

## Session Program

4-8 Jun 2017



# 27th IEEE Symposium on Fusion Engineering

## *M.POS: Poster Session M*

Marriott Shanghai City Center  
555 Xi Zang Road (Middle), Huangpu District Shanghai 200003 China

# Monday 5 June

13:40

## M.POS: Poster Session M

Poster Session | Location: Junior Ballroom

### Real-time Two-dimensional Optical Polarization Properties of the Fusion Reactor First Mirror Based on Active Polarized Beams

**Speaker**

Mr Junli Qi

### Tritium transport analysis for one water-cooled ceramic breeder blanket module of CFETR based on COMSOL

**Speaker**

Mr Dingyu Lao

### Automatic Deployment of a Nuclear Fusion Experimental Data Storage Cluster

**Speaker**

Dr Wei Zheng

### Numerical simulation of particle dynamics in the magnetic mirror

**Speaker**

Mr Hui Wang

### The feasibility of application the existing IVVS concept to CFETR

**Speaker**

Mr ZIBO ZHOU

### Performance test of CICC joint for ITER correction coil

**Speaker**

Dr Yuanyuan Ma

### Optimized Shape of TF Coil

**Speaker**

Wang Zhaoliang

### Preliminary Design for Diagnostic Port Integration at ITER Upper Port #18

**Speaker**

Sunil PAK

### Spectroscopic diagnostics for negative ion source test facility at ASIPP

**Speaker**

lizhen liang

### Thermal Analysis and Test for the Mockup of ITER Radial X-Ray Camera

**Speaker**

jian ge

### Multiple laser system for high resolution Thomson scattering diagnostics on the EAST tokamak

**Speaker**

Dr Xiaofeng Han

**Test upgrade for ITER HTS current leads series production****Speaker**

Dr Chenglian Liu

**Neutronics and thermomechanical analysis of a conceptual shielding blanket for CFETR****Speaker**

Dr Jie Zhang

**Li<sub>2</sub>Be<sub>2</sub>O<sub>3</sub> pebbles prepared via sol-gel method: multifunctional blanket material designed to both tritium breeder and neutron multiplier****Speaker**

Dr Wei Lu

**Progress in the development of CFC/CuCrZr components for HL-2M divertor****Speaker**

Dr Youyun Lian

**The forming die design and experimental research of CFETR Vacuum Vessel shells****Speaker**

Yuncong Huang

**Application of EPICS in HL-2A Host Centralized Control System****Speaker**

Jie Xu

**Recent Development in Structural Design and Optimization of ITER Neutral Beam Manifold****Speaker**

Dr Chengzhi Cao

**Tokamak Size Scaling****Speaker**

Prof. GE LI

**Latest results from the Hybrid Illinois Device for Research and Applications (HIDRA)****Speaker**

Mr Rabel Rizkallah

**An approach to the study of crack initiation at the divertor tungsten target plates of ASDEX Upgrade****Speaker**

Mr Nikola Jaksic

**Design of Ground Plane of NSTX-U Ohmic Heating Coil****Speaker**

Weiguo Que

**Current profile measured by the motional Stark effect polarimeter in the HL-2A tokamak**

**Speaker**  
Mr Wenjin Chen

**Lessons learned on design, manufacturing and commissioning of IRVIS endoscopes prototypes for W7-X divertor temperature monitoring**

**Speaker**  
Didier Chauvin

**Transverse velocity effect on Hunt's flow**

**Speaker**  
Mr Hao Wang

**Final Design and Fabrication of the TDU Scrapper for Wendelstein 7-X**

**Speaker**  
G. Douglas Loesser

**Numerical Simulation Research on the New Design Scheme of the EAST Divertor using Multi-physics Coupling Method**

**Speaker**  
Dr Lei LI

**Progress of Auxiliary Systems for Linear IFMIF Prototype Accelerator (IFMIF)**

**Speaker**  
Mr Giuseppe Pruneri

**Modeling of advanced nuclear fuel cycles incorporating hybrid fission/fusion devices.**

**Speaker**  
Prof. Martin Nieto-Perez

**PPPL's Project Management Office: Work Planning System**

**Speaker**  
Ms Soha Aslam

**The measurement of visible bremsstrahlung emissivity profiles on HL-2A**

**Speaker**  
Mr Liu Liang

**Design of a local oscillator for the 2.45GHz/4MW LHCD system on EAST**

**Speaker**  
Dr ZHU Liang

**Design and Analysis of the CFETR TF Coils with REBCO tapes**

**Speaker**  
Dr Yong Ren

**COMPUTATIONAL MODELING AND CHARACTERIZATION OF PLASMA PULSED GUN FOR PLASMA WALL INTERACTION APPLICATIONS**

**Speaker**  
Mr Christian Gómez-Samaniego

**The Design of DRAGON-V Loop for Key Technique Verification of Liquid PBLI Blanket**

**Speaker**  
Dr zhiqiang zhu

**Numerical-experimental benchmarking of a probabilistic code for prediction of Voltage Holding in High Vacuum, for ITER N-NBI.**

