



## The 37<sup>th</sup> International Pyrotechnics Seminar

of the

*The International Pyrotechnics Society*

Hosted by Safety Consulting Engineers, Inc. and IPSUSA Seminars, Inc.

Grand Junction Doubletree Hotel

Grand Junction, Colorado, USA, on July 11-16, 2010



### Co-Chairs:

C. James Dahn, Safety Consulting Engineers  
Ph: 847-925-8100, [sceinc@sceinc.com](mailto:sceinc@sceinc.com)  
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Larry Brown, National Technical Systems  
Ph: 303-979-0533, [larry.brown@ntscorp.com](mailto:larry.brown@ntscorp.com)

## CALL FOR ABSTRACTS

(Please Post this announcement in your work area or pass along to other colleagues that may be interested)

The Thirty-Seventh International Pyrotechnics Seminar and Symposium will be held at the Grand Junction Doubletree Hotel in Grand Junction, Colorado, Sunday through Friday **July 11 – 16, 2010**.

Information about the Seminar may also be found at our web page, <http://www.ipsusa.org>.

Send Abstracts or Title and notice of intent to submit and abstract to: [sceinc@sceinc.com](mailto:sceinc@sceinc.com)

Please put “IPS ABSTRACT” in the subject line.

## SYMPOSIUM TOPICS

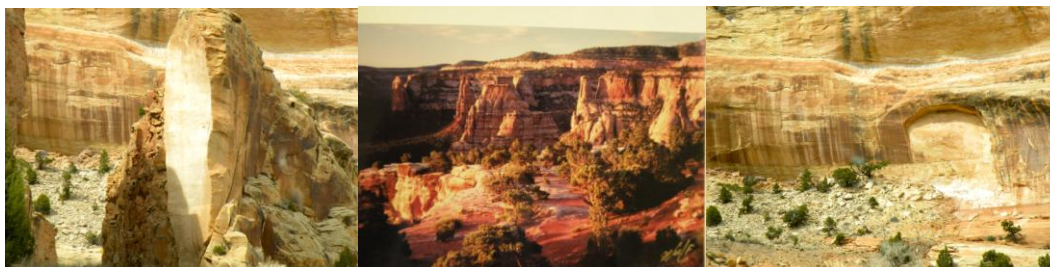
*Pyrotechnics*, in the International Pyrotechnics Society context, includes all energetic materials. Subjects of interest for this Symposium include all aspects of pyrotechnics application, with special emphasis on research aspects for explosives and propellants.

### Contributed oral and poster presentations are planned in the following areas of interest:

- ◆ All aspects of Propellants, Explosives and Pyrotechnics (PEP)
- ◆ R&D, manufacturing processes, lifecycle issues, Disposal and Demil
- ◆ Computational methods applied to energetics
- ◆ Fuel/oxidizer formulations
- ◆ Insensitive materials
- ◆ Contemporary issues for energetic materials: safety, environmental, regulatory, etc.
- ◆ Nano-particles in energetic materials
- ◆ Testing methods and devices
- ◆ Improvised explosive devices (IEDs)
- ◆ Initiators and initiation
- ◆ Regulations and standards applicable to energetics, STANAGs, etc.
- ◆ Synthesis and composition of explosives and other energetic composites
- ◆ Unusual applications of energetic materials

*Traditionally, this event has been called a “Seminar” and we will continue to do so for historical reasons. However, the recent composition of the presentations and manuscripts for these Seminars, by definition, qualify this event to more properly be called a “Symposium.”*

**Authors/Presenters also receive a 10% discount off the current Registration Fee (Early or Pre). Limited to one discount registration per paper presented. Discount does not apply to Poster Session presentations.**





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## ADJOINING WORKSHOP

The 8<sup>th</sup> Workshop on Pyrotechnic Combustion Mechanisms

Same Location! Saturday, July 11<sup>th</sup>, workshop is just before the 37<sup>th</sup> IPS Seminar.

There is a separate registration and fee for the Workshop (go to <http://intpyro.org/workshop.aspx>).

This workshop is dedicated to studying the combustion of pyrotechnic materials. Whereas our present knowledge on the combustion of solid propellants may be considered mature, our understanding of the combustion processes occurring with modern pyrotechnics is still in its infancy. Thus development of pyrotechnics for various applications, be it illuminating and decoy flares, igniter materials, smoke charges and the like, still requires time-consuming procedures resembling more of a trial and error system.

It is the aim of this workshop to create a platform for scientists to allow for detailed exchange of information and critical discussion on the physical and chemical aspects of the combustion of pyrotechnic materials.

## SCHEDULE OF EVENTS

**March 1 – June 6, 2010**

Early Registration. Early Registration receives a 10% discount.

**April 28, 2010**

Title and brief abstract DEADLINE

Early Registration for the Seminar continues

**April 28, 2010**

Poster Abstracts DEADLINE

Early Registration for the Seminar continues

**May 15, 2010**

Full abstracts due.

