FRANK BATTEN COLLEGE OF ENGINEERING & TECHNOLOGY 37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



#### **UPDATES**

- 02.15.2010 Student travel grants application is now closed.
- 02.14.2010 Abstract submission is now closed.
  02.02.2010 Registration is now open.
- 01.16.2010 Deadline extension: Abstracts submissions is open until January 23, 3:00 AM.

#### **WELCOME**

We wish to extend a cordial invitation to the 37<sup>th</sup> IEEE International Conference on Plasma Science (ICOPS) to be held in Norfolk, VA, USA, from June 20 to June 24, 2010 with a minicourse scheduled June 24 and 25. The conference venue is the Marriott Waterside hotel located in the center of downtown Norfolk.

Plasma science covers a wide range of topics. ICOPS 2010 will offer a rich technical program that spans the many fundamental as well as applied aspects of the field. The conference will be followed by a 1.5 days minicourse on low temperature plasma modelling and applications.

Norfolk, VA, is located in a region of eastern Virginia known as "Hampton Roads". There are 10 cities in Hampton Roads (Norfolk, Portsmouth, Chesapeake, Hampton, Newport News, Suffolk, Franklin, Poquoson, Williamsburg, and Virginia Beach). The total population of the region is in the excess of 1.6 Millions. There are many attractions and historic sites in Hampton Roads. Williamsburg, Jamestown (the oldest English settlement in North America), and the beautiful sandy beaches of Virginia Beach are but a few examples.



The conference organizers, including committee members and session organizers, as well as the IEEE Nuclear and Plasma Sciences Society, welcome and encourage you and your companions to attend the ICOPS 2010 in Norfolk, VA.

Mounir Laroussi Chair, ICOPS 2010

John Luginsland Chair, PSAC/ExCom





Click here to download the poster of ICOPS 2010

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Frank Batten College of Engineering & Technology

37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



#### **CONFERENCE TOPICS**

- Basic Processes in Fully and Partially Ionized Plasmas
- Microwave Generation and Plasma Interactions
- Charged Particle Beams and Sources
- High Energy Density Plasmas Applications
- Industrial, Commercial and Medical Plasma Applications
- Plasma Diagnostics
- Pulsed Power and Other Plasma Applications

# ABSTRACT DEADLINE:

January 15, 2010, extended to January 23, 2010, now closed.

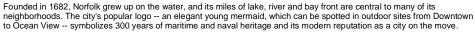
#### **MINI COURSE:**

Low Temperature Plasma Modeling and Simulation and Application

#### **CONFERENCE LOCATION**

ICOPS 2010 will take place in Norfolk, Virginia. Norfolk is a city of some 238,832 residents and more than 100 diverse neighborhoods. It is the cultural, educational, business and medical center of Hampton Roads, hosts the world's largest naval base, the region's international airport and is one of the busiest international ports on the East Coast of the United States.

The city has been undergoing a successful renewal, including new office, retail, entertainment and hotel construction downtown, new residential development along the rivers and bay front, and revitalization projects in many of its neighborhoods. Norfolk has added thousands of new residents to its downtown - turning it into a vibrant, lively place to live, visit or work. A light rail route through the heart of downtown is scheduled to open in late 2010.





Attractions -- such as the battleship U.S.S. Wisconsin, a salute to the city's long-standing relationship with the Navy, Nauticus, the Hampton Roads Naval Museum, and the new Cruise and Celebration Center dot Norfolk's easily-walked downtown waterfront. Here, tugboats and visiting cruise ships share the waters with sailboats and merchant ships. The waterfront is also home to Town Point Park, a recently refurbished green space that houses summer festivals, fountains, walkways, and tributes to the City's naval history. Other treasures -- The Chrysler Museum, Norfolk Botanical Garden and the Virginia Zoological Park -- are close by.

Norfolk is home to the Virginia Port Authority. Norfolk-Southern Railway. the Virginia Symphony, Virginia Stage Company, Old Dominion University, Eastern Virginia Medical School,. Norfolk State University and Tidewater Community College, Tides baseball in the summer and the Admirals hockey in the winter, state of the art research facilities, shipping companies and an exuberant arts and cultural community.