**Speaker**  
Nicola Pilan

**Advances in Technology, Performance, and Power and Polarization Measurements for the ECH System on DIII-D**

**Speaker**  
Dr Mirela Cengher

**Effect of Rapid-forging and annealing on the properties of W-TaC alloys**

**Speaker**  
Dr Fan Feng

**Improvement of the plasma current density profile by the polarimeter/interferometer system on the EAST tokamak**

**Speaker**  
Xiang Zhu

**Implementation of an Excitation Controller for an Impulse Motor-Generator**

**Speaker**  
Mr Chi Wang

**The Design on Pulse Distributor and Its On-line Status Diagnosis for ITER PF Power Supply**

**Speaker**  
Dr Xiaojiao Chen

**Insulation Systems for the ITER Central Solenoid Modules**

**Speaker**  
Nikolai Norausky

**Test Results of ITER 52-kA HTS Current Lead Prototypes**

**Speaker**  
Chenglian Liu

**The enhancement of high temperature deformation resistance for V-4Cr-4Ti alloys**

**Speaker**  
Dr Pengfei Zheng

**Study on the effect of Pressure on the Electrical insulation of Plasma-sprayed Alumina Coating**

**Speaker**  
Mrs Rongrong Luo

**The dynamic testing and analysis of copper and copper alloy in divertor working temperature range**

**Speaker**  
Mr X. Mao

**Study on the Welding Process of the Vacuum Vessel Mock-up for CFETR**

**Speaker**

Mr ZHIHONG LIU

**Reverse Processing of CFETR Vacuum Vessel Mock-up****Speaker**

Haibiao Ji

**Application of Contour Fitting Method in CFETR VV Assembly****Speaker**

Mr Xiaosong Fan

**ENGINEERING METHODOLOGY TO PROVIDE INTEGRITY OF THE ITER PORT PLUG ON-BOARD COMPONENTS DYNAMICALLY RESPONDING TO PLASMA TRANSIENTS COMBINED WITH SEISMIC EVENTS****Speaker**

Mr Anatoly Panin

**Physics and engineering progress of CFETR integration design****Speaker**

Xiang Gao

**Conceptual design of the cryogenic system for CFETR****Speaker**

Mr Xiaogang Liu

**Assembly methodology and tools developed for Tore Supra transformation into WEST platform****Speaker**

Cyril BRUN

**A construction design of helium recovery and purification system on HL-2M****Speaker**

Mr Xin Chen

**Research on Brazing technique of tungsten materials and reduced active ferritic-martensitic steels****Speaker**

Jianbao WANG

**The in-vessel protection components for ITER First Plasma operation****Speaker**

Dr Ryan Hunt

**Control and protection system for the W7-X ECRH plant - experience from the first and plans for the next campaign****Speaker**

Stefan Marsen

**Mechanism for Plasma Fusion with Major Ionic Species at Only Ten Million Kelvins****Speaker**

Prof. Tianxi Zhang

**Particle model of the driver of ITER NBI system**

**Speaker**

Nicola Ippolito

**Polarizer designed for the electron cyclotron resonance heating system on J-TEXT****Speaker**

Dr C.H. Liu

**The Design of Real-time Communication System Based on RFM and MRG-Realtime for EAST****Speaker**

Ms Li Chunchun

**Modeling of Ohmic Disruptive Discharge in J-TEXT Using the Tokamak Simulation Code****Speaker**

Dr Jinhong Yang

**Lithium Evaporation System Design for the NSTX-Upgrade Fusion Device****Speaker**

Dr Dang Cai

**Simulation study of large power handling in the divertor for CFETR phase II****Speaker**

Dr Xiaoju Liu

**The effect of He nanobubble on inhibiting D trapping in radiation damaged tungsten****Speaker**

Mr Quan Bai

**Preliminary Assessment of Tungsten as an Optional Plasma Facing Material in CFETR****Speaker**

Mr Guoliang Xu

**Suppression of tungsten impurity by lithium injection in tungsten divertor on EAST****Speaker**

Wei Xu

**A Quasi-Periodic Linear Feeder for the Impurity Granular Injection on DIII-D****Speaker**

Alexander Nagy

**Design and Analysis of the High Power DC Water-Cooled Busbar Connecting Type****Speaker**

Mr Zhongma Wang

**New features of the W7-X Safety Control system for OP 1.2****Speaker**

Dr Reinhard Vilbrandt

**Preliminary Probabilistic Safety Assessment of Tokamak-type Fusion Power Plants In Conceptual Design Stage**

**Speaker**

Dr Shanqi Chen

**Safety impact of the Be-steam reaction during in-box LOCA on the WCCB blanket for CFETR****Speaker**

Ms Xiaoman Cheng

**Sensitivity Studies of Tritium Transport to WCSB of CFETR****Speaker**

Yang Xiang

**Improving accuracy of interceptive current measurement for use in IFMIF/EVEDA accelerator****Speaker**

Dr Yosuke HIRATA

**WCLL BLANKET MODULE STRUCTURE VARIATION INFLUENCE ON NEUTRON ACTIVATION INVENTORIES****Speaker**

Andrius Tidikas

**Study on considerable defects introduced in tritium breeding material  $\text{Li}_2\text{TiO}_3$  by annealing in vacuum****Speaker**

