



ICPIG 2017 @ ESTORIL / LISBON (PORTUGAL) 9 – 14 July 2017

Second announcement

The International Scientific Committee (ISC) and the Local Organizing Committee (LOC) are pleased to invite you to the XXXIII International Conference on Phenomena in Ionized Gases (ICPIG), which will be held in Estoril / Lisbon, Portugal, from 9 to 14 July 2017.

This edition, for the first time, welcomes submissions for both oral and poster contributions.

Since 1953 the ICPIG has been the forum for discussion of nearly all fields in plasma science, covering both modelling and experiments, from the fundamentals of plasma elementary processes, basic data and discharge physics (including transport and interaction with the walls), to applications with the plasma processing of surfaces and particles, high pressure and thermal plasma processing, development of radiation sources, plasma medicine, atmospheric and stellar plasmas, environmental protection and pollution control, plasma aerodynamics, and non-thermal plasmas in fusion devices.



Estoril is a village located less than 30km West of Lisbon, which combines glamour, luxury and tradition. During the Second World War, Estoril was the place of exile of several members of the European high society, such as kings, writers, famous artists and bankers, and naturally it became also the main destination for British, Japanese and German spies. Indeed, Estoril was the scenery for the creation of Ian Fleming's famous spy 007 / James Bond, in the novel "Casino Royale", and the stage for some scenes of Bond's 1969 motion picture "On Her Majesty's Secret Service".

This is the ideal surrounding to meet and discuss, in an enjoyable relaxed atmosphere, profiting also the high-quality scientific program of ICPIG 2017.

Eugen Stamate, Chair ISC



Luís L. Alves, Chair LOC



Conference scope and topics

The International Conference on Phenomena in Ionized Gases (ICPIG) is a renowned biennial international conference covering nearly all fields in plasma science, from fundamentals to applications. It emphasises interdisciplinary research and fosters exchange between different communities.

You are kindly invited to communicate the latest results of your scientific work in one of the XXXIII ICPIG topics.

FUNDAMENTALS

- 1) Elementary processes and fundamental data
- 2) Thermodynamics and transport phenomena
- 3) Plasma wall interactions, electrode and solid/liquid surface effects
- 4) Collective and nonlinear phenomena

MODELLING, SIMULATION AND DIAGNOSTICS

- 5) Modelling and simulation techniques
- 6) Plasma diagnostic methods

PLASMA SOURCES AND DISCHARGE REGIMES

- 7) Astrophysical, geophysical and other natural plasmas
- 8) Low pressure plasmas
- 9) High frequency discharges
- 10) Non-equilibrium plasmas and microplasmas at high pressures
- 11) Thermal plasmas
- 12) Complex and dusty plasmas, ion-ion plasmas, mixed phase plasmas
- 13) Plasma created by external sources of ionization

APPLICATIONS

- 14) Plasma processing of surfaces and particles
- 15) High pressure and thermal plasma processing
- 16) Plasma lamps and radiation sources
- 17) Medical, biological, environmental and aeronautical applications
- 18) Plasma power and pulsed power technology, particle sources

Scientific Program – NEW FORMAT

ICPIG 2017 introduces a **new format in the scientific program**, consisting of

- 6 invited **General Lectures** (GLs, with 45min duration), including the von Engel & Franklin prize lecture
- 30-32 invited **Topical Lectures** (TLs, 30min)
- 30-36 **Oral Contributions** (OCs, 20min)
Oral contributions are new to the ICPIG. The ISC will select them from the submitted abstracts, based on the quality of the material presented and on the preferences of the authors upon submission, considering also the number of slots available.
- 4 **Poster Sessions** (2h)
- 1 **Special Session** (2h)

The tentative timetable of the scientific program of ICPIG 2017 is shown below.

