

Agenda of 27th International Conference on Plasma-Surface Interactions in Controlled Fusion Devices (PSI) May 17 to 22 2026 in Regensburg Germany

Track Legend:	
A.	Physics Processes at the Plasma Material Interface
B.	Material Erosion, Migration, Mixing, and Dust Formation
C.	Plasma Fueling, Particle Exhaust and Control, Tritium Retention
D.	Wall Conditioning and Tritium Removal Techniques
E.	Impurity Sources, Transport and Control
F.	Edge and Divertor Plasma Physics
G.	Power Exhaust, Plasma Detachment and Heat Load Control
H.	Far SOL Transport and Plasma Wall Interaction in Main Chamber
I.	Plasma Edge and First Wall Diagnostics
J.	Plasma Exhaust and Plasma Material Interactions for Fusion Reactors
	Review
	Oral
	Invited
	Poster Session
	Break / Lunch
	Other

All types of oral presentations are invited to present their topics also as posters in the poster sessions. The Wednesday morning presentations can be presented in the Thursday poster session.

Sunday 17

Time	Title	Speaker	Chapter
12:00 to 17:20	Registration		
13:00	An introduction to Plasma Wall Interactions	Sebastijan Brezinsek (FZJ)	
14:00	Introduction to Scrape Off Layer Turbulent Transport	Peter Manz (University Greifswald)	
15:00	*** Break ***		
15:20	Dust in Fusion Devices: 40 years of Research	Marek Rubel (Royal Institute of Technology, Sweden)	
16:20 to 17:20	Tutorial on plasma power exhaust physics modeling with HEAT	Tom Looby (Commonwealth Fusion Systems)	

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Monday 18

Time	Title	Speaker	Track
8:15	Opening/Welcome	tba	
8:50	Modeling first wall erosion and impurity migration: from layer formation to W-core ingress	Klaus Schmid (MPI Garching)	B
9:30	Integrated modeling of wall material evolution and the boundary plasma transport for EAST long-pulse discharges	Guoliang Xu (ASIPP)	B
9:50	Understanding the sputtering phenomena of complex surfaces	Frederic Granberg (University Helsinki)	B
10:10	*** Break ***		
10:40	Erosion and Screening of Tungsten in the JET divertor during inter/intra-ELM Periods in DT Ne-seeded plasma	Alexander Huber (FZJ)	A
11:10	Time-resolved simulation of erosion on tungsten-coated divertor plate in the Large Helical Device using ERO2.0	Mamoru Shoji (National Institute for Fusion Science)	B
11:30	Refining High-Z Impurity Sourcing and Transport Models for Mixed Material Plasma-Facing Component Operations at DIII-D	David Donovan (University of Tennessee-Knoxville)	B
11:50	Tungsten neoclassical temperature screening in the periphery of ASDEX Upgrade plasmas	Athina Kappatou (MPI Garching)	E
12:20	*** Lunch ***		
13:20	Physics basis and status of the ITER tungsten First Wall	Richard Pitts (ITER Organization)	J
13:50	Study of Charge-exchange Neutral Distribution and its Impact on First wall Erosion in EAST	Jin Guo (ASIPP)	H
14:10	Impact of turbulent SOL fluctuations on tungsten sources in ASDEX Upgrade	Henri Kumpulainen (FZJ)	E
14:30	3D numerical modeling of W erosion and migration in WEST plasma: impact of magnetic ripple on erosion patterns and core contamination	Guido Ciraolo (IRFM CEA)	E
14:50	Evaluating the dominant tungsten erosion source during limiter start-up on ASDEX Upgrade	Jörg Hobirk (MPI Garching)	E
15:20	Kinetic effects on tungsten impurity transport and divertor leakage mechanisms under different divertor conditions	Hui Wang (IPP Hefei)	E
15:50	*** Break ***		
16:10 to 18:40	Postersession 1 - Tracks A, B, C, D, E, F and G		
19:00 to 22:00	Reception		

