

# 45<sup>th</sup> INTERNATIONAL PYROTECHNICS SOCIETY SEMINAR

## First Call for Papers (Abstracts)



Hosted by  
IPSUSA Seminars, Inc.

## A Major International Forum for Pyrotechnics and Energetic Materials!

July 10-15, 2022

The 45<sup>th</sup> International Pyrotechnics Society Seminar will be held at the DoubleTree by Hilton Hotel in Colorado Springs, Colorado, USA, on July 10-15, 2022



DoubleTree by Hilton  
Colorado Springs, Colorado

<https://www.hilton.com/en/hotels/cosp-dt-doubletree-colorado-springs/>

## 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
- Pyrotechnic generated/dispersed biocides
- 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

## 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 Posters to be published in the Proceedings.

Commercial vendors must register and are encouraged to present posters or display exhibits.

## Submission of Abstracts

To be considered, Abstracts may be submitted for inclusion in the Seminar at any time up to January 18, 2022. 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 2022, and a list of papers for oral and poster presentation will also be published and posted on the website in March 2022. 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 publications.

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.

## 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 strongly recommend starting the Visa application process as early as possible.***

## Schedule of Events

The timetable leading to the Seminar is:

### First Week of September 2021

Second Call for Papers with Reminder for Abstracts

Registration for the Seminar continues

### First Week of December 2021

Third Call for Papers with Reminder for Abstracts

Registration for the Seminar continues

### January 18, 2022

Abstracts due to Seminar Coordinator (see address on second page)

Final full text manuscripts are due for the Young Scientist Award and the Bursary Award considerations

Registration for the Seminar continues

### February 15, 2022

Authors notified of paper acceptance  
Young Scientist Award and Bursary Award  
Notifications

Registration for the Seminar continues

### March 15, 2022

Final Announcement with list of papers  
Registration for the Seminar continues

### April 26, 2022

Full Manuscripts due to Seminar Coordinator for Proceedings

Registration for the Seminar continues

### June 7, 2022

Cutoff date for Hotel reservations

### June 10, 2022

Final date for receiving discounted registration \*\*

### July 10-15, 2022

45<sup>th</sup> International Pyrotechnics Society  
Seminar

***\*\* We strongly 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 10, 2022, 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.***

## Colorado Springs, Colorado

Colorado Springs, at an elevation of 6,035 ft., is a city in Colorado at the eastern foot of the Rocky Mountains. It lies near glacier-carved Pikes Peak, a landmark in Pike National Forest with hiking trails and a paved road leading to its 14,114-ft. summit. The city's Garden of the Gods park features iconic red-sandstone formations and mountain views.

## DoubleTree by Hilton

Located just two blocks from the World Arena Event Center, the DoubleTree by Hilton Hotel Colorado Springs offers scenic Colorado Rocky Mountain views in a convenient location. The DoubleTree is less than nine miles from the Colorado Springs Airport, with transportation available by the Colorado Springs Shuttle. The Colorado Springs Shuttle is also the only direct regularly scheduled shuttle service to and from Colorado Springs to the Denver International Airport (which is about 1 ½ hours northeast of Colorado Springs).

The newly renovated DoubleTree by Hilton Colorado Springs showcases a contemporary lobby, spacious guestrooms, and casual dining. Admire views of Pikes Peak and Cheyenne Mountain during your stay. Walk through the doors and be greeted with a smile, outstanding service, and the famous warm chocolate chip cookie by DoubleTree.

Make yourself at home in one of their 299 guest rooms featuring signature bedding, 49" flat-screen HD TV, WiFi, oversized work desk, and more. Start your day with a specialty coffee at the Made Market featuring a selection of Starbucks® drinks and morning grab 'n go items. Enjoy tempting menu creations from the hotel's inviting dining venue, The Mill House, open for breakfast, lunch, and dinner. The Bar, the largest hotel bar in the city, offers a relaxing spot to unwind and enjoy a selection of appetizers, entrées, and craft brews.

## Hotel Reservations

To make Reservations before August 2021, you may call the Hotel's direct number at 1-719-576-8900 and ask for Reservations. Make sure you reference "IPSUSA". NOTE: As soon as we get the direct IPSUSA Reservation links, they will be posted on the IPSUSA website and emailed to you. There will be a limited number of Per Diem rooms (for U.S. Government Employees only – with a valid Government ID), so it is advised that you register early if you qualify for these. Regular room rates will be \$145 per night. Once you make your reservation, you will receive a confirmation number from the hotel.



## 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 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 Thursday evening (for Registrants only\*), which are included in the Registration fee. \* **Companion fee is extra.**

## 2022 Dr. Bernard E. Douda – Young Scientist Award

One special award, the **2022 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 45<sup>th</sup> 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, 2022), 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 45<sup>th</sup> IPS Seminar. Applicants will be notified by February 15, 2022. The point of contact for this award is Dr. Jesse J. Sabatini at [jesse.j.sabatini.civ@mail.mil](mailto: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 pyrotechnicians to attend and present their work at international seminars being sponsored/sanctioned 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](mailto: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/](http://www.intpyrosoc.org/frank-carver-bursary/) for details of the rules. Applicants for the award must submit a completed application, plus all required materials to [lcrouseipsusaseminars@gmail.com](mailto:lcrouseipsusaseminars@gmail.com) by January 18, 2022. Applicants will be notified of the decision on the award by February 15, 2022.

## Seminar Steering Committee IPSUSA Seminars, Inc. Officers

**Dr. Gregory D. Knowlton** – President

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**Dr. Zachary Doorenbos**  
Lawrence Livermore National Laboratory  
[doorenbos1@llnl.gov](mailto:doorenbos1@llnl.gov)

## 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/>.

## Registration

Registration and Abstracts will be handled through the Seminar Coordinator:

**Linda Crouse**  
IPSUSA 2022 Seminar Coordinator  
Phone: 303.601.8550 ♦ Fax: 303.904.3965  
E-mail: [lcrouseipsusaseminars@gmail.com](mailto:lcrouseipsusaseminars@gmail.com)

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