

Monday, 05 June 2017

08:00–08:50	Opening Ceremonies	<i>Grand Ballroom</i>
08:50–09:30	Overall Status of the ITER Project	Dr. Bernard Bigot <i>Grand Ballroom</i>
09:30–10:10	CFETR: New Design and RAD Activities	Yuanxi Wan <i>Grand Ballroom</i>
10:10–10:40	Break	

	<i>Salon 1 M.OA1: Experimental Devices I</i>	<i>Salon 2- M.OA2: Divertors & High Heat Flux Components</i>	<i>Salon 3- M.OA3: Inertial Fusion Engineering & Alternate Concepts</i>
10:40–11:00	Overview of NSTX-U Progress <i>Dr. Rajesh Maingi</i>	Design and Test of W7-X Water-Cooled Divertor Scraper <i>Dr. Jean Boscary</i>	Status of the ICF Program in China <i>Wanguo Zheng</i>
11:00–11:20	Technical Issues toward the Steady State Operation at KSTAR <i>Dr. Jong-Gu Kwak</i>	Modeling and Experimental Validation of Physics Enabled by W7-X Scraper Element Divertor Components <i>Dr. Jeremy Lore</i>	Magnetized Target Fusion at General Fusion <i>Dr. Michel Laberge</i>
11:20–11:40	Status of the ITER Vacuum Vessel Manufacturing <i>Dr. C.H. Choi</i>	Status of the ITER Cooling Water System Design <i>Giovanni Dell'Orco</i>	Properties of a Clean and Economic Boron Laser Fusion Reactor <i>Prof. Heinrich Hora</i>
11:40–12:00	MAST Upgrade Divertor Facility: A Test Bed for Novel Divertor Solutions <i>Dr. William Morris</i>	Virtual Engineering of a Fusion Reactor: Application to Divertor Design, Manufacture and Testing <i>Dr. Thomas R. Barrett</i>	Fusion Chamber Dynamics and First Wall Response in a Z-Pinch Driven Fusion-Fission Hybrid Power Reactor <i>Dr. Jianmin Qi</i>
12:00–12:20	Progress of Interface Design between Test Cell and Lithium Systems in IFMIF-DONES <i>Dr. Kuo Tian</i>	Experimental and Numerical Investigation on Anti-Fatigue and Anti-Thermal Shock Performance of the Divertor First Wall <i>Shenghong Huang</i>	Experimental Results from the SPECTOR Device at General Fusion <i>Dr. Stephen Howard</i>
12:20–12:40	Development and Application of High Intensity D-T Fusion Neutron Generator HINEG <i>Chao Liu</i>	<i>Adjourn</i>	Radiation Safety Design for the North Pole Neutron Time-of-Flight System at the NIF <i>Dr. Hesham Khater</i>
12:40–13:40	Lunch <i>Shanghai City Bistro / EZO Restaurant</i>		
13:40–15:40	M. POS: Poster Session (Monday) <i>Junior Ballroom</i>		
15:40–16:00	Break		