Dr Qiang Qi

**The numerical simulation for the heat transfer enhancement experiments of the HCCB-TBM first wall****Speaker**

Mr Desheng Cheng

**A Method for Diagnosis of Current in PF Magnet based on Inversion of Measured Magnetic Field****Speaker**

Mr Zichu Huang

**Mechanical Designs for High Magnetic Field Tests for ITER Applications****Speaker**

Dr Luis Delgado-Aparicio

**Thermal Strain Measurement of EAST Tungsten Divertor Module with Bare FBG Sensors****Speaker**

Mr Xingli Wang

**EM Analysis of ITER Diagnostics Upper Port Plugs 14 (US port) and its in-Port components during Plasma Disruptions****Speaker**

Mr russell feder

**Development of primary vacuum windows for ITER diagnostics****Speaker**

Dr Victor Udintsev

**Current Status and Progress on the Shield Blanket Design of CFETR Reactor****Speaker**

Dr Liu Changle

**NEUTRONIC SHIELDING DESIGN OF THE ITER EC UPPER LAUNCHER****Speaker**

Peter Spaeh

**Concept Design of GDT-Based Fusion Neutron Source for Improving the Q with High Field Neutral Beam Injection****Speaker**

Dr Dehong Chen

**Divertor heat flux study of H-mode with NBI in EAST****Speaker**

Mrs Bo Shi

**Time Synchronization Network for Poloidal Field Power Supply Control System Based on IEEE 1588****Speaker**

Mrs Shiyong HE

**Integral Benchmark Experiments on a Large Copper Block using GELINA accelerator to validate natural Cu neutron inelastic scattering cross sections from different neutron cross section databases.****Speaker**

Dr Mario Pillon

**SAFETY ANALYSIS OF HELIUM COOLED CERAMIC BREEDER TEST BLANKET SYSTEM****Speaker**

Dr Jiangtao Jia

**ITER PF6 Dummy Double Pancake Winding****Speaker**

Dr Wei Wen

**Analysis of Short Circuit Fault for 4.6GHz/6MW LHCD High Voltage Power Supply****Speaker**

Mr Yang Zhigang

**Design of Inverter Module on RMP coil Power Supply in EAST****Speaker**

Dr Deyong Song

**Designing a Power Module for Compressed Plasma****Speaker**

Dr Zhiyuan Weng

**Thermal and mechanical analysis of the Wendelstein7-X cryo-vacuum pump plug-in****Speaker**

Dr Zhongwei Wang

### **Electronic Transport Properties of NbTi in Cooper Matrix Superconducting Wires for ITER Applications**

**Speaker**

Mrs Alina Elena Niculescu

### **Conceptual Design of a Bidirectional Hybrid DC Circuit Breaker for Quench Protection of CFETR**

**Speaker**

Mr Shusheng Wang

### **Design a Suitable Test Scheme for Triggering Bypass Protection Test of ITER PF Converter Unit**

**Speaker**

Dr Xiuqing Zhang

### **Transient stability analysis of a flexible generator used in fusion power plant**

**Speaker**

Dr Hua Li

### **Servo-Power-Controller Design Based on EPICS**

**Speaker**

Yinchi Duan

### **The Development of a monitoring system for poloidal Field Power Supply**

**Speaker**

Dr Lili Zhu

### **Operation Analysis of Impulse Current Mode on ITER High Power DC Test Platform with SVC System**

**Speaker**

Mr Xudong Wang

### **Rectangular Magnetic Sensor Array for Current Measurement Based on Numerical Quadrature Method**

**Speaker**

Mr Qi Guo

### **Conceptual design of the torus cryopump for CFETR**

**Speaker**

Dr Chen Chen

### **A rapid non-destructive inspection method applied to EAST lower divertor by IR thermography technique**

**Speaker**

Mr Yanwei Liu

### **The reliability design of CFETR divertor**

**Speaker**

Dr Lei Cao

### **RAMI analysis for PFCs of EAST divertor**

**Speaker**

Yang Zhang

**NSTX-U IN-VESSEL CONTROL COILS DESIGN CONCEPT**

**Speaker**

Mr Neway Atnafu

**Upgraded Design of EAST Lower Divertor**

**Speaker**

Mr Pengfei Zi

**Research and Analysis on the Compatible Structures of the CFETR Divertor Based on the Remote Handling Requirements**

**Speaker**

Dr Huaichu Dai

**Experimental Study on Natural Circulation Heat Transfer of Square Channel in Water Cooled Blanket**

**Speaker**

Mr hui bao

15:40