

15th Workshop on Pyrotechnic Combustion Mechanisms

The 15th Workshop on Pyrotechnic Combustion Mechanisms will be held on Saturday, July 25, 2020, prior to the 45th International Pyrotechnic Society Seminar. There will be a separate registration and fee for the Workshop. The goal and primary focus of this Workshop is to provide a platform for scientists to exchange information and discuss critical physical and chemical aspects of the combustion of pyrotechnic materials.

For further information on the Workshop, see the IPS and/or IPSUSA Seminars websites or contact Dr. Ernst-Christian Koch at e-c.koch@lutradyn.com.

Companions' Tour

NOTE: Due to the limited number of spots for this Tour, please sign up early and pay in advance (no later than June 26th) to receive the discounted price of \$65 per person and reserve your spot on this very popular Tour. The price will be \$90 per person after June 26th. Please note, this payment is non-refundable unless the Tour is cancelled. You DO NOT need to pay your Seminar Registration fee early.

Please join us for this all-day, fun-filled Companion Tour to the Garden of the Gods and Manitou Springs! You will have time for sight-seeing, shopping, and lunch.

For more details, please see Page 2 of the Registration form.

Registration

Registration, Abstracts, and Papers will be handled through the Seminar Coordinator:

Linda Crouse

IPSUSA 2020 Seminar Coordinator

P.O. Box 621633

Littleton, Colorado 80162-1633 USA

Phone: 303.601.8550 ♦ Fax: 303.904.3965

E-mail: LcrouseIPSUSASeminars@gmail.com

Questions about details for registration and other arrangements may be directed to her.

Seminar Registration

See attached Registration Form for Registration fees. Note discounts for early registration and for IPS members. Early registrants using credit cards (VISA, MasterCard, and AMEX only) will not be charged until just before the Seminar. Also, please specify Seminar activities for companions and note participation in all events for both registrants and companions on the Registration Form. Please complete all sections of the form.

Activities for Registrants & Companions included in the Registration fee:

There is an informal reception Sunday evening with ample food, a casual get-together Mixer/Picnic on Monday night with Karaoke, and a special outing and dinner on Wednesday evening (for Registrants only)**, which are included in the Registration fee. Companion fee is extra. **

Cheyenne Mountain Zoo Outing

On Wednesday evening, the social event will be a trip by bus to the Cheyenne Mountain Zoo in the mountains less than five miles west of Colorado Springs. You will enjoy an evening with the animals, including the opportunity to feed the Giraffes! This evening event is included in the registration fee for Seminar Registrants. Tickets for Companions of Seminar Registrants will be available at \$100.00 each. Children 6 to 12 are half price.

Seminar Co-Chairs

Mr. Christopher Csernica of U.S. Army CCDC Armaments Center,
christopher.m.csernica.civ@mail.mil

Dr. Zachary Doorenbos of NAWCWD China Lake, zachary.doorenbos@navy.mil

Further Information

As information about the Seminar becomes available, it will be posted on the website at <http://www.ipsusa-seminars.org>. Copies of proceedings from previous Seminars held in the US are available in book and CD form for sale at <http://www.ipsusa-seminars.org/publications/>.

Seminar Steering Committee IPSUSA Seminars, Inc. Officers

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45th INTERNATIONAL PYROTECHNICS SOCIETY SEMINAR

Third Call for Papers (Abstracts)



Hosted by
IPSUSA Seminars, Inc.

A Major International Forum for Pyrotechnics and Energetic Materials!

July 26-30, 2020

The 45th International Pyrotechnics Society Seminar will be held at the DoubleTree by Hilton Hotel in Colorado Springs, Colorado, USA, on July 26-30, 2020



DoubleTree by Hilton
Colorado Springs, Colorado

<https://doubletree3.hilton.com/en/hotels/colorado/doubletree-by-hilton-hotel-colorado-springs-COSP-DT/index.html>

Seminar Topics

Pyrotechnics, in the international context, includes all energetic materials. Subjects of interest for this Seminar include explosives, propellants, pyrotechnics, and devices that utilize these materials, processes used to make them, and the physical and chemical principles and processes involved in their design, characterization, reaction, testing, operation, and aging.

- All aspects of Pyrotechnics
- Fuel/oxidizer formulations
- Insensitive energetic materials
- Sensitivity and safety
- Solid rocket propellants
- Environmental considerations
- Nano-particles in energetic materials
- Testing methods and devices
- Manufacturing processes; twin-screw extruders, coacervation, co-precipitation, etc.
- Computational methods applied to energetics
- Detonation science
- Improvised explosive devices (IEDs)
- Initiators and Initiation
- Regulations and standards applicable to energetics; STANAGs, etc.
- Synthesis of explosive, propellant, and pyrotechnic compositions
- Unusual applications of energetic materials
- Conventional/non-conventional explosives
- Commercial fireworks (R&D, processing, safety, materials, etc.)
- Commercial explosives and pyrotechnics for blasting, excavation, drilling, and mining

Passport and VISA Advisory and Warning

In the process of obtaining your Visa for travel to the USA, you may be asked to appear for a personal interview. This will lengthen the time it takes to obtain a Visa.

