Fusion Materials Development	Invited
4.1.3	Holger	Podlech	The IFMIF Project	Invited
4.1.4	Anselmo	Cisneros	Feasibility Studies on Once Through Subcritical Cores Driven by Accelerator Driven Spallation Neutrons	
10:30 AM C.A. Thayer Room			4.2 Education and Economics	
4.2.1	Michel	Giot	Recent Trends in Nuclear Education and Training to Match the Needs	Invited
4.2.2	Emilio	Minguez	ENEN's Challenges in Response to the Industry and Regulatory Needs	Invited
4.2.3	Tom	Lönnroth	Education of Nuclear Energy Systems at Abo Akademi	
4.2.4	Kenneth	Ferguson	Asset Management; Time for an Integrated Approach	

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1:30 PM Presidio Ballroom			4.3 Fusion	
4.3.1	Laila	El-Guebaly	Fifty Years of Fusion Research: Historical Overview of Power Plant Studies and Discussion of Future Trends	Invited
4.3.2	Grant	Logan	Heavy-Ion Driven IFE	Invited
4.3.3	Kazuo	Imasaki	New Laser Fusion by Intense Laser	
4.3.4	David	Kraft	Time-Dependent Fusion Reaction Rates in the Mechanical Adiabatic Compression of a Dense Plasma	
4.3.5	Arthur	Molvik	Axisymmetric Magnetic Mirror Applications – Neutron Source to Fusion Power Plant	
1:30 PM C.A. Thayer Room			4.4 Sustainability	
4.4.1	Thomas	Hamacher	The Economic and Environmental Prospects of Fusion and Fission in the Long Term	Invited
4.4.2	Mireia	Piera	A General Approach to Nuclear Fission Sustainability and the Need for Specific Solutions. A Case Study on a New Coolant	Invited
4.4.3	Benjamin	Cross	Sustainable Energy Security: Need for a Comprehensive Systematic Integrated Approach	
4.4.4	Vladimir	Novikov	Embedding Emerging Nuclear Systems in Sustainable Development: the Shadow of Nuclear Past and a Potential Dark Side of Nuclear Future	
4.4.5	Qi	Zhang	Long-term Planning for Nuclear Power's Development in Japan for a Zero-carbon Electricity Generation System by 2100	
3:30 PM Presidio Ballroom			4.5 Plenary	
4.5.1	Hyuck Jong	Kim	Fusion DEMO Program of Korea	Invited
4.5.2	Kunihiko	Okano	Conceptual Design Study and Strategy Toward Fusion Demonstration Plants	Invited
4.5.3	Guillermo	Velarde	Energy Synergism: A Framework for Energy Stability	Invited

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Posters - Monday Afternoon, May 16

5:00 PM Amador Room			1.7 Poster Session	
1.7.01	Sara	Bortot	Feasibility Studies and Scope Analyses for a SUPERSTAR Demonstrator Neutronics Design	S
1.7.02	Cristhian	Galvez	Direct Reactor Auxiliary Cooling System coolant selection for the PB-AHTR	S
1.7.03	Fabiano	Cardosa	A Neutronic Evaluation of Reprocess Fuel and Depletion Study of VHTR	S
1.7.04	Boyce	Travis	A Heat Transfer Correlation for Flow Channels in a Prismatic Core	S
1.7.05	Xiaoyan	Yang	Research of Fast Reactor Fuel Management	S
1.7.06	Barbara	Vezzoni	Analysis of a Hypothetical Italian Fuel Cycle: Transition to Fast Reactors	S
1.7.07	Yongliang	Wang	Preliminary Evaluation of the Adequacy of Lithium Resources Supply for D-T Fusion Reactors	S
1.7.08	Ming	Jin	Design and Analysis of the Blanket for Fusion-Fission Hybrid Multi-Functional Experimental Reactor (FDS-MFX)	S
1.7.09	Ming-Huang	Wang	Neutronics Analysis of Spent Fuel Burner Blanket for a Fusion-Fission Hybrid Reactor (FDS-SFB)	S
1.7.10	Kamron	Fazel	Low Energy Nuclear Reactions: Experimental Status, Contrast with Hot Fusion and Needed Actions	S
1.7.11	Kamron	Fazel	Fusion Cross-Section Enhancement in Superconductors	S
1.7.12	Rafael	Juarez	Current Status of HiPER 4a Phase: Waste and Radiological Evaluations	S
1.7.13	David	Cereceda	Molecular Dynamics Simulations of Screw Dislocation Mobility in Tungsten	S
1.7.14	Alberto	Fraile	Liquid Lead and Lithium. A Comprehensive Molecular Dynamics Study.	
1.7.15	Sergio	Courtin	Influence of Thermal Fluctuations in Radiation Damage Cascade Production and Defect Dynamics in Tungsten	S
1.7.16	Erin	Hayward	Multiple Hydrogen Trapping at Monovacancies in BCC Iron	S
1.7.17	Dain	Holdener	Convective Heating of the LIFE Engine Target During Injection	S
1.7.18	Jeffrey	Powers	Integration of TRISO Fuel Performance Modeling into Mainstream Design Analyses	S
1.7.19	Jeffrey	Seifried	Adjoint-Based Implicit Uncertainty Analysis for Figures of Merit in a Laser Inertial Fusion Engine	S
1.7.20	Tai	Pham	An Investigation of Biological Dose Estimates inside a Space Station	S
1.7.21	Paloma	Castro	Validation of Real Time Dispersion of Tritium Over the Western Mediterranean Basin in Different Assessments: Comparison with the Chalk River Chronic HT Release Experiment Database	S
1.7.22	Timothy	Schriener	Neutronics Analysis of Long Operational Life LMRs for Lunar Surface Power	S

