

THURSDAY 10 APRIL

08:50 GENERAL INFORMATION OF THE DAY

09:00 **M. Gatu Johnson** – Development of an inertial confinement fusion platform to study nuclear reactions relevant to nuclear astrophysics

09:45 **D. Verscharen** - In-situ measurements of space plasma: recent progress and future challenges

10:15 **J. Xiao** - First Experimental Results of Multi-physics Parameter Diagnosis in a MA-class Dense Plasma Focus

10:35 – 11:10 COFFEE BREAK

11:10 **I. Abramovic** - Advancing Synthetic Diagnostics for Plasma Control and Pulse Planning in SPARC

11:40 **Prize award: Y. Wan** - Exploring the key subtleties: a powerful tool for probing laser-plasma wakefield dynamics

12:10 **K. Munechika** - Synthetic framework for ITER bolometer performance assessment

12:30 **F. Federici** - Improved performance of IRVB foils to image low- to moderate-temperature plasma radiation

12:50 **J. Zhao** – Development of the 18MJ pulsed power system of SPERF

13:10 CONFERENCE CLOSURE AND STUDENT PRIZE AWARD

13:30 – 15:00 LATE LUNCH IN DUO HOTEL

Lunch boxes available for those leaving early.

Register at the welcome desk in advance.

16:00 – 18:00 VISIT OF IPP

Registration at the welcome desk.

Address: U Slovanky 1746/1, 182 00 Prague 8

CONFERENCE THEMATICS

- *Magnetic Confinement Fusion (MCF)*
- *Beam Plasmas and Inertial Fusion (BPIF)*
- *Low Temperature and Dusty Plasmas (LTDP)*
- *Basic Space and Astrophysical Plasmas (BSAP)*

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6TH EUROPEAN CONFERENCE ON PLASMA DIAGNOSTICS

7– 10 APRIL 2025
PRAGUE, CZECHIA



Organized by
Institute of Plasma Physics of Czech Academy of Sciences

SPONSORED BY:



SUNDAY 6 APRIL

17:00 – 19:00 WELCOME RECEPTION

MONDAY 7 APRIL

08:00 REGISTRATION OPENING

08:30 OFFICIAL OPENING

09:00 C. Sozzi - Diagnostics for large tokamaks: from JET to JT-60SA

09:45 M. Kocan - Progress on ITER diagnostics

10:15 P. Bilkova - Diagnostics for COMPASS Upgrade tokamak

10:35 – 11:10 COFFEE BREAK

11:10 L Hayes - The Flaring Sun: X-ray Diagnostics of Solar Flares with Solar Orbiter

11:40 A. Goussarov - Long term operation of the Fibre Optics Current Sensor at JET

12:00 J. Feng - Optical emission spectroscopy diagnostics of novel DCSBD linear jet plasma system

12:20 B. Tosto - Fast evaluation of the Fast-Ion $D\alpha$ spectroscopy measurements at the ASDEX Upgrade tokamak

12:40 – 14:00 LUNCH IN DUO HOTEL

14:00 H. Akatsuka - Optical Emission Spectroscopic Measurement of Atmospheric-Pressure Plasma by Continuum and Line Emissions with Collisional Radiative Model

14:30 M. Geissel - Using High-Performance Cameras for Advanced Plasma Diagnostics

15:00 R. Agnello - Insights from Beam Emission Spectroscopy in SPIDER in multi-beamlet configuration

15:20 – 17:00 POSTER SESSION 1

17:00 E. Wagenaars - Measuring atomic radicals in atmospheric-pressure plasmas

17:30 Y. Cheng - First observation of line emissions from $W46+$ ions at 7-8 Å by Extreme Ultraviolet Spectrometers in Experimental Advanced Superconducting Tokamak with full tungsten divertor

17:50 J. Fujera - Advanced analysis of overlapping molecular spectra to determine vibrational distributions of excited electronic states of N_2 , N_2^+ and NO

18:10 L. Lobanova - Plasma-chemical mechanism of surface destruction of the diagnostic system components inside EAST vacuum vessel

