



ICDERS

26th International Colloquium on the Dynamics of Explosions and Reactive Systems

July 30 – August 4, 2017, Boston, Massachusetts, USA

FIRST INVITATION and CALL FOR PAPERS

The International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS) has been held every two years since its founding in 1967 by N. Manson, A.K. Oppenheim, and R. Soloukhin. The colloquium is the premier international forum for the presentation of scientific contributions in the fields of explosions and unsteady combustion, where there is strong coupling between reaction and fluid mechanics. It is held on alternate years from The International Symposium on Combustion and is recognized by The Combustion Institute as a Specialists Meeting on the fluid dynamics of combustion.

The subject matter of Dynamics of Explosions is concerned principally with the interrelationship between rate process of energy deposition in compressible media and its flow field, as it occurs typically in detonations. Dynamics of Reactive Systems is concerned with non-steady coupling between the flow system and the exothermic reactions, as they occur typically in the course of combustion. These definitions are intentionally broad and include fluid systems with a variety of additional chemical and physical effects. The meeting encompasses and welcomes both basic and applied research. Specific examples of contributions and topics from previous years can be found by visiting the website of the Institute for the Dynamics of Explosions and Reactive Systems (IDERS), www.icders.org, which has links to websites of previous meetings.

The 26th ICDERS marks the 50th anniversary of the Colloquium and will be hosted by FM Global in Boston, Massachusetts on the campus of Boston University.

Prior ICDERS meetings

Bruxelles (1967), Novosibirsk (1969), Marseille (1971), San Diego (1973), Bourges (1975), Stockholm (1977), Göttingen (1979), Minsk (1981), Poitiers (1983), Berkeley (1985), Warsaw (1987), Ann Arbor (1989), Nagoya (1991), Coimbra (1993), Boulder (1995), Krakow (1997), Heidelberg (1999), Seattle (2001), Hakone (2003), Montreal (2005), Poitiers (2007), Minsk (2009), Irvine (2011), Taipei (2013), Leeds (2015)

Scientific Program

Contributed presentations, in oral and poster sessions, plenary and special sessions will take place during the week-long Colloquium. It is ICDERS policy to encourage intensive discussions on fundamental and timely topics. A digital version of the Proceedings of the Colloquium, which includes the extended abstracts of presented papers, will be distributed to participants at the meeting. The Proceedings will also be available through the IDERS website. Authors of papers presented at this meeting are encouraged to submit full-length versions to one of these journals: Combustion Science and Technology, Combustion Theory and Modeling, and Shock Waves.

Submitted manuscripts will be peer reviewed according to individual journal standards but will be identified as ICDERS work individually or as part of a special issue.

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Submissions are encouraged on, but not limited to, the following topics:

- Detonation dynamics, structure, initiation and limits
- Dynamics of deflagration waves
- Dynamics of premixed and non-premixed flames
- Gas and dust explosions
- Diagnostics for reactive systems
- Numerical methods for reacting flows
- Nonlinear analysis and reactive analogues
- Ignition phenomena
- Reactive dynamics of energetic materials
- Multiphase reactive dynamics
- Relaxation phenomena in shock waves
- Propulsion applications of detonations and high-speed flames
- Turbulence in compressible reacting flows
- Chemical reaction kinetics and reaction dynamics
- Reaction wave instabilities and quenching
- Astrophysical deflagrations and detonations
- Safety relevant ignition processes
- Fire dynamics
- Industrial safety applications

Calendar of Events – Important Dates

- Initial Paper Submission Deadline: January 6, 2017
- Notification of Acceptance: Week of March 27, 2017
- Work-In Progress Poster Submission: April 7, 2017
- Work-In Progress Poster Notification: May 5, 2017
- Early Registration Deadline: June 11, 2017

Program Committee:

U. Maas (Chair), M. Short (Co-Chair), S. Shy (Co-Chair), J. Austin, Y.C. Chao, N. Chaumeix, A. Chinnayya, C. Chiquete, T. Echehki, M. Fikri, B. Fiorina, V. Gubernov, I.-S. Jeung, A. Kasimov, D. Kessler, D. Markus, K. Maruta, A. Matsuo, H.D. Ng, J. Regele, P. Ronney, N. Whitworth, M.-H. Wu, R. Zitoun

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Author Instructions and Paper Submission:

Author Instructions and the link to the paper submission website will be available at:
www.icders2017.com

Host Committee at FM Global:

J. Chao (Chair), C.R. Bauwens (Co-Chair), S.B. Dorofeev, D. Staplins

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