	SUNDAY July 9	MONDAY July 10	TUESDAY July 11	WEDNESDAY July 12	THURSDAY July 13	FRIDAY July 14
9am - 10.30am		Opening GL1	GL2 + GL3	GL4 + GL5	TL23+OC19-21 / TL24+OC22-24	TL31 + OC31-33/ TL32 + OC34-36
Break (10.30am -11am)						
11am-12.30pm		TL1 + OC1-3 / TL2 + OC4-6	TL15 + OC7-9 / TL16 + OC10-12	TL21 + OC13-15/ TL22 + OC16-18	TL25 + OC25-27/ TL26 + OC28-30	Von Engel Franklin Closing
Lunch (12.30pm – 2 pm)						
2pm – 4pm		Posters I	Posters II	EXCURSION	Posters III	
Break (4pm -4.30pm)						
4.30pm – 5.30pm		TL3-4 / TL5-6	TL17-18 / TL19-20		TL27-28 / TL29-30	
5.30pm – 7.30pm	Registration	TL7-10 / TL11-14	Special Session		Posters IV	
8pm		Welcome reception			Conference Dinner	

General Invited Speakers

- **Prof M. Cernak**, Czech Republic, *Unified theory of the streamer initiated gas breakdown*
- **Prof M. Hori**, Japan, *Plasma-material interactions: diagnostics and control*
- **Prof A. Neuber**, USA, *VUV Radiation from streamers*
- **Dr A. Rousseau**, France, *Surface and volume kinetics of molecules in air depollution processes*
- **Dr E. Tatarova**, Portugal, *Microwave plasma applied for synthesis of 2D nanostructures*

Topical Invited Speakers

- **Prof I. Adamovich**, USA, *Electric field measurements in surface discharges in atmospheric air over solid and liquid dielectrics*
- **Dr P. Bandyopadhyay**, India, *Flow induced excitations of nonlinear waves in dusty plasmas*
- **Dr P. Baroch**, Czech Republic, *Specific plasma phenomena in dual magnetron sputtering system*
- **Prof M. Chaker**, Canada, *Pulsed laser and sputtering deposition of optical materials*
- **Dr L. Couedel**, France, *Two-dimensional plasma crystals: waves and instabilities*
- **Prof R. Dussart**, France, *Microhollow cathode discharges on silicon devices*
- **Dr F. Esposito**, Italy, *Reactivity, relaxation and dissociation of molecules in plasma modelling*
- **Dr F. Ghezzi**, Italy, *Modelling and interpretation of micrometric dust behaviour in tokamaks*
- **Prof K. Hara**, USA, *Direct kinetic simulation of nonlinear plasma waves and Hall thruster discharge plasmas*
- **Dr V. Herrero**, Spain, *Plasma generation and processing of interstellar carbonaceous dust analogs*
- **Dr T. Huiskamp**, Netherlands, *Nanosecond pulsed discharges: generation, measurements and plasma processing*
- **Dr I. Jogi**, Estonia, *Plasma and catalyst for the oxidation of NO_x*

- **Prof T. Kaneko**, Japan, *Plasma gene transfection*
- **Dr S. K. Karkari**, India, *Diagnosing negative ions using electrical probes*
- **Prof A. von Keudell**, Germany, *Reactive atmospheric plasmas*
- **Dr K. Kostov**, Brazil, *Pre-treatment of sugarcane bagasse by atmospheric pressure plasmas*
- **Dr S. Mazouffre**, France, *Rotating spoke instabilities in standard and wall-less Hall thrusters: experiments and PIC simulations*
- **Prof M. Nistor**, Romania, *Pulsed electron beams for thin film deposition*
- **Dr S. Nunomura**, Japan, *Characterization of electronic transport in semiconductor films during plasma processing*
- **Dr P. Papp**, Slovakia, *Electron interactions for plasma diagnostics and modelling*
- **Dr J. Pawlat**, Poland, *Atmospheric pressure plasmas for agriculture, medicine and surface technology*
- **Prof I. Schneider**, France, *Electron/molecular-cation collisions in cold plasmas: super-excited states at "zero" energy*
- **Dr C. I. Schrittwieser**, Austria, *Recent developments in probe diagnostics*
- **Dr D. V. Tereshonok**, Russia, *Pre-breakdown phenomena and discharges in gas-liquid systems*
- **Prof F. Tochikubo**, Japan, *Simulation of glow discharge electrolysis for material processing in liquid*
- **Dr T. Trottenberg**, Germany, *Non-conventional plasma and sheath diagnostics*
- **Prof P. Veis**, Slovakia, *Simultaneous vacuum UV and broadband UV-NIR plasma spectroscopy for LIBS improvement*
- **Dr O. Versolato**, Netherlands, *Generating EUV light from tin plasma for chip manufacturing*
- **Dr A. V. Vodopyanov**, Russia, *A point-like discharge, sustained by powerful radiation of terahertz gyrotron*
- **Dr E. Wagenaars**, UK, *Diagnostics of atmospheric pressure plasma jets*

Special Session

“Challenges in Low-Temperature Plasma Modelling”

The scientific program of ICPIG 2017 includes on July 11 (Tuesday) a Special Session on “Challenges in Low-Temperature Plasma Modelling”, dedicated to the memory of Professor Carlos Matos Ferreira.

