



# 37<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON COMBUSTION

Dublin, Ireland: 29 July - 3 August 2018



## Call for Papers: 37th International Symposium on Combustion

Released: 4 May 2017

The **37th International Symposium on Combustion** will convene at The Convention Centre Dublin, Ireland from Sunday, 29 July through Friday, 3 August 2018. Scientists, engineers, and others interested in combustion are invited to attend and participate in this biennial world congress of **The Combustion Institute**.

### Symposium Agenda

The technical program will consist of contributed papers and Work-in-Progress Poster (WiPP) sessions. Invited lectures, topical reviews, and special industry perspectives will be presented by eminent specialists.

### Technical Program Co-Chairs

Heinz Pitsch, RWTH Aachen University, Germany      Hai Wang, Stanford University, United States

### Colloquia Descriptions

A total of 13 colloquium categories will be addressed at the 37th International Symposium on Combustion. Authors must indicate a choice of colloquium with their submissions.

**GAS-PHASE REACTION KINETICS including the kinetics of hydrocarbons and oxygenated fuels, formation of gaseous pollutants, elementary reactions, mechanism generation, reduction and uncertainty quantification.** René Fournet, University of Lorraine, France; C. Franklin Goldsmith, Brown University, United States; Matthias Olzmann, Karlsruhe Institute of Technology, Germany; Raghu Sivaramakrishnan, Argonne National Laboratory, United States; Tamás Turányi, Eötvös Loránd University, Hungary; Bin Yang, Tsinghua University, China.

**SOOT, NANOMATERIALS, AND LARGE MOLECULES including the formation, growth, and destruction of soot, PAHs, carbon nanostructures, and other nanoscale materials.** Lutz Mädler, University of Bremen, Germany; Hope A. Michelsen, Sandia National Laboratories, United States; Michael E. Mueller, Princeton University, United States; Xiaoqing You, Tsinghua University, China.

**DIAGNOSTICS including the development and application of diagnostic techniques and sensors for the understanding and control of combustion and reacting flow phenomena.** Aamir Farooq, King Abdullah University of Science and Technology, Saudi Arabia; Bassam Dally, The University of Adelaide, Australia; Bruno Renou, CORIA, INSA Rouen-Normandie, France.

**LAMINAR FLAMES including their ignition, structure, propagation, extinction, stabilization, dynamics, and instabilities.** Jeffrey Bergthorson, McGill University, Canada; Zheng Chen, Peking University, China; Christos E. Frouzakis, ETH Zurich, Switzerland; Fabien Halter, Université d'Orléans-CNRS/ICARE, France; Zuohua Huang, Xi'an Jiaotong University, China; Yiguang Ju, Princeton University, United States; Murray J. Thomson, University of Toronto, Canada.

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## Colloquia Descriptions (continued)

**TURBULENT FLAMES including their ignition, structure, propagation, extinction, stabilization, dynamics, and instabilities, and modeling of turbulence chemistry interaction.** Fabrizio Bisetti, University of Texas at Austin, United States; Isaac Boxx, German Aerospace Center, Germany; Epaminondas Mastorakos, University of Cambridge, United Kingdom; Michael Pfitzner, Bundeswehr University Munich, Germany; Robert W. Pitz, Vanderbilt University, United States; Adam Steinberg, University of Toronto, Canada.

**SPRAY, DROPLET, AND SUPERCRITICAL COMBUSTION including atomization, combustion of droplets, sprays, and supercritical fluids.** Andreas Kronenburg, University of Stuttgart, Germany; Antonio L. Sanchez, University of California, San Diego, United States; Laurent Selle, Centre National de la Recherche Scientifique, France; Stefan Will, Friedrich-Alexander-University Erlangen-Nürnberg, Germany.

**DETONATIONS, EXPLOSIONS, AND SUPERSONIC COMBUSTION including flame acceleration, DDT, and pulse-detonation-, constant volume combustion-, and scramjet-engines.** Nabiha Chaumeix, CNRS-ICARE Orléans, France; In-Seuck Jeung, Seoul National University, Korea; Jiro Kasahara, Nagoya University, Japan; Venkat Raman, University of Michigan, United States; Jeffrey A. Sutton, Ohio State University, United States.

**SOLID FUEL COMBUSTION including fundamental aspects related to pyrolysis, oxidation, gasification, and ash formation from coal, biomass, and wastes, as well as combustion of propellants and metals.** Satyanarayanan R. Chakravarthy, Indian Institute of Technology, Madras, India; Thomas H. Fletcher, Brigham Young University, United States; Shuiqing Li, Tsinghua University, China; Osvalda Senneca, Istituto di Ricerche sulla Combustione del Consiglio Nazionale delle Ricerche, Italy; Hiroaki Watanabe, Kyushu University, Japan; Kenji Yamamoto, Mitsubishi Hitachi Power System, Ltd., Japan.

