

17th International Congress on **Plasma Physics** Lisbon, Portugal



CONFERENCE PROGRAM

15-19 September, 2014

Hosted by Instituto Superior Técnico

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co-organized by:



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INSTITUTO DE PLASMAS
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General Information

The International Congress on Plasma Physics was first held in Nagoya, in 1980, and followed by similar events in many different cities around the world: Gothenburg (1982), Lausanne (1984), Kiev (1987), New Delhi (1989), Innsbruck (1992), Foz-do-Iguaçu (1994), Nagoya (1996), Prague (1998), Quebec City (2000), Sydney (2002), Nice (2004), Kiev (2006), Fukuoka (2008), Santiago (2010) and Stockholm (2012).

The scope of ICPP is to discuss the recent progress and to establish a view on the future of plasma science, covering a wide range of aspects on fundamental plasma physics, fusion plasmas, astrophysical plasmas and plasma applications.

Committees

Program Committee (PC)

Dimitri Batani (France); Robert Bingham (UK); Jean-Paul Booth (France); Diego Del-Castillo-Negrete (USA); Ricardo Galvão (Brazil); Kimitaka Itoh (Japan); Tito Mendonça (Portugal); Oleg Pokhotelov (Russia); Abhijit Sen (India).

International Advisory Committee (IAC)

Igor Anisimov, Ukraine; Hiroshi Azechi, Japan; Sadruddin Benkadda, France; Robert Bingham, UK; Ibere Caldas, Brazil; Susana Cappello, Italy; Diego del Castillo-Negrete, USA; Christine Charles, Australia; C.Z. Frank Cheng, Taiwan (co-chair); Andrea Costa, Argentine; Brigitte Cros, France; Amita Das, India; Robert L. Dewar, Australia; Dominique Escande, France; Cary Forest, USA; Vladimir E. Fortov, Russia; Ricardo Galvão, Brazil; Manfred Hellberg, South Africa; Julio Herrera-Velasquez, Mexico; Osamu Ishihara, Japan; Kimitaka Itoh, Japan; Mark Koepke, USA; Akio Komori, Japan; Siegbert Kuhn, Austria; Alexander G. Litvak, Russia; Maria E. Manso, Portugal; Tito Mendonça, Portugal (chair); George J. Morales, USA; Cesar Moreno, Argentine; Volker Naulin, Denmark; Irina Potapenko, Russia; Talkkagul Ramazanov, Kazakhstan; Paulo H. Sakanaka, Brazil; Kohnosuke Sato, Japan; Abhijit Sen, India; V. Smirnov, Russia; Leopoldo Soto, Chile; Richard Sydora, Canada; Shuichi Takamura, Japan; Michael Tandler, Sweden; Milan Tichy, Czech Republic; Guido Van Oost, Belgium; Frank Verheest, Belgium; Baonian Wan, China.

Local Organizing Committee (LOC)

Tito Mendonça (Chair), Jorge Loureiro (co-Chair); Anabela Gonçalves (Secretary); Bernardo Brotas de Carvalho; Gonçalo Figueira; Vasco Guerra; Maria Emília Manso; José António Rodrigues

Venue

This seventeenth edition of The International Congress on Plasma Physics will be held at the Alameda Campus of Instituto Superior Técnico, Universidade de Lisboa.

The Instituto Superior Técnico (IST) is located in central Lisbon, a short walk from two Lisbon Metro stations: **Saldanha** (at the crossing of yellow/red lines) and **Alameda** (at the crossing of the green/red lines). Its coordinates are 38°44'14.40"N and 9°8'24.84"W.

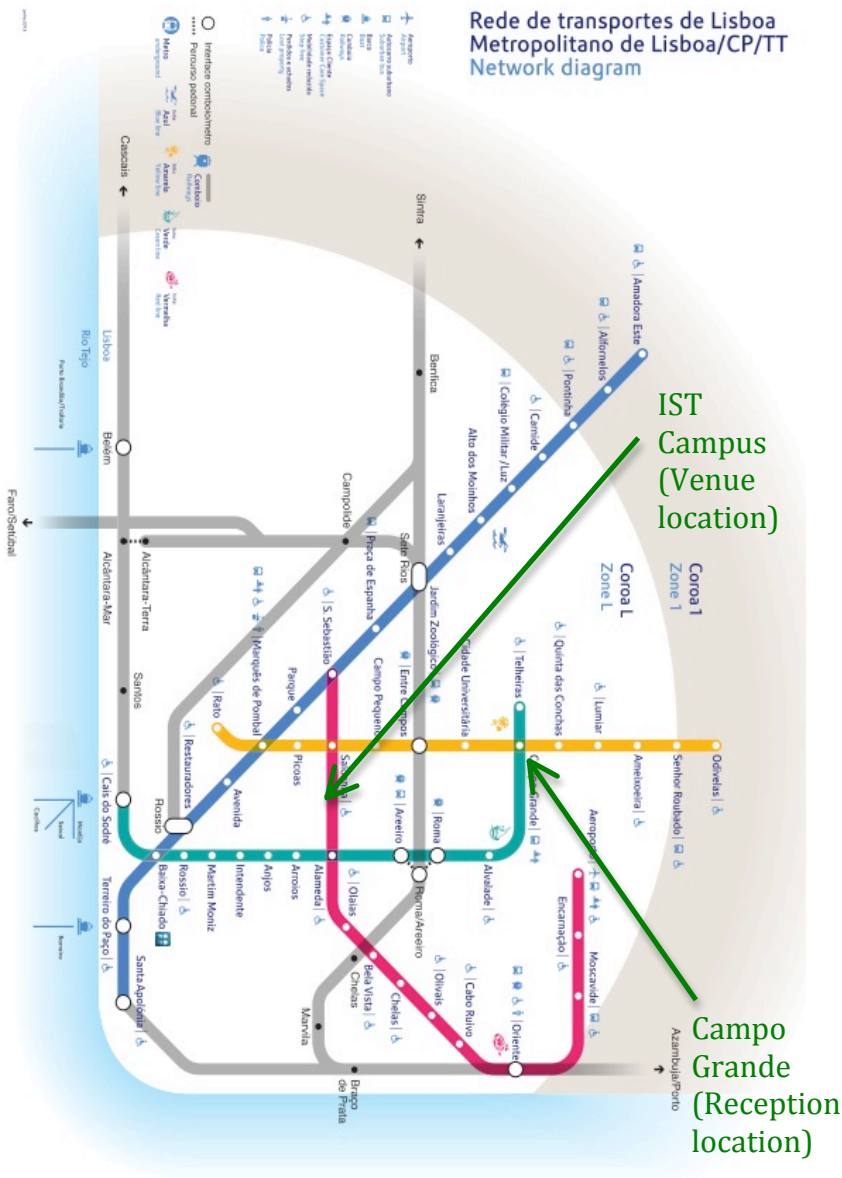
17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014



