

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

Final 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 of ICPIG, for the first time, will host both contributed oral and poster sessions.

Since 1953, ICPIG has been a forum for the discussion of nearly all fields of plasma science, covering modelling and experiments, from the fundamentals of elementary processes, basic data and discharge physics (including transport and interaction with walls), to applications. Topics include 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 30 km west of Lisbon, which combines glamour, luxury and tradition. During World War II, Estoril was a place of exile for members of the European high society, such as kings, writers, famous artists and bankers, and naturally it became a main destination for British, Japanese and German spies. Indeed, Estoril was the location of Ian Flemming's famous spy 007 James Bond in the novel "Casino Royale", and the location for scenes in the 1969 James Bond motion picture "On Her Majesty's Secret Service".

Estoril is the ideal surrounding to meet and discuss equally intriguing plasma physics, in an relaxed atmosphere, enjoying the high-quality scientific program of ICPIG 2017.

Eugen Stamate, Chair ISC



Luís L. Alves, Chair LOC



ICPIG 2017 @ Estoril / Lisbon

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

IUPAP support and policy

The XXXIII edition of ICPIG is partly sponsored by the International Union of Pure and Applied Physics (IUPAP). Accordingly, the XXXIII ICPIG is organized following the IUPAP principles, regarding the free circulation of scientists for international collaborations and discussions, as stated in the declaration of the International Council of Science, adopted at the 26th General Assembly in 2008 and endorsed by the 27th General Assembly in 2011. In particular, no bona fide scientist is excluded from participation on grounds of origin, nationality or political considerations unrelated to science.

Scientific Program – NEW FORMAT

The full scientific program of ICPIG 2017 can be downloaded here

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

- 6 invited **General Lectures** (GLs, 40+5 min duration), including the von Engel & Franklin Prize Lecture
- 29 invited **Topical Lectures** (TLs, 25+5 min)
- 36 Oral Contributions (OCs, 15+5 min)
 Oral contributions are new to the ICPIG. The ISC selected papers for oral contributions from the submissions, taking into account the preferences of the authors and the number of slots available. The contributions were evaluated based on their novelty, scientific quality and expected impact on ICPIG audience, considering also the balance between the number of contributions submitted by country or region.
- 4 Poster Sessions (2h)
- 1 Special Session (2h)

LEGEND:

GL: General Lecture **TL**: Topical Lecture **OC**: Oral Contribution

Elementary processes and fundamental data Modelling and simulation techniques High frequency discharges Thermodynamics and transport phenomena Complex and dusty plasmas, ion-ion plasmas, mixed phase plasmas Collective and nonlinear phenomena Astrophysical, geophysical and other natural plasmas High pressure and thermal plasma processing Non-equilibrium plasmas and microplasmas at high pressures Thermal plasmas Plasma wall interactions, electrode and solid/liquid surface effects Medical, biological, environmental and aeronautical applications Plasma diagnostic methods Plasma lamps and radiation sources Plasma created by external sources of ionization Plasma processing of surfaces and particles Plasma power and pulsed power technology, particle sources Low pressure plasmas

XXXIII International Conference on Phenomena in Ionized Gases 9-14 July 2017. Estoril / Lisbon. Portugal

