### Monday, 05 June 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-08:50</td>
<td>Opening Ceremonies</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>08:50-09:30</td>
<td>Overall Status of the ITER Project</td>
<td>Dr. Bernard Bigot</td>
</tr>
<tr>
<td>09:30-10:10</td>
<td>CFETR: New Design and RAD Activities</td>
<td>Yuanxi Wan</td>
</tr>
<tr>
<td>10:10-10:40</td>
<td>Break</td>
<td></td>
</tr>
</tbody>
</table>

#### Salon 1 - M.OA1: Plasma Operation & Control  
#### Salon 2 - M.OA2: Divertors & High Heat Flux Components  
#### Salon 3 - M.OA3: Inertial Fusion Engineering & Alternate Concepts

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:40-11:00</td>
<td>Overview of NSTX-U Progress</td>
<td>Dr. Rajesh Maingi</td>
</tr>
<tr>
<td>11:00-11:20</td>
<td>Technical Issues toward the Steady State Operation at KSTAR</td>
<td>Dr. Jong-Gu Kwak</td>
</tr>
<tr>
<td>11:20-11:40</td>
<td>Status of the ITER Vacuum Vessel Manufacturing</td>
<td>Dr. C.H. Choi</td>
</tr>
<tr>
<td>11:40-12:00</td>
<td>MAST Upgrade Divertor Facility: A Test Bed for Novel Divertor Solutions</td>
<td>Dr. William Morris</td>
</tr>
<tr>
<td>12:00-12:20</td>
<td>Progress of Interface Design between Test Cell and Lithium Systems in IFMIF-DONES</td>
<td>Dr. Kao Tian</td>
</tr>
<tr>
<td>12:20-12:40</td>
<td>Development and Application of High Intensity D-T Fusion Neutron Generator HINEG</td>
<td>Chao Liu</td>
</tr>
<tr>
<td>12:40-13:40</td>
<td>Lunch</td>
<td>Shanghai City Bistro / EZO Restaurant</td>
</tr>
<tr>
<td>13:40-15:40</td>
<td>M. POS: Poster Session (Monday)</td>
<td>Junior Ballroom</td>
</tr>
<tr>
<td>15:40-16:00</td>
<td>Break</td>
<td></td>
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</tbody>
</table>

#### Salon 1 - M.OP1: Plasma Operation & Control  
#### Salon 2 - M.OP2: Materials 1  
#### Salon 3 - M.OP3: Next Step Devices, DEMO, Power Plants

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:00-16:20</td>
<td>Plasma Control for EAST Long Pulse Non-Inductive H-Mode Operation in a Quasi-Snowflake Shape</td>
<td>Bingjie Xiao</td>
</tr>
<tr>
<td>16:20-16:40</td>
<td>Real-Time Control of MHD Instabilities using ECCD</td>
<td>Matthias Reich</td>
</tr>
<tr>
<td>16:40-17:00</td>
<td>Real-Time Detection and Localization of Magnetic Island used for Neoclassical Tearing Mode Control and Disruption Mitigation</td>
<td>Ms. Yang Zhang</td>
</tr>
<tr>
<td>17:00-17:20</td>
<td>A First Analysis of JET Plasma Profile Based Indicators for Disruption Prediction and Avoidance</td>
<td>Dr. Alessandro Pau</td>
</tr>
<tr>
<td>17:20-17:40</td>
<td>New Control Ability on EAST PCS for Steady-State Operation</td>
<td>Dr. Qingyuan</td>
</tr>
<tr>
<td>17:40-18:00</td>
<td>ELM Pacing with Lithium Granules Injection in W Divertor on EAST</td>
<td>Dr. Zhen Sun</td>
</tr>
<tr>
<td>19:00-21:30</td>
<td>NPSS Women in Engineering Reception</td>
<td>Meeting Room #5</td>
</tr>
</tbody>
</table>