Instituto Superior Técnico (IST/UTL)
Coordinates: 38°44'14.40"N and 9°8'24.84"W



IST Congress Centre (Civil Engineering Building)



All conference sessions and meetings will be held inside the campus. Most of the sessions will take place at three spots, and a comprehensive description of locations is as follows:

ROOM 1 - Great Auditorium at the Congress Centre (Centro de Congressos), **Civil Engineering Building** (Pavilhão de Engenharia Civil), building referred in the picture by number 2;

ROOM 2 - Abreu Faro Auditorium at the Interdisciplinary Complex (Complexo Interdisciplinar), building referred in the picture by number 26;

ROOM 3 - QA02.3 at the South Tower (Torre Sul), **2nd floor**, building referred in the picture by number 20.

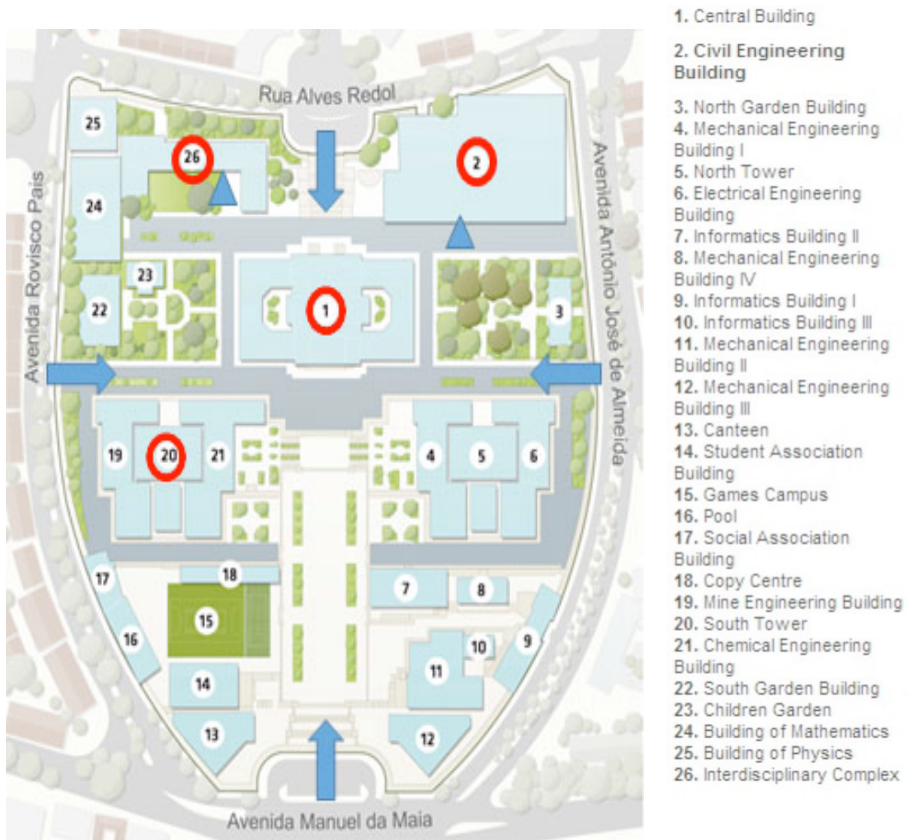
Some other rooms will also be used:

01.1, 02.2 and 02.3 at the Congress Centre, referred in the picture by number 2;

Interdisciplinary Complex Meeting Room (Sala de Reuniões do Complexo Interdisciplinar), **building** referred in the picture by number 26;

Central Building Meeting Room (Sala de Reuniões do Pavilhão Central), building referred in the picture by number 1.

17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014



IST Alameda Campus with arrows signaling main entrances. Building 1 is the Central Building, building 2 is the Civil Engineering Building, where is located the Congress Centre with its Great Auditorium and rooms 01.1, 02.2 and 02. Building 20 is the South Tower and building 26 is the Interdisciplinary Complex.

