



FIRST ANNOUNCEMENT AND CALL FOR PAPERS

We are pleased to announce that the 36th **European Physical Society Conference on Plasma Physics** will take place at the National Palace of Culture in Sofia, Bulgaria, from June 29 to July 3, 2009.

The Conference is a leading international forum for the dissemination of recent results in all areas of plasma physics. The topic covered will include, among others Magnetic Confinement Fusion, Beam Plasmas and Inertial Fusion, Dusty and Low-Temperature Plasmas, Basic Plasmas, Space and Astrophysical Plasmas. Detailed information, including important dates and deadlines, registration and accommodation, etc., can be found on the Conference website:

<http://eps2009.uni-sofia.bg>

Among the major objectives of the Conference is to facilitate the presentation and discussion of recent results in all areas of plasma and controlled-fusion physics. The exchange of cross-disciplinary information between scientists working in various plasma-physics-related fields is strongly encouraged. To fulfill its purpose, the Conference will comprise daily plenary sessions on the latest developments in plasma science. Parallel invited talks related to the main topics of the Conference will cover advanced technical aspects. Some of the contributions submitted to the Conference will be presented in parallel oral sessions; the rest will be presented as posters. Part of the Conference time will be exclusively devoted to daily poster sessions.

The National Palace of Culture is the largest multifunctional complex in Southeastern Europe. It is located in the center of the city of Sofia, with a number of supporting 4 & 5-star hotels at a walking distance away. It is surrounded by a beautiful leisure park, and has a magnificent view of the Vitosha Mountain. The Conference facilities comprise Hall 3 (for Plenary sessions), and Halls 7, 8 and 9 (for Parallel invited and oral talks).

Sofia is linked by direct air routes with more than 50 destinations in Central, Western and Eastern Europe, the Middle East and Africa. Sofia Airport is about 20 min from the centre of the city. The transportation to/from Sofia Airport is easier than one can imagine. The regular bus service and the convenient road will make a good start or finish of your travel. The bigger hotels will also provide a shuttle bus to/from the Airport.

Looking forward to welcoming you in Sofia,

Matey Mateev

Evgenia Benova

Chair, Local Organizing Committee

Scientific Secretary



Scope

This Conference is a continuation of the series of **European Physical Society (EPS)** meetings devoted to **Plasma Physics** and encompassing the fields of fusion research, magnetic confinement fusion, beam plasmas, laser-plasma interaction and inertial confinement fusion, dusty and low-temperature plasmas, as well as astrophysical plasmas and basic plasmas.

Topics

1. Magnetic Confinement Fusion
 - a. Edge and plasma-wall interactions
 - b. Turbulence and transport
 - c. MHD equilibrium, stability and control
 - d. Operational limits and plasma control
 - e. Diagnostics
 - f. Heating and fuelling
 - g. Concept development and engineering
 - h. Other sub-topics

2. Beam Plasmas & Inertial Fusion
 - a. Inertial confinement and high gain target design
 - b. Hydrodynamics and instabilities
 - c. Ultra-intense laser interaction and fast ignition
 - d. Frontiers in hot dense matter research
 - e. Radiation hydrodynamics
 - f. Laboratory astrophysics
 - g. Inertial fusion energy drivers and reactors; pulsed power machines
 - h. Laser and ion beam coupling with plasmas
 - i. Radiation sources - harmonics, X-ray lasers, etc.
 - j. Laser and plasma based particle accelerators
 - k. Warm dense matter
 - l. Other sub-topics

3. Dusty & Low Temperature Plasmas
 - a. Theory and numerical simulations
 - b. Liquid and crystalline complex (dusty) plasmas
 - c. Nucleation and growth
 - d. Waves
 - e. Diagnostics
 - f. Plasma Processing and applications
 - g. Dust in fusion
 - h. Other sub-topics

Topics addressed this year will cover: (i) collisionless and stochastic heating in low-temperature plasmas, (ii) dusty plasmas, (iii) diagnostics and modelling of plasma discharges, (iv) atmospheric pressure plasmas and (v) plasma-surface interactions for energy applications,



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4. Basic Plasmas & Space & Astrophysical Plasmas
 - a. Space and solar plasmas
 - b. Fundamental plasma physics
 - c. Astrophysics and cosmology
 - d. Free electron lasers and masers
 - e. Other sub-topics



Plenary speakers and provisional titles

C. Angioni	Particle transport in tokamak plasmas, theory and experiment
S. Atzeni	Building the Principles of Inertial Fusion through Theory, Experiments and Simulation
A. Brandenburg	Dynamo theory
G. Chabrier	Plasma physics relevant to Jovian-like planets
J. deGrassie	Rotation sources, sinks, and transport in tokamak plasmas
U. Ebert	The common mechanisms of lab streamers and sprite discharges above thunderclouds
L. Fletcher	Flaring energy releases
G. Morfill	Complex plasmas from plasma physics to interdisciplinary research
G. Saibene	Qualification of the ITER baseline operating scenario in JET
L. Silva	Laser electron acceleration towards the energy frontier theory and full scale simulations
M.C.M. van de Sanden	Thin film deposition for photovoltaics from fundamentals to industrial application
J. Wark	Saturable absorption of Intense XUV radiation, and a novel form of warm dense matter
R. White	Nondiffusive models for transport

