### 2ND ANNOUNCEMENT AND CALL FOR PAPERS



# **ICOPS/SOFE 2009**

36th International Conference on Plasma Science and 23rd Symposium on Fusion Engineering

May 31 – June 5, 2009 — Omni Hotel, San Diego, California USA

Conference website: <u>http://cer.ucsd.edu/icopssofe09</u> E-mail address: icopssofe@cer.ucsd.edu









Friday January 9, 2009 Friday February 27, 2009 Friday March 13, 2009 Friday March 27, 2009 Friday May 1, 2009 Friday May 1, 2009

**SOFE Conference Chair – Mark Tillack** 

University of California San Diego

Local Organizing Chair – Dan Goodin

ICOPS Conference Chair – Farhat Beg University of California San Diego





Center for Energy Research





**General Atomics** 



### Welcome

We wish to cordially invite you to the combined International Conference on Plasma Science and Symposium on Fusion Engineering to be held in downtown San Diego, CA from May 31 to June 5, 2009.

Plasma science and fusion engineering encompass a wide range of technical activities, and we hope the combined nature of the 2009 meeting for both these areas will provide an excellent opportunity for cross-topic interaction.

In addition to the main conference, there will be two mini-courses offered in the areas of Target Fabrication for High Energy Density Physics Experiments, and Fusion Engineering and Design.

California's second largest city and the United States' seventh largest, San Diego boasts a citywide population of nearly 1.3 million residents. San Diego is renowned for its idyllic climate, 70 miles of pristine beaches and a dazzling array of world-class family attractions. Popular attractions include the world-famous San Diego Zoo and Wild Animal Park, Sea World San Diego and LEGOLAND California, and Mexico is only 10 miles away. San Diego offers an expansive variety of things to see and do, appealing to guests of all ages from around the world.



The organisers, including the conference chairs, the organising and technical committees as well as the NPSS encourage you and your companions to attend ICOPS/SOFE 2009 in San Diego.

Farhat Beg ICOPS Chair

Mark Tillack SOFE Chair/FTC Chair

Christine Coverdale ICOPS Technical Chair Rene Raffray SOFE Technical Chair Ronald Gilgenbach PSAC/ExCom Chair

Dan Goodin Local Organizing Chair



## **Conference Topics**

• • • •	<ul> <li>Basic Processes in Fully and Partially Ionized Plasmas</li> <li>Microwave Generation and Plasma Interaction</li> <li>Charged Particle Beams and Sources</li> <li>High Energy Density Plasmas and their Interactions</li> <li>Industrial, Commercial and Medical Applications of Plasmas</li> <li>Plasma Diagnostics</li> <li>Pulsed Power and Other Plasma Applications</li> </ul>	
· · · · · ·	<ul> <li>ITER and experimental devices</li> <li>New device design and reactor studies</li> <li>Divertors and plasma materials interactions</li> <li>Chambers, vacuum vessels, blankets, and shields</li> <li>Diagnostics, data acquisition, and plasma control systems</li> <li>Safety and environmental engineering</li> <li>Materials assembly, fabrication, and maintenance</li> <li>Heating and current drive</li> <li>Plasma Fueling, pumping, and tritium handling systems</li> <li>IFE drivers, targets and related technologies</li> <li>Power systems</li> <li>Magnet engineering</li> <li>Electromagnetics and electromechanics</li> </ul>	
•	The Influence of Target Fabrication on High-Energy- Density-Physics Experiments Fusion Device Engineering	

### **Abstract Deadline is Friday January 9, 2009**

Abstract submission will be available on December 1, 2008 at <a href="http://cer.ucsd.edu/icopssofe09/">http://cer.ucsd.edu/icopssofe09/</a>



36<sup>th</sup> International Conference on Plasma Science and 23<sup>rd</sup> Symposium on Fusion Engineering

### **Conference Location**

Omni San Diego Hotel 675 L Street San Diego, California 92101 Phone: (619) 231-6664 Fax: (619) 231-8060

Nestled in the heart of the historic Gaslamp Quarter and bathed in Southern California sunshine, the stylish Omni San Diego Hotel puts you close to the city's top sites and attractions. An exciting variety of restaurants and bars is only a few minutes' stroll away, and the San Diego Bay provides a stunning backdrop for the conference. Explore Balboa Park, take a harbor cruise to Coronado or catch a Padres baseball game at PETCO Park; San Diego is an exhilarating place to be.