Social Program

Reception

Monday, 15th of September, 20:00-21:30

The welcoming reception will be held at the “Museu da Cidade”, Lisbon City Museum (Metro station: Campo Grande).

Excursion

Wednesday, 17th of September, 15:00-18:00

A boat trip along the river Tejo on the sailing boat “Príncipe Perfeito” will be arranged. The boat departs from Alcântara docks and arrives at Terreiro do Paço. Bus transportation, departing at 14:30 from IST to Alcântara, will be provided.

Congress dinner

Thursday, 18th of September, 20:00-23:00

The traditional congress dinner will take place at the Palace of Conde de Óbidos, near to the National Museum of Ancient Art. Bus transportation, departing from IST at 19:30 will be provided. Dinner will include welcoming drinks and music entertainment.

The recipient of the IUPAP Prize 2014 in Plasma Physics will be announced during the dinner. On Friday morning, the Prize recipient will give an invited talk.

Prizes

IUPAP Young Scientist Prize in Plasma Physics 2014

The IUPAP Plasma Physics C16 Young Scientist Prize recognizes exceptional achievement in the study of plasma physics by scientists at a relatively early stage of their career.

The Prize will consist of 1,000 Euro and a Medal and Certificate.

Prize “Edouard Fabre”

The COST Action MP1208 “Developing the physics and the scientific community for Inertial Confinement Fusion” promotes the 2014 Prize entitled to the memory of Edouard Fabre.

The prize will consist in a certificate and 1,500 Euro.

Résumé

	MONDAY – 15th September	
8:30	Registration	
	<i>Room 1 - Chair: G. Morales</i>	
9:00	<i>WELCOMING – B. Gonçalves</i>	
9:15	V. Fortov	
10:00	N. Kasuya – MCF.I4	
10:30	Coffee	Coffee
	<i>Room 1- Chair S. Benkadda</i>	<i>Room 2 - Chair: J.P. Booth</i>
11:00	Ph. Morrison – MCF.I8	S. Baalrud – LTP.I2
11:30	H. Tsuchiya – MCF.I11	J. Amorin-Filho – LTP.I1
12:00	MCF – 01, 02	LTP – 01, 02
12:30	Lunch	Lunch
	<i>Room 1 - Chair: A. Sen</i>	<i>Room 2 - Chair: G. Brodin</i>
14:00	R. Ganesh – MCF.I2	W. Gekelman – BAP.I4
14:30	A.Smolyakov- MCF.I10	B. Zelener – BAP.I9
15:00	MCF – 03, 04	BAP – 01, 02
15:30	Coffee	Coffee
16:00	Poster session: MCF, LTP	
16:30		
17:00		
		COST meeting 3 Room3
		COST meeting Room 3

Registration: Sunday afternoon and Monday morning;**Reception:** Monday at 20:00;**Conference Dinner:** Thursday at 20:00

17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014

	TUESDAY – 16th September	
	<i>Room 1 - Chair: R. Bingham</i>	
9:15	R. Dendy –	
10:00	S. Baton – LPB.I1	
10:30	Coffee	Coffee
	<i>Room 1 - Chair: A. Cairns</i>	<i>Room 2 - Chair: M. Hellberg</i>
11:00	F. Pegoraro – LPB.I7	A. Das – LTP.I5
11:30	J.J. Santos – LPB.I9	O. Petrov – LTP.I10
12:00	LPB – 01, 02	LTP – 03, 04
12:30	Lunch	Lunch
	<i>Room 1 - Chair: Ph. Zeit</i>	<i>Room 2 - Chair: J. Loureiro</i>
14:00	P. Koester – LPB.I4	A. Ito – LTP.I8
14:30	A. Cairns – LPB.I2	LTP – 05, 06
15:00	LPB – 03, 04	LTP – 07, 08
15:30	Coffee	Coffee
16:00	M. Fajardo – LPB.I3	V. Filinov – BAP.I2
16:30	M. Murakami – LPB.I6	BAP – 03,04
17:00	LPB – 05,06	BAP – 05,06
17:30	LPB – 07,08	BAP – 07,08
18:00	FABRE Prize	

Registration: Sunday afternoon and Monday morning;

Reception: Monday at 20:00;

Conference Dinner: Thursday at 20:00

17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014

	WEDNESDAY – 17th September	
	<i>Room 1 - Chair: D. Batani</i>	
9:15	R. Betti	
10:00	Kerchung Shaing – MCF.I9	
10:30	Coffee	
	<i>Room 1 - Chair: R. Galvão</i>	<i>Room 2 - Chair: C. Forest</i>
11:00	S.Krasheninikov-MCF.I7	D. Speirs– BAP.I8
11:30	D. Klir – MCF.I5	M. Aramaki – BAP.I1
12:00	Z.Guimarães-Filho-MCF.I9	F. Haas – BAP.I5
12:30	D. Bonfiglio – MCF.I1	BAP – 09,010
13:00	Lunch + Excursion	

Registration: Sunday afternoon and Monday morning;

Reception: Monday at 20:00;