**Meeting Room #5**

**Marriott Shanghai City Centre Hotel**
## Tuesday, 06 June 2017

### Announcements

<table>
<thead>
<tr>
<th>Time</th>
<th>Salon 1 T.OA1: Diagnostics &amp; Instrumentation 1</th>
</tr>
</thead>
</table>
| 10:40-11:00 | Design, Manufacturing, and Integrated Testing of the ITER Port Instrumentation  
Stefan Simrock  
Tungsten Technology Development in Korea and its Application to KSTAR Experiments  
Dr. Suk-Ho Hong |
| 11:00-11:20 | Design and Analysis Progress of US ITER Integrated Diagnostic Upper Port 14  
Dr. Yaha Zhai  
Investigation of ITER-grade Tungsten under Very High Heat Loads  
Leonid Khimenko  
Dr. Yue Huang |
Luis F. Delgado-Aparicio  
Tungsten Monoblock Concepts for the U.S. Fusion Nuclear Science Facility (FNSF) First Wall and Divertor  
Yue Huang  
Dr. Alessandro Del Nevo |
| 11:40-12:00 | Surface Deterioration and Recovery of CXRS First Mirror in EAST  
Yan Rong  
Dr. David Rapisarda |
| 12:00-12:20 | Integration Conceptual Study of Reflectometry Diagnostic for the Main Plasma in DEMO  
Prof. Bruno Gonçalves  
Precipitation of Transmutant Elements in Neutron Irradiated Tungsten  
Dr. Xunxiang Hu |
| 12:20-12:40 | Prototype Manufacturing and Testing of Metalized Ceramic Printed Circuit Boards for ITER Bolometer Cameras  
Dr. Florian Penzel  
Defect Production and Deuterium Bulk Retention in Quasi-Homogeneously Damaged Tungsten  
Dr. Feng Liu |
| 12:40-13:40 | Lunch  
Shanghai City Bistro / EZO Restaurant |

### T. POS: Poster Session (Tuesday)

| Time  | T.OP1: Power Supply Systems  
The ITER Power Supplies: Status and Recommendations for the Next Tokamaks  
Ivone Benfatto  
The Power Supply System of SPIDER  
Elena Gaso  
Design and Manufacturing of the SIC-Based Power Supply System for Resistive-Wall-Mode Control in JT-60SA  
Alberto Ferro  
Development of HL-2M Power Supply System  
Dr. Yingjuao Wang  
Fuzzy Controller Using Circulating Mode for ITER Poloidal Field (PF) AC/DC Converter System  
Mahmood ul Hassan  
A Constant Power Control Strategy for Three-Phase PWM Rectifier for the ITER In-Vessel Vertical Stabilization Coils  
Karos Chien  
Hydrogen Isotope Separation by Cryogenic Chromatography in Processing Tokamak Exhaust Gas  
Dr. Chengjian Xiao |
| 15:40-16:00 | Break |

### Salon 2 T.OA2: Divertors & PFCs: Tungsten

<table>
<thead>
<tr>
<th>Time</th>
<th>Salon 2 T.OA2: Divertors &amp; PFCs: Tungsten</th>
</tr>
</thead>
</table>
| 10:40-11:00 | Tungsten Technology Development in Korea and its Application to KSTAR Experiments  
Dr. Suk-Ho Hong |
| 11:00-11:20 | Investigation of ITER-grade Tungsten under Very High Heat Loads  
Dr. Yue Huang |
| 11:20-11:40 | Tungsten Monoblock Concepts for the U.S. Fusion Nuclear Science Facility (FNSF) First Wall and Divertor  
Dr. Alessandro Del Nevo |
| 11:40-12:00 | Thermal Stress Evaluation on the Optimized Shaping Design for Tungsten Monoblock in EAST Divertor  
Dr. David Rapisarda |
| 12:00-12:20 | Precipitation of Transmutant Elements in Neutron Irradiated Tungsten  
Dr. Xunxiang Hu |
| 12:20-12:40 | Defect Production and Deuterium Bulk Retention in Quasi-Homogeneously Damaged Tungsten  
Dr. Feng Liu |
| 12:40-13:40 | Lunch  
Shanghai City Bistro / EZO Restaurant |