#### **CONFERENCE FORMAT**

The conference will include plenary, oral, and poster sessions. There will be four plenary talks presented by international leaders in the plasma physics community; one plenary presentation will be an address by the 2010 IEEE Plasma Science and Applications Award recipient. In addition, for this conference, we plan to have a special oral session on the emerging field of "Plasma Medicine".

Oral presentations will include both invited and contributed papers. Invited talks will be 30 minutes and contributed talks 15 minutes including time for questions. Oral talks will be loaded onto presentation computers prior to each session. The expected applications are Microsoft Powerpoint and Adobe Acrobat (pdf files). Presentations are to be submitted on a CD or flash memory and will be transferred to the database. Posters should fit within a space of 4x6 feet.

## **PUBLICATIONS**

The Conference Record will be on a USB memory stick. Manuscripts of plenary and invited oral presentations can be submitted for a special issue of the IEEE Transactions on Plasma Science to be published in early 2011. The Guest Editors of this special issue are Prof. Ravindra Joshi, Old Dominion University, Prof. Xinpei Lu, HuaZhong University, and Prof. Yukinori Sakiyama, UC Berkeley.



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http://www.eng.odu.edu/icops2010/generalinfo.shtml

Frank Batten College of Engineering & Technology 37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



# **Conference Executive Committee**

#### **General Chair:**

Mounir Laroussi Laser & Plasma Engineering Institute, Old Dominion University

#### **Technical Chair:**

Christine Coverdale Sandia National Laboratories

#### Treasurer:

Shirshak Dhali Electrical & Computer Engineering Dept., Old Dominion University

#### **Registration Assistant:**

Romina Samson Electrical & Computer Engineering Dept., Old Dominion University

#### **Student Awards:**

Ravindra Joshi Old Dominion University

#### **Student Travel:**

Keith Cartwright, Chair Air Force Research Labs

#### **Publications:**

Ravindra Joshi Old Dominion University

### Minicourse Organizer:

Demetre Economou Univ. Houston

# **Local Organizing Committee**

Sacharia Albin, ODU Ravindra Joshi, ODU Mounir Laroussi, ODU Nicole Laroussi, ODU Shirshak Dhali, ODU Juegen Kolb, ODU Romina Samson, ODU Linda Marshall, ODU

#### **Technical Program Committee**

## Chair:

Christine Coverdale

Sandia National Laboratories

#### **Technical Area Coordinators:**

Kurt Becker Polytechnic New York

Monica Blank

Robert Commisso Naval Reseach Labs

Farhat Beg UC San Diego

Michael Kong Univ. Loughborough, UK

Jean-Michel Pouvesle GREMI, France

Edl Schamiloglu Univ. New Mexico

## **Conference Management**

Lisa Boyd,CMP, Supervisor Lukrecija Lelong, CMP, Meeting Planner IEEE Meeting & Conference Management

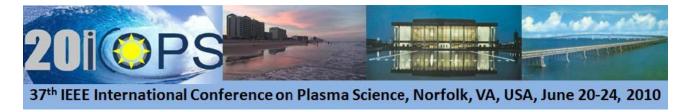




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http://www.eng.odu.edu/icops2010/commitees.shtml

# Frank Batten College of Engineering & Technology 37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



# **IMPORTANT DEADLINES**

Abstract submission: January 15, 2010, extended to January 23, 2010, NOW CLOSED.

Advance registration: April 30, 2010

Hotel booking: May 21, 2010

Minicourse registration: May 31, 2010

Student travel: February 15, 2010, NOW CLOSED.





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FRANK BATTEN COLLEGE OF ENGINEERING & TECHNOLOGY 37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



## **REGISTRATION**

	In Advance	On Site
	On or before April 30, 2010	After April 30, 2010
IEEE Members	\$ 550	\$ 650
Non-members	\$ 700	\$ 800
Student Members	\$ 160	\$ 210
Student Non-members	\$ 160	\$ 210
Retired / Unemployed	S 160	\$ 210

Click here to register online: https://www.npss-confs.org/icops/registration

To register by fax or by mail please download the registration form.

Affiliate members of the IEEE Nuclear and Plasma Science Society (NPSS) qualify of the lower Members rate. For membership information, contact IEEE Member Services at 800-678-IEEE.

#### REGISTRATION CANCELLATION POLICY

Registrants wishing to cancel their registrations may receive a refund if requested in writing to Romina Samson (rsamson@odu.edu). If the request is received by May 31, 2010, it will be processed without charge. A cancellation fee of \$100 will accrue for refund requests received after that date. Refund requests will not be honored after June 15, 2010.