Conference Dinner: Thursday at 20:00

17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014

	THURSDAY – 18th September	
	<i>Room 1 - Chair: L. Soto</i>	
9:15	K. Ida	
10:00	C. Forest – BAP.I3	
10:30	Coffee	Coffee
	<i>Room 1- Chair:P. Sakanaka</i>	<i>Room 2 - Chair: J.L.Ferreira</i>
11:00	H.J. Hole – MCF.I6	T. Hagelaar – LTP.I6
11:30	MCF – 05, 06	P. Bruggeman – LTP.I4
12:00	MCF – 07,08	LTP – 09,010
12:30	Lunch	Lunch
	<i>Room 1 - Chair:F. Pegoraro</i>	<i>Room 2 - Chair: V.Guerra</i>
14:00	A. Lifschitz – LPB.I5	T. Nozaki – LTP.I9
14:30	O. Rosmej – LPB.I8	LTP – 011,012
15:00	LPB – 09,010	LTP – 013,014
15:30	Coffee	Coffee
16:00	Poster Session: LPB, BAP	
16:30		
17:00		

Registration: Sunday afternoon and Monday morning;

Reception: Monday at 20:00;

Conference Dinner: Thursday at 20:00

17TH INTERNATIONAL CONGRESS ON PLASMA PHYSICS 2014

	FRIDAY – 19th September	
	<i>Room 1 - Chair: L.O. Silva</i>	
9:30	IUPAPPrize	
10:00	A. Raga – BAP.I7	
10:30	Coffee	Coffee
	<i>Room 1- A. Serbeto</i>	<i>Room 2 – A. Das</i>
11:00	M.A.Mochalov-BAP.I6	A. Bogaerts – LTP.I3
11:30	BAP – 011,012	LTP – 015,016
12:00	BAP – 013,014	LTP – 017,018
12:30	Lunch	Lunch
	<i>Room 1 – A. Cairns</i>	<i>Room 2 –E. Tatarova</i>
14:00	BAP – 015,016	LTP – 019,020
14:30	BAP – 017,018	LTP – 021,022
15:00	BAP – 019,020	LTP – 023,024
15:30	Coffee	Coffee
	<i>Room 1 – Chair: F. Cheng</i>	
16:00	S. Hamaguchi – LTP7	
16:30	CLOSURE	

Registration: Sunday afternoon and Monday morning;

Reception: Monday at 20:00;

Conference Dinner: Thursday at 20:00

PARALLEL MEETINGS

COST Meetings – Monday 15th and Wednesday 17th – Rooms 01.1, 02.2, 03.3 at the Congress Centre and Meeting Room at the Interdisciplinary Complex.

ICPP-IAC Meeting – Wednesday 17th, 12:00 - Central Building Meeting Room

Registration: Sunday afternoon and Monday morning;

Reception: Monday at 20:00;

Conference Dinner: Thursday at 20:00

DETAILED PROGRAM

SUNDAY – 14th of September

16:00 – 19:00 REGISTRATION
IST CONGRESS CENTRE

MONDAY – 15th of September

8:30 – 9:00 REGISTRATION
IST CONGRESS CENTRE

ROOM 1

9:00-10:30, Chair – G. Morales

9:00, B. Gonçalves (Head of IPFN) – Welcoming address;

9:15, V. Fortov, STRONGLY NONIDEAL PLASMA-DENSITY AND CHARGE COUPLING;

10:00, N. Kasuya, SIMULATION STUDY OF HYSTERESIS IN THE FLUX-GRADIENT RELATION IN TURBULENT TRANSPORT;

10:30 – 11:00, COFFEE BREAK

ROOM 1

11:00-12:30, MCF Session, Chair – S. Benkadda

11:00, Ph. Morrison, HAMILTONIAN AND ACTION PRINCIPLE DERIVATIONS OF REDUCED MAGNETOFLUID MODELS FOR PLASMA DYNAMICS – CONSEQUENCES;

11:30, H. Tsuchiya, IMPACT OF STOCHASTIZATION OF MAGNETIC FIELDS ON INTERNAL TRANSPORT BARRIER IN LHD;

12:00, G.J. Morales, SHEAR ALFVÉN WAVES IN ITER PLASMAS AND THE ION-ION HYBRID RESONATOR;

12:15, A.G. Elfimov, GEODESIC MODE SPECTRUM MODIFIED BY THE ENERGETIC PARTICLES IN TOKAMAK PLASMAS;

ROOM 2

11:00-12:30, LTP Session, Chair – J.P. Booth

11:00, S. Baalrud, EXTENSIONS AND APPLICATIONS OF THE BOHM CRITERION;

11:30, J. Amorin-Filho, STUDY OF AN ATMOSPHERIC PRESSURE ARGON MICROPLASMA JET;

12:00, A. Todoran, CONTROL OF THE PARTICLE FLUX AND ENERGY AT THE SUBSTRATE IN AN INVERTED CYLINDRICAL MAGNETRON REACTOR FOR PLASMA PVD;

12:15, V. Nosenko, PARTICLE PAIRING IN COMPLEX PLASMAS;

12:30 – 14:00, LUNCH BREAK

ROOM 1

14:00-15:30, MCF Session, Chair – A. Sen

14:00, R. Ganesh, LARGE SCALE PARTICLE-IN-CELL SIMULATION OF STEADY STATE MICROTURBULENCE IN TOKAMAKS;

14:30, A. Smolyakov, ZONAL FLOWS AND GEODESIC ACOUSTIC MODES;

15:00, G. Gladush, COMPACT TOKAMAK PLASMA - NEUTRON SOURCE FOR HYBRID REACTOR FOR PRODUCING FUEL ²³³U;

15:15, A.M. de Aguilera, PARTICLE TRANSPORT RESPONSE TO DYNAMICAL DENSITY GRADIENTS AS A FUNCTION OF MAGNETIC WELL IN THE TJ-II STELLARATOR;

ROOM 2

14:00-15:30, BAP Session, Chair – G. Brodin

14:00, W. Gekelman, EXPERIMENTAL INVESTIGATION OF THE EMERGENCE OF CHAOS IN THE DYNAMICS OF CURRENT SHEETS AND FLUX ROPES;

14:30, B. Zelener, ULTRACOLD PLASMA AND RYDBERG ATOMS IN A MAGNETIC FIELD.