### **Conference Format**

The conference will contain plenary talks, which will address topics of interest to both ICOPS and SOFE attendees, along with oral and poster sessions in a range of technical areas. The oral talks will be divided into invited and contributed talks, and preparation details will be available through the conference website following the abstract submission process. At the conference, please allow time to check and upload your talk in Adobe Acrobat Reader (.pdf) or PowerPoint (.ppt) form prior to each session. Talks may be loaded from CD, DVD, or flash drive from the presentation upload room. Only a computer and projector set-up will be available (no Overhead Projector). Poster preparation details will also be posted on the conference website.

### **Publications**

All registrants will receive a conference record on flash drive, containing the conference program and abstracts for both ICOPS and SOFE. ICOPS abstracts will be archived in IEEE Xplore. Presenters of ICOPS plenary and invited talks will be encouraged to contribute to a refereed Special Issue of the IEEE Transactions on Plasma Science which will be published following the conference.

SOFE registrants will additionally receive a DVD of all SOFE papers submitted by the end of the symposium. These unrefereed papers will be archived in IEEE Xplore. In addition to the proceedings, a refereed special issue of IEEE Transactions on Plasma Science will be produced. SOFE authors who submit a paper to the proceedings (and present at the symposium) will be invited to expand on their conference paper for submission to the special issue.

Please visit the conference web site for manuscript preparation and submission instructions.



### **Abstract Submission**

Abstracts must be submitted online at the conference website. The submission website is expected to be operational on December 1, 2008. **The abstract submission deadline is January 9, 2009.** Presentations submitted after this date will be placed in a poster session and the abstracts are not guaranteed to appear in the Conference Record.

### Registration

	In Advance On or before May 1, 2009	On Site After May 1, 2009
IEEE Members	\$500	\$600
Non-members	\$650	\$750
Student Members	\$160	\$210
Student Non-members	\$200	\$250
Retired / Unemployed	\$160	\$210

Registration should be completed online at the conference website, which will be activated by early 2009. Registration for either conference provides access to both. Affiliate members of the IEEE Nuclear and Plasma Science Society (NPSS) qualify for the lower Members rate. For membership information, contact IEEE Member Services at 800-678-IEEE or visit <a href="http://ieee.org/web/membership/join.html">http://ieee.org/web/membership/join.html</a>.

**Cancellation Policy**: Registrants wishing to cancel their registrations may receive a refund if requested in writing to the registration chair Cynthia Escobedo at Center for Energy Research, UC San Diego (cescobedo@ucsd.edu). Requests received by May 1, 2009 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 May 15, 2009.

### **Student Travel Grants**

A limited number of travel grants are available to encourage students who are IEEE members to attend ICOPS-SOFE 2009. Applicants should submit the following information through the Student Travel Grants link on the conference website by February 27, 2009.

Applicants are asked to provide:

- Copy of submitted abstract
- IEEE membership number (if not a member, please visit <u>www.ieee.org</u> for information)
- Proposed travel budget to the conference (cost sharing with other students is encouraged)
- Two separate letters of recommendation, one of which is from the student's advisor, stating the importance of the research to be presented.

Travel grant recipients will be contacted on or about April 17, 2009. Questions regarding the nomination and award process for student travel grants should be sent to **Ryan Umstattd** at **studenttravel2009@ieee.org** 