TUESDAY 8 APRIL

8:50 GENERAL INFORMATION OF THE DAY

09:00 A. Gerakis - Non-resonant four wave mixing techniques for the thermodynamic characterization of neutrals, ions, electrons and nanoparticles in a gas discharge

09:45 V. Malka - ELI NP status and challenges

10:15 I. Tazes - Experimental observation of Magnetic Vortex Accelerated ions by femtosecond laser interaction with optically shaped gaseous targets in the near critical density plasma regime

10:35 – 11:10 COFFEE BREAK

11:10 A. Jalalvand - Leveraging AI for Resilient Fusion Plasma monitoring and Control: Mitigating Failures and Enhancing Diagnostic

11:40 H. Wu - Bayesian integrated estimation of tungsten impurity concentration distributions at WEST using soft X-ray and bolometer diagnostics

12:00 M. Carrard - Real-time reflectometry for control experiment in tokamak plasma

12:20 F. Wang - High spatiotemporal resolution two-dimensional shock wave diagnosis technology based on compressive sensing and neural network technology

12:40 – 14:00 LUNCH IN DUO HOTEL

14:00 J. Adamek - Advances in Plasma Diagnostics: 20 Years of the Ball-Pen Probe in Fusion and Non-Fusion Research

14:30 H. Hoefft - Synchronised fast optical and electrical diagnostics for pulsed-driven atmospheric pressure discharges

15:00 M. Zuin - A small-scale experiment for Langmuir wave study in a laboratory plasma, a model for solar wind

15:20 – 17:00 POSTER SESSION 2

17:00 C. Zhou - Multi-scale turbulence measurement by integrated backscattering, forward scattering and cross-polarization scattering of Doppler reflectometer

17:30 G. Fuchert - In-situ spectral calibration from plasma measurements of the W7-X Thomson scattering diagnostic

17:50 X. Zhao - Angular-resolved scattered light diagnostics for laser-plasma instability studies in inertial confinement fusion

18:10 D. Elliott - Design and commissioning of the optical diagnostic suite for the Material Plasma Exposure eXperiment: optimization for steady-state operations and high heat flux

19:30 CONFERENCE DINNER

WEDNESDAY 9 APRIL

08:50 GENERAL INFORMATION OF THE DAY

09:00 K. Ida - Development of hyperspectral camera for auroral imaging (HySCAI)

09:45 D. Kraus - X-ray diagnostics of dense plasmas relevant to stellar interiors and inertial fusion energy

10:15 A. Laso Garcia - Solid Density Plasmas Diagnostics at the HED-HiBEF Instrument at EuXFEL

10:35 – 11:10 COFFEE BREAK

11:10 A. Dal Molin - Measurement of the Gamma-Ray-to-Neutron Branching Ratio for the Deuterium-Tritium Reaction in Magnetic Confinement Fusion Plasma

11:40 L. Liao - A scintillating-fiber detector for the deuterium-deuterium fusion-born triton confinement study in EAST tokamak

12:00 R. Yamada - Thermal neutron imaging for laser-driven neutron sources

12:20 Y. Arikawa - Pico second time resolution neutron detector for burning plasma measurement on inertial confinement fusion

12:40 – 14:00 LUNCH IN DUO HOTEL

14:00 S. Starikovskaia - “Gradient” discharge for plasma-assisted detonation: controlled production of gradient of radicals

14:30 E. Hume - Characterization of electrons in intense laser-plasma interactions, both utilizing solid and gas targets

15:00 S. Irimiciuc - Selective acceleration and gas phase chemistry during expansion of laser-produced oxide and nitride plasma via angle- and time-resolved electrical diagnostics

15:20 – 17:00 POSTER SESSION 3

17:00 P. Turjanica - Innovative Magnetic Field Sensors for Fusion Reactors: Harnessing the Thick Printed Copper Technology

17:20 Y. Liu - The influence of magnetic field and plasma on the diagnosis of wall material by LIAS in HIT-PSI device

17:40 L. Gottardi - Diagnostic of magnetically confined plasmas with superconducting transition edge sensors

18:00 GROUP PICTURE

18:30 SCIENTIFIC COMMITTEE REUNION

Closed session