15:00, V. Belashov, DYNAMICS OF IGW AND TRAVELING IONOSPHERIC DISTURBANCES IN PLASMA OF IONOSPHERE WITH SHARP GRADIENTS OF BASIC PARAMETERS OF MEDIUM;

15:15, G. Mamatsashvili, SUBCRITICAL TURBULENCE IN 2D MHD PLANE SHEAR FLOWS -- SELF-SUSTENANCE VIA INTERPLAY OF LINEAR TRANSIENT GROWTH AND NONLINEAR TRANSVERSE CASCADE.

ROOM 3

14:00-15:30, COST MEETING, Chair D. Batani, Ph. Zeitoun

14:00, G.A. Pavlov, IMAGE REGISTRATION OF DENSE PLASMA CLOTS IN THE HARD X-RAY RANGE;

14:15, Ph. Nicolai, DEMONSTRATION OF LASER IMPRINT REDUCTION USING UNDERDENSE FOAMS AND ITS CONSEQUENCES ON THE HYDRODYNAMIC INSTABILITY GROWTH;

14:30, V. Bychenkov, OPTIMIZATION STUDY OF LASER TRIGGERED ION ACCELERATION FOR RADIATION SOURCES OF SOCIALLY SIGNIFICANT APPLICATIONS;

14:45, D. Del Sorbo, NONLOCAL TRANSPORT MODEL BASED ON ENTROPIC CLOSURE OF MOMENT EQUATIONS;

15:00, I.B. Foldes, HIGH HARMONICS FROM NOBLE GAS CLUSTERS;

15:15, A.A. Andreev, MULTI-STAGE ION ACCELERATION IN ELECTRIC FIELD OF A FOIL IRRADIATED BY ULTRA-INTENSE LASER PULSES.

15:30 – 16:00, COFFEE BREAK

CONGRESS CENTRE HALL

16:00 – 17:30, POSTER SESSION 1: MCF, LTP

ROOM 3

16:00-18:00, COST MEETING, Chair D. Batani, Ph. Zeitoun

16:00, A. Inglebert, IONIC SPECIES SEPARATION IN THE HOT SPOT OF marginally IGNITING TARGETS;

16:15, O. Renner, K-SHELL X-RAY DIAGNOSIS OF HOT ELECTRON GENERATION IN LASER-IRRADIATED CU FOILS;

16:30, V. Stancalie, SIMULATION OF THE IONIZATION DYNAMICS OF ALUMINUM IRRADIATED BY INTENSE SHORT-PULSE LASERS;

16:45, T. Akhter, STABILIZING EFFECTS IN A SELF-MODULATED LONG RELATIVISTIC CHARGED-PARTICLE BEAM TRAVELLING IN A PLASMA;

17:00, N.E. Andreev, ELECTRON ACCELERATION AND X-RAYS GENERATION IN THE INTENSE LASER-MATTER INTERACTIONS;

17:15, A. Vallet, SEMI-ANALYTIC MODELING OF SHOCK IGNITION.

20:00 – 21:30, RECEPTION
MUSEU DA CIDADE

TUESDAY – 16th of September

ROOM 1

9:15-10:30, Chair – R. Bingham

9:15, R. Dendy, ION CYCLOTRON EMISSION FROM FUSION-BORN IONS IN LARGE TOKAMAK PLASMAS: FROM JET AND TFTR TO ITER;

10:00, S. Baton, EXPERIMENTS ON SHOCK IGNITION: WHAT HAS BEEN DONE;

10:30 – 11:00, COFFEE BREAK

ROOM 1

11:00-12:30 LPB Session, Chair – A. Cairns

11:00, F. Pegoraro, LASER-DRIVEN RADIATION PRESSURE ACCELERATION AND RAYLEIGH-TAYLOR INSTABILITY;

11:30, J.J. Santos, PULSED KTESLA DIPOLAR MAGNETIC FIELD GENERATION BY LASER AND APPLICATIONS.

12:00, N.K. Verna, TERAHERTZ RADIATION GENERATION VIA LASER-MAGNETIZED PLASMA INTERACTION;

12:15, M. Tayyab, EFFECT OF LASER CHIRP ON PROTON ACCELERATION IN THIN FOIL TARGETS;

ROOM 2

11:00-12:30, LTP Session, Chair – M. Hellberg

11:00, Amita Das, COLLECTIVE BEHAVIOR OF STRONGLY COUPLED DUSTY PLASMA;

11:30, O. Petrov, TWO-DIMENSIONAL MELTING OF DUST CRYSTAL IN PLASMA: SIMULATIONS, DIAGNOSTICS AND EXPERIMENTS;

12:00, F. Gaboriau, EXPERIMENTAL STUDY OF MAGNETIZED ELECTRON TRANSPORT IN LOW TEMPERATURE PLASMAS IN CLOSED AND BOUNDED DRIFT CONFIGURATIONS;

