

# EC PD 2019

3rd European Conference on

## PLASMA DIAGNOSTICS

6 - 10 May 2019    *Lisbon, Portugal*

*Bringing together experts in diagnostics  
from all fields in plasma physics*

### Topics and Scientific Committee:

#### Beam Plasmas and Inertial Fusion (BPIF)

*Dimitri Batani (chair), Marta Fajardo,  
Nigel Woolsey, Wang Feng*

#### Magnetic Confinement Fusion (MCF)

*Bruno Soares Gonçalves, Angelo A. Tuccillo,  
Liqun Hu, Michael Walsh, Tsuyoshi Akiyama*

#### Low-Temperature and Industrial Plasmas (LTIP)

*Walter Gekelman, Deborah O'Connell,  
Olivier Guaitella, Milan Simek*

#### Basic and Astrophysical Plasmas (BAP)

*Marco Feroci, Jan-Willem den Herder,  
Olivier Limousin, Hiroshisa Hara*

### Local Organising Committee:

*Bruno Soares Gonçalves (chair), Luís Lemos Alves,  
Carlos Silva, Paulo Varela, Alberto Vale, Jorge Santos,  
Carlos Jorge Freitas, Carmo Nunes*

[www.ipfn.tecnico.ulisboa.pt/ECPD2019](http://www.ipfn.tecnico.ulisboa.pt/ECPD2019)

## Tutorials and Topical Lectures:

**Chikang Li**, *Exploring HED physics, ICF dynamics and lab astrophysics with advanced nuclear diagnostics*, Massachusetts Institute of Technology (MIT), Plasma Science and Fusion Center

**Hans Meister**, *Bolometer Developments in Diagnostics*, ITER Technology & Diagnostics, Max-Planck-Institut f. Plasmaphysik, Garching

**Fabrizio Nicastro**, *Detection of the missing baryons by studying the lines from the Warm Hot Intergalactic Medium (WHIM)*, INAF/OAR, Rome

**Roberta Fantoni**, *In situ and remote laser diagnostics for material characterization from plasma facing components to Cultural Heritage surfaces*, ENEA Frascati

## Invited Talks:

### Beam Plasmas and Inertial Fusion (BPIF)

**Luca Antonelli**, *X-ray Phase Contrast Imaging as diagnostic for high energy density physics*, University of York

**Didier Raffestin**, *First results from Academic diagnostics on LMJ/PETAL*, CELIA, Bordeaux

**Xing Zhang**, *X-ray temporal and spatial diagnosis technology in ShenGuang laser facilities*, Laser Fusion Research Center, China Academy of Engineering Physics, Mianyang City, Sichuan Province, China

**Tammy Ma**, *X-Ray Analysis Group of the ICF programme at NIF*, LLNL, USA

### Magnetic Confinement Fusion (MCF)

**Naoki Tamura**, *Versatility and Flexibility of the Tracer-Encapsulated Solid Pellet as a Diagnostic Tool in Magnetic Fusion Plasmas*, the TJ-II team, the W7-X team, the LHD Experiment Group1

**Haiqing Q. Liu**, *Real-time Control of Plasma Parameters with Measurements by Faraday-effect Polarimetry on EAST tokamak*, Institute of Plasma Physics, Chinese Academy of Sciences, Hefei, Anhui 230031, P.R. China

**Marco Tardocchi**, *High rate neutron and gamma-ray spectroscopy in magnetic fusion*, CNR Milano

**M.A. Van Zeeland**, *Imaging Neutral Particle Analyzer Measurements of the Confined Fast Ion Profile and Instability Induced Transport in DIII-D*, U. Calif.-Irvine

## Invited Talks (cont.):

### Low-Temperature and Industrial Plasmas (LTIP)

**Grant Ritchie**, *Advanced optical diagnostics for measurements in water containing plasmas*, Oxford University

**Pavel Dvorak**, *Fluorescent measurements of atomic species in discharges and flames (H, N, O, Pb, Bi, Sn and Te)*, MUNI, Masaryk University, Czech Republic

**Paolo Francesco Ambrico**, *N<sub>2</sub>/O<sub>2</sub> single streamer discharge studies by OPO based TALIF and LIF diagnostics*, CNR NANOTEC

### Basic and Astrophysical Plasmas (BAP)

**Giulio Del Zanna**, *X-ray spectroscopy of Solar plasma*, Cambridge, UK

**Paolo Bastia**, *Transition Edge Sensors, detectors providing the highest spectral resolution (few eV) in X-ray astronomy*, Thales Alenia Space, Milan

**Junji Mao**, *The impact of improved plasma diagnostics on modeling the X-ray Universe*, Glasgow Strathclyde University

### Session in memory of Anatoly FAENOV (X-ray spectroscopy and X-ray imaging):

**Tatiana Pikuz**, *Development of X-ray imaging methods using spherically bent crystals (for HEDP)*, Osaka University

**Yuji Fukuda**, *Relativistic laser plasma of gas cluster targets - particle and X-ray diagnostics*, KPSI

**Francesco Flora**, *X-ray imaging (of bio/medical) samples using laser-plasma-based X-ray sources/ LiF detector*, ENEA Frascati

**Dieter Hoffmann**, *Radiation diagnostics of dense plasmas created by heavy ion beams*, GSI Darmstadt

**Michel Koenig**, *X-ray diagnostics in laboratory astrophysics*, LULI Ecole Polytechnique

**Frank Rosmej**, *Hollow atom X-ray spectroscopy / X-ray spectroscopy in experiments with XFEL and laser produced plasmas*, UPMC

**Arie Zigler**, *Diagnostics in relativistic laser pulse interaction with mass-limited/nanostructured media*, Hebrew University