## **ICOPS-** List of Topics and Session Organizers

Session Area	Organizer	Email
1.0 Basic Processes in Fully and Partially Ionized Plasmas	Earl Scime West Virginia University	escime@wvu.edu
1.1 Basic Phenomena	Greg Severn Univ. of San Diego	severn@sandiego.edu
1.2 Computational Plasma Physics	John P. Verboncouer <i>UC Berkeley</i>	johnv@nuc.berkeley.edu
1.3 Space Plasmas	Greg Howes UC Berkeley	ghowes@astro.berkeley.edu
1.4 Partially Ionized Plasmas	Karl Umstadter <i>UC San Diego</i>	kumstadter@ucsd.edu
1.5 Dusty Plasmas	Marlene Rosenberg UC San Diego	rosenber@ecepops.ucsd.edu
2.0 Microwave Generation and Plasma Interactions	Monica Blank <i>Communications &amp; Power</i> Industries	monica.blank@cpii.com
2.1 Intense Beam Microwave Generation	Adrian Cross Strathclyde University, UK	a.w.cross@strath.ac.uk
2.2 Fast-wave Devices	Lawrence Dressman Crane	lawrence.dressman@navy.mil
2.3 Slow-wave Devices	Adam Balckum Communications & Power Industries	Adam.balckum@cpii.com
2.4 Vacuum Microelectronics	Lawrence Ives Calabazas Creek Research	RLIves@calcreek.com
2.5 Codes and Modelling	Alexander Vlasov Science Applications International Corp.	vlasov@glue.umd.edu
2.6 Non-fusion Microwave Systems	Arne Fliflet Naval Research Laboratory	fliflet@ppdmail.nrl.navy.mil
2.7 Microwave Plasma Interaction	Tim Bigelow Oak Ridge National Laboratories	bigelowts@ornl.gov

ICOPS 2009 SOFE

## **ICOPS-** List of Topics and Session Organizers

Session Area	Organizer	Email
3.0 Charged Particle Beams and Sources	Pravesh Patel Lawrence Livermore Natl. Laboratory	patel9@llnl.gov
3.1 Plasma, Ion and Electron Sources	Manuel Hegelich Los Alamos Natl. Laboratory	hegelich@lanl.gov
3.2 Intense Electron and Ion Beams	Scott Wilks Lawrence Livermore Natl. Laboratory	wilks1@llnl.gov
4.0 High Energy Density Plasmas and their Applications	John Giuliani Naval Research Laboratory	giul@ppdu.nrl.navy.mil
4.1 Fusion (Inertial, Magnetic and Alternate Concepts	Glen Wurden Los Alamos Natl. Laboratory	wurden@lanl.gov
4.2 Particle Acceleration with Laser Beams	Dan Gordon Naval Research Laboratory	daniel.gordon@nrl.navy.mil
4.3 Radiation Physics, Fast Z-Pinches, X- Pinches and X-ray lasers	Brent Jones Sandia National Laboratories	bmjones@sandia.gov
4.4 High Energy Density Matter	Victor Kantsyrev University of Nevada, Reno	victor@unr.edu
4.5 Laser Produced Plasmas	Mingsheng Wei UC San Diego	mwei@ferp.ucsd.edu
5.0 Industrial, Commercial and Medical Plasma Applications	Mounir Laroussi Old Dominion University	mlarouss@odu.edu
5.1 Nonequilibrium Plasma Applications	Michael Kong University of Loughborough	m.g.kong@lboro.ac.uk
5.2 High-Pressure and Thermal Plasma Processing	Alexander Fridman Drexel University	fridman@drexel.edu
5.3 Plasma Thrusters	Nikolas Gatsonis Worcester Polytechnic Institute	gatsonis@wpi.edu
5.4 Plasma for Lighting and Flat Panel Displays	Richard Garner <i>Sylvania</i>	richard.garner@sylvania.com
5.5 Medial, Biological and Environmental Applications	Mounir Laroussi Old Dominion University	mlarouss@odu.edu



## **ICOPS-** List of Topics and Session Organizers

Session Area	Organizer	Email
6.0 Plasma Diagnostics	Ray Leeper Sandia National Laboratories	rjleepe@sandia.gov
6.1 Optical and X-ray Diagnostics	Jeff Koch Lawrence Livermore Natl. Laboratories	koch1@llnl.gov
6.2 Microwave and FIR Diagnostics	Calvin Dornier <i>UC Davis</i>	cwdomier@ucdavis.edu
7.0 Pulsed Power and Other Plasma Applications	Mark Gilmore University of New Mexico	gilmore@ece.unm.edu
7.1 Insulation and Dielectric Breakdown	Hulya Kirkici Auburn University	kirkih@eng.auburn.edu
7.2 Switching	Scott Kovaleski University of Missouri, Columbia	kovaleskis@missouri.edu
7.3 Plasma Lasers	John Kline Los Alamos Natl Laboratories	jkline@lanl.gov
7.4 Compact Pulsed Power and Applications	Kelly Hahn Sandia National Laboratories	kdhahn@sandia.gov