12:15, J.L. Ferreira, DEVELOPMENT OF PERMANENT MAGNET HALL THRUSTERS FOR APPLICATIONS ON FUTURE BRAZILLIAN SPACE MISSIONS;

12:30 – 14:00, LUNCH BREAK

ROOM 1

14:00-15:30, LPB Session, Chair Ph. Zeitoun

14:00, P. Koester, EXPERIMENTAL STUDIES ON FAST ELECTRON TRANSPORT IN RELATIVISTIC LASER-MATTER INTERACTIONS;

14:30, A. Cairns, THE ROLE OF COLLISIONLESS SHOCKS IN SOME LASER-PLASMA PROBLEMS;

15:00, B. Ramakrishna, GENERATION OF ENERGETIC PARTICLES IN INTENSE LASER MATTER INTERACTION;

15:15, N.K. Jaiman, RELATIVISTIC HARMONICS GENERATION BY ULTRASHORT AND ULTRAINTENSE LASER PULSE DRIVEN HIGH DENSITY PLASMA;

ROOM 2

14:00-15:30, LTP Session, Chair J. Loureiro

14:00, Atsushi M. Ito, MOLECULAR DYNAMICS AND DENSITY FUNCTIONAL SIMULATIONS FOR CLASSIFICATION OF HYDROGENATED AMORPHOUS CARBON;

14:30, V.V. Andreev, INVESTIGATION OF IMPACT OF THE ELECTRIC DISCHARGES ON ORGANOSILICON VARNISH FILM APPLIED ON THE TEXTOLYTE SURFACE;

14:45, A. Fedoseev, DUST CLOUD FORMATION IN THE STRIATION OF A DC GLOW DISCHARGE IN HELIUM;

15:00, G. Sukhinin, POLARIZATION OF “DUST QUASI-ATOMS” IN AN EXTERNAL ELECTRIC FIELD;

15:15, K. Sasaki, RESPONSES OF OH(X) AND OH(A) TO THE ELECTRICAL CURRENT OF DIELECTRIC BARRIER DISCHARGE IN A PLASMA-ASSISTED BURNER FLAME.

15:30 – 16:00, COFFEE BREAK

ROOM 1

16:00-18:00, LPB Session, Chair M. Koenig

16:00, M. Fajardo, PROBING SOLID DENSITY PLASMAS GENERATED BY X-RAY FREE ELECTRON LASERS WITH AN ULTRASHORT HIGH HARMONIC SOURCE;

16:30, M. Murakami, PROTON BEAM GENERATION BY NANOTUBE ACCELERATOR;

17:00, Tong-Pu Yu, ULTRA-BRIGHT SYNCHROTRON-LIKE GAMMA RAYS FROM LASER WIRE TARGET INTERACTION;

17:15, D. Bleiner, SHORT-WAVELENGTH PLASMA RADIATION FOR TABLE-TOP NANO-INSPECTION;

17:30, M. Skoric, INTENSE COMPRESSION AND AMPLIFICATION OF ATTOSECOND PULSES BY LASER LIGHT REFLECTION FROM RELATIVISTIC ELECTRON MIRRORS;

17:45, A. Yogo, ION ACCELERATION VIA “STOCHASTIC VACUUM HEATING”.

18:00-19:00, Open Session, FABRE PRIZE

Special session dedicated to the announcement of the winner of the first FABRE PRIZE for contributions to Inertial Fusion and Laser Plasma Interaction.

ROOM 2

16:00-18:00, BAP Session, Chair R. Fedele

16:00, V. Filinov, COLOR PATH INTEGRAL EQUATION OF STATE OF THE QUARK-GLUON PLASMA AT NONZERO CHEMICAL POTENTIAL;

16:30, S. Ter-Avetisyan, MEV NEGATIVE AND NEUTRAL ATOM BEAMS;

16:45, C. Ruyer, FORMATION OF WEIBEL-MEDIATED COLLISIONLESS SHOCKS: ANALYTICAL MODEL FOR SYMMETRIC COLLIDING FLOWS AND NUMERICAL STUDY OF LASER-DRIVEN SHOCKS IN OVERDENSE PLASMAS;

17:00, R. Horiuchi, COLLISIONLESS DRIVEN RECONNECTION UNDER THE INFLUENCE OF STRONG GUIDE MAGNETIC FIELD IN AN OPEN SYSTEM;

17:15, O. Pezzi, COLLISIONAL EFFECTS ON ION-ACOUSTIC SOLITARY WAVES PROPAGATION;

17:30, A. Okamoto, INTERACTION BETWEEN ION BEAM AND RECOMBINING HYDROGEN PLASMA IN RADIO-FREQUENCY DISCHARGE DIVERTOR SIMULATING DEVICE;

17:45, C.P. Olivier, POLARITY SWITCHES OF ACOUSTIC SOLITONS IN MULTI-COMPONENT SPACE PLASMAS.

