

**Session Program**

22-27 Oct 2018

**27th IAEA Fusion Energy Conference - IAEA CN-258**

***P7 Posters***

Mahatma Mandir Conference Centre  
Gandhinagar (nearest Airport: Ahmedabad), India

# Friday 26 October

08:30

## P7 Posters

Poster Session | Location: Mahatma Mandir Conference Centre, Gandhinagar (nearest Airport: Ahmedabad), India

### Negative ion beam source physics as a complex system: identification of main processes and key interdependence

Speaker

Dr Vanni Antoni

### SST-1 Cryogenics Requirements and the Way Forward

Speaker

Dr Vipulkumar Tanna

### Stability, Transport, and Active MHD Mode Control Analysis of KSTAR High Performance Plasmas Supporting Disruption Avoidance

Speaker

Dr Young-Seok Park

### Implementation of the Spherical Tokamak MEDUSA-CR: Stage 1

Speaker

Prof. Jaime Mora-Meléndez

### Design optimization of Helium cooling systems for Indian LLCB TBM

Speaker

Mr Brijesh Kumar Yadav

### The Scrape-off Layer plasma transport physics simulation activity for Indian tokamaks Aditya and SST-1

Speaker

Dr Devendra Sharma

### Development of a Prototype Collaborative Robot for Fusion Remote Handling Applications

Speaker

Mr Naveen Rastogi

### Early definition of the maintenance plan is essential to achieve an economic EU DEMO

Speaker

Mr Oliver Crofts

### Collisional Merging of a Field-Reversed Configuration in the FAT-CM Device

Speaker

Prof. Tomohiko Asai

### Power Coupling of Lower Hybrid Fast Wave in VEST

Speaker

Dr Sun-Ho Kim

### Velocity Profile and modulation frequency of Ions in a Magnetized Plasma Sheath using kinetic trajectory simulation method

Speaker

Dr Raju Khanal

**Timing and Synchronization for Integrated Operation of Large Volume Plasma Device****Speaker**

Mr Ritesh SUGANDHI

**Overview of Recent Gyrotron R&D towards DEMO within EUROfusion Work Package Heating and Current Drive****Speaker**

Gerd Gantenbein

**Simulation Study of the Impurity Radiation in the Quasi-Snowflake Divertor with Ne Seeding for CFETR****Speaker**

Prof. Minyou Ye

**Pressure balance in a low collisionality tokamak scrape-off layer****Speaker**

Mr Randy Churchill

**Plasma transport in toroidally discontinuous limiter generated 3D SOL configurations of Aditya tokamak****Speaker**

Mr Bibhu Prasad Sahoo

**Design of the TF/PF Bus Bar lay out and its connections with Current Feeder System of SST1 Tokamak****Speaker**

Mr bharatkumar doshi

**Conceptual Design of a Compact Helical Fusion Reactor FFHR-c1 for the Early Demonstration of a Year-long Electric Power Generation****Speaker**

Dr Takuya Goto

**SOL/Divertor Plasma Simulation of Diverging Magnetic Field Configurations for Advanced Divertors****Speaker**

Dr Satoshi Togo

**Advanced Assembly Technology of the Superconducting Coils in JT-60SA Tokamak****Speaker**

Dr Yusuke Shibama

**the ITER plasma current termination phase: physics constraints on control****Speaker**

Dr Francesca Poli

**Observation of Heat Load on the Castellated Tungsten Block by Back-Scattered Particles from Intentionally Misaligned Protruding Edge****Speaker**

Dr Suk-Ho Hong

**Optimising the ITER 15MA DT Baseline Scenario by Exploiting a Self-Consistent Free-Boundary Core-edge-SOL Workflow in IMAS****Speaker**

Dr Florian Koechl

**R&D for reliable disruption mitigation in ITER**

**Speaker**  
Dr Michael Lehnen

### **Development and experiment of PbLi facilities for fusion nuclear technology**

**Speaker**  
Dr Dehong Chen

### **Synthetic edge and SOL diagnostics - a bridge between experiments and theory**

**Speaker**  
Dr Anders Henry Nielsen

### **Pump Characterization of 80 K Liquid Nitrogen Booster System for SST-1**

**Speaker**  
Mr Gaurang Mahesuria

### **JET Upgraded Diagnostic Capabilities and Scientific Exploitation in Support of Deuterium-Tritium Operation**

**Speaker**  
Dr Joao Figueiredo

### **Bifurcation of Perpendicular Rotation and Field Penetration at the Transition to RMP-induced ELM-crash Suppression**