### Salon 3 T.OA3: Blankets & Tritium Breeding: Liquid Breeders

<table>
<thead>
<tr>
<th>Time</th>
<th>Salon 3 T.OA3: Blankets &amp; Tritium Breeding: Liquid Breeders</th>
</tr>
</thead>
</table>
| 10:40-11:00 | Design of Chinese DEMO Blanket Concepts and R&D Progress of DFLL TBM  
Prof. Qunying Huang |
| 11:00-11:20 | WCLL Breeding Blanket Design and Integration: Lessons Learned in 2016 and Follow-Up  
Dr. Zhang Nan  
Mr. Carlota Soto |
| 11:20-11:40 | Consolidated Design of the Low Temperature EU-DCLL  
Dr. David Rapisarda |
| 11:40-12:00 | Integration of the Neutral Beam Injector System into the DCLL Breeding Blanket for the EU DEMO  
Dr. Jiong Fernandez-Berceruela |
| 12:00-12:20 | Development, Characterization, and Testing of a SiC-based Material for Flow Channel Inserts in High Temperature DCLL Blankets  
Dr. Wei Wei  
Ms. Meng Zi  
Dr. Carlos Soto |
| 12:20-12:40 | The Application of Nano Fluid Technology on MHD Effect of Liquid Metal Tritium Breeder Blankets  
Dr. Di Meng |
| 12:40-13:40 | Lunch  
Shanghai City Bistro / EZO Restaurant |

### Lunch

<table>
<thead>
<tr>
<th>Time</th>
<th>Junior Ballroom</th>
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</thead>
</table>
| 13:40-15:40 | T. POS: Poster Session (Tuesday)  
Shanghai City Bistro / EZO Restaurant |

### Break

<table>
<thead>
<tr>
<th>Time</th>
<th>Junior Ballroom</th>
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</thead>
</table>
| 15:40-16:00 | Break  
Shanghai City Bistro / EZO Restaurant |
## Wednesday, 07 June 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>08:00-08:10</td>
<td>Announcements</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>08:10-08:50</td>
<td>Technical Progress of EAST Tokamak</td>
<td>Prof. Yuntao Song, IPP, Chinese Academy of Sciences Grand Ballroom</td>
</tr>
<tr>
<td>08:50-09:30</td>
<td>Overview of US ITER Domestic Agency Progress</td>
<td>Graeme Murdoch, Oak Ridge National Laboratory Grand Ballroom</td>
</tr>
<tr>
<td>09:30-10:10</td>
<td>Status of IFMIF Project: Is Talking about IFMIF Still Like Talking of Alice in Wonderland?</td>
<td>Dr. Juan Knaster, IFMIF/EVEDA (F4E) Grand Ballroom</td>
</tr>
<tr>
<td>10:10-10:40</td>
<td>Break</td>
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<tr>
<td>10:40-11:00</td>
<td><strong>Salon 1 - W.OA1: Materials II</strong></td>
<td></td>
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<tr>
<td>11:00-11:20</td>
<td><strong>Salon 2 - W.OA2: Divertors &amp; PFCs: Liquid Metals</strong></td>
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<tr>
<td>11:40-12:00</td>
<td><strong>Salon 3 - W.OA3: Neutronics &amp; Multiphysics Analysis</strong></td>
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<tr>
<td>12:00-12:20</td>
<td><strong>Salon 4 - W.OP1: Magnets</strong></td>
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<tr>
<td>12:20-12:40</td>
<td><strong>Salon 5 - W.OP2: Heating &amp; Current Drive</strong></td>
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<tr>
<td>12:40-13:40</td>
<td>Lunch</td>
<td>Shanghai City Bistro / EZO Restaurant</td>
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<tr>
<td>13:40-15:40</td>
<td>W. POS: Poster Session (Wednesday)</td>
<td>Junior Ballroom</td>
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<tr>
<td>15:40-16:00</td>
<td>Break</td>
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<tr>
<td>16:00-16:20</td>
<td><strong>Salon 1 - W.OP1: Magnets</strong></td>
<td></td>
</tr>
<tr>
<td>16:20-16:40</td>
<td><strong>Salon 2 - W.OP2: Heating &amp; Current Drive</strong></td>
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<tr>
<td>16:40-17:00</td>
<td><strong>Salon 3 - W.OP3: Blankets &amp; Tritium Breeding: Solid Breeders</strong></td>
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<tr>
<td>17:00-17:20</td>
<td><strong>Salon 4 - W.OP1: Magnets</strong></td>
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<tr>
<td>17:20-17:40</td>
<td><strong>Salon 5 - W.OP2: Heating &amp; Current Drive</strong></td>
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<tr>
<td>17:40-18:00</td>
<td><strong>Salon 6 - W.OP3: Blankets &amp; Tritium Breeding: Solid Breeders</strong></td>
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<tr>
<td>19:00-22:00</td>
<td>SOFE 2017 Banquet</td>
<td>Shunfeng Restaurant</td>
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### Schedule Details