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Tuesday 19

Time	Title	Speaker	Chapter
8:00	Cracking and local ageing of tungsten plasma facing components – does it matters?	ALAN DURIF (CEA)	J
8:40	Overview of plasma wall interactions in the new high particle fluence campaign of WEST operated with cold divertor plasma conditions	Jonathan Gaspar (Aix Marseille Univ., CNRS, IUSTI)	G
9:10	Thermal-gradient effects on recrystallization and grain coarsening in fusion-relevant tungsten monoblocks: a phase-field study	Narguess Nemati (Aarhus University)	J
9:30	Qualification of plasma-facing materials via public and private sector experiments in DIII-D	Florian Effenberg (PPPL)	A
9:50	*** Break ***		
10:20	Energy Balance and Surface Diagnostics of Runaway Electron Beam Termination in the TCV Tokamak	Marta Padrini (EPFL)	I
10:50	Coupling Microstructural Evolution Simulations to Material Property Degradation Predictions for Plasma-Facing Materials	Stephanie Pitts (Idaho National Laboratory)	J
11:10	Tungsten heavy alloys for application as plasma facing material in fusion devices	Johann Riesch (MPI Garching)	J
11:30	An overview of Lithium and PSI/PMI results from the HIDRA Team	Daniel Andruczyk (University of Illinois Urbana-Champaign)	J
11:50	Heat and impurity ion fluxes on the ITER first wall at high far SOL transport in ITER burning plasmas	Srikanth Sureshkumar (CEA)	H
12:20	*** Lunch ***		
13:20	Validation of high-fidelity physics improvement in SOLPS-ITER for detached JET-ILW L-mode hydrogenic plasmas	Ray Chandra (Aalto)	G
13:50	Overview of Divertor and SOL Physics Results Following the Installation of the Tungsten Divertor in KSTAR	Hyungho Lee (KFE)	G
14:20	Ion temperature measurements on the lower divertor of the WEST tokamak from attached plasmas to detached and X-point radiator regimes	James Gunn (CEA)	F
14:40	SOLPS-ITER modelling of JET-ITER baseline discharges	Ou Pan (MPI Garching)	G
15:00	Comparative study of divertor detachment and tungsten screening in deuterium and helium plasmas on EAST	Rui Ding (IPP, Chinese Academy of Sciences)	F
15:30	Dynamics of the X-point radiator formation in the WEST tokamak	Hao YANG (CNRS)	G
16:00	*** Break ***		
16:20 to 18:50	Postersession 2 - Tracks A, B, D, F, H, I and J		

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Wednesday 20			
Time	Title	Speaker	Chapter
8:00	Stellarator island divertor physics in Wendelstein 7-X: Current understanding and remaining challenges towards a reactor exhaust concept	Felix Reimold (MPI Garching)	F
8:40	An Overview of Divertor Research in LHD	Gen Motojima (National Institute for Fusion Science)	C
9:10	Explaining observed potential and drift phenomena in Wendelstein 7-X with the mean-field Braginskii model	Tobias Tork (MPI Garching)	F
9:30	*** Break ***		
10:00	The PULSE regime: pellet-utilized long-pulse high-performance operation in W7-X	Andreas Dinklage (MPI Garching)	C
10:20	Divertor dynamics of pellet-fueled discharges in DIII-D	Sophie Gorno (ORNL)	C
10:50	Integration of high normalized beta core with divertor detachment in DIII-D	Huiqian Wang (General Atomics)	G
11:10	Plasma-Neutral Interactions and Atomic Processes in Detached Divertors under High-Density Transient Pulses	Yuki Hayashi (University of Tokyo)	G
11:40	Collisional sheath impact on ITER divertor plasma and power exhaust	David Tskhakaya (IPP CAS)	F
12:00	Unprecedented characterisation of ion kinetics in the tokamak divertor from attached to detached regimes	Richard Ducker (EPFL)	F
12:20 to 13:50	*** Lunch ***		
start 14:00	Outing		
start 17:00	Football		
after	Beergarden		