#### FREE INTRODUCTORY MEMBERSHIP

In order to encourage participation in the activities of the IEEE and the Plasma Science and Applications Section of the IEEE Nuclear and Plasma Science Society, free half-year memberships will be given to all interested non-IEEE members (including students) registering for this conference. This free half-year membership includes a subscription to IEEE Spectrum and Transactions on Plasma Science. The regular cost of a full year's membership can be found at www.ieee.org Membership includes:

- Subscription to Transaction on Plasma Science, a journal devoted to all aspects of plasma science and technology.
   Subscription to IEEE Spectrum, a magazine covering engineering topics of general technical, economic, political, and social interest.
   Subscription to Society Newsletter with news items about the Conference on Plasma Science, the Particle Accelerator Conference, and the Symposium on Fusion
- Engineering.Eligibility to participate in a broad range of IEEE activities.
- Opportunities for IEEE educational services such as video-conferences and individual learning packages.

To receive our free membership, fill out an application at the Registration Desk or call 800-678-IEEE.





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# 37th IEEE International Conference on Plasma Science (ICOPS)



Marriott Waterside, Norfolk, VA • 20-24 June, 2010

ADDRESS COURSES TOURS & EVENTS BANQUETS CONFIRM	
* First name MI * Last name/Family name/Surname	
Name to Appear on Badge:	
Company/Organization Name to Appear on Badge	
* Country Pick a country	
* Mailing address (do not include name and country) *Line 1: Line 2: Line 3: Line 4 (non-U.S.): U.S. only: *City *State *Zip	
Preview address label	
* E-mail address	
* Telephone FAX	
Note: Companions must be registered to purchase event tickets. If you are bringing companions, enter their names here:	
Please provide a contact email address for the companions, if different from that of the registrant:	
Are you on IEEE recombor?	
Are you an IEEE member? j No j Yes	
IEEE member number: (Required to obtain member rates)	

**Note:** To become a member, visit the IEEE membership booth at the conference.

#### **EARLY REGISTRATION DEADLINE:**

April 30, 2010 (After this date, you will be charged at the on-site registration rate.)

# CANCELLATION AND REFUND POLICY:

Registrants wishing to cancel their registration may receive a refund if requested to Romi Samson (rsamson@odu.edu). If the request is received by 31 May, 2010, it will be processed without charge. A cancellation fee of \$100 will accrue for refunds requests received after that date. Refund requests will not be honored if received after 15 June, 2010.

# Choose your fee type:

Registration type	By Apr 30 Af	fter Apr 30
j IEEE Member	\$550.00	\$650.00
j Non-IEEE Member	\$700.00	\$800.00
Non-Member Student (proof of status required)	\$160.00	\$210.00
J Student/Retired/Unemployed (IEEE only)	\$160.00	\$210.00
Courses > Social Events > Paym	nent >	

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## **ABSTRACTS**

Abstracts must be submitted online at the Website. The abstract submission deadline is extended to January 23, 2010. Presentations submitted after that date will be placed in a poster session and the abstracts are not guaranteed to appear in the Conference Record.

#### Abstract submission is now closed.

# Abstract submission deadline is extended to January 23, 2010

#### **Abstract Submission**

Please download this template for preparing abstracts:

• ICOPS (.doc, .pdf)

Please ensure that your abstract fully complies with IEEE Xplore requirements. Use **PDF eXpress** to confirm compliance. To do so please go to the IEEE PDF eXpress web site at <a href="www.pdf-express.org">www.pdf-express.org</a>, click on "New Users - Click Here", and fill in your information. The Conference ID is "icops10x".

Review the procedure for submitting abstracts:

- All abstracts are submitted electronically.
- Start by logging in to the abstract submission web site. Usernames from ICOPS 2009 are still valid. If you do not already have an account, then please create one. If you do not remember your username or password, these can be recovered through the abstract submission web site.
- Go to "Paper Submission"
- Create a new draft paper.
- Enter all requested data (title, authors, etc) and select "Save Data".
- Upload your abstract pdf file. Review if desired. Click on "Continue submission".
- The submission is still a DRAFT. You must "Submit This Draft Abstract" to complete submission. At that point, no more changes can be made.
   You must assign copyright to IEEE before abstracts can be published. Please follow the instructions provided.