- **Announcements**
  - Grand Ballroom

- **Technical Progress of EAST Tokamak**
  - Prof. Yuntao Song, IPP, Chinese Academy of Sciences
  - Grand Ballroom

- **Overview of US ITER Domestic Agency Progress**
  - Graeme Murdoch, Oak Ridge National Laboratory
  - Grand Ballroom

- **Status of IFMIF Project: Is Talking about IFMIF Still Like Talking of Alice in Wonderland?**
  - Dr. Juan Knaster, IFMIF/EVEDA (F4E)
  - Grand Ballroom

- **Salon 1 - W.OA1: Materials II**
  - Integrating Materials Engineering and Design for Fusion
    - Dr. Michael Gorley

- **Salon 2 - W.OA2: Divertors & PFCs: Liquid Metals**
  - A Review of Recent Studies on Liquid Metal Plasma-Facing Components
    - Prof. Yoshi Hirooka

- **Salon 3 - W.OA3: Neutronics & Multiphysics Analysis**
  - Development and Application of Advanced Nuclear Software SuperMC for Fusion
    - Dr. Jing Song
  - Recent Results of Li Experiments in EAST with W Divertor
    - Dr. J.S. Hu
  - SuperMC Benchmark with SINBAD
    - Dr. Lijuan Hao

- **Salon 4 - W.OP1: Magnets**
  - Commissioning of the Wendelstein 7-X In Vessel Control Coils
    - Frank Füllenbach

- **Salon 5 - W.OP2: Heating & Current Drive**
  - The ITER Neutral Beam Test Facility: Recent Advances
    - Fanni Toigo

- **Salon 6 - W.OP3: Blankets & Tritium Breeding: Solid Breeders**
  - Progress in Design Activities Related to the Water Cooled Breeder Blanket for CFETR Phase-1
    - Prof. Songlin Liu
  - Smoothly Varying Injected Neutral Beam Voltage and Current Provides New Capability on the DIII-D Tokamak
    - Prof.心跳

- **Lunch**
  - Shanghai City Bistro / EZO Restaurant

- **W. POS: Poster Session (Wednesday)**
  - Junior Ballroom

- **Break**

- **Salon 1 - W.OP1: Magnets**
  - Evaluation of ITER CS Module OD Band Structure for Lead Supports
    - Kevin Freudenberg

- **Salon 2 - W.OP2: Heating & Current Drive**
  - Design, Test, and Analysis of a Gyrotron Cavity Mock-Up Cooled using Mini-Channels
    - Prof. Laura Savoldi

- **Salon 3 - W.OP3: Blankets & Tritium Breeding: Solid Breeders**
  - Towards a New Generation of High Power High Efficiency Neutral Beam Heating System for the Future Fusion Reactors
    - Alain Simonin
  - Tritium Release from Li4SiO4: The Effect of Material Properties
    - Dr. Guangming Ban

- **Salon 4 - W.OP1: Magnets**
  - Progress and Study on the Superconducting Magnet System of China Fusion Engineering Test Reactor
    - Jinxing Zheng

- **Salon 5 - W.OP2: Heating & Current Drive**
  - Optics and Thermo-Mechanical Analysis of the Accelerator for the DEMO Neutral Beam Injector
    - Piero Agostinetti

- **Salon 6 - W.OP3: Blankets & Tritium Breeding: Solid Breeders**
  - Parametric Analysis of the EU DEMO HCPB Breeding Blanket Thermal-Hydraulic Transient Operation using the GETHEM Code
    - Prof. Roberto Zanino
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:40-09:20</td>
<td>Prospect towards Steady-State Helical Fusion Reactor based on Progress of LHD Project Entering the Deuterium Experiment Phase</td>
<td>Prof. Yasuhiko Takeiri, NIFS/NINS</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>09:20-10:00</td>
<td>Engineering Challenges in W7-X and Preparations for the Second Operation Phase</td>
<td>Prof. Hans-Stephan Bosch, MPI for Plasma Physics</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>10:00-10:20</td>
<td>Break</td>
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</tr>
<tr>
<td>10:20-11:00</td>
<td>Status and Plans on MAST-U</td>
<td>Joseph Milnes, UKAEA</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>11:00-11:40</td>
<td>Progress of Fusion Technology at SWIP toward Reactor</td>
<td>Yong Liu</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>11:40-12:40</td>
<td>Lunch</td>
<td></td>
<td>Shanghai City Bistro / EZO Restaurant</td>
</tr>
</tbody>
</table>