	<i>Salon 1- M.OP1: Plasma Operation & Control</i>	<i>Salon 2 M.OP2: Materials I</i>	<i>Salon 3- M.OP3: Next Step Devices, DEMO, Power Plants</i>
16:00–16:20	Plasma Control for EAST Long Pulse Non-Inductive H-Mode Operation in a Quasi-Snowflake Shape <i>Bingjia Xiao</i>	Application of Materials Science Advances to Fusion Energy <i>Dr. Steven J. Zinkle</i>	Status of K-DEMO Design Concept Study <i>Dr. Keeman Kim</i>
16:20–16:40	Real-Time Control of MHD Instabilities using ECCD <i>Matthias Reich</i>	Thermomechanical Properties of Nanostructured W Based Coatings under ITER-Relevant Thermal Loads <i>Edoardo Besozzi</i>	Building a Virtual Tokamak – Integrated Multi-Physics Modelling for Fusion Engineering <i>Matti Coleman</i>
16:40–17:00	Real-Time Detection and Localization of Magnetic Island used for Neoclassical Tearing Mode Control and Disruption Mitigation <i>Ms. Yang Zhang</i>	Effects of Temperature and He Concentration on Formation and Growth of He Bubble in BCC Iron under Irradiation <i>Jie Zhan</i>	Conceptual Development of K-DEMO, Highlighting Maintenance and Support Details of In-Vessel Components <i>Thomas Brown</i>
17:00–17:20	A First Analysis of JET Plasma Profile Based Indicators for Disruption Prediction and Avoidance <i>Dr. Alessandro Pau</i>	Effects of High-Energy C Ions Irradiation on the D Retention Behavior in V-5Cr-5Ti <i>Yu-Ping Xu</i>	Preliminary Research on Reliability Index System of Fusion Power Plant <i>Dr. Dagui Wang</i>
17:20–17:40	New Control Ability on EAST PCS for Steady-State Operation <i>Dr. Qiping Yuan</i>	The Experimental Investigation of Wetting Property for Liquid Lead Lithium Alloy with Breeder Blanket Materials <i>Prof. Weihua Wang</i>	Initial Concept for the Plasma Diagnostic and Control System for the European DEMO Tokamak Reactor <i>W. Biel</i>
17:40–18:00	ELM Pacing with Lithium Granules Injection in W Divertor on EAST <i>Dr. Zhen Sun</i>	Design, Synthesis and Characterization of Li4SiO4-based Solid Solutions as Advanced Tritium Breeders <i>Linjie Zhao</i>	Status of the US Virtual Laboratory for Technology <i>Dr. Phil Ferguson</i>

19:00–21:30	NPSS Women in Engineering Reception	<i>Meeting Room #5 Marriott Shanghai City Centre Hotel</i>
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08:00–08:10	Announcements	<i>Grand Ballroom</i>
08:10–08:50	Plasma Instrumentation for Spaceflight Missions	<i>Scott Weidner, Princeton University Grand Ballroom</i>
08:50–09:30	Status and Progress of JT-60SA	<i>Yutaka Kamada, National Institutes for Quantum and Radiological Science and Technology Grand Ballroom</i>
09:30–10:10	Progress in the EU DEMO Research and Design Activity	<i>Dr. Gianfranco Federici, EUROfusion Grand Ballroom</i>
10:10–10:40	Break	

	<i>Salon 1- T.OA1: Diagnostics & Instrumentation I</i>	<i>Salon 2 T.OA2: Divertors & PFCs: Tungsten</i>	<i>Salon 3- T.OA3: Blankets & Tritium Breeding: Liquid Breeders</i>
10:40–11:00	Design, Manufacturing, and Integrated Testing of the ITER Port Instrumentation <i>Stefan Simrock</i>	Tungsten Technology Development in Korea and its Application to KSTAR Experiments <i>Dr. Suk-Ho Hong</i>	Design of Chinese DEMO Blanket Concepts and R&D Progress of DFLL TBM <i>Prof. Qunying Huang</i>
11:00–11:20	Design and Analysis Progress of US ITER Integrated Diagnostic Upper Port 14 <i>Dr. Yuhu Zhai</i>	Investigation of ITER-grade Tungsten under Very High Heat Loads <i>Leonid Khimchenko</i>	WCLL Breeding Blanket Design and Integration: Lessons Learned in 2016 and Follow-Up <i>Alessandro Del Nevo</i>
11:20–11:40	Novel Multi-Energy X-Ray Cameras for Magnetically Confined Fusion Plasmas <i>Luis F. Delgado-Aparicio</i>	Tungsten Monoblock Concepts for the U.S. Fusion Nuclear Science Facility (FNSF) First Wall and Divertor <i>Yue Huang</i>	Consolidated Design of the Low Temperature EU-DCLL <i>David Rapisarda</i>
11:40–12:00	Surface Deterioration and Recovery of CXRS First Mirror in EAST <i>Yan Rong</i>	Thermal Stress Evaluation on the Optimized Shaping Design for Tungsten Monoblock in EAST Divertor <i>Xiahua Chen</i>	Integration of the Neutral Beam Injector System into the DCLL Breeding Blanket for the EU DEMO <i>Dr. Iván Fernández-Bergeruelo</i>
12:00–12:20	Integration Conceptual Study of Reflectometry Diagnostic for the Main Plasma in DEMO <i>Prof. Bruno Gonçalves</i>	Precipitation of Transmutant Elements in Neutron Irradiated Tungsten <i>Dr. Xunxiang Hu</i>	Development, Characterization, and Testing of a SIC-based Material for Flow Channel Inserts in High Temperature DCLL Blankets <i>Mrs. Carlota Soto</i>
12:20–12:40	Prototype Manufacturing and Testing of Metalized Ceramic Printed Circuit Boards for ITER Bolometer Cameras <i>Dr. Florian Penzel</i>	Defect Production and Deuterium Bulk Retention in Quasi-Homogeneously Damaged Tungsten <i>Dr. Feng Liu</i>	The Application of Nano Fluid Technology on MHD Effect of Liquid Metal Tritium Breeder Blankets <i>Dr. Zi Meng</i>
12:40–13:40	Lunch <i>Shanghai City Bistro / EZO Restaurant</i>		
13:40–15:40	T. POS: Poster Session (Tuesday) <i>Junior Ballroom</i>		
15:40–16:00	Break		