WEDNESDAY – 17th of September

ROOM 1

9:15-10:30, Chair – D. Batani

9:15, R. Betti, STATUS AND PROSPECTS FOR BURNING PLASMAS VIA LASER FUSION

10:00, Kerchung Shaing, NEOCLASSICAL TRANSPORT THEORY FOR ORBITS WITH FINITE WIDTH IN TOKAMAKS;

10:30 – 11:00, COFFEE BREAK

ROOM 1

11:00-13:00, MCF Session, Chair – R. Galvão

11:00, S. Krasheninikov, PHYSICS OF THE EDGE PLASMA AND FIRST WALL IN FUSION DEVICES: SYNERGISTIC EFFECTS;

11:30, Daniel Klir, EFFICIENT GENERATION OF FUSION NEUTRONS IN RECENT Z-PINCH EXPERIMENTS;

12:00, Z. Guimarães Filho, CHARACTERIZATION OF MHD INSTABILITIES IN TCABR TOKAMAK;

12:30, D. Bonfiglio, HELICAL SELF-ORGANIZATION IN 3D MHD MODELING OF FUSION PLASMAS;

ROOM 2

11:00-13:00, BAP Session, Chair – C. Forest

11:00, D. Speirs, SCALED LABORATORY EXPERIMENTS AND NUMERICAL SIMULATIONS OF AURORAL MAGNETOSPHERIC RADIO EMISSION;

11:30, M. Aramaki, PRECISE CONTROL AND DIAGNOSTICS OF PLASMA USING TUNABLE DIODE LASERS;

12:00, F. Haas, RELATIVISTIC HYDRODYNAMIC EQUATIONS FOR FULLY DEGENERATE PLASMA;

12:30, G. Brodin, EXCHANGE EFFECTS IN PLASMAS: QUANTUM KINETIC THEORY;

**12:45, A. Bret, COLLISIONLESS WEIBEL SHOCKS: FULL
FORMATION MECHANISM AND TIMING.**

13:00 – 18:00, LUNCH BREAK + EXCURSION

THURSDAY – 18th of September

ROOM 1

9:15-10:30, Chair – L. Soto

9:15, Katsumi Ida, EXPERIMENTAL PROGRESS OF TRANSPORT PHYSICS IN TOROIDAL PLASMAS.

10:00, C. Forest, STIRRING UNMAGNETIZED PLASMAS: DYNAMOS IN THE LAB;

10:30 – 11:00, COFFEE BREAK

ROOM 1

11:00-12:30, MCF Session, Chair – P. Sakanaka

11:00, H.J. Hole, ADVANCED MHD MODELS OF ANISOTROPY, FLOW AND CHAOTIC FIELDS;

11:30, I. Caldas, ISOCHRONOUS ISLAND CHAINS MULTIPLICITY FOR WAVE-PARTICLE INTERACTIONS;

11:45, R. Henriques, THE HEAVY ION BEAM DIAGNOSTIC FOR PLASMA FLUCTUATION STUDIES AT THE TOKAMAK ISTTOK;

12:00, G. Tynan, OBSERVATION OF INWARD TURBULENT FLUX AGAINST DENSITY GRADIENT WITH SPATIALLY DISTINCT MULTIPLE FREE ENERGY SOURCES;

12:15, J. Bernardo, DENSITY IMPACT ON TOROIDAL ROTATION IN TORE SUPRA: EXPERIMENTAL OBSERVATIONS AND THEORETICAL INVESTIGATION;

ROOM 2

11:00-12:30 LTP Session, Chair – J.L. Ferreira

11:00, G. Hagelaar, LOW-TEMPERATURE PLASMA TRANSPORT ACROSS MAGNETIC FIELDS: FROM ELECTRIC PROPULSION AND NEGATIVE ION SOURCES TO TOKOMAK EDGE PLASMAS;

11:30, P. Bruggeman, ELECTRON DENSITIES AND ENERGIES OF FILAMENTARY ATMOSPHERIC PRESSURE PLASMAS;

12:00, A. Janeco, A GLOBAL MODEL FOR DBD CONVERSION OF CH₄/CO₂;

12:15, Y. Yasaka, CONTROL OF SPATIAL PLASMA PROFILE IN SLOT-EXCITED MICROWAVE DISCHARGES BY USING INVERSE SIMULATION;

12:30 – 14:00, LUNCH BREAK

ROOM 1

14:00-15:30, LPB Session, Chair F. Pegoraro

14:00, A. Lifschitz, SELF-INJECTION AND STABILITY IN LASER-PLASMA ACCELERATORS;

14:30, O. Rosmej, INVESTIGATIONS OF HYDRODYNAMIC, ABSORPTION AND RADIATIVE PROPERTIES OF X-RAY HEATED LOW DENSITY FOAMS FOR EXPERIMENTS ON HEAVY ION STOPPING IN PLASMAS;

15:00, I. Potapenko, KINETIC SIMULATION OF HEAT TRANSPORT IN COLLISIONAL LASER PRODUCED PLASMAS;

15:15, G. Fiore, A “SLINGSHOT” LASER-DRIVEN ACCELERATION MECHANISM OF PLASMA ELECTRONS.

ROOM 2

14:00-15:30, LTP Session, Chair V. Guerra

14:00, T. Nozaki, NON-THERMAL PLASMA-ASSISTED FUEL CONVERSION FOR GREEN CHEMISTRY;

14:30, J.A. Silva, CHARACTERIZATION OF ATMOSPHERIC PRESSURE PLASMA-GROWN SiN_x:H FILMS;

14:45, E. Ahedo, MAGNETIZED PLASMA PHYSICS; IN MAGNETIC NOZZLES FOR SPACE ELECTRIC PROPULSION;

15:00, T. Shiraishi, DEVELOPMENT AND PERFORMANCE INVESTIGATION OF DUAL-GROUNDED TRI-ELECTRODE PLASMA ACTUATOR

1:15, G. D’Ammando, STATE-TO-STATE MODELS FOR HIGH ENTHALPY NOZZLE AND SHOCK TUBE FLOWS;

