

# HIGH-SPEED IMAGING METHODS FOR RESEARCH AND EXPERIMENTATION

September 26<sup>th</sup>- 29<sup>th</sup>, 2017 | Golden, CO | Colorado School of Mines

## About this course...

A hands-on, world class short course from Colorado School of Mines and AXPRO Explosive Research Laboratory (ERL).

Vision Research, a world leader in digital high speed imaging, is sponsoring this course. Focus is on experimentation techniques with explosives and ballistics. **Mr. Frank Mazella**, Learning Products Manager at Vision Research, will be instructing.

Students will be working one-on-one with instructors on specific technical problems of high-speed imagery and camera setups.

## Registration Information

For registration please visit our website :<http://www.csm.space.com/events/hispeeding/> For questions about registration, please contact Office of Special Programs and Continuing Education: (303) 279-5563 or [space@mines](mailto:space@mines).

For technical course questions please contact **Dr. Vilem Petr** (303)273-3232 or email: [vpetr@mines.edu](mailto:vpetr@mines.edu).

Please visit our website [AXPRO.MINES.EDU](http://AXPRO.MINES.EDU)

## Course Content

A wide range of material will be covered including: detonation and shock wave physics, an introduction to high-speed imaging, lighting and selecting lenses for the best results, triggering strategies, analysis of high-speed imagery, and more.



## Registration

The registration type(s) and fee(s) for High-Speed Imaging Methods for Research and Experimentation are shown below:

- Regular Attendees — \$ 2,495 (USD)
- Regular Attendees - On Site — \$ 2,695 (USD)

### Day One -Tuesday 09/27/2016

Introduction to High-speed Imaging  
Laboratory Safety  
Lenses and Optics in High Speed Video  
Illumination and Light Consideration  
Triggering

Welcome Reception 5:30 PM Hill Hall 300

### Day Two -Wednesday 09/28/2016

Introduction to Phantom camera Control  
Classroom Hands -on exercises  
Introduction to High-Speed Motion  
Analyses Software  
Data analyses

### Day Three -Thursday 09/29/2016

Practical Training at our Explosive Research Laboratory (ERL) at Idaho Springs  
Practical Exercise: Group test results analyses

**Personal Protective equipment (PPE) is Required on Day 3**

### Day Four -Friday 09/30/2016

Practical Exercise: Group test results analyses using motion analysis Software  
Group presentation  
Wrap-Up(Q&A, Evaluations)  
Certificates