## Mini-course on Target Fabrication for High-Energy-Density-Physics Experiments

This one day course will discuss target-related issues connected with High-Energy-Density Science (HEDP) experiments, described recently in two national academy reports as a new exciting branch of physics. HEDP experiments, conducted from large scale (Z, OMEGA, NIF and Vulcan laser etc.) to medium size machines (COBRA, ZEBRA, Titan and 100 TW lasers) and soon also on OMEGA-EP, investigate radiation transport, shock compression, inertial confinement fusion, fast ignition, laboratory astrophysical plasmas and radiation effects. The targets needed to examine these effects are the foundation of experiments. The knowledge of their variety, limitations, and their (sometimes subtle) effects on the physics investigated is valuable not only to experimentalists but also to theorists and modellers.

The course will be tutorial in nature, and will cover the influence of target fabrication on high energy density physics experiments. The course will be targeted to the non-specialist, but will assume some previous knowledge of the basics of target physics (e.g. basic principles of inertial confinement fusion, material science etc.). Individual topics will be covered in 30 - 60 minute presentations by experts in the field to provide the most up to date information on the implementation of targets in a range of experimental sciencies. Discussions of particular concerns will be feasible in discussion periods and at dinner that evening.

#### Who should attend?

The course is designed for engineers/scientists from industry and research, technicians, and graduate level engineering/science students with an interest in HEDP target design.

#### Topics

- Low Density Target Design
- High performance implosion targets
- Shock propagation
- energetic e- generation / propagation in plasmas

#### **Registration, Fees and Scholarships**

The course will take place on all day Friday June 5 ending with a group dinner with the lecturers. Registration will be \$500 for all attendees (student aid available). A limited number of scholarships will be available for full time graduate or undergraduate students in the form of a waiver of the mini course registration fee. Details will be available on the conference website shortly

For further information contact:

Rich Stephens General Atomics, San Diego, California stephens@fusion.gat.com (858) 455-3863





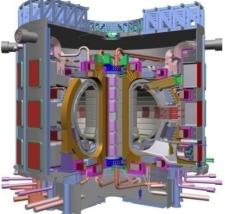
### Mini-course on the Basics of Fusion Engineering and Design

#### **OVERVIEW**

As part of the 23rd International Symposium on Fusion Energy a special one-day Short Course on fusion engineering and design will be offered on Friday June 5, 2009 and will be held at the Omni Hotel, San Diego, California.

A group of experts from fusion technology research will provide a set of lectures on:

Basics of Plasma and Fusion
-ITER Overview
-Fusion Safety & Tritium Management



Courtesy of US ITER Project Office https://www.usiter.org/index.shtml

#### WHO SHOULD ATTEND?

The course is designed in particular to help individuals from industry, who might be interested in ITER procurement, to get a better understanding of the overall fusion engineering picture. It would also benefit researchers and graduate students new to the fusion field. The course fee is \$500 per attendee. Opportunities exist for financial aid to partially or fully cover the registration fee for graduate and undergraduate students.

#### **ORGANIZATION:** Don Steiner

Rensselaer Polytechnic Institute Phone: 518 276 4016 E-mail: profsteiner@nycap.rr.com Rene Raffray UC San Diego Phone: 858 534 9720 E-mail: rraffray@ucsd.edu