Now that you have read the instructions. Visit the abstract submission web site at www.npss-confs.org/icops

If you will need an invitation letter to request a Visa, please visit the Visa information page as soon as possible. Once you have submitted your abstract, you may contact us requesting your invitation letter.





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37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



# 37th IEEE International Conference on Plasma Science, Norfolk, VA, USA, June 20-24, 2010

Session Area	Organizer	Email	Phone
Basic Processes in Fully and Partially Ionized Plasmas	Kurt Becker Polytech NY	kbecker@poly.edu	718-260- 3608
1.1 Basic Phenomena	Kurt Becker Polytech NY	kbecker@poly.edu	718-260-3608
1.2 Computational Plasma Physics	John Verboncoeur UC Berkeley	johnv@eecs.berkeley.edu	510-642-3477
1.3 Space Plasmas	Greg Howes Univ. Iowa	Gregory-howes@uiowa.edu	319-335-1221
1.4 Partially Ionized Plasmas	Weidong Zhu St. Peter's College	wzhu@spc.edu	201-761-6343
1.5 Dusty Plasmas	Holger Kersten Univ. Kiel, Germany	kersten@physik.uni-kiel.de	0431-880-387
2. Microwave Generation and Plasma Interactions	Monica Blank CPII	Monica.blank@cpii.com	650-846- 3557
2.1 Intense Beam Microwave Generation	Adrian Cross Strathclyde Univ., UK	a.w.cross@strath.ac.uk	44 141-548- 4614
2.2 Fast-Wave Devices	Lawrence Dressman NSWC Crane	Lawrence.dressman@navy.mil	812-854-4804
2.3 Slow-Wave Devices	Adam Balkcum CPII	Adam.balkcum@cpii.com	650-846-3448
2.4 Vacuum Microelectronics	Lawrence Ives CCR	rli@calcreek.com	650-312-9575
2.5 Codes and Modeling	Alexander Vlasov NRL	vlasov@ccs.nrl.navy.mil	202-767-0034
2.6 Non-Fusion Microwave Systems	Arne Fliflet NRL	Arne.fliflet@nrl.navy.mil	202-767-2469
2.7 Microwave Plasma Interaction	Tim Bigelow ORNL	bigelowts@ornl.gov	865-576-5959
2.8 THz Sources, Radiation, & Applications	Baruch Levush NRL	baruch.levush@nrl.navy.mil	202-405-4513
3. Charged Particle Beams and Sources	Robert Commisso NRL	Robert.commisso@nrl.navy.mil	202-404- 8984
3.1 Plasma, Ion and Electron Sources	Edward Barnat SNL	evbarna@sandia.gov	505-2849828
3.2 Intense Electron and Ion Beams	Brayan Oliver NSL	bvolive@sandia.gov	505-284-7876
4. High Energy Density Plasmas and Applications	Farhat Beg UCSD	fbeg@ucsd.edu	858-822- 1266
4.1 Fusion - Inertial, Magnetic and Alternate Concepts	KazuoTanaka GSE/ILE	katanaka@eei.eng.osaka-u.ac.jp	81-66879-723
4.2 Particle Acceleration with Laser and Beams	Markus Roth Tech Univ., Darmstadt	m.roth@gsi.de	49 (0) 6151/165417
4.3 Radiation Physics	John Apruzese NRL	apruzese@ppd.nrl.navy.mil	202-767-2939
4.4 High Energy Density Matter	Pravesh Patel LLNL	pravpatel@llnl.gov	925-423-7450
4.5 Laser Produced Plasmas	Mingsheng Wei UCSD	mwei@ferp.ucsd.edu	858-534-6997
4.6 Fast Z-Pinches, X-Ray Lasers	Jerry Chittenden Imperial College	j.chittenden@imperial.ac.uk	44-20-7594- 7654
5. Industrial, Commercial and Medical Plasma Applications	Michael Kong Loughborough Univ.	m.g.kong@lboro.ac.uk	44-1449- 227075
5.1 Nonequilibrium Plasma Applications	Satoshi Hamaguchi Osaka Univ.	hamaguch@ppl.eng.osaka-u.ac.jp	81-6-6879- 7913
5.2 High-Pressure and Thermal Plasma Processing	Alexander Fridman Drexel Univ.	Fridman@drexel.edu	215-895-1542
		1	512-471-4279
5.3 Plasma Thrusters	Lax Raja UT Austin	<u>lraja@mail.utexas.edu</u>	012 4/1 42/0