	<i>Salon 1 T.OP1: Power Supply Systems</i>	<i>Salon 2- T.OP2: Fueling, Exhaust & Vacuum Systems</i>	<i>Salon 3- T.OP3: Project Management & Systems Engineering</i>
16:00–16:20	The ITER Power Supplies: Status and Recommendations for the Next Tokamaks <i>Ivone Benfatto</i>	Brief History and Status of Cryogenic Pellets in Fusion Energy Research <i>Stephen K. Combs</i>	Status on Design and Construction of the ITER Buildings and Plant Systems <i>Ingo Kuehn</i>
16:20–16:40	The Power Supply System of SPIDER <i>Elena Gaio</i>	Design of Cryogenic Twin Screw Hydrogen Extruder System <i>Samiran Mukherjee</i>	Preparation of ITER Tokamak Assembly and Tooling <i>Jens Reich</i>
16:40–17:00	Design and Manufacturing of the SIC-based Power Supply System for Resistive-Wall-Mode Control in JT-60SA <i>Alberto Ferro</i>	Core Fueling of DEMO by Direct Line Injection of High-Speed Pellets from the HFS <i>Dr. Antonio Frattolillo</i>	Assessing Component Suitability and Optimising Plant Design—Alternative Approaches to TRLs <i>Dr. Elizabeth Surrey</i>
17:00–17:20	Development of HL-2M Power Supply System <i>Dr. Yingqiao Wang</i>	Refined Multiphysics Analysis of W7-X Cryopumps <i>Dr. Jiawu Zhu</i>	Extent of Condition Review of the NSTX-U Project <i>Charles Neumeyer</i>
17:20–17:40	Fuzzy Controller Using Circulating Mode for ITER Poloidal Field (PF) AC/DC Converter System <i>Mahmood ul Hassan</i>	Sub-Divertor Neutral Gas Dynamics: Integration Between the Vacuum System and the Divertor Operation <i>Dr. Stylianos Varoutis</i>	Project Coordination Challenges During W7-X Completion <i>Dr. Axel Lorenz</i>
17:40–18:00	A Constant Power Control Strategy for Three-Phase PWM Rectifier for the ITER In-Vessel Vertical Stabilization Coils <i>Karos Chien</i>	Hydrogen Isotope Separation by Cryogenic Chromatography in Processing Tokamak Exhaust Gas <i>Dr. Chengjian Xiao</i>	Early Lessons from the Application of Systems Engineering at UKAEA <i>Dan Wolff</i>