Invited speakers and provisional titles

T. Amari	Simulating coronal mass ejection
P. Amendt	Electric field and ionization-gradient effects on ICF implosions
H. Azechi	Plasma Physics Study and Laser Development for the Fast Ignition Realization Experiment (FIREX) Project
M. Bell	Plasma response to lithium-coated plasma facing components in NSTX
T. Bell	Particle acceleration in supernova remnants
M. Beurskens	Pedestal identity studies in JET, DIII-D and AUG and implications for ITER
R. Bingham	Dark matter
A. Blagoev	Modelling of plasma breakdown
A. Caillard	Low-temperature plasma processing techniques applied to fuel cell technology
G. Cartry	Plasma surface interaction with applications to ITER
C. Castaldo	Interactions and dynamics of magnetized, metallic dust particles in tokamak plasmas
S. Chapman	Plasmas as complex systems- distinguishing models using the data
C. Cherfils	Progress in the design of ICF targets
U. Czarnetzki	Collisionless wave damping in Neutral Loop Discharge
P. de Vries	Identity physics experiments on Internal Transport Barriers in JET and JT-60U
M.E. Dieckmann	Simulations on beam instabilities
K. Dolag	Cosmological simulations (<i>to be confirmed</i>)
F. Dorchie	X-ray absorption for the study of warm dense matter
L. Drury	The highest energy particles in the universe; how does Nature beat CERN?
T. Eich	Steady state and ELM-induced heat loads in JET
T. Estrada	Physics of sheared flows and transitions to improved confinement regimes in the TJ-II stellarator
L. Feretti	Radio observation of extra galactic magnetic fields
R. Foest	Local deposition of SiO _x plasma polymer films by a miniaturized atmospheric pressure plasma jet
S. Fujioka	Laboratory spectroscopy of silicon plasmas photo-ionized by mimic astrophysical compact object
O. Guaitella	Atmospheric pressure plasmas for environmental purposes
R. Hatakeyama	Novel Gas-Liquid Interfacial Plasmas Basic Properties and Applications to Nano-Bio Material Creation
G. Huysmans	3D non-linear MHD simulations of ELMs
I. Kaganovich	Nonlocal collisionless and collisional electron transport in low temperature plasmas
S. Karsch	Stable laser-wakefield electron acceleration - beam control and applications
B. Klumov	3D complex plasmas experiments vs simulations
P. Lauber	Damping and drive of Alfvén eigenmodes at ASDEX-Upgrade



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P. Loubeyre	Measurements of the equation of state of warm dense fluids of H ₂ and He improving the pre-compressed target approach and new insights from the data
B. Loupias	Propagation of laser-induced plasma jets in ambient gas media
H. Lütjens	Non-linear full MHD modelling of core MHD in tokamaks
V. Malka	Electron acceleration from interaction of colliding laser pulses with underdense plasmas
C. Marmolino	Stochastic heating of dust particles in laboratory and space plasmas
E. Martines	Current filaments in turbulent magnetised plasmas
E. Nardon	The control of edge localised modes using resonant magnetic perturbations in the MAST spherical tokamak
E. Neyts	Modeling of hydrocarbon plasmas for nanoparticle formation and the growth of carbon nanostructures
D. Newman	Mechanisms for non-diffusive radial transport across sheared zonal flows in ITG turbulence
H. Norman	Nonequilibrium nonideal nanoplasma generated by a fast single ion in condensed matter
D. O'Connell	Dynamics of ionization in high-frequency driven plasmas
M. Osakabe	Fast-ion confinement studies of the neoclassical optimized configuration on the LHC
J. Paley	Real time plasma control using electron cyclotron systems on TCV
G. Pautasso	Disruption studies in AUG in view of ITER
B. Pegourié	Recent results on the fuelling and plasma control by pellet injection, application to ITER
F. Perez	Fast electron transport in cylindrically compressed matter
A. Phelps	Free electron maser modelling and experiments
T. Pohl	Non-equilibrium dynamics of ultra-cold plasmas
M.E. Puiatti	Helical equilibria and magnetic structures in Reversed Field Pinch and analogies with Tokamak and Stellarator
X. Ribeyre	Shock ignition target design and robustness
D. Riley	WDM probed by XRTS experiments and calculations
C. Roach	Gyrokinetic simulations of turbulence in spherical tokamaks
V. Rohde	Wall-retention of Deuterium and gaseous impurities in all tungsten AUG
M. Roth	Proton isochoric heating of matter under XRTS
A. Serbeto	Quantum Free electron laser
M.W. Sherlock	Absorption of relativistic laser pulses on multiple energy scales
H. Smith	Runaway electron generation in tokamak disruptions
S. Ter-Avetisyan	Characterization and control of ion sources from ultra-short high-intensity laser-foil interaction
W. Theobald	Advanced Ignition Concepts Exploration on OMEGA
C. Tsagas	Simulation of cosmic magnetic fields
M. Turner	Collisionless heating in rf sheaths
G. Tynan	Basic plasmas in linear machines
D.A. Uzdenski	Reconnection in astrophysical plasmas
A. Vaivads	Magnetic reconnection in space plasmas
G. van Rooij	Thomson scattering at Pilot-PSI and Magnum-PSI
M. Velli	Solar wind turbulence
E. Verwichte	Diagnostics of low-beta plasmas using MHD waves applying MHD spectroscopy / seismology to magnetic fusion experiments and to solar corona
O. Willi	Particle and x-ray generation by irradiation of gaseous and solid targets with a 100TW laser pulse
E. Wolfrum	Investigation of H-mode pedestal physics in ASDEX Upgrade