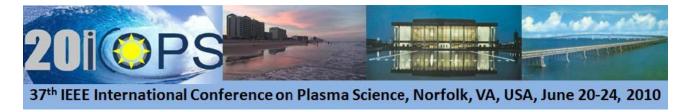
	Medical, Biological and vironmental Applications	Michael Kong Loughborough Univ.	m.g.kong@lboro.ac.uk	44 1449 227075
6.		Jean-Michel Pouvesle GREMI	Jean-michel.pouvesle@univ- orleans.fr	33-0-238-41- 7123
6.1	Optical and X-ray Diagnostics	Jeff Koch LLNL	Koch1@llnl.gov	925-422-3956
6.2		Xinpei Lu HuaZhong Univ.	luxinpei@hust.edu.cn	86-27- 87558104
6.3	Particle Diagnostics	Johan Frenje MIT	jfrenje@psfc.mit.edu	617-452-4941
7. Ap		Edl Schamiloglu Univ. New Mexico	edl@ece.unm.edu	505-277- 4423
7.1		Hulya Kirkici Auburn Univ.	kirkih@eng.auburn.edu	334-844-1822
7.2		Naz Islam Univ. Missouri	islamn@missouri.edu	573-882-7570
7.3	Generators	Joshua Leckbee SNL	jjleckb@sandia.gov	505-284-9951
7.4		Ravindra Joshi ODU	<u>rjoshi@odu.edu</u>	757-683-4827





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# **PLENARY SPEAKERS**

Erich E. Kunhardt, Polytech Institute of NYU, USA, "The Discharge Physics of Atmospheric Pressure Non-Equilibrium Plasma Sources"

Kimberly S. Budil, Office of Under Secretary for Science, Washington, DC, USA, "High Energy Density Plasma Physics: A View from DOE"

Manfred Thumm, PSAC Award Winner, IHM, Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany, "Progress in Gyrotrons for ITER and Future Thermonuclear Fusion Reactors"

Laifa Boufendi, GREMI Laboratory, Orleans University, Orleans, Cedex, France, "Dusty Plasma and Nanotechnology"





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FRANK BATTEN COLLEGE OF ENGINEBRING & TECHNOLOGY

37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



#### SPECIAL SESSION ON PLASMA MEDICINE

Research on the biomedical applications of low temperature plasmas gained great momentum in the last decade. This is because of promising possibilities to use plasma in medical practice such as in electrosurgery, wound healing, dentistry, sterilization/ decontamination, etc... Today the term "Plasma Medicine" is used to describe this new emerging field that cuts across several disciplines, from Physics and engineering to microbiology and medicine. ICOPS was the first international conference that started dedicating sessions to the biological and medical applications of plasmas, with the first such session offered at ICOPS 1998. Since then numerous conferences have included such sessions and the field experienced extraordinary growth that led to the establishment of a conference totally dedicated to plasma medicine (ICPM). The third ICPM is planned to take place in Greifswald, Germany, in September 2010. It is the pleasure of the organizing committee of ICOPS 2010 to announce that we are organizing Special Sessions on Plasma Medicine. These sessions are scheduled to take place on Monday June 21 and Tuesday June 22, 2010. Leading scientists in the field will be invited to present their latest research. Attendence of these sessions is open to all ICOPS registrants.

M. Laroussi General Chair

C. Coverdale Technical Program Chair

M. Kong Technical Area Coordinator

#### **INVITED SPEAKERS:**

Alexander Fridman Drexel University, USA

Mark Kushner University of Michigan, USA

Gregor Morfill

Max Planck Institute for Extraterrestrial Physics, Germany

Jean-Michel Pouvesle GREMI, France

Klaus-Dieter Weltmann INP Greifswald e.V., Germany

Vincent Puech LPGP, Universite Paris-Sud 11

Michael Kong University of Loughborough, UK





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#### **MINI-COURSE**

#### Low Temperature Plasma Modeling & Simulation and Applications

As part of ICOPS 2010, a special 1.5-day minicourse on low temperature plasma modeling and Simulation will be offered on Thursday afternoon June 24th and Friday June 25th. The minicourse will be held at the Marriott hotel. A group of international experts from academia and industry will provide a set of comprehensive lectures on modeling techniques for low temperature plasmas and their applications.