| | | | | | | 9-14 J | | uly 2017, Estoril / Lisbon | | |
|---------------|--------------------------------------|-----------------------------------|---------------------------------------------------------------------------|---------------------------------|----------------|-------------------|-------------------------------------|------------------------------------|--------------------------------|----------------|
| | MONDAY | | TUESDAY | | WEDNESDAY | | THURSDAY | | FRIDAY | |
| | July 10 | | July 11 | | July 12 | | July 13 | | July 14 | |
| 09:00 - 09:10 | Registration | | Neuleau | | - | | Veis Baroch | | Ghezzi <mark>Tereshonok</mark> | |
| 09:10 - 09:20 | Registration | | Neuber | | Tatarova | | (TL) | (TL) | (TL) | (TL) |
| 09:20 - 09:30 | OPENING | | (GL) | | (GL) | | Room 1 | Room 2 | Room 1 | Room 2 |
| 09:30 - 09:40 | | | Room 1 | | Room 1 | | Barnat | Velicu | Minea | Janda (OC) |
| 09:40 - 09:50 | | | | | | | (OC) Room 1 | (OC) Room 2 | (OC) Room 1 | (OC) Room 2 |
| 09:50 - 10:00 | Hori | | Černák | | Rousseau | | Panousis | Oshiro | Yang | Gómez-Ramírez |
| 10:00 - 10:10 | (GL) | | (GL) | | (GL) | | (OC) Room 1 | (OC) Room 2 | (OC) Room 1 | (OC) Room 2 |
| 10:10 - 10:20 | (GL) Room 1 | | Room 1 | | Room 1 | | Rawat | Kajita | Rutjes | Stepanova |
| 10:20 - 10:30 | Koom 1 | | | | Noom 1 | | (OC) Room 1 | (OC) Room 2 | (OC) Room 1 | (OC) Room 2 |
| 10:30 - 11:00 | | | | | COFFEE | BREAK | | | | |
| 11:00 - 11:10 | Kaneko | Nistor | Von Keudell | Wagenaars | Herrero | Magureanu | Jõgi | Рарр | | |
| 11:10 - 11:20 | (TL) | (TL) | (TL) | (TL) | (TL) | (OC) Room 2 | (TL) | (TL) | Czarr | netzki |
| 11:20 - 11:30 | Room 1 | Room 2 | Room 1 | Room 2 | Room 1 | Vayner | Room 1 | Room 2 | von E | ngel & |
| 11:30 - 11:40 | Chauvin | Nave | Toyoda | Kühn-Kauffedt | Pérez-Invernón | (OC) Room 2 | Morillo-Candas | Vermeiren | | in prize |
| 11:40 - 11:50 | (OC) Room 1 | (OC) Room 2 | (OC) Room 1 | (OC) Room 2 | (OC) Room 1 | Room 2 Surov | OC) Room 1 | (OC) Room 2 | (+ poste | - |
| 11:50 - 12:00 | Pajak | Koom 2 Kylian | Jang | Skrylev | Sasaki | (OC) Room 2 | Ryu | Bonaventura | | m 1 |
| 12:00 - 12:10 | (OC) Beerry 1 | (OC) | (OC) | (OC) Room 2 | (OC) | Room 2 Espinho | OC) | (OC) Beem 3 | KU0 | |
| 12:10 - 12:20 | Room 1 Benova | Room 2 Dias | Room 1 Béchu | Room 2 Bílek | Room 1 | (OC) | Room 1 Pinhão | Room 2 Orriere | CLOS | URF |
| 12:20 - 12:30 | (OC) | (OC) | (OC) | (OC) | | Room 2 | (OC) | (OC) | Roo | |
| 12:30 - 14:00 | Room 1 | Room 2 | Room 1 | Room 2 | NCH | | Room 1 | Room 2 | | |
| 14:00 - 16:00 | POSTER SESSION I | | POSTER SESSION II | | | | POSTER SESSION III | | | |
| 16:00 - 16:30 | | COFFEE | BREAK | | | | COFFEE BREAK | | | |
| 16:30 - 17:00 | lonita (TL) <i>Room 1</i> | Chake (TL) <i>Room 2</i> | Esposito (TL) <i>Room 1</i> | Pawlat (TL) <i>Room 2</i> | | | Versolato (TL) <i>Room 1</i> | Dussart (TL) <i>Room 2</i> | | |
| 17:00 - 17:30 | Karkari (TL) <i>Room 1</i> | Huiskamp (TL) <i>Room 2</i> | Schneider (TL) <i>Room 1</i> | Kostov (TL) <i>Room 2</i> | | | Vodopyanov (TL) <i>Room 1</i> | Tochikubo (TL) <i>Room 2</i> | | |
| 17:30 - 18:00 | Trottenberg (TL) <i>Room 1</i> | Hara (TL) <i>Room 2</i> | SPECIAL SESSION "Challenges in Low-Temperature Plasma Modelling" | | EXCURSION | | | | | |
| 18:00 - 18:30 | Nunomura (TL) <i>Room 1</i> | Tsikata (TL) <i>Room 2</i> | | | | | POSTER SESSION IV | | | |
| 18:30 - 19:00 | Adamovich (TL) <i>Room 1</i> | Couedel (TL) <i>Room 2</i> | | | | | | | | |
| 19:00 - 19:30 | WELCOME | | Room 1 | | | | | | | |
| 19:30 - 20:00 | RECEPTION | | CULTURAL SESSION | | | | | | | |
| 20:00 - 22:00 | | | | | | | CONFEREN | CE DINNER | | |
| | | @ Estoril / Li | | | 9-14 July 2017 | | | 2017.tecnico | | |