The confirmed list of invited speakers is the following.

- **Luís L. Alves**, Portugal, *Opening. Evocation of Carlos Matos Ferreira*
- **Ron White**, Australia, *Challenges in the kinetic modelling of electrons and ions in gaseous and liquid matter*
- **Thomas Mussenbrock**, Germany, *Challenges in PIC modelling: electromagnetic description and resonance phenomena*
- **Juan Pablo Trelles**, United States, *Advances and challenges in fluid flow models of low-temperature plasmas*
- **Vasco Guerra**, Portugal, *Challenges in the modelling of plasma-surface interaction*
- **Andrew Gibson**, United Kingdom, *Challenges in the modelling of reactive plasmas: limitations and opportunities in global modelling*

ICPIG’s von Engel & Franklin prize 2017

The von Engel and Franklin Prize is awarded biennially for outstanding research in the field of physics and technology of plasmas and ionized gases, as covered by ICPIG meetings. The prize is named in honour of two distinguished colleagues who have had a major role in ICPIG and its community since the original meeting in 1953.

The election procedure is conducted by the International Scientific Committee taking account of recommendations from the community based on long-standing and important contributions with remarkable scientific impact to the field.

The nomination cycle begins around February with a decision at the end of March.

Abstract submission

Submission of contributions should follow the guidelines given at <http://icpig2017.tecnico.ulisboa.pt/authors/abstract-submission/>

During submission, the authors must choose the type of contribution between Poster / Oral / Invited (General, Topical or Special Session). They must also select the topic number relevant to the contribution.

Each contribution is limited to a maximum length of 1 full page. Details of editing are included in the [abstract template](#).

Each registered participant can present a maximum of two contributions.

The deadline for submissions is March 3, 2017.

Deadlines will be respected, hence early submission is encouraged.

The accepted contributions will be published in the conference proceedings, on-line and on digital support distributed to all registered participants. In order to have a contribution published in the conference proceedings, **at least one of the authors must have paid the registration fee before May 21, 2017.**

Please note that the early registration deadline is May 5, 2017.

Conference venue

The ICPIG 2017 will be held in the **Estoril Congress Centre**, located on a very prominent tourist site known as the Estoril Coast, next to the famous Casino, granted with the surrounding gardens and sea views and a 25km drive from Lisbon airport.



Opened in 2001 and winner of the “Excellency in innovation and Architecture Quality Prize” and “Best Tourism Development”, the Estoril Congress Center has been designed to hold a great number of events and its functionality and modern technological equipment allow it to adapt to specific requirements, as well as the simultaneous holding of different activities. The Estoril Congress Center is the only space certified as a Green Venue in Portugal for its commitment to green practices and sustainable business.

Travel

Lisbon is one of Europe’s cosmopolitan centres, easy accessible from all around the world.

By plane: Lisbon Airport (<https://www.aeroporto lisboa.pt/en/lis/home>) is linked to all major airports in the world. The airport connects directly to the city centre by the Lisbon Metro.

By train: Lisbon is connected by train to Madrid, by the *Lusitânia Comboio Hotel* (<https://www.cp.pt/passageiros/en/how-to-travel/lusitania>), and to Hendaye, by the *Sud Expresso* (<https://www.cp.pt/passageiros/en/how-to-travel/sud-expresso>). The different train-stations in Lisbon connect directly to the city centre by the Lisbon Metro.

There are multiple ways to access the Estoril Congress Centre from Lisbon, using public transportation.

Lisbon Metro (<http://www.metrolisboa.pt/eng/>): go until *Cais do Sodré* Station.

From the airport, take the red line until *Alameda* station, and change to green line until *Cais do Sodré* station.

AeroBus (<https://www.aerobus.pt/en-GB/Home-2.aspx>): from the airport, take Line 1 that terminates at *Cais do Sodré*.

From *Cais do Sodré*, there is a **regular train service** directly to Estoril (Cascais line, <https://www.cp.pt/passageiros/en/how-to-travel/urbanos-lisboa>).