#### SCHEDULE: The course will take place on Friday June 5, 2009.

9.00 9.1 <i>5</i>	Justine de esti en en d'Oran mei erre	Prof. D. Steiner
8:00-8:15	Introduction and Overview	Professor Emeritus, Rensselaer Polytechnic Institute
8:15-9:45	Basics of Plasma and Fusion	Prof. D. Steiner
0.15-9.45		Professor Emeritus, Rensselaer Polytechnic Institute
9:45-10:00	Break	
10.00 11.20	ITER Overview	Dr. N. Sauthoff
10:00-11:30		Director, US ITER Project Office
11:30-1:00	Fusion Power Plants	Prof .F. Najmabadi
11.30-1.00		Director, Center for Energy Research, UCSD
1:00-2:00	Lunch	
		Prof. N. Morley
2:00-3:30	In-Vessel Components	Associate Director, Center for Energy Science & Technology
		Advanced Research, UCLA
3:30-3:45	Break	
2.45 5.15	Fusion Safety and Tritium	Dr. L. Cadwallader
3:45-5:15	Management	Fusion Safety Program, Idaho National Laboratory
5:15	Adjourn	



### **Paul Phelps Continuing Education Grant**

To promote continuing education and encourage membership, the Nuclear and Plasma Sciences Society funds the Paul Phelps Continuing Education Grant. This is designed to aid participation in NPSS sponsored short courses mostly for tuition, but in selected cases also for partial travel expenses. Students who will attend the ICOPS or SOFE mini-course are encouraged to apply

Prize: Maximum of \$8,000/year for all recipients.

Eligibility: Outstanding Student Members of NPSS and unemployed Members of NPSS who need assistance in changing career direction.

Basis for Judging: Exceptional promise as a Graduate Student in any of the fields of the NPSS, exceptionally good work in those fields for currently unemployed NPSS members and an expectation that attendance to one or more of the Short Courses will result in improved possibility of obtaining a job in the NPSS fields.

Presentation: Presented each year at the NPSS sponsored conference in which the Short Courses are given. The awards will be handled prior to the dates of the Conference, so that award recipients can apply the corresponding funds towards covering tuition and/or traveling costs to the Short Courses

The deadline for application is January 31, 2009. Forms can be downloaded from the NPSS Website at <u>http://ewh.ieee.org/soc/nps/PhelpsContinuingEd.htm</u>, and completed applications should be sent to:

Peter S. Winokur, Ph.D. Defense Nuclear Facility Safety Board 625 Indiana Avenue NW Washington, DC 20004 Tel: (202) 694-7090 Fax: (202) 308-6518 Email: pwinokur@dnfsb.gov



### **Best Student Paper Awards**

#### ICOPS Student Attendees

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 will receive a cash prize and a certificate each. Two runners-up will receive a certificate.

Any student who is the principal or sole author/researcher and the presenter of either an oral or poster paper at the ICOPS-SOFE 2009 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 further information contact:

Monica Blank Communications & Power Industries Inc. E-mail: <u>monica.blank@cpii.com</u>

#### **SOFE Student Attendees**

Beginning in 2007 at the 22<sup>nd</sup> Symposium on Fusion Engineering, a best student paper award is presented at each symposium. Submitted student abstracts are pre-screened by the Awards Committee. A select number of students are invited to present a 10-minute oral summary of their paper at the Fusion Technology Committee luncheon, held early in the week of the symposium. Award winners are announced at the banquet and presented with a cash prize and a certificate.

#### For further information contact:

Philip Heitzenroeder Princeton Plasma Physics Laboratory Email: <u>pheitzen@pppl.gov</u>



## **Free Introductory IEEE Membership**

In order to encourage participation in the activities of the IEEE and 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 the Society Newsletter. The regular cost of a full year's membership can be found at www.ieee.org

Membership includes:

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

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

### **Placement Center**

A job placement center will be set up at the conference. Individuals interested in employment opportunities in plasma physics and related areas should send their resumes (marked "ICOPS-SOFE 2009") to the address below.

Employers with plasma-related technical positions available should contact :

Simon Bott Center for Energy Research University of California, San Diego 9500 Gilman Drive #0417 La Jolla, CA 92093-0417 Phone: 858 822 3828 E-mail: sbott@ucsd.edu

This is a free service that has been a success at past ICOPS in hiring graduates into industry, academia and national laboratories, and attendees are encouraged to take advantage of this opportunity