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1.7.23	Graciany de P.	Barros	Fast Accelerator Driven Subcritical System For Energy Production using Reprocessed Fuel	S
1.7.24			Withdrawn	S
1.7.25	Zhong	Chen	Preliminary Neutronics Analysis of Lead-Bismuth Cooled Accelerator Driven Subcritical Reactor for Waste Transmutation (LEBCAR)	S
1.7.26	Renan	Cunha	GB5 – A Linking Code Between MCNP5 and ORIGEN2.1 for Fuel Burnup and Radiotoxicity Analysis – DEN/UFMG Version	S
1.7.27	Patrick	Calderoni	Design and analysis of Fluoride salt-cooled High-temperature Reactor heat exchangers	
1.7.28	Moham-madreza	Nematollahi	Heat Transfer Analysis of a Mixing Vane on the Hexagonally Arranged Fuel Bundle Spacer	
1.7.29	Moham-madreza	Nematollahi	Experimental Evaluation of Natural Circulation Pressure Drop in a Boiling Channel	
1.7.30	Inho	Song	Development of IGCT Switch Module and Blip Resistor for KSTAR	
1.7.31	Francesco	Milani	Fusion Applications of Large DC-Current Interruption Units	

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5:00 PM Amador Room			2.7 Poster Session	
2.7.01	Moham-madreza	Nematollahi	Quantitative Evaluation of Heat Transfer in Bubble Collapse Process in Subcooled Flow Boiling Condition	
2.7.02	Boris	Kuteev	Options for a Steady-State Compact Fusion Neutron Source	
2.7.03	Ralph	Moir	Fission-Suppressed Fusion, Thorium-Cycle Breeder and Nonproliferation	
2.7.04	Santiago	Cuesta-Lopez	Hydrodynamics Study Regarding the Effect of Structural Molecular Anisotropies in a Model DT-fuel Pellet Implosion	
2.7.05	David	Garoz	Diffusion of Temperature and Light Species between Armor and Structural Material in Inertial Fusion Reaction Chambers: a Case for HiPER	
2.7.06	Carlo	Guerrero	Quantum Molecular Dynamics and Ab initio Studies of The Crystal Structure of Hydrogen Isotopes Near Triple Point.	
2.7.07	Darwin	Ho	Performance of Ignition Capsules with Aerogel-Supported DT Fuel for the National Ignition Facility and for Reactor Applications	
2.7.08	Sarah	Powers	Reliability Modeling in the Design of a New Energy Concept	
2.7.09	Yian	Lei	Inertial Fusion Energy Concept Based on Thick Shell Implosion	
2.7.10	Nuria	Moral	A Tritium Recycling Dynamics Assessment at HiPER4A W-Wall Chamber	
2.7.11	Pace	Van-Devender	Compact Plasma Power Station with Quasi Spherical Direct Drive Capsule for Fusion Yield and Inverse Diode for Driver-Target Standoff	
2.7.12	William	Webb	Multi-Strand String Theory Applied to Fusion	
2.7.13	Robert	Bourque	RACER (Ring ACElerated Reactor): Revisiting the Field-Reversed Mirror	
2.7.14	Steve	Ployhar	The ITER Heat Rejection Challenge	
2.7.15	Uri	Shumlak	The Sheared Flow Stabilized Z-Pinch	
2.7.16	Hiomasa	Takeno	Studies on Modulation Process of Traveling Wave Direct Energy Converter for Advanced Fusion	
2.7.17	Hiomasa	Takeno	Analytical Experiments Using a Bias-type Traveling Wave Direct Energy Converter Simulator Installed on GAMMA 10 Tandem Mirror	
2.7.18	Sunghwan	Yun	Global Depletion Analysis of Breeder Unit Korean Helium Cooled Solider Breeder TBM in ITER	
2.7.19	Massimo	Zucchetti	A High Field Tokamak Neutron Source Facility	

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2.7.20	Satoshi	Fukada	Fundamental Experiment and Analysis of Direct Energy Conversion using Proton-Conducting Ceramic Fuel Cells Supplied with High-Temperature Nuclear Heat and Natural Gas	
2.7.21	Babulal	Gopalapillai	Design Features of ITER Cooling Water Systems to Minimize Environmental Impacts	
2.7.22	Inho	Song	Study on the Qualification of ITER Toroidal Field Coil Fast Discharge Safety System	
2.7.23	George	Miley	Small Power Cells Based on Low Energy Nuclear Reactions (LENRS) - a New Type of "Green" Nuclear Energy	
2.7.24	Pertti	Aarnio	Laser-Induced X-Ray Transmutation of Nuclides	
2.7.25	Sümer	Şahin	Reduction of Weapon Grade Plutonium Inventories in a Thorium Burner	
2.7.26	Weihuang	Wang	Structure Design and Analysis for Lead-Bismuth Cooled Accelerator Driven Subcritical Reactor (LEBCAR)	