**FIRE RESEARCH including fundamental aspects of ignition, burning, spread and suppression of fire, as well as applications to building fire and urban/wildland fire safety.** Kazunori Kuwana, Yamagata University, Japan; Naian Liu, University of Science and Technology of China, China; Samuel L. Manzello, National Institute of Standards and Technology, United States; Bart Merci, Ghent University, Belgium; Guillermo Rein, Imperial College London, United Kingdom; Stanislav I. Stoliarov, University of Maryland, United States.

**STATIONARY COMBUSTION SYSTEMS AND CONTROL OF GREENHOUSE GAS EMISSIONS including combustion in stationary power generation, fluidized beds, incineration, utility boilers, industrial applications, NO<sub>x</sub> and SO<sub>x</sub> reduction, MILD combustion, oxy-fuel combustion, chemical looping, and CO<sub>2</sub> capture.** Javier Ballester, University of Zaragoza, Spain; William Linak, Environmental Protection Agency, United States; Sean T. Smith, University of Utah, United States; Hai Zhang, Tsinghua University, China.

**INTERNAL COMBUSTION ENGINES including device-specific aspects of fuels research, emissions, direct injection, and combustion dynamics (e.g. ignition, quenching).** André L. Boehman, University of Michigan, United States; David L.S. Hung, Shanghai Jiao Tong University, China; Sebastian Kaiser, University of Duisburg-Essen, Germany; Lyle M. Pickett, Sandia National Laboratories, United States; Yuri M. Wright, ETH Zurich, Switzerland.

**GAS TURBINE AND ROCKET ENGINE COMBUSTION including propulsion and power generation, as well as device-specific aspects of fuels research, emissions, stability, and combustion dynamics (e.g. ignition, quenching, thermoacoustics).** Laurent Y.M. Gicquel, CERFACS, France; Robert Gordon, The University of Melbourne, Australia; Jacqueline O'Connor, Pennsylvania State University, United States; Wolfgang Polifke, Technische Universität München, Germany.

**OTHER CONCEPTS including assisted combustion (plasmas, electric and magnetic fields), catalysis, fuel synthesis and transformation, micro-channel reactors, integrated process intensification, fuel cells, and electrolysis.** Robert J. Kee, Colorado School of Mines, United States; Terese Løvås, Norwegian University of Science and Technology, Norway; Godfrey Mungal, Stanford University, United States; Jeroen van Oijen, Eindhoven University of Technology, Netherlands; Dimosthenis Trimis, Karlsruhe Institute of Technology, Germany; Stephen D. Tse, Rutgers University, United States.

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## Selection of Papers for Presentation and Publication

The selection of papers is based on the quality and scientific rigor of the submissions evaluated in a peer-review process. **Authors are highly encouraged to provide assessment of experimental/numerical uncertainty and its impact on the interpretation of results and conclusions.** The Colloquium Co-Chairs (CCCs) will solicit and evaluate written reviews in their topic area. The reviews will be sent to authors, a rebuttal will be requested, and when necessary, examined by the original reviewers. Based on this, CCCs will recommend papers for presentation to assist the Program Co-Chairs (PCCs) in the assembly of the final symposium program. All accepted papers will be arranged into parallel sessions for oral presentation. Publication in the **Proceedings of The Combustion Institute** is determined by the Proceedings editorial board, and is not guaranteed based on symposium presentation selection. Evaluation of manuscripts for publication begins with reviewing the decisions of the CCCs and PCCs. Authors of papers considered for publication will be requested to submit a revision, which will be reviewed by the editorial board, potentially consulting additional reviewers. Additional revisions may be requested during the process. Final publication decisions will then be made.

## Instructions to Authors of Contributed Papers

Please read the instructions on the submission site carefully before submitting a paper.

**30 November 2017:** Due date is 23:59 Pacific Standard Time (GMT-8hrs) for receipt of completed paper.

**Week of 2 April 2018:** Authors notified of acceptance for presentation at the symposium.

For instructions on submission of papers, visit The Combustion Institute website: [CombustionInstitute.org](http://CombustionInstitute.org).

## Work-in-Progress Posters (WiPPs)

To provide a forum for presentation and discussion of work in progress, poster sessions will be scheduled to run concurrently with contributed oral sessions. Presentation in Work-in-Progress Poster (WiPP) sessions will be determined on the basis of a one-page abstract. A full-length paper is not required. The posters presented in WiPP sessions will not be published in the Proceedings of The Combustion Institute. The sessions will be organized by the **WiPP Co-Chairs:** Matthew Cleary, University of Sydney, Australia; Alessio Frassoldati, Politecnico di Milano, Italy; Perrine Pepiot, Cornell University, United States.

Deadline for WiPP Submissions:

**26 April 2018:** Due date is 23:59 Pacific Standard Time (GMT-8 hrs) for receipt of abstracts.

**21 May 2018:** Authors notified of decision for Work-in-Progress Posters.

Carefully follow all WiPP instructions on The Combustion Institute website: [CombustionInstitute.org](http://CombustionInstitute.org).

## Registration, Location, and Accommodations

For more information about symposium registration, local arrangements and attractions, and travel accommodations, visit the symposium website: [CombustionSymposia.org](http://CombustionSymposia.org).