Wednesday, 07 June 2017

08:00–08:10	Announcements	<i>Grand Ballroom</i>
08:10–08:50	Technical Progress of EAST Tokamak	<i>Prof. Yuntao Song, IPP, Chinese Academy of Sciences Grand Ballroom</i>
08:50–09:30	Overview of US ITER Domestic Agency Progress	<i>Graeme Murdoch, Oak Ridge National Laboratory Grand Ballroom</i>
09:30–10:10	Status of IFMIF Project: Is Talking about IFMIF Still Like Talking of Alice in Wonderland?	<i>Dr. Juan Knaster, IFMIF/EVEDA (F4E) Grand Ballroom</i>
10:10–10:40	Break	

	Salon 1 W.OA1: Materials II	Salon 2- W.OA2: Divertors & PFCs: Liquid Metals	Salon 3- W.OA3: Neutronics & Multiphysics Analysis
10:40–11:00	Integrating Materials Engineering and Design for Fusion <i>Dr. Michael Gorley</i>	A Review of Recent Studies on Liquid Metal Plasma-Facing Components <i>Prof. Yoshi Hirooka</i>	Development and Application of Advanced Nuclear Software SuperMC for Fusion <i>Dr. Jing Song</i>
11:00–11:20	Material Solutions for Flow Channel Inserts for Liquid Metal Blankets <i>Dr. Yutai Katoh</i>	Recent Results of Li Experiments in EAST with W Divertor <i>Dr. J.S. Hu</i>	SuperMC Benchmark with SINBAD <i>Dr. Lijuan Hao</i>
11:20–11:40	Effect of Heat Treatment on Anisotropic Tensile Behavior of CLAM Steel Fabricated by Additive Manufacturing <i>Dr. Yutao Zhai</i>	Testing Liquid Metal/Capillary Porous System Concepts as Alternative Solution for the Divertor Target Design of a Fusion Reactor in TJ-II <i>Prof. Francisco Tabares</i>	Development and Validation of Cryostat Finite Element Model with Unique FE Method <i>Tarun Kumar Sharma</i>
11:40–12:00	Synergetic Effects of He Ions Irradiation and Oxidation on W <i>Yi-Ming Lyu</i>	Synergies in Liquid Metal Technology Development for Divertor Applications <i>Dr. Robert Kaita</i>	Nuclear and Thermal Analysis of a Reflectometry Diagnostics Concept for DEMO <i>Dr. Raul Luis</i>
12:00–12:20	Tungsten-Steel Composites Fabricated by Roll Bonding and Ultrasonic Welding for Structural Use in Plasma-Facing Components <i>Lauren Garrison</i>	Investigation of an Upgraded Flowing Liquid Lithium Limiter for Higher Performance Plasmas in Tungsten Divertor in EAST <i>Dr. Guizhong Zuo</i>	Design, Research, and Development of CFETR Vacuum Vessel <i>Dr. Lu Kun</i>
12:20–12:40	Experiment Investigation on Heat Transfer Performance Enhancement of PFC Hypervapotron by Micro Surface Manipulation Technology <i>Prof. Shenghong Huang</i>	Advancement of LiMIT and Associated Technologies <i>Matthew Szott</i>	Estimate of Air Activation at the ITER Neutral Beam Test Facility <i>Sandro Sandri</i>
12:40–13:40	Lunch <i>Shanghai City Bistro / EZO Restaurant</i>		
13:40–15:40	W. POS: Poster Session (Wednesday) <i>Junior Ballroom</i>		
15:40–16:00	Break		