Plasma modeling and simulation are powerful tools to address fundamental questions of plasma physics and chemistry and to interpret experiments. This short course is designed to introduce students to the concepts and methods used in plasma modeling and simulation.

Low temperature plasmas can be modeled from a variety of perspectives, including analytical models, fluid models, Boltzmann models and particle simulations such as Particle-in-Cell/Monte Carlo models. So-called 'hybrid' models combine various aspects of these models; for example a kinetic description of electrons using Monte Carlo methods, with fluid models of heavy species.

Interactions of plasmas with surfaces can be treated with Monte Carlo-based binary collision models or molecular dynamics (MD). MD methods are further classified in terms of the interatomic potentials used, from classical to ab-initio.

Chemically reactive plasmas are generally treated with extensions of approaches taken for other reaction flow problems, including combustion, atmospheric chemistry and chemical vapor deposition. These equations are coupled to the plasma dynamics models described above and to the appropriate sub-set of Maxwell's equations for electromagnetic effects.

#### Who should attend

The course is designed for students, engineers, and scientists from academia and industry. The instructors will provide both introductory and advanced coverage of modelling techniques.

## **Minicourse Topics Include:**

- Plasma Reactors
- Plasma Surface Interactions
- Deterministic Methods for Solving Kinetics Equations Multi-dimentional Simulations of Industrial Plasmas
- Capacitively Coupled Discharges
- High Pressure Discharges and Microdischarges
- Fluid Modeling of Atmospheric Pressure Plasmas Plasma Chemistry in Atmospheric Pressure Plasmas

#### **More Information**

#### Minicourse Registration Fees:

Before April 30 After April 30 Regular Student \$250 \$350

To register online or by fax or mail go the conference registration page and follow the instructions.

# Mini-course Organizer:

Prof. Demetre Economou Department of Chemical and Biomolecular Engineering University of Houston

Email: economou@uh.edu





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# **WWW** OldDominionUNIVERSITY

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37TH INTERNATIONAL CONFERENCE ON PLASMA SCIENCE



## **EXHIBITS**

The ICOPS 2010 exhibition will take place at the Marriott Waterside hotel, which is also the venue of the conference. The exhibition room is a high traffic area where the the conference poster sessions, coffee breaks, and internet cafe will be located. More detailed information on the exhibits is shown below. If you are interested in participating in our exhibits please contact a member of our exhibit management team:

Juergen Kolb, Exhibit Chair jkolb@odu.edu

Lukrecija Lelong, CMP, Meeting Planner IEEE Meeting & Conference Management I.lelong@ieee.org

Click here to download the exhibit prospectus.

#### **EXHIBIT LEVELS** (\*please pay close attention to deadlines for inclusion in conference materials\*)

# **BRONZE (BASIC BOOTH)**

\$2,800 (\$3,100 after March 1, 2010)

- → Draped booth space for duration of conference (Monday-Wednesday).
- → Inclusion on the exhibitor list in the printed conference booklet and the electronic (pdf) book of abstracts on conference USB drive as bronze sponsor \*).
- → Listed on the exhibition page of the conference website from date of signed contract. Listed as exhibitor during background presentation at the conference banquet.
- → One complimentary registration to the conference. Additional exhibitors must register if they wish to attend technical sessions.

## **SILVER (STANDARD BOOTH)**

\$4,500 (\$5,000 after March 1, 2010)

- → Draped booth space for duration of conference (Monday-Wednesday).
- → Inclusion with company logo on the exhibitor list in the printed conference booklet and the electronic (pdf) book of abstracts on conference USB drive as silver sponsor \*).
- → Linked website banner ad on the exhibition page of the conference website from date of signed contract. Listed as exhibitor during background presentation at the conference banquet.
- → Two complimentary half price registrations (or one complimentary full registration) to the conference. Additional exhibitors must register if they wish to attend technical sessions.
- → Free high speed internet access for one computer at the booth.