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Thursday 21

Time	Title	Speaker	Chapter
8:00	Progress in understanding and modelling of fuel retention in view of future fusion devices with metallic walls	Dmitry Matveev (FZJ)	C
8:40	He and D retention in bulk-W lamellae from the JET divertor measured by Laser-Induced Desorption with melting	Mirosław Zlobinski (FZJ)	C
9:00	Hydrogen co-deposition with fusion-relevant materials	Stepan Krat (NRNU MEPhI)	B
9:30	Simultaneous self-damaging and deuterium plasma exposure leading to increased deuterium retention in tungsten	Anže Založnik (UCSD)	J
9:50	*** Break ***		
10:20	X-point radiation stability, operational space and performance impact in DIII-D H-mode discharges	Filippo Scotti (Lawrence Livermore National Laboratory)	G
10:50	Time-dependent SOLPS-ITER simulations of type-I ELMs in ASDEX Upgrade H-mode plasmas: experimental validation and impact on particle exhaust	Antonello Zito (MPI Garching)	F
11:10	Validating edge plasma simulations in TCV: a multi-diagnostic, experiment-driven approach	Elena Tonello (SPC - EPFL)	F
11:30	Evaluating trade-offs in integrated power exhaust solutions for next-step devices through multi-machine projections of the separatrix operating space	Bart Lomanowski (Oak Ridge)	F
11:50	Unified Scaling Laws Linking Gas Puffing Rates and Separatrix Quantities: A Multi-Machine Empirical Study	Matteo Moscheni (Gauss)	C
12:10	*** Lunch ***		
13:10	Performance enhancement through real time wall conditioning and profile modification : A cross configurational analysis of Impurity Powder Dropper Experiments	Robert Lunsford (PPPL)	D
13:40	Effects of low-Z powder injection on wall recycling, impurity content, and ELM behavior in KSTAR with a W divertor	Hanna Schamis (PPPL)	D
14:10	Recycling Control for Long-Pulse Plasma Confinement: Statistical Evidence and a 1000 s H-Mode in EAST	Yaowei Yu (IPP, Chinese Academy of Sciences)	F
14:30	Comparing the effectiveness of non-uniform and uniform glow-discharge boronisation in full-tungsten devices in support of ITER	Sehoon An (MPI Garching)	D
15:00	Efforts for H-mode plasma achievement without low-Z material coating in EAST with full metal walls	Jiansheng Hu (ipp; Chinese Academy of Sciences)	D
15:30	*** Break ***		
15:50 to 18:00	Postersession 3 - Tracks B, C, E, G and J		
18:30 to 23:00	Conference Dinner (boats leave at 19:00h)		

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Friday 22			
Time	Title	Speaker	Chapter
8:00	Alternative divertor research – from physics studies to reactor implementation	Christian Theiler (EPFL-SPC)	G
8:40	Negative Triangularity as a Reactor-Relevant Scenario: High-Performance Detached Plasmas on TCV Leveraging Alternative Divertor Configurations	Garance Durr-Legoupil-Nicoud (EPFL)	G
9:00	Physics basis of stationary power exhaust in the X-Point Target divertor configuration	Massimo Carpita (SPC-EPFL)	G
9:30	*** Break ***		
09:50 to 12:20	Postersession 4 - Tracks F, G and I		
12:20	*** Lunch ***		
13:20	Filamentary transport in Quasi-Continuous Exhaust and detached X-Point Radiator regime simulations	Wladimir Zholobenko (MPI Garching)	F
13:50	Tokamak boundary turbulence of detached plasmas with kinetic neutrals	Diego Oliveira (CEA - IRFM)	F
14:10	Accounting for cross-field transport and neutral recycling in a Lengyel-like detachment model	Thomas Body (Commonwealth Fusion Systems)	G
14:30	Near scrape-off layer decay lengths in D, T and DT plasmas on JET	Peter John Ryan (UKAEA)	G
15:00	Pedestal origin, SOL transport and extrapolation of small-ELM energy flux in ITER and SPARC	Renato Perillo (UCSD)	J
15:20	Closing		