	Salon 1 W.OPI: Magnets	Salon 2 W.OP2: Heating & Current Drive	Salon 3- W.OP3: Blankets & Tritium Breeding: Solid Breeders
16:00–16:20	Commissioning of the Wendelstein 7-X In Vessel Control Coils <i>Frank Füllentuch</i>	The ITER Neutral Beam Test Facility: Recent Advances <i>Vanni Toigo</i>	Progress in Design Activities Related to the Water Cooled Breeder Blanket for CFETR Phase-1 <i>Prof. Songlin Liu</i>
16:20–16:40	Qualification of the US conductors for ITER TF Magnet System <i>Dr. Nicolai Martovetsky</i>	Smoothly Varying Injected Neutral Beam Voltage and Current Provides New Capability on the DIII-D Tokamak <i>Tim Scoville</i>	Overview of the HCPB Research Activities in EUROfusion <i>Francisco Hernandez</i>
16:40–17:00	Fabrication Status of ITER Central Solenoid Modules <i>Dr. John Smith</i>	Conceptual Design of a 2-Channel Steady-State ECH Launcher for KSTAR <i>Robert Ellis</i>	Study of the Pebble Beds for Tritium Breeding Blanket <i>Prof. Hongli Chen</i>
17:00–17:20	Evaluation of ITER CS Module OD Band Structure for Lead Supports <i>Kevin Freudenberg</i>	Design, Test, and Analysis of a Gyrotron Cavity Mock-up Cooled using Mini-Channels <i>Prof. Laura Savoldi</i>	3D Unsteady Model for Be-Steam Reaction in Water Cooled Ceramic Breeder Blanket <i>Dr. Andrei Khodak</i>
17:20–17:40	Progress and Study on the Superconducting Magnet System of China Fusion Engineering Test Reactor <i>Jinxing Zheng</i>	Towards a New Generation of High Power High Efficiency Neutral Beam Heating System for the Future Fusion Reactors <i>Alain Simonin</i>	Tritium Release from Li ₄ SiO ₄ : The Effect of Material Properties <i>Dr. Guangming Ran</i>
17:40–18:00	Development and Applications of Magnets Module for SYCOMORE CEA System Code <i>Louis Zani</i>	Optics and Thermo-Mechanical Analysis of the Accelerator for the DEMO Neutral Beam Injector <i>Piero Agostinetti</i>	Parametric Analysis of the EU DEMO HCPB Breeding Blanket Thermal-Hydraulic Transient Operation using the GETTHEM Code <i>Prof. Roberto Zanino</i>

19:00–22:00	SOFE 2017 Banquet	<i>Shunfeng Restaurant</i>
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08:30–08:40	Announcements	<i>Grand Ballroom</i>
08:40–09:20	Prospect towards Steady-State Helical Fusion Reactor based on Progress of LHD Project Entering the Deuterium Experiment Phase	<i>Prof. Yasuhiko Takeiri, NIFS/NINS Grand Ballroom</i>
09:20–10:00	Engineering Challenges in W7-X and Preparations for the Second Operation Phase	<i>Prof. Hans-Stephan Bosch, MPI for Plasma Physics Grand Ballroom</i>
10:00–10:20	Break	
10:20–11:00	Status and Plans on MAST-U	<i>Joseph Milnes, UKAEA Grand Ballroom</i>
11:00–11:40	Progress of Fusion Technology at SWIP toward Reactor	<i>Yong Liu Grand Ballroom</i>
11:40–12:40	Lunch	<i>Shanghai City Bistro / EZO Restaurant</i>

