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38th International Symposium on Combustion

12 – 17 July 2020
Adelaide, Australia



Call for Papers: 38th International Symposium on Combustion

Released: 3 April 2019

The **38th International Symposium on Combustion** will convene at the Adelaide Convention Centre, Adelaide, Australia from Sunday, 12 July through Friday, 17 July 2020. 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

Tim Lieuwen, Georgia Institute of Technology, USA Fei Qi, Shanghai Jiao Tong University, China

Colloquia Descriptions

A total of 13 colloquium categories will be addressed at the 38th 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.

Michael P. Burke, Columbia University, United States; Guillaume Dayma, Université d'Orléans—CNRS/ICARE, France; Perrine Pepiot, Cornell University, United States; Raghu Sivaramakrishnan, Argonne National Laboratory, United States; Bin Yang, Tsinghua University, China; Judit Zádor, Sandia National Laboratories, United States.

SOOT, NANOMATERIALS, AND LARGE MOLECULES including the formation, growth, and destruction of soot, PAHs, carbon nanostructures, and other nanoscale materials.

Per-Erik Bengtsson, Lund University, Sweden; Yuyang Li, Shanghai Jiao Tong University, China; Michael E. Mueller, Princeton University, United States; William Roberts, King Abdullah University of Science and Technology, Saudi Arabia; 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; Tina Kasper, University of Duisburg-Essen, Germany; Jeffrey A. Sutton, Ohio State University, United States; Wolfgang Meier, Deutsches Zentrum für Luft- und Raumfahrt e.V., Germany.

LAMINAR FLAMES including their ignition, structure, propagation, extinction, stabilization, dynamics, and instabilities.

Zheng Chen, Peking University, China; Christos E. Frouzakis, ETH Zürich, Switzerland; Fabien Halter, Université d'Orléans—CNRS/ICARE, France; Zuohua Huang, Xi'an Jiaotong University, China; Jeong Park, Pukyong National University, Republic of Korea; Eric L. Petersen, Texas A&M University, United States; Bruno Renou, CORIA, INSA Rouen Normandie, France.

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Colloquia Descriptions (continued)

TURBULENT FLAMES including their ignition, structure, propagation, extinction, stabilization, dynamics, and instabilities. Bénédicte Cuenot, CERFACS, France; Evatt R. Hawkes, University of New South Wales, Sydney, Australia; Akihiro Hayakawa, Tohoku University, Japan; Santosh Hemchandra, Indian Institute of Science, Bangalore, India; Nicolas Noiray, ETH Zürich, Switzerland; Adam Steinberg, Georgia Institute of Technology, United States; Yue Yang, Peking University, China.

SPRAY, DROPLET, AND SUPERCRITICAL COMBUSTION including atomization, combustion of droplets, sprays, and supercritical fluids. Matthias Ihme, Stanford University, United States; S. Alex Schumaker, Air Force Research Laboratory, United States; Laurent Selle, Institut de Mécanique des Fluides de Toulouse, 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. Kareem Ahmed, University of Central Florida, United States; Klaus Hannemann, German Aerospace Center, Germany; Jiro Kasahara, Nagoya University, Japan; Keith R. McManus, GE Research, United States; Alexei Poludnenko, Texas A&M 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. Satya R. Chakravarthy, NCCRD, IIT Madras, India; Osvalda Senneca, Istituto di Ricerche sulla Combustione del Consiglio Nazionale delle Ricerche, Italy; James C. Sutherland, The University of Utah, United States; Hiroaki Watanabe, Kyushu University, Japan; Hongwei Wu, Curtin University, Australia; Hong Yao, Huazhong University of Science and Technology, China.

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. Simo Hostikka, Aalto University, Finland; Longhua Hu, University of Science and Technology of China, China; Samuel L. Manzello, National Institute of Standards and Technology, Japan; Bart Merci, Ghent University—UGent, Belgium; Yuji Nakamura, Toyohashi University of Technology, Japan; Stanislav I. Stolarov, University of Maryland, United States; Dong Zeng, FM Global, United States.

STATIONARY COMBUSTION SYSTEMS AND LOW CARBON COMBUSTION TECHNOLOGIES including combustion in stationary power generation, fluidized beds, incineration, utility boilers, industrial applications, NO_x and SO_x reduction, MILD combustion, oxy-fuel combustion, chemical looping, and CO₂ capture. James Dawson, NTNU, Norway; Christian Hasse, Technische Universität Darmstadt, Germany; N. Swaminathan, Cambridge University, United Kingdom; Paul Papas, United Technologies Research Center, United States; Sang Hee Won, University of South Carolina, United States; Hai Zhang, Tsinghua University, China.

RECIPROCATING 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; Sebastian Kaiser, University of Duisburg-Essen, Germany; Magin Lapuerta, University of Castilla-La Mancha, Spain; Yi Yang, University of Melbourne, Australia; Mingfa Yao, Tianjin University, China.

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). Mirko Bothien, Ansaldo Energia, Switzerland; Benjamin Emerson, Georgia Institute of Technology, United States; Robert Gordon, The University of Melbourne, Australia; Malissa Lightfoot, Air Force Research Laboratory, United States; Jacqueline O'Connor, Pennsylvania State University, United States; William Proscia, Pratt & Whitney, United States.

NEW CONCEPTS including assisted combustion (plasmas, electric and magnetic fields), catalysis, fuel synthesis and transformation, micro-channel reactors, integrated process intensification, fuel cells, and electrolysis. Joseph K. Lefkowitz, Technion – Israel Institute of Technology, Israel; John Mantzaras, Paul Scherrer Institute, Switzerland; Li Qiao, Purdue University, United States; Wenting Sun, Georgia Institute of Technology, United States; 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.

07 November 2019: Due date is 23:59 Pacific Standard Time (GMT-8hrs) for receipt of completed paper.

Week of 2 March 2020: Authors notified of acceptance for presentation at the symposium.

For instructions on submission of papers, visit The Combustion Institute website: 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:** Nicole J. Labbe, University of Colorado Boulder, United States; Zeynep Serinyel, Université d'Orléans, France; Zhen-Yu Tian, Chinese Academy of Sciences, China.

Deadline for WiPP Submissions:

15 April 2020: Due date is 23:59 Pacific Standard Time (GMT-8 hrs) for receipt of abstracts.

22 April 2020: Authors notified of decision for Work-in-Progress Posters.

Carefully follow all WiPP instructions on The Combustion Institute website: 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.