#### **Conference Organizing Committee**

ICOPS Chair Farhat Beg UC San Diego

**SOFE Chair** Mark Tillack *UC San Diego* 

**Conference Consultant** Chris Deeney US Department of Energy

#### Local Organizing Committee

**Local Committee Chair** Dan Goodin *General Atomics* 

**Registration Chair** Cynthia Escobedo *UC San Diego*  Scientific Secretary Simon Bott UC San Diego

**Publications Chair** Eric Hollman *UC San Diego*  **Treasurer** Kathleen Johnson *UC San Diego* 

**Publications Co-Chair** Karl Umstadter *UC San Diego* 

**Poster Session Coordinator** 

Karl Umstadter

UC San Diego

Brandi Pate

**On-Site Coordinator** 

**Oral Session Coordinator** Lane Carlson *UC San Diego* 

**Sponsor Liaison** Kelly Kaiser *General Atomics* 

#### **Technical Program Committee**

**ICOPS Technical Chair** Christine Coverdale Sandia National Laboratories

**SOFE Technical Chair** Rene Raffray *UC San Diego*  ICOPS Minicourse Organizer Rich Stephens General Atomics

**SOFE Minicourse Organizer** Don Steiner *Rensselaer Polytechnic Institute*  UC San Diego

**ICOPS Technical Area Coordinators** Earl Scime *West Virginia University* 

Monica Blank Communications & Power Industries

Pravesh Patel Lawrence Livermore Natl. Laboratory

John Giuliani Naval Research Laboratory

Mounir Laroussi Old Dominion University

Ray Leeper Sandia National Laboratories

Mark Gilmore University of New Mexico

#### **SOFE Technical Co-Chairs** William Cary *General Atomics*

Guenter Janeschitz Forschungszentrum Karlsruhe

Satoshi Konishi Kyoto University





## The ICOPS-SOFE 2009 conference is sponsored by:

The Nuclear and Plasma Sciences Society of the Institute of Electrical and Electronics Engineers

### **Organized by:**

The University of California, San Diego, Center for Energy Research

and

**General Atomics** 

### With generous donations from:

General Atomics (General Conference Support)

NRL Laser Fusion Program (General Conference Support) Image provided courtesy of the Naval Research Laboratory

US Department of Energy (Student and Publication Support)

Air Force Office of Scientific Research (General Conference Support)











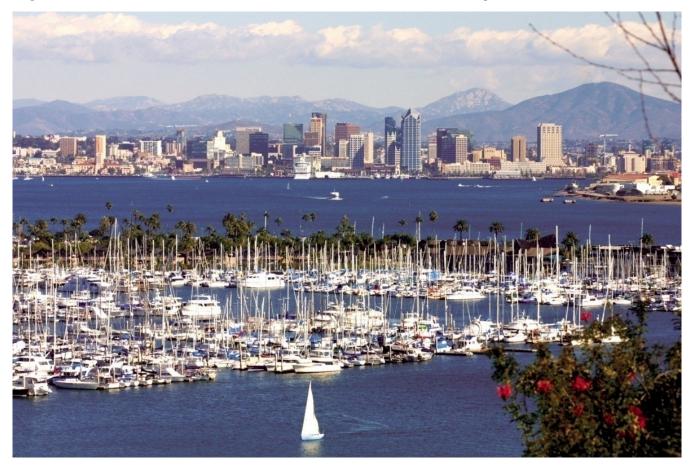




### **Exhibitor and Sponsor Information**

The ICOPS-SOFE 2009 conference offers a range of opportunities to promote your business either through hosting an exhibitor's booth or by sponsoring events taking place throughout the conference.

**Exhibitors Packages** range from \$2,000 to \$10,000 which includes a well supplied booth area, a single one-page advertisement on the conference USB drive, display of your company logo on the conference website, and at least one full conference registration.



**Sponsors Packages** are also available, which range from sponsoring a drink break or the conference bag to hosting a reception to be attended by all conference delegates with full acknowledgement of your company. Prices start from \$2,000. We are also happy to discuss other opportunities on an individual basis.

For further information please contact:

Kelly Kaiser General Atomics PH: 858 455 2516 E-mail: kelly.kaiser@gat.com



### **Getting to the Conference Site**

#### From San Diego Airport 14 minutes / 4 miles

Follow the airport exit signs toward Harbor Drive/Downtown San Diego. Merge onto Harbor Drive going south along the San Diego Bay. Follow Harbor Drive as it turns to the left at Seaport Village. Turn left onto 5th Avenue. Make an immediate right onto L Street. Proceed one block on L Street. The hotel is located on the right on the corner of 6th Avenue and L Street.