#### GOLD (TWO STANDARD BOOTHS) \$7,200 (\$8,000 after March 1, 2010)

- → Double-sized draped booth space (2 standard booths) for duration of conference (Monday- Wednesday).
- → Inclusion with company logo on the exhibitor list in the printed conference booklet and the electronic (pdf) book of abstracts on conference USB drive as gold sponsor \*).
- → Linked website banner ad with priority placement on the exhibition page of the conference website from date of signed contract.
- → Listed on separate slide as exhibitor during background presentation at the conference banquet.
- → Two complimentary registrations to the conference. Additional exhibitors must register if they wish to attend technical sessions.
- → Inclusion of an exhibitor provided brochure (pdf-format) on the conference USB drive.
- → Free high speed internet access for one computer at the booth.
- → Two complimentary banquet tickets.

<sup>\*)</sup> ICOPS 2010 will not provide a printed book of abstracts

# Each exhibition space includes:

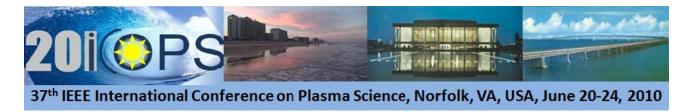
- ✓ 8'x10' floor space with piping and drapes ✓ One (1)skirted table and two (2) chairs
- ✓ One 7"X44" ID sign ✓ Wastebasket





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# **STUDENT TRAVEL GRANTS**

Student travel grants application is now closed.

A limited number of travel grants are available to encourage students who are IEEE members to attend ICOPS 2010.

Applicants should submit the following information by February 15, 2010.

- Copy of submitted abstractIEEE membership number
- Proposed travel budget to the conference (cost sharing with other students is encouraged)

Two letters of recommendation, one of which is from the student's advisor, stating the importance of the research to be presented.

Applications have to be done online. For more information contact:

Keith Cartwright studenttravel2010@ieee.org





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## **BEST STUDENT PAPER AWARDS**

The "Best Student Presentation Awards" were established in 2005 by the IEEE Nuclear and Plasma Sciences Society.

The purpose of these awards is to encourage both outstanding student contributions and greater student participation as principal or sole authors of papers as well as to acknowledge the importance of student contributions to the fields embraced by the NPSS umbrella.

The two best submissions (two awards) will receive cash awards of \$250, book vouchers worth \$250 from Springer-Verlag, and a certificate. The two runners-up will receive a certificate only.

Any student who is the principal author/researcher and the presenter of either an oral or poster paper at the ICOPS 2010 conference and who has been identified as an eligible student author will be eligible. If there is a tie, preference will be given 1) to IEEE NPSS members, 2) to IEEE members; 3) to non-IEEE members.

All candidates for selection must have identified themselves at the time of abstract submission. Upon notification of acceptance of the abstract, the award candidate should arrange to have his/her advisor or research supervisor provide an endorsement of the work to the awards committee (contact details will be provided at a later date). At the conference, the on-site awards committee will rank the papers for technical content and originality first. Other criteria such as graphic display and clarity of data presentation may be considered.

For information contact: Prof. Ravindra Joshi Old Dominion University rjoshi@odu.edu





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## **SOCIAL EVENTS**

# **Welcome Reception**

A welcome reception will be held at the Marriott hotel on Sunday June 20 from 5 to 10 pm. There is no charge for conference registrants and companions.

# **Reception at Old Dominion University**

On Monday evening June 21 there will be a reception hosted by the President of Old Dominion University (ODU). There is no charge for conference registrants and their companions. The number of people able to attend this reception is limited to about 300, first come - first served.

The reception will take place at the open air Kaufman Mall of Old Dominion Un iversity. ODU is a Carnegie/Doctoral Research Extensive institution with a total student body of about 23,000 and having its main campus only few minutes drive from downtown Norfolk and the Marriott hotel. There will be buses that will shuttle attendees from the hotel to the ODU campus and back.



# **Boat Cruise aboard the Spirit of Norfolk**

A cruise is scheduled on Tuesday evening (June 22) on board of the Spirit of Norfolk. Dinner, soft drinks, fruit juices, coffee, tea, and bottled water will be served. A no-host cash bar for alcoholic drinks will also be available. The cost of the cruise is \$20 for conference registrants and companions.



#### **Banquet**

The conference banquet will be held Wednesday (June 23) evening, in the grand ballroom of the conference hotel. A limited number of tickets are available. A nominal payment of \$40 will be charged for conference registrants and companions. Tickets can be purchased during on-line registration and at the Registration Desk on a first-come basis.