Taxis: There are always plenty of taxis waiting outside Lisbon’s Airport arrivals terminal. For the 28km between Estoril and the airport, the price is estimated at 40-50€.

Accommodation

A number of rooms have been reserved at special prices, in various hotels near the venue, for the accommodation of the participants and their accompanying persons. Rooms in these hotels can be booked using the same link as for the registration <http://icpig2017.tecnico.ulisboa.pt/registration/>

Detailed information on the hotels, including their location, can be found on the ICPIG 2017 website at <http://icpig2017.tecnico.ulisboa.pt/venue/#hotel>

Please note that Estoril is a tourist destination and July is high season. **Attendants to ICPIG 2017 are strongly advised to book in advance.**

Conference Dinner (at Palácio Estoril Hotel)

Built in 1930, Palácio Estoril Hotel retains many of the characteristics of that period, pervading an ambience of exclusiveness through the combination of the white façade, the beautiful gardens the elegant classic décor.



The Hotel has always hosted heads of state, emperors, kings and princes, European nobility, artists, writers, sports champions, filmmakers and actors. In the 40's, the Palácio Hotel welcomed numerous members of the European royalty (Spanish, Italian, French, Bulgarian and Romanian), which have chosen Estoril for their exile due to Portugal's neutrality during the Second World War. In this period, the Hotel was also the haunt of British and German spies, who could often be found in its bar. Later, this atmosphere of intrigue and espionage inspired famous novelists and filmmakers and the Hotel even served as the set for James Bond's "On Her Majesty's Secret Service".

In February 2011 the Hotel inaugurated the "Royal Gallery", presently one of Estoril's tourist attractions, displaying the photographs of important members of the European royalty who stayed at Palácio Hotel.

The Palácio Hotel has benefited from several refurbishments and renovations throughout the years. Today, it offers all the comfort and convenience of a modern luxury five-star hotel, while retaining all the charm of its olden days.

Conference Excursion

On Wednesday July 12, afternoon, all participants and their companions are kindly invited to the ICPIG 2017 excursion, included in the registration fee (English language guided tours, starting / ending at the conference venue).

There is a choice between the excursions indicated below (pre-registration required on the conference registration form; assignment will be based on first-come-first-served basis).

Option 1: Visit to Tomar (3h return travel + 2h tour)

The tour includes the visit to the exceptionally well-preserved Castle-Convent of Christ. Tomar's Castle was conquered to the Arabs in 1147 and later confirmed in 1159 as the seat of the Order of the Knights of the Temple and from 1312 of the Order of Christ. The layout of the Castle has different areas of interest, with particular emphasis to the Medieval "Charola" (chapel), the Renaissance cloisters and the Gothic-Manueline window, ex-libris of the town. In the churchyard one finds several tombstones of medieval knights that fought in the Crusades.



The tour concludes with a walking visit to the town of Tomar, where one finds some Gothic arched houses, the Roman Cathedral and a 16th century Synagogue now turned into the Jewish Museum and Memorial to the Portuguese Jews.

Option 2: Visit to Óbidos (2h30 return travel + 2h30 tour)

Óbidos is one of the most charming Portuguese villages, completely enclosed within the ramparts of its Medieval Castle. The tour includes a walking visit to the village, with entrance by the 18th century arch covered in glazed-tiles (azulejos), passing by bright-white small houses along cobblestone narrow streets with flower pots on the window-sills, and entering into Gothic and Renaissance churches that remind the importance of its past. Óbidos is the archaic jewel in the Portuguese crown that time and ware could not change.



The early 17th century paintings of Josefa d' Óbidos can be admired in the beautiful Church of Santa Maria. Local artisans and craftsmen, still using old techniques, show their wares in small shops along the streets. Time will be dedicated to individual leisure or to look for souvenirs.

Registration and fees

Registration can be made following the information on the website of ICPIG 2017 at <http://icpig2017.tecnico.ulisboa.pt/registration/>

The hotel accommodation and the conference dinner can be reserved using the same form. Note that the hotel accommodation, the conference lunches and the conference dinner are not included in the registration fee.

The registration fees are the following

	Early Fee (until May 5, 2017)	Late Fee (from May 5, 2017)
Regular Participants	450 €	500 €
Students	280 €	330 €
Accompanying persons	80 €	100 €
Conference Dinner (limited to 400 places)	57 €	57 €

The registration fee for regular participants and for students brings a complete package including a digital copy of the conference proceedings, conference material, coffee breaks, invitation for the welcome reception and the excursion, and a complete tourist guide.