	Salon 1- R.OP1: Diagnostics & Instrumentation II	Salon 2- R.OP2: PMI & Plasma Edge Physics	Salon 3- R.OP3: Tritium Extraction & Control
12:40–13:00	Neutron Diagnostics in the Large Helical Device <i>Prof. Mitsutaka Isobe</i>	Overview of Plasma Surface Interactions in Tungsten with Helium Plasma Exposure <i>Prof. Brian Wirth</i>	Tritium Extraction from HCLL/WCLL/DCLL PbLi BBs of DEMO and HCLL TBS of ITER <i>Dr. Marco Utili</i>
13:00–13:20	Joint Plasma Pressure Diagnostic System of Beam Emission Spectroscopy and Ultrafast Charge eXchange Recombination Spectroscopy on EAST Tokamak <i>Dr. Yi Yu</i>	Multiphysics Simulations of Plasma-Material Interactions during Transient Plasma Events <i>Prof. Ahmed Hassanein</i>	Liquid PbLi Atomization in Vacuum for Tritium and Heat Recovery <i>Prof. Satoshi Konishi</i>
13:20–13:40	Commissioning of KSTAR Motional Stark Effect Diagnostic with Background Polychrometer <i>Jinseok Ko</i>	Understanding Tungsten Divertor Sourcing, Transport and its Impact on Core Impurity Accumulation in DIII-D High Performance Discharges <i>Tyler Abrams</i>	Recent Developments on the TRITON Experiment <i>Belit Garcinuño</i>
13:40–14:00	Estimation of X-Mode Reflectometry First Fringe Frequency using Neural Networks <i>Diogo E. Aguiam</i>	Utilization of Isotopically Enriched Tungsten Tracer Particles and Outer-Midplane Collector Probes for Impurity Transport Studies in the Far Scrape-Off Layer of DIII-D <i>Dr. D. Donovan</i>	Estimation of Tritium Release and Permeation Behavior in Water Cooled Solid Breeder Blanket <i>Prof. Kazunari Katayama</i>
14:00–14:20	In Situ and Real Time Observation of Tritium Behavior in the Metal by Reversing Associated Particle Spectra of DT Neutron Generator <i>Dr. Qingjun Zhu</i>	Study of D Retention and Impurity Emission Properties of Oxidized B4C Coatings under Deuterium Irradiation in NSTX-U <i>Felipe Bedoya</i>	Analyses of DEMO Tritium Self-Sufficiency <i>Baojie Nie</i>
14:20–14:40	Managing ITER Diagnostics and Port Plug Engineering Project Risks <i>Russell Feder</i>	Design, Construction and Installation of Limiter & Divertor of Aditya-U Tokamak <i>Kaushal Patel</i>	Validation of Tritium Self-Sufficiency of DEMO <i>Prof. Satoshi Konishi</i>
14:40–15:00	Break		

	Salon 1 R.OP4: Stellarators	Salon 2 R.OP5: Experimental Devices II	Salon 3- R.OP6: Safety, Operations, & Maintenance
15:00–15:20	Preparation and Commissioning for the LHD Deuterium Experiment <i>Prof. Masaki Osakabe</i>	Design and Analysis of an Actively Cooled Window for a High Power Helicon Plasma Source <i>Dr. Arnold Lumsdaine</i>	Fusion R&D Activities at INEST <i>Prof. Jie Yu</i>
15:20–15:40	Review of Research and Engineering on the H-1 Helic <i>Dr. Boyd Blackwell</i>	Tokamak Design and Maintenance Scheme Trade Off Application on CFETR <i>Eric Villedieu</i>	Failure Impact of Crucial Components on DEMO Maintenance Performance and Mitigation Attempts <i>Martin Mitwollen</i>
15:40–16:00	HIDRA – A Stellarator for Materials Research <i>Prof. Daniel Andruczyk</i>	Study of the Impact of Pre- and Real-Time Deposition of Lithium on Plasma Performance on NSTX <i>Gustavo P. Canal</i>	Forensic Analysis of Faulted NSTX-U Inner Poloidal Field Coil <i>Joseph Petrella Jr.</i>
16:00–16:20	The Quasi-Optical Steady State 10 MW ECRH System of Wendelstein 7-X Commissioning, Plasma Operation, and Future Plans <i>Torsten Stange</i>	CODAC Core System for ITER Plant System I&C <i>Franck Di Maio</i>	Proposed Methodology for Unplanned Repair Scenarios in ITER <i>Dr. Shanliang Zheng</i>
16:20–16:40	Mechanical Monitoring Issues in Preparation to Next Step of W7-X Operation <i>Dr. Victor Bykov</i>	Extreme Ultraviolet Spectroscopy Applied to Study RMP Effects on Core Impurity Concentration in EAST <i>Germán Vogel</i>	Radiation Maps in the ITER Tokamak Complex during Operation <i>Rafael Juarez</i>
16:40–17:00	Prospects for Stellarators based on Additive Manufacturing <i>Vincente M. Queral</i>	Development of a Utility Negative Ion Test Equipment with RF Source at ASIPP <i>Dr. Jianglong Wei</i>	CorteX: A Standardised Remote Operations Communication System that is Inherently Designed to Accommodate Change <i>Robert Skilton</i>