General Invited Speakers

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

Topical Invited Speakers

- **I. Adamovich,** USA, Electric field measurements in surface discharges in atmospheric air over solid and liquid dielectrics
- **P. Baroch,** Czech Republic, Specific plasma phenomena in dual magnetron sputtering system
- M. Chaker, Canada, Pulsed laser and sputtering deposition of optical materials
- L. Couedel, France, Two-dimensional plasma crystals: waves and instabilities
- **R. Dussart,** France, *Microhollow cathode discharges on silicon devices*
- F. Esposito, Italy, Reactivity, relaxation and dissociation of molecules in plasma modelling
- **F. Ghezzi,** Italy, Modelling and interpretation of micrometric dust behaviour in tokamaks
- **K. Hara,** USA, Direct kinetic simulation of nonlinear plasma waves and Hall thruster discharge plasmas
- **V. Herrero,** Spain, *Plasma generation and processing of interstellar carbonaceous dust analogs*
- **T. Huiskamp,** Netherlands, *Nanosecond pulsed discharges: generation, measurements and plasma processing*
- **C. Ionita,** Austria, *Recent developments in probe diagnostics*
- I. Jogi, Estonia, *Plasma and catalyst for the oxidation of NOx*
- T. Kaneko, Japan, Gas-liquid interfacial plasmas for novel gene transfer systems
- S. K. Karkari, India, Diagnosing negative ions using electrical probes

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

Poster Sessions

There will be **four poster sessions** for contributed papers. The poster sessions will take place in the Foyer of the Congress Centre.

The presenters in **poster session I** (Monday July 10, 14:00-16:00) and **poster session II** (Tuesday July 11, 14:00-16:00) are requested to **mount their posters prior to 12:30 on Monday**. These presenters should **remove their posters right after the end of poster session II**.

The presenters in **poster session III** (Thursday July 13, 14:00-16:00) and **poster session IV** (Thursday July 13, 17:30-19:30) are requested to **mount their posters prior to 12:30 on Wednesday**. These presenters should **remove their posters right after the end of poster session IV**.

Poster boards are 1 m wide by 2.5 m height, **suitable for an A0 size poster format in portrait orientation**. The posters can be attached with special adhesive clay, which will be available at the Registration Desk. No tacks or other tape should be used.

ICPIG's von Engel & Franklin Prize 2017

The 'von Engel and Franklin Prize' was established in 1998. It is sponsored by the 'Hans von Engel and Gordon Francis Fund' and is administered by the Board of Physical Sciences, University of Oxford. The prize is named in honour of two distinguished colleagues who had a major role in ICPIG and its community since the first meeting in 1953.

The prize, consisting of 1000€ and a certificate, is awarded every two years to an individual for work in the field of physics and technology of plasmas and ionized gases, as covered by ICPIG meetings. The selection is conducted by the International Scientific Committee, based either on long-standing and important contributions to the field, or an outstanding achievement giving rise to a new field, or both.

The International Scientific Committee (ISC) have chosen Prof. Uwe Czarnetzki. as the 2017 winner of ICPIG's von Engel & Franklin prize.

ICPIG 2017 Student Prizes for Best Oral Contribution and Best Poster

The International Scientific Committee (ISC) of ICPIG will select the best Oral Contribution and the best Poster presented by PhD students.

The prizes, consisting of $500 \in$ and a certificate, will acknowledge the quality of both the scientific content and the presentation, irrespective of the topic, or whether it is predominantly experimental, computational or theoretical.

The student's supervisor, whether attending ICPIG or not, must nominate her/his student for the prize. Eligible students should not have defended their PhD thesis before January 2017. The nomination letter briefly describing and evaluating the specific work (maximum of one page, including up to three most relevant publications - journal and conference proceedings – related to the PhD thesis) should reach the ISC Chair, Dr Eugen Stamate, by e-mail (<u>eust@dtu.dk</u>), before **16th June 2017**.

The student prize for Best Oral Contribution is sponsored by *Instituto de Plasmas e Fusão Nuclear*.

The student prize for Best Poster is sponsored by Sociedade Portuguesa de Física.

Conference Proceedings

The accepted contributions (including General Lectures, Topical Lectures and Special Session) will be published in the conference proceedings, on-line and in digital format (4 GB USB drive) distributed to all registered participants.

The authors of the General Lectures, Topical Lectures and Special Session are invited to submit a full paper for a **regular issue of Plasma Sources Science and Technology (PSST)**. The full papers must be **submitted before October 30**th, **2017**. Submitted papers will be subject to the usual peer-review process arranged by the Institute of Physics (IOP).

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 and the payment of fees can be done on site, during the conference.

The registration office will be open on Sunday, 9 July from 16:00 to 19:00. From Monday 10 to Friday 14 July, it will be open from 8:30 to 12:30 and from 14:00 to 19:30.

| | Early Fee (until May 12, 2017) | Late Fee (from May 12 <i>,</i> 2017) |
|----------------------------------------------|-----------------------------------|-----------------------------------------|
| Regular Participants | 450€ | 500€ |
| Students | 280€ | 330€ |
| Accompanying persons | 80€ | 100€ |
| Conference Dinner (limited to 400 places) | 57€ | 57€ |

The registration fees are the following

The registration fee for regular participants and for students includes a digital copy of the conference proceedings, conference materials, 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

Note that cancellations received after 16 June 2017 will NOT be refunded.