The fee for accompanying persons includes the participation in the welcome reception and the excursion.

Payments can be made by credit card or by bank transfer.

The bank account information for electronic bank transfers is the following

Bank Millennium BCP

Rua Júlio Dinis, nb 713, 2º

4050-320 Porto, Portugal

Beneficiary Name on Account: VIAGENS ABREU S.A.

Bank's Account Number: 000000000231320

SWIFT Code: BCOMPTPL

IBAN Number: PT50 0033 0000 00000231320 83

For queries please contact:

Angélica Ruivo

Phone: (351) 21 415 6125

angelica.ruivo@abreu.pt

ABREU PCO-Lisboa

Cancellation Policy

Cancellation received

- Before May 21, 2017 Full fee refund (bank transfer charges will be deducted)
- Before June 2, 2017 70% refund
- Before June 16, 2017 50% refund
- After June 16, 2017 No refund

Financial support

A limited budget is available from the Local Organizing Committee (LOC) to partially cover, with a fixed amount to determine, the expenses (conference fee and/or accommodation) of presenting authors from Developing Countries that most need financial support for attending ICPIG 2017.

This financial support is granted through sponsorship of the International Union of Pure and Applied Physics (IUPAP).



Details about financial support from the LOC are given on the conference website at <http://icpig2017.tecnico.ulisboa.pt/financial-support/>

The deadline for applications to financial support from the LOC is March 3, 2017.

International Scientific Committee

Eugen STAMATE , President of ISC (chair) Technical University of Denmark, Denmark	Denmark, Finland, Norway and Sweden
Mark KUSHNER University of Michigan, USA	USA and Canada
Sudeep BHATTACHARJEE Indian Institute of Technology, Kanpur, India	Australia, New Zealand, Indonesia, Polynesia, India and South Africa
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Ute EBERT Centre for Mathematics and Computer Science, The Netherlands	Belgium, The Netherlands and Luxembourg
Holger KERSTEN Kiel University, Germany	Germany, Austria, Lichtenstein and Switzerland
Miles TURNER Dublin City University, Ireland	UK and Ireland
Olga DE PASCALE CNR Institute of Inorganic Methodologies and Plasmas, Italy	Italy, Greece and Israel
Zdenko MACHALA Comenius University, Bratislava, Slovakia	Poland, Hungary, Czech Republic and Slovakia
Masaharu SHIRATANI Kyushu University, Japan	Japan
Gilles CARTRY Aix-Marseille University, France	France and North Africa
Marija RADMILOVIC RADJENOVIC University of Belgrade, Serbia	Bulgaria, Romania, Serbia, Bosnia, Montenegro, Croatia and Slovenia
Francisco J. GORDILLO VÁZQUEZ Consejo Superior de Investigaciones Científicas, Granada, Spain	Spain, Portugal, Mexico and South and Central America

Local Organizing Committee

Instituto de Plasmas e Fusão Nuclear
Instituto Superior Técnico

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Carlos Daniel **PINTASSILGO**

Secretary

Anabela **GONÇALVES**

Image and Website

Joana **CABRAL**

Irene **LEMOS ALVES**

Important dates

Dates and deadlines	Action
March 3, 2017	Deadline for abstract submission
March 3, 2017	Deadline for application to financial support from LOC
April 3, 2017	Deadline for abstract acceptance notification
April 17, 2017	Decision of financial support from LOC
May 5, 2017	Deadline for early registration (reduced fee)
May 21, 2017	Registration deadline for inclusion in ICPIG 2017 proceedings
May/June 2017	Final announcement

Contacts

Professional Conference Organizer

ABREU PCO-Lisboa

Angélica Ruivo

Phone: (351) 21 415 6125

angelica.ruivo@abreu.pt

Local Organizing Committee

icpig2017@tecnico.ulisboa.pt

Conference Secretariat Support

Anabela Gonçalves

[Instituto de Plasmas e Fusão Nuclear](#)

[Instituto Superior Técnico](#)

Av. Rovisco Pais

1049-001 Lisbon, Portugal

Phone: (351) 21 841 9325

pcanabela@tecnico.ulisboa.pt