Early Registration for the Seminar continues

**April 1 – May 20, 2010**

Authors notified of paper acceptance within 5 days of full abstract submittal.

Early Registration for the Seminar continues

**May 16, 2010**

Program Announcement with list of papers and authors.

Early Registration for the Seminar continues

**May 30, 2010**

Manuscripts DEADLINE for inclusion in published proceedings (CD)

Early Registration for the Seminar continues

**June 6, 2010**

Final date for Early registration.

**June 7 – July 10**

Pre-conference Registration period.

**July 1, 2010**

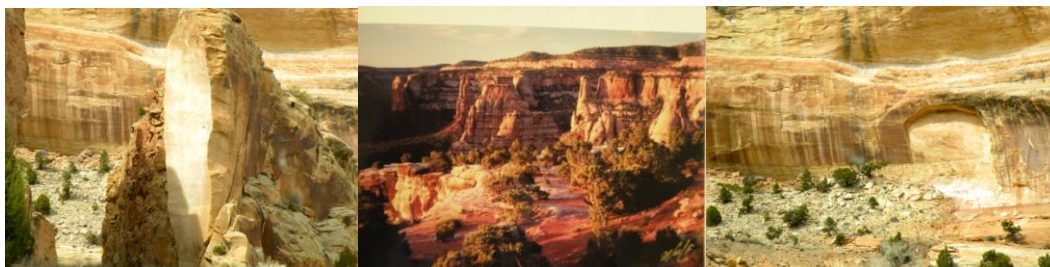
Presentation and video files due.

**July 11-16, 2010**

Thirty Seventh International Pyrotechnics Seminar

On-site registration

Registration forms received by June 6, 2010 will be accepted at the lower Early Registration fee rate.





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## ABSTRACTS

Abstracts must be unclassified and, if a government has sponsored the work, must be cleared for submission by the sponsoring government. Full abstracts should be no more than 500 words in length. Please indicate your preference for presentation in oral or poster session. Full manuscripts from both types of presentations without distinction will be included in the proceedings. Commercial vendors must register and are encouraged to present posters.

## ABSTRACT SUBMISSION

**To be considered**, a title and brief abstract must be submitted by **April 28, 2010**, to indicate your intent and desire to present a paper or participate in the poster session. Full abstracts should be submitted as soon as possible, but in any case, no later than **May 15, 2010**. Receipt of your abstract will be acknowledged by email. Authors will be notified within 5 business days of the status of their abstract.

Authors are requested to follow the guidelines for preparation of the manuscript for publication that can be found at <http://www.ipsusa.org/authorguidance.pdf>.

Selection of the papers to be given at the Seminar will be made by **May 20, 2010** and a list of papers for oral and poster presentations will be posted on the website in May, 2010. It is our intent to publish the Proceedings of the Seminar on CD. These will be distributed at 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, of those 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 and posters will be presented and written in the English language. Furthermore, all submitted manuscripts must allow IPSUSA Seminars, Inc. to copyright their submissions in accordance to standard practice for the publication of all technical and scientific publications.

When submitting the abstract or manuscript please provide the email, phone number and full mailing address of the author to be contacted with questions.

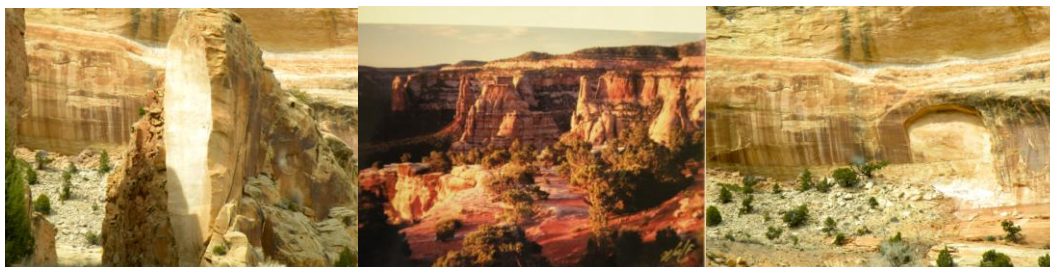
## ACTIVITIES

### Additional Seminar Activities available for Registrants and Companions:

Sunday night: Reception  
Monday night: Picnic  
Tuesday: Area companion tour  
Thursday: Black Canyon/ Pioneer Town Tour  
Thursday: Seminar Banquet  
Friday: Wine and Cheese Social

*The Black Canyon of the Gunnison's* is 2,700 feet deep and 53 miles long. It is a unique and spectacular landscape. No other canyon in North America combines the narrow opening, sheer walls, and startling depths offered by the Black Canyon of the Gunnison.