**Speaker**  
Dr Jaehyun Lee

### **Intrinsic Toroidal Rotation for Ohmic L-mode Plasmas in KSTAR**

**Speaker**  
Dr Sang Gon Lee

### **A toroidal confinement facility study and eventual experimental device to investigate a range of liquid metal divertor and first-wall concepts**

**Speaker**  
Mr Thomas Brown

### **Thermal-hydraulic Characteristics Study of Superconducting Magnets of SST-1**

**Speaker**  
Mr Upendra Prasad

### **Simulations of Tokamak Boundary Plasma Turbulent Transport**

**Speaker**  
Xueqiao Xu

### **Electron Impact Excitation of $W^{40+}$ to $W^{43+}$ Ions: Cross Section and Polarization**

**Speaker**  
Ms Neelam Shukla

### **The physics basis for a solution to the power and particle exhaust problem of a next step device**

**Speaker**  
Dr Marco Wischmeier

### **Assessment and optimization of the cavity thermal performance for the European Continuous Wave gyrotrons**

**Speaker**  
Prof. Laura Savoldi

**Design and Thermal Fluid Structure Interaction Analysis of Liquid Nitrogen Cryostat of Cryogenic Molecular Sieve Bed Adsorber for Hydrogen Isotopes Removal System**

Speaker  
Ms Gayathri V.

**Maintenance experience of 315kW Electrical Motor of Helium screw compressor in 1.3kW Helium Refrigerator/Liquefier Plant**

Speaker  
Mr Dickens Christian

**Characteristics of Asymmetric (low-field-side and high-field side) Divertor Detachment in KSTAR L-mode Plasmas**

Speaker  
Mr Jae-Sun Park

**ELM Suppression and Internal Transport Barrier Formation by Krypton Seeding in KSTAR Plasmas**

Speaker  
Mr Juhyeok Jang Jang

**Wide divertor heat-flux width in ITER from self-organization between the neoclassical and turbulent transports across the separatrix surface**

Speaker  
Dr Choongseok Chang

**Experimental observation and modelling of high-Z impurity transport by tungsten powder injection in KSTAR plasmas**

Speaker  
Mr Inwoo Song

**Integrated Modeling of Core, Edge Pedestal and Scrape-Off-Layer for High Beta<sub>N</sub> Steady-State Scenarios on DIII-D**

Speaker  
Dr Richard J. Buttery

**Performance assessment of tightly-baffled long-leg divertor geometries in the ARC reactor concept**

Speaker  
Mr Michael Wigram

**Ion Inertial Effects on Three-dimensional Filament Dynamics**

Speaker  
Dr Hiroki Hasegawa

**Comparative analysis of the SOL properties for the various magnetic configurations proposed for the DEMO divertor**

Speaker  
Dr Vincenzo PERICOLI RIDOLFINI

**The Influence of Toroidal Magnetic Field Growth on Plasma Performance in the Spherical Tokamak Globus-M/-M2**

Speaker  
Dr Vladimir Minaev

**The effect of electron cyclotron heating on thermal and fast-ions transport in high beta-poloidal discharges at KSTAR**

**Speaker**  
Dr Si-Woo Yoon

### **Multi-physics modeling of the long-term evolution of plasma-exposed surfaces**

**Speaker**  
John Canik

### **Thermal Diffusivity Measurement of Functional & Structural Materials for Fusion Blanket Application**

**Speaker**  
Mr Aroh Shrivastava

### **Error field experiment and analysis in SST-1**

**Speaker**  
Mr Someswar Dutta

### **Development of a plasma scenario for the EU-DEMO: current activities and perspectives**

**Speaker**  
Dr Mattia Siccino

### **Conversion of electrostatic Bernstein waves in the SCR-1 Stellarator using a full wave code**

**Speaker**  
Dr Ivan Vargas-Blanco

### **Time Resolved Triton Burnup Measurements Using the Scintillating Fiber Detector on KSTAR**

**Speaker**  
Mr Jungmin Jo

### **Experimental observations of the plasma shape effect on the RMP-ELM coupling for optimization of the KSTAR ELM-crash control**