COMMITTEES

EPS Programme Committee Members

Sylvie Jacquemot (Chair PC)
Carlos Hidalgo Spain (Chair EPS PPD)

Magnetic Confinement Fusion

P. Martin
M. Bécoulet
L. Carraro
S. Coda
K. Gibson
K. McClements
F. Ryter

Beam Plasmas & Inertial Fusion

M. Koenig
A. Macchi
S. Mangles
J. Sanz
G.L. Gregori

Low Temperature Plasmas

V. Schultz van de Gathen
P. Chabert
S. Ratynskaia
D. Uhrlandt
Satoshi Hamaguchi

Basic & Astrophysical Plasmas

T. Mendonça
V. Nakariakov
P. Sasorov
L. Vlahos

The Local Organising Committee

Matey Mateev (Chair)
Evgenia Benova (Scientific Secretary)
Tsviatko Popov
Chavdar Ghelev



IMPORTANT DATES

<i>Event</i>	<i>Date</i>
Deadline for submission of abstracts	February 16 – 27
Deadline for request of Satellite meetings	February 27
Communication of acceptance of abstracts	April 15
Deadline for registration (at reduced rates) and hotel reservation	May 8
Deadline for submission of post-deadline papers	May 31
Communication of acceptance of post deadline papers	June 15
Deadline for submission of 4-page papers	Open June 15 Closed June 22
Deadline for submission of invited papers	June 29
Conference	June 29 – July 3

FEES

Registration type	Early (before May 8, 2009)	Late (after May 8, 2009)
EPS member	€460,00	€530,00
Non EPS member	€520,00	€590,00
Member of a National Physical Society	€490,00	€560,00
Student	€100,00	€200,00
Accompanying person	€60,00	€60,00



INSTRUCTIONS FOR AUTHORS

What document to prepare and when

- One-page abstract (for plenary, invited and contributed papers) must be prepared before the abstract submission deadline (Electronic submission system open February 16 – 27);
- The authors giving a contributed oral or poster presentation must prepare a 4-page paper before the 4-page paper submission deadline (June 22). These papers will be included in the Conference CD to be distributed after the Conference;
- The invited speakers must submit their works before June 29. The invited papers will be published in a special issue of Plasma Physics and Controlled Fusion (PPCF).

All the above documents must comply with the layout requirements below:

Item	Requirement
Max. number of pages	1 (abstracts), 4 (4-page papers)
Page size	A4 (210 x 297 mm)
Page margins	2.5 cm on all four sides, gutter 0
Fonts	Times, Symbol
Font size	14 pts (title), 12 pts (all remaining text)
Line spacing	1.5 lines (21 points)
Title of paper	Centered, bold, 14 points
List of authors	Centered, normal, 12 points, presenting author underlined, e.g., <u>M. First</u> ¹ , N.N. Second ²
Authors' affiliations	Centered, italic, 12 points e.g., ¹ <i>Institute, City, Country</i>
Page margins	Justified, normal, 12 points

Templates

The following templates will be provided on-line to facilitate document preparation. However, no guarantee is provided as to their correct functioning on all platforms. The authors remain responsible for checking the compliance with the above layout requirements.

- For WYSIWYG text editor users: template file in RTF format (compatible with many text editors, including MS Word);
- For LaTeX users: **LaTeX class file, LaTeX sample file, sample PDF format picture.** (Note: not all LaTeX versions can handle PDF pictures. Yet the sample file should also be able to handle PS or EPS format pictures after a minor modification, as indicated in the LaTeX sample file).

The submission of abstracts and 4-page papers is exclusively handled by the *electronic submission system*.



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ORGANIZATION

The Conference is organized by the Union of Physicists in Bulgaria.

For registration, accommodation and transportation, please contact:

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