Conference logistics

ICPIG participants are requested to **wear their badges at all times**, while attending the sessions, coffee breaks and social events.

All speakers are asked to upload their presentations by the end of the day before their sessions. The presentations can be uploaded using an USB memory stick

- at the régie of the auditorium, for presentations in room 1
- directly onto the computer of room 2, for presentations in this room.

Members of the Congress Centre and/or of ICPIG staff will be present in the rooms to assist in this process and/or in resolving any technical issues. The use of personal laptop for presentations is discouraged.

All presentation will be displayed in format of 16x9. Please save your presentation as ppt. or pdf. files (be mindful of proprietary fonts; we recommend the ppt. format). When using videos, MPG and AVI are the most used video formats. Movies created in (Apple) QuickTime should be converted to MPG or AVI before inserting the video in your presentation. Save the videos used in your presentation on your USB memory stick.

It is the responsibility of each speaker to check that his/her presentation will display correctly on the conference computers (Windows 7, Microsoft Office 2010, Acrobat Reader).

At the end of the congress, all presentations will be deleted so that no copyright issues will arise.

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, surrounded by gardens and sea views. The site is a 25 km drive from the Lisbon airport.



Opened in 2001 and winner of the "Excellency in innovation and Architecture Quality Prize" and "Best Tourism Development", the Estoril Congress Centre has been designed to host a variety of events. 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 Centre 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 (<u>https://www.aeroportolisboa.pt/en/lis/home</u>) 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* (<u>https://www.cp.pt/passageiros/en/how-to-travel/lusitania</u>)</u>, and to Hendaye, by the *Sud Expresso* (<u>https://www.cp.pt/passageiros/en/how-to-travel/sud-expresso</u>). 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 (<u>http://www.metrolisboa.pt/eng/</u>): 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 (<u>https://www.aerobus.pt/en-GB/Home-2.aspx</u>): 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, <u>https://www.cp.pt/passageiros/en/how-to-travel/urbanos-lisboa</u>).

Shuttles: several companies offer connections between the airport and Estoril, at prices between 30-60€.

Lisbon Low Cost Transfers Suntransfers.com

Shuttle direct

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.

Welcome Reception (Estoril Congress Centre)

On **Monday July 10**, from 19:00 to 20:00, all participants and their companions are kindly invited to attend the ICPIG 2017 Welcome Reception at the Terrace of the foyer of Estoril Congress Centre. The Welcome Reception is included in the registration fee.

Cultural Session (Estoril Congress Centre)

On **Tuesday July 11**, from 19:30 to 20:00, all participants are kindly invited to attend a performance by the MUSAICO choir, at the auditorium of the Estoril Congress Centre.



Musaico is a choir of the *Escola de Música do Conservatório Nacional*. Its members, aged 15 to 30 years old, are students from several different courses. The choir was started in 2008 for the purpose of preparing several high quality musical programmes of different styles every year. Since its founding Musaico has been conducted by Tiago Marques, who also written and arranged several compositions.

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 a 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 who 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 through 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.

Conference Dinner (Palácio Estoril Hotel)

On **Thursday July 13**, from 20:00 to 22:00, the Conference Dinner of ICPIG 2017 will take place at the 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 hosted heads of state, emperors, kings and princes, European nobility, artists, writers, sports champions, filmmakers and actors. In the 1940's, the Palácio Hotel welcomed numerous members of the European royalty (Spanish, Italian, French, Bulgarian and Romanian), who chose Estoril for their exile due to Portugal's neutrality during World War II. During 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". Hotel Palácio plays a center role in the recent novel "Estoril" by Dejan Tiago-Stankovic, a Serbian-Portuguese writer.

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.

International Scientific Committee

| Eugen STAMATE , President of ISC (chair) Technical University of Denmark, Denmark | Denmark, Finland, Norway and Sweden | | | |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--|--|--|
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| Masaharu SHIRATANI Kyushu University, Japan | Japan | | | |
| Eduard SON Joint Institute for High temperature RAS, Russia | Russia and the area of the former SU | | | |
| Miles TURNER Dublin City University, Ireland | UK and Ireland | | | |

Local Organizing Committee

Instituto de Plasmas e Fusão Nuclear Instituto Superior Técnico

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Joana CABRAL Irene LEMOS ALVES

Sponsors





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 <u>Instituto de Plasmas e Fusão Nuclear</u> <u>Instituto Superior Técnico</u> Av. Rovisco Pais 1049-001 Lisbon, Portugal Phone: (351) 21 841 9325 <u>pcanabela@tecnico.ulisboa.pt</u>