15:30 – 16:00, COFFEE BREAK

CONGRESS CENTRE HALL

16:00-17:30, POSTER SESSION 2: LPB, BAP

LOCATION – PALÁCIO CONDE D'ÓBIDOS

20:00-23:00, CONFERENCE DINER

FRIDAY – 19th of September

ROOM 1

9:30-10:30, Chair – L.O. Silva

9:30, IUPAP Prize, Wei Lu, TOWARDS DREAM BEAM: A PERSONAL PERSPECTIVE ON PLASMA BASED ACCELERATION

10:00, A. Raga, WEAK SHOCK WAVES IN ASTROPHYSICAL AND GEOPHYSICAL FLOWS;

10:30 – 11:00, COFFEE BREAK

ROOM 1

11:00-12:30, BAP Session, Chair – A. Serbeto

11:00, M.A. Mochalov, STRONG SHOCK WAVES AND EXTREME STATES OF MATTER;

11:30, T. Kaladze, EXCITATION OF ZONAL FLOW AND MAGNETIC FIELD BY ULF PLANETARY WAVES IN THE EARTH'S IONOSPHERIC E-LAYER;

11:45: Z. Ehsan, NONLINEAR LANDAU DAMPING OF EMWS AND ITS INTERDISCIPLINARY APPLICATIONS;

12:00, C.Z. Cheng, PHYSICS OF 2-1/2D DRIVEN COLLISIONLESS MAGNETIC RECONNECTION;

12:15, N.S. Saini, NONLINEAR KINETIC ALFVEN WAVES IN A TWO TEMPERATURE ELECTRONS PLASMAS;

ROOM 2

11:00-12:30, LTP Session, Chair – Amita Das

11:00, A. Bogaerts, COMBINED PLASMA CHEMISTRY AND PLASMA-SURFACE INTERACTIONS MODELING FOR CO₂ CONVERSION BY GAS DISCHARGE PLASMAS;

11:30, Xiaolong Deng, PREPARATION OF AGNPS; DECORATED NON-WOVEN FABRICS USING AN ATMOSPHERIC; PRESSURE NONEQUILIBRIUM PLASMA;

11:45, Jaeho Kim, OPTICAL DIAGNOSTICS OF ATMOSPHERIC;
PRESSURE MICROWAVE-EXCITED PLASMA JETS;

12:00, L.L. Alves, THE LXCAT PROJECT;

12:15, T. Silva, CHARACTERIZATION OF MICROWAVE
GASEOUS DISCHARGES FOR DISSOCIATION OF CO₂;

12:30 – 14:00, LUNCH BREAK

ROOM 1

14:00-15:30, PAB Session, Chair – A. Cairns

14:00, F. Tanjia, LONGITUDINAL CHARGE-PARTICLE
DYNAMICS INDUCED BY AN ULTRA-SHORT RELATIVISTIC
ELECTRON BUNCH IN PLASMAS;

14:15, B. Van Compernelle, INTERMITTENT PROFILE
COLLAPSE IN A BASIC HEAT TRANSPORT EXPERIMENT;

14:30, Ph. Korneev, LASER PRODUCED PLASMA INTERACTION
WITH STRONG MAGNETIC FIELDS IN APPLICATIONS TO
ASTROPHYSICAL STUDIES;

14:45, L. Bilbao, UNSTABLE VELOCITY GRADIENT FLOWS
WITH ALIGNED MAGNETIC FIELD: THEORY AND
OBSERVATION ASPECTS OF A NEAR EARTH SPACE PLASMA
EVENT;

15:00, R. Sydora, ANOTHER VIEW ON ELECTRON BEAM-
PLASMA INTERACTION AND RELATED PHENOMENA;

15:15, M.A. Amato, CHARGED PARTICLES IN THE HMF MODEL;

ROOM 2

14:00-15:30, LTP Session, Chair E. Tatarova

14:00, S. Mitic, STAR-SHAPED DENSITY FLUCTUATIONS IN A
CAPACITIVELY-COUPLED LOW PRESSURE, XENON RF
DISCHARGE;

14:15, M. Irie, THE “STABLE” HELICAL MODE IN ARC
DISCHARGE.

14:30, F.E.M. Silveira, AXISYMMETRIC INSTABILITIES FOR PLASMA COLUMNS WITH PARABOLIC PROFILE: CURRENT RELAXATION AND INDUCTIONLESS APPROXIMATION;

14:45, E. Sternberg, DYNAMICS OF A LASER-ABLATED MOLYBDENUM PLUME;

15:00, T. Nakamura, THRUST PERFORMANCE OF PERMANENT MAGNET TYPE HELICON PLASMA THRUSTER IN VARIOUS MAGNETIC FIELD DISTRIBUTIONS;

15:15, M. Lino da Silva, STATE-TO-STATE MODELING OF HIGH-SPEED, NONEQUILIBRIUM SHOCKED FLOWS.

15:30 – 16:00, COFFEE BREAK

ROOM 1

16:00-17:00, Chair – F. Cheng

16:00, S. Hamaguchi, LIQUID-PHASE CHEMICAL REACTIONS INDUCED BY LOW-TEMPERATURE ATMOSPHERIC-PRESSURE PLASMAS RELEVANT OT PLASMA MEDICINE;

16:30, R. Bingham, J.T. Mendonça, CLOSING REMARKS.

16:45, CONFERENCE CLOSURE