**Speaker**  
Dr YoungMu Jeon

### **Solenoid-free start-up utilizing outer PF coils with the help of EBW pre-ionization and change of external inductance in VEST**

**Speaker**  
Mr HyunYeong Lee

### **Simulation of Beryllium Erosion and Surface Damage Under ITER-like Transient Plasma Heat Loads**

**Speaker**  
Dr Igor Kupriyanov

### **First Analysis of the Updated ITPA Global H-Mode Confinement Database**

**Speaker**  
Dr Geert Verdoolaege

### **Effects of Reconnection Downstream Conditions on Electron Parallel Acceleration during Merging Start-up of Spherical Tokamak**

**Speaker**  
Prof. Michiaki Inomoto

### **Poloidal Flows, Asymmetries and Multiscale Organisation in Interplaying Core-edge-SOL Turbulent Plasmas**

**Speaker**  
Dr David Zarzoso

**Exact conservative solutions of fluid models for the scrape-off layer as the ancestors of blobs?****Speaker**

Prof. João P. S. Bizarro

**Development of DEMO-FNS fueling systems and modeling hydrogen isotopes distribution via «FC-FNS» simulation code****Speaker**

Dr Sergey Ananyev

**Simulation of cross-separatrix edge plasma transport with the continuum gyrokinetic code COGENT****Speaker**

Dr Mikhail Dorf

**Robust Burn Control in ITER Under Deuterium-Tritium Concentration Variations in the Fueling Lines****Speaker**

Prof. Eugenio Schuster

**Internal Structure of MHD Fluctuations for Various Current Density Profiles during Current Rise Phase of Ohmic Discharge in VEST****Speaker**

Mr Jeong-hun Yang

**Evolution of locked mode under the existence of non-axisymmetric fields in KSTAR****Speaker**

Dr Jayhyun Kim

**Progress in design of DEMO-FNS hybrid facility****Speaker**

Yuri Shpanskiy

**Progress in Design and Fabrication of Current and Helium Feeding System for JT-60SA Superconducting Coils****Speaker**

Mr Kaname Kizu

**Non-Invasive Plasma Density Measurement in a 13.56 MHz Magnetized Capacitive Coupled RF discharge****Speaker**

Ms shikha Binwal

**Implementation of 3-D effects of the ITER plasma-facing components in a 2-D real-time model-based approach for wall heat flux control on ITER****Speaker**

Dr Himank Anand

**Development of Capacitively-Coupled Compline Antennas for Current Drive in Tokamaks****Speaker**

Prof. Yuichi Takase

**Assessment of Alternative Divertor Configurations as an Exhaust Solution for DEMO****Speaker**

Dr Holger Reimerdes

**Implications of Uncertainties on the European DEMO design**

**Speaker**  
Dr Hanni Lux

### **Thermo-structural and heat load analysis of SST-1 Superconducting coils**

**Speaker**  
Mr Arvind Tomar

### **Continuum Gyrokinetic Simulations of NSTX SOL Turbulence with Sheath-Limited Model Geometries**

**Speaker**  
Mr Ammar Hakim

### **Progresses at CEA on EU DEMO reactor cryomagnetic system design activities and associated R&D**

**Speaker**  
Dr Louis ZANI

### **Effects of Lithium Coating of Chamber Wall on the STOR-M Tokamak Discharges**

**Speaker**  
Prof. Chijin Xiao

### **Advances in modelling of plasma pedestal behaviour and ELM control in ITER reference plasma scenarios**

**Speaker**  
Dr Alberto Loarte

### **Recent progress in developing Gamma Spectrometer in ITER**

**Speaker**  
Dr Dmitry Gin

### **Self-consistent modelling of a liquid metal pool-type divertor**

**Speaker**  
roberto zanino

### **Key Considerations in the Power Extraction from Fusion Reactors**

**Speaker**  
Mr Piyush Prajapati

### **Operational Results and Troubleshooting in Current Feeder System for SST-1**

**Speaker**  
Mr Atul Garg

### **Preventive measures to avoid electrical arcing incidences in SST-1 PF current leads**

**Speaker**  
Ms Swati Roy

### **Model Development and Electromagnetic Analysis of Vertical Displacement Event for CFETR Helium Cooled Solid Blanket**

**Speaker**  
Prof. Hongli Chen

12:30