#### **Transportation Options**

Taxi: Approx. \$13 one way Shuttle: Approx. \$6-\$10 one way per person Bus/Trolley: Approx \$5



Take the #992 bus from the airport to American Plaza downtown, then take the trolley south on the Orange Line. The Gaslamp Quarter Stop is right outside the Onmi Hotel.

#### Directions from the North — via Highway 5 South

Take Highway 5 South to the 10th Avenue exit. Follow 10th Avenue to Market Street. Turn right onto Market Street and proceed to 6th Avenue. Turn left onto 6th Avenue and proceed to L Street. The hotel is on the left on the corner of 6th Avenue and L Street.

#### Directions from the North – via Highway 163 South

Take Highway 163 until it turns into 10th Avenue. Follow 10th Avenue to Market Street. Turn right onto Market Street and proceed to 6th Avenue. Turn left onto 6th Avenue and proceed to L Street. The hotel is on the left on the corner of 6th Avenue and L Street.

#### **Directions from the East – via Highway 8 West**

Take Highway 8 West to Highway 163 South toward downtown. Take Highway 163 until it turns into 10th Avenue. Follow 10th Avenue to Market Street. Turn right onto Market Street and proceed to 6th Avenue. Turn left onto 6th Avenue and proceed to L Street. The hotel is on the left on the corner of 6th Avenue and L Street.

#### Directions from Los Angeles (LAX) or Orange County

Take Interstate 405 South until it merges with Interstate 5 South. Take Highway 5 South to the 10th Street exit. Follow 10th Street to Market Street. Turn right onto Market Street and proceed to 6th Avenue. Turn left onto 6th Avenue and proceed to L Street. The hotel is on the left on the corner of 6th Avenue and L Street.



36<sup>th</sup> International Conference on Plasma Science and 23<sup>rd</sup> Symposium on Fusion Engineering

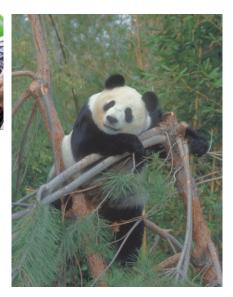
### **Local Attractions**

San Diego hosts a large variety of attractions for for visitors. About 2 miles north of downtown in Balboa Park, **San Diego Zoo** is one of the largest, and most progressive zoos in the world with over 4,000 animals of more than 800 species.



Both this and it's sister site of San Diego Wild Animal Park in north San Diego State are a truly exciting and educational day out for all the family. Visit <u>www.SanDiegoZoo.org</u>

In addition to the Zoo and over 1,200 acres of lush gardens, Balboa park is also home to 15 major museums, including the San Diego Natural History Museum, the Reuben H. Fleet Science Center, and the San Diego Air and Space Museum. Visit www.balboapark.org for more details.





SeaWorld San Diego is one of the world's premier marine adventure parks with 200 acres of world-class shows, thrilling rides and unforgettable animal encounters. More than 80 million visitors have explored the mysteries of the sea here, with up-close animal interactions. SeaWorld is located 4 miles north-east of and more downtown details can be found at www.seaworld.com/SanDiego.

The nearby San Diego Bay also hosts a variety of attraction for visitors, including **Seaport Village**, and the **Maritime Museum** which hosts the **Star of India**, the oldest working ship in the world, and **HMS Surprise**, featured in the movie Master and Commander. In addition, the **USS Midway** aircraft carrier museum is located at Navy Pier on the Bay and provides tours and exhibits of life aboard this famous vessel.



Further afield are some of Southern California's biggest tourist attractions. Lego Land (<u>www.legoland.com/california.htm</u>) Disneyland Resort (<u>www.Disneyland.com</u>), Universal Studios (<u>www.universalstudioshollywood.com</u>), and Mexico are all within easy driving distance.

For further information on San Diego attractions, beaches, nightlife and excursion ideas visit <u>www.SanDiego.org</u>. For local transport, including maps and pricing, visit <u>www.sdcommute.com</u>