**Salon 1- R.OP1: Diagnostics & Instrumentation II**
- Neutron Diagnostics in the Large Helical Device by Prof. Mitsutaka Itobe
- Joint Plasma Pressure Diagnostic System of Beam Emission Spectroscopy and Ultrafast Charge eXchange Recombination Spectroscopy on EAST Tokamak by Dr. Yi Ya
- Estimation of X-Mode Reflectometry First Fringe Frequency using Neural Networks by Diogo E. Aguiam
- In Situ and Real Time Observation of Tritium Behavior in the Metal by Reversing Associated Particle Spectra of DT Neutron Generator by Dr. Qingjun Zhu
- Managing ITER Diagnostics and Port Plug Engineering Project Risks by Russell Feder

**Salon 2- R.OP2: PMI & Plasma Edge Physics**
- Overview of Plasma Surface Interactions in Tungsten with Helium Plasma Exposure by Brian Wirth
- Multiphysics Simulations of Plasma-Material Interactions during Transient Plasma Events by Prof. Ahmed Hassanein
- Understanding Tungsten Divertor Sourcing, Transport and its Impact on Core Impurity Accumulation in DIII-D High Performance Discharges by Tyler Abrams
- Study of D Retention and Impurity Emission Properties of Oxidized BC Coatings under Deuterium Irradiation in NSTX-U by Felipe Bedoya
- Design, Construction and Installation of Limiter & Divertor of Aditya-U Tokamak by Kaushal Patel

**Salon 3- R.OP3: Tritium Extraction & Control**
- Tritium Extraction from HCLL/WCLL/DCLL PbLi BBs of DEMO and HCLL TBS of ITER by Dr. Marco Utili
- Liquid PbLi Atomization in Vacuum for Tritium and Heat Recovery by Prof. Satoshi Komishi
- Estimation of Tritium Release and Permeation Behavior in Water Cooled Solid Breeder Blanket by Prof. Kazunari Katayama
- Analyses of DEMO Tritium Self-Sufficiency by Basjie Nie
- Validation of Tritium Self-Sufficiency of DEMO by Prof. Satoshi Komishi

**Salon 1- R.OP4: Stellarators**
- Preparation and Commissioning for the LHD Deuterium Experiment by Prof. Masaki Okabe
- Review of Research and Engineering on the H-1 Heliac by Dr. Boyd Blackwell
- HIDRA – A Stellarator for Materials Research by Prof. Daniel Andručyk
- The Quasi-Optical Steady State 10 MW ICRH System of Wendelstein 7-X Commissioning, Plasma Operation, and Future Plans by Torsten Stange
- Mechanical Monitoring Issues in Preparation to Next Step of W7-X Operation by Dr. Victor Bykov
- Prospects for Stellarators based on Additive Manufacturing by Vincente M. Queral

**Salon 2- R.OP5: Experimental Devices II**
- Design and Analysis of an Actively Cooled Window for a High Power Helicon Plasma Source by Dr. Arnold Lumsdaine
- Tokamak Design and Maintenance Scheme Trade Off Application on CFETR by Eric Villedieu
- Study of the Impact of Pre- and Real-Time Deposition of Lithium on Plasma Performance on NSTX by Gustavo P. Canal
- CODAC Core System for ITER Plant System I&C by Franch Di Maio
- Extreme Ultraviolet Spectroscopy Applied to Study RMP Effects on Core Impurity Concentration in EAST by Gernán Vogel
- Development of a Utility Negative Ion Test Equipment with RF Source at ASIPP by Dr. Jianglong Wei

**Salon 3- R.OP6: Safety, Operations, & Maintenance**
- Fusion R&D Activities at INEST by Prof. Jie Yu
- Failure Impact of Crucial Components on DEMO Maintenance Performance and Mitigation Attempts by Martin Mittwollen
- Forensic Analysis of Faulted NSTX-U Inner Poloidal Field Coil by Joseph Petrella Jr.
- Proposed Methodology for Unplanned Repair Scenarios in ITER by Dr. Shanliang Zheng
- Radiation Maps in the ITER Tokamak Complex during Operation by Rafael Juarez
- Cortex: A Standardised Remote Operations Communication System that is Inherently Designed to Accommodate Change by Robert Skilton