*Pioneer Town* - Tours take visitors through a country store, a log cabin, a unique, multi-sided grain silo, an old-time saloon, and the many other town buildings such as the Marshall's office, the Wells-Fargo office, the jail, bank, and creamery.





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### GRAND JUNCTION, COLORADO

Awe-inspiring natural beauty and a dramatic red rock landscape. Exhilarating outdoor adventures and stunning golf courses. Peaceful places to reflect and unwind and a charming downtown full of great shops, restaurants, galleries and more. This is Grand Junction, Colorado's Wine Country.

### SEMINAR REGISTRATION

See enclosed registration form for registration and companion fees. Note: discounts for early registration, for IPS members and a special 10% discount for one author or presenter per paper. 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.*

### HOTEL RESERVATIONS

All hotel reservations should be made directly with the hotel. The telephone number for reservations is **970-241-8888** and they are located at 743 Horizon Drive, Grand Junction, Colorado 81506. **Be sure to mention that you will be attending the IPSUSA 2010 seminar in July.** The rates quoted are also offered to registrants two days before and after the conference based on space availability.

**Seminar registration, abstracts and manuscripts will all be handled through:**

**Pat Hobbs: IPS 2010 Coordinator**

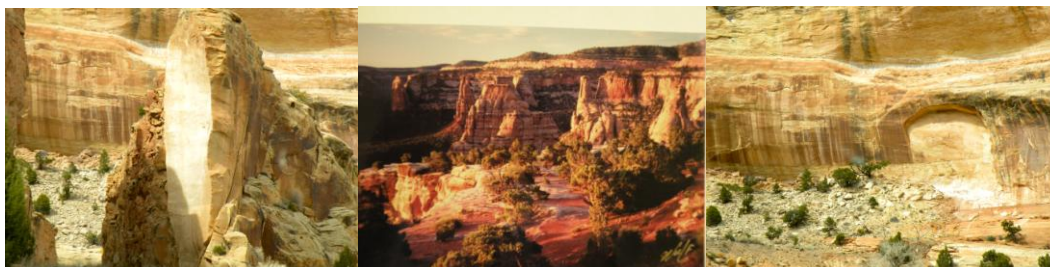
Safety Consulting Engineers, Inc.

2131 Hammond Drive

Schaumburg, Illinois 60173-3811

Phone: (847) 925-8100 · Fax: (847) 925-8120

e-mail: [sceinc@sceinc.com](mailto:sceinc@sceinc.com)





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## REGISTRATION FORM

Title: \_\_\_\_\_ Name: \_\_\_\_\_

Companion Name(s) \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Country \_\_\_\_\_

May we include your phone number and e-mail address on the Attendee List? Yes  No

<b>Fill in amount for applicable fees and then total:</b>		
IPS or AFP Member Early Registration (must be a member by June 1, 2010 to get the discount) before June 7 <sup>th</sup> .	\$1090	_____
Non-Member Early Registration before June 7 <sup>th</sup> .	\$1190	_____
IPS or AP Member Pre-Registration on or after June 7 <sup>th</sup>	\$1125	_____
Non-Member Pre- Registration on or after June 7 <sup>th</sup>	\$1225	_____
Companion, Breakfasts (all 5 days) for a total of .....	\$ 50	_____
Companion Lunches, Mon ___ Tues ___ Wed ___ @ \$22/each day		_____
Thursday Black Canyon Tour *	# _____ @ \$50/person	_____
Thursday Banquet Non-registrants*	# _____ @ \$60/person	_____
<b>Total Remitted</b>		_____

**Registration includes Proceedings, Portfolio, Refreshments, Registration Social, Picnic Dinner, Five Breakfasts, Three Lunches, Tuesday Companion Tour to Town, Thursday Banquet and Friday Wine & Cheese.**

\*Children under 14 accompanied by an adult are free.

<b>My companion(s) and I plan to participate in the following activities:</b>		
	<b>Registrant</b>	<b>Companion(s)</b>
Sunday, 11 July, Registration Social	( )	( )
Monday, 12 July, Lunch	( )	( )
Monday, 12 July, Mixer/Picnic Dinner	( )	( )
Tuesday, 13 July, Lunch	( )	( )
Tuesday, 13 July, Companion Tour to Town	( )	( )
Thursday, 15 July, Black Canyon Scenic Tour	( )	( )
Thursday, 15 July Banquet	( )	( )
Friday, 16 July, Wine & Cheese Social	( )	( )

**Return form to IPS Coordinator, Pat Hobbs @ 2131 Hammond Drive, Schaumburg, IL 60173 or Fax to 847-925-8120. Checks: all checks must be in US dollars, payable on a US bank, payable to "2010 IPSUSA Treasurer". Checks must be received by June 20, 2010, in order to allow sufficient time for processing before the conference. Credit Cards: VISA, MASTERCARD or AMERICAN EXPRESS will be accepted for Seminar Fees. No Purchase Orders will be accepted.**