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# **ACCOMMODATIONS**

The conference hotel and the venue for all the technical sessions is the Norfolk Marriott Waterside Hotel, located in the center of downtown Norfolk. The conference discounted rate is \$159/night plus tax. Rooms at the prevailing government rate will also be available.

For reservations please follow this link: <a href="http://cwp.marriott.com/orfws/ieeeeintconference">http://cwp.marriott.com/orfws/ieeeeintconference</a>

For reservations you can also call 1-757-627-4200 or 1-800-874-0264. Please mention that you are attending the IEEE-ICOPS to get the discounted rate. We have arranged a room block for the conference, but these rooms are held only until May 21, 2010. Attendees are highly encouraged to reserve their rooms before May 21, 2010.

Those booking their rooms at the government rate should complete their reservations by phone.

Marriott Norfolk Waterside on the web: <a href="http://www.marriott.com/hotels/travel/orfws-norfolk-marriott-waterside/">http://www.marriott.com/hotels/travel/orfws-norfolk-marriott-waterside/</a>













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# **DOWNLOADS**

- Click <u>here</u> to download the poster of ICOPS 2010
   Click <u>here</u> to download the brochure of ICOPS 2010
   Click <u>here</u> to download the exhibit prospectus





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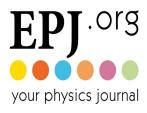


























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# TRAVEL INFORMATION

#### **Norfolk Airport**

The Norfolk airport (ORF) is within 30 minutes to an hour flight from major hubs such as Washington DC, Philadelphia, New York, and Atlanta

www.norfolkairport.com

#### Amtrak (trains)

Travelers should use the Newport News Central Station (NPN), then take a Taxi to hotel (about 30 minutes to Norfolk).

Train Station Address: 9304 Warwick Boulevard
Newport News, Virginia 23601

www.amtrak.com

#### By car:

Check the Virginia Department of Transportation (VDOT) web site:

htttp://virginiadot.org

Driving directions from any starting address within the US to the hotel can be found on:

 $\underline{\text{http://www.marriott.com/hotels/maps/travel/orfws-norfolk-waterside-marriott/}}$ 

#### Map:

View Larger Map





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http://www.eng.odu.edu/icops2010/travelinformation.shtml

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#### **Visa Information for Foreign Travelers**

All nationals and citizens of Visa Waiver Program (VWP) countries who plan to travel to the U.S. for temporary business or pleasure for 90 days or less will be required by law to obtain travel authorization prior to initiating travel to the United States. This authorization can be obtained online through the Electronic System for Travel Authorization (ESTA), a free Internet application administered by the U.S. Department of Homeland security.

For additional information about the ESTA please visit http://www.cbp.gov/esta.

Travelers from countries not in the VWP are required to obtain a Visa upon entry into the United States. If you need a visa, please contact us AS SOON AS you submit your abstract (deadline is Jan. 15, 2010) at <a href="mailto:icops2010@odu.edu">icops2010@odu.edu</a> to request an invitation letter.





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http://www.eng.odu.edu/icops2010/visainfo.shtml

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# **FUTURE ICOPS AND RELATED CONFERENCES**

38th International Conference on Plasma Science (ICOPS 2011)

Ahmed Hassanein, General Chair

Chicago, IL https://engineering.purdue.edu/icops2011

**39th International Conference on Plasma Science (ICOPS2012)** Michael Kong, General Chair Edinburgh, UK

**3rd. International Conference on Plasma Medicine (ICPM-3)** K-D Weltmann, General Chair Greifswald, Germany www.icpm3.org

For more information on future conferences click on:

http://ewh.ieee.org/soc/nps/PlasConf/plasma\_meetings.html





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http://www.eng.odu.edu/icops2010/futureicops.shtml

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## **Job Placement Center**

A job placement center will be set up at the conference. Individuals interested in employment opportunites in plasma physics and related areas should send their resumes (marked "ICOPS") to the e-mail below. Employers with plasma-related techinical positions available should contact

William White will.white@kirtland.af.mil

This is a free service that has been a success at past ICOPS in hiring graduates into industry, academia and national laboratories.





http://www.eng.odu.edu/icops2010/job.shtml