We highly recommend starting the Visa application process very early.

Submission of Abstracts

To be considered, Abstracts may be submitted for inclusion in the Seminar at any time up to January 18, 2020. Receipt of your Abstract will be acknowledged by email. Guidelines on how to prepare the manuscript for publication will be available on the IPSUSA Seminar website. Selection of the papers to be given at the Seminar will be made in February 2020, and a list of papers for oral and poster presentation will also be published and posted on the website in March 2020. The Proceedings of the Seminar will be published as a CD or USB thumb-drive and will be distributed at the beginning of the Seminar.

It is expected that an author will present each oral or poster paper. ***It is our intent not to publish manuscripts of papers from authors who do not participate in the Seminar.*** This standard is set to encourage attendance and participation in the Seminar and to encourage the open exchange of ideas. All papers will be presented and written in the English language. Furthermore, all submitted manuscripts must allow IPSUSA Seminars, Inc. to copyright their submissions in accordance with standard practice for the publication of all technical and scientific papers.

Authors are personally and solely responsible for obtaining organizational clearance for their paper (abstract and manuscript) before submitting it to the Seminar for presentation and publication. In granting the clearance approval, it should be understood that the abstract and manuscript will be published in the Seminar Proceedings on a CD or USB thumb-drive. These will be made available to the public at large.

Abstracts

Abstracts should be no more than 500 words in length. You may indicate your preference for presentation in the oral or poster session. Full manuscripts from both types of presentations, without distinction, will be included in the Proceedings. Full manuscripts are not required for Posters. A detailed summary/Abstract (two to four pages) is acceptable for Poster publications in the Proceedings. Commercial vendors must register and are encouraged to present posters or display exhibits.

Schedule of Events

The timetable leading to the Seminar is:

January 18, 2020

Abstracts due to Seminar Coordinator (see address on back page)
Final full text manuscripts are due for the Young Scientist Award and the Bursary Award considerations
Registration for the Seminar continues

February 15, 2020

Authors notified of paper acceptance
Young Scientist Award and Bursary Award Notifications
Registration for the Seminar continues

March 15, 2020

Final Announcement with list of papers
Registration for the Seminar continues

April 26, 2020

Full Manuscripts due to Seminar Coordinator for Proceedings
Registration for the Seminar continues

June 23, 2020

Cutoff date for Hotel reservations

June 26, 2020

Final date for receiving discounted Registration *

July 26-30, 2020

45th International Pyrotechnics Society Seminar



*** We greatly encourage completing the Seminar Registration form and making your Hotel reservation early. Payment is not required prior to arrival at the Seminar.**

Registration forms received by June 26, 2020, will be accepted at the lower advance registration fee for payment at the Seminar. "Walk-in" registrants will pay a higher fee.

Your credit card will not be billed until the date of the Seminar (unless requested by you).

2020 Dr. Bernard E. Douda – Young Scientist Award

One special award, the **2020 Dr. Bernard E. Douda – Young Scientist Award** for Pyrotechnics Investigators is anticipated from the fund established through the International Pyrotechnics Society. The award will pay for the 45th IPSUSA Seminar Registration fee and a 2-year paid IPS membership. To be eligible for the award, the Applicant must be under 40 years of age at the time of the submission deadline (January 18, 2020), must not be an officer or past officer of the IPS or IPSUSA, must submit a full paper with cover letter explaining the importance of the presented work along with a curriculum vitae, and must attend and present the paper at the 45th IPS Seminar. Applicants will be notified by February 15, 2020. The point of contact for this award is Dr. Jesse J. Sabatini at jesse.j.sabatini.civ@mail.mil.

Frank Carver Bursary Award

One special award, the **Frank Carver Bursary** for a Pyrotechnics Investigator is anticipated from the Bursary Fund established through the International Pyrotechnics Society. The Frank Carver Bursary Fund is a UK Charity which promotes advancement in the scientific understanding of energetic materials by assisting young pyro technicians to attend and present their work at international seminars being sponsored by the International Pyrotechnics Society.

The award will be £1200 Sterling equivalent. The amount is usually sufficient to cover travel expenses or Seminar fees. To be eligible for the award, the recipient must be less than 40 years of age, from outside of North America, and must orally present the paper at the Seminar. Persons who wish to be considered for the award should notify their intention to the International and Technical Steering Committees of the Seminar (Trevor Griffiths at tgriffiths.ips@gmail.com) and submit their written paper at least six months before the date of the Seminar.

The winner will be selected from among the group of applicants for the award. See www.intpyrosoc.org/frank-carver-bursary/ for details of the rules. Applicants for the award must submit a complete application, plus all required materials to LcrouseIPSUSASeminars@gmail.com by January 18, 2020. Applicants will be notified of the decision on the award by February 15, 2020.