



## Call for Papers

Release date: 14 April 2023

The Combustion Institute's 40th International Symposium - Emphasizing Energy Transition will convene at the Allianz MiCo Convention Centre in Milan, Italy from Sunday, 21 July through Friday, 26 July 2024. Scientists, engineers, professors, students, industrial practitioners, and others who are interested in combustion are invited to attend and participate in this biennial world congress of **The Combustion Institute**.

### Technical Program Co-Chairs

Dr. Bassam Dally  
King Abdullah University of Science and Technology  
Saudi Arabia

Dr. José L. Torero  
University College London  
United Kingdom

### Symposium Agenda

The technical program will consist of contributed papers, presented in both oral and poster format sessions. Invited lectures, topical reviews, and special industry sessions will be presented by eminent specialists. Delegates can also contribute a short abstract that will be presented in a Work-in-Progress Poster (WiPP) format during the symposium.

Publication in the **Proceedings of The Combustion Institute** is determined by the Proceedings editorial board, and is not guaranteed based on symposium presentation selection.

All papers must be submitted through Elsevier's Editorial Manager system. To create or confirm your account, please use this [link](#).

### Logistical Information

In addition to the technical program, the week long symposium will include several social programs as well. Hosted by the Italian Section of The Combustion Institute and Politecnico di Milano, and organized by MZ Events, the meeting will offer delegates the opportunity to visit the beautiful Lake Como, in addition to all the amazing sites in Milan.

Future information about symposium registration, local arrangements and attractions, travel, and accommodations will be available through the symposium website: [CombustionSymposia.org/2024](https://CombustionSymposia.org/2024).

Questions concerning the symposium or paper submission can be directed to [office@combustioninstitute.org](mailto:office@combustioninstitute.org).

# Call for Papers: CI's 40th International Symposium

## Colloquia Descriptions

A total of 13 colloquium categories will be addressed at the 40th Symposium. Authors must indicate a choice of colloquium with their submissions. The colloquia are organized under four themes namely, combustion fundamentals, combustion research tools, combustion applications, and combustion impact and mitigation.

### COMBUSTION FUNDAMENTALS

**GAS-PHASE REACTION KINETICS** *including the kinetics of hydrocarbons, oxygenated fuels, and alternative fuels, formation of gaseous pollutants and particulates, elementary reactions, and mechanism generation and reduction.*

**HETEROGENEOUS COMBUSTION** *including fundamental aspects related to pyrolysis, oxidation, smoldering, gasification, and ash formation from coal, biomass, and wastes, as well as combustion of propellants and metals.*

**FLAME DYNAMICS AND TRANSPORT PROCESSES** *including experiments, theory, and modeling applied to laminar flame, ignition, structure, propagation, extinction, dynamics, and instabilities, as well as atomization, combustion of droplets, sprays and supercritical fluids.*

**DETONATION** *including fundamental principles governing high-speed reactive flows, dynamic structural and stability issues in flame acceleration, DDT and pulse detonation.*

### COMBUSTION RESEARCH TOOLS

**DIAGNOSTICS** *including the development and application of diagnostic techniques and sensors for the understanding and control of combustion and reacting flow phenomena.*

**NUMERICAL COMBUSTION** *including discretization and meshing techniques, high-order methods, high performance computing, machine learning, artificial intelligence, uncertainty quantification, experimental design, and generation of numerical data.*

### COMBUSTION APPLICATIONS

**TURBULENT FLAMES** *including experiments and modeling applied to ignition, structure, propagation, extinction, stabilization, dynamics, and instabilities.*

**FIRE RESEARCH** *including fundamental aspects of ignition, burning, spread and suppression of fire, as well as fire safety and applications to industrial, building fire, and urban/wildland fire.*

**EXPLOSIONS HAZARDS, DETONATION APPLICATIONS AND SUPERSONIC COMBUSTION** *including flame acceleration, DDT, rotating- and pulse-detonation engines, constant volume combustion engines, and scramjet-engines.*

**PROPULSION** *including device-specific aspects of fuels, emissions, injection, stability, and combustion dynamics (e.g. ignition, quenching, thermos-acoustics) in reciprocating internal combustion engines, gas turbines (for propulsion and power generation), and rocket engines.*

**COMBUSTION TECHNOLOGY** *including MILD, hybrids, Plasma assisted, oxy-fuel, and metal combustion as well as formation, growth, and destruction of carbon nanostructures and synthetic particles.*

### COMBUSTION IMPACT AND MITIGATION

**EMISSION MITIGATION FROM FLAMES** *including the formation, growth, characterization and destruction of soot, PAHs, carbon nanostructures, and other nanoscale materials, NO<sub>x</sub>, NH<sub>2</sub>, NH<sub>3</sub>, and SO<sub>x</sub>.*

**LOW-CARBON TECHNOLOGIES** *including waste and biomass to energy, carbon capture, Fuel cells, chemical looping, use of alternative fuels, system level analysis, and LCA.*

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## Selection of Papers for Presentation and Publication

The Combustion Institute and the Program Co-Chairs (PCCs) are committed to a fair and efficient evaluation of the submitted manuscripts. In addition to the normal 'Oral Paper Presentation' (OPP), a new presentation category, termed 'Poster Paper Presentation' (PPP), will be introduced to accommodate the anticipated increase in the number of papers submitted, to ensure a reasonable acceptance ratio, and to maintain a quality review process. Both paper categories, if accepted, will appear in the Proceedings without distinction. The acceptance rate will be consistent for all submissions and not a factor of presentation format. 'Oral Papers' will be reviewed per normal following a very similar review process as before. 'Poster Papers' will be assigned to the Proceedings editors and will be reviewed similar to a journal paper. Accepted 'Oral Papers' will be sent to Proceedings editors for review, as per normal, and will be allocated 20 minutes in a session for oral presentation. A group of accepted 'Poster Papers' will be presented in a poster format in a dedicated session in the program when no other activity will be scheduled. 'Poster Papers' will be displayed for the whole day when the session is scheduled. Authors of both OPPs and PPPs will submit a 20-minute video recording of their paper presentation, to be made available to delegates online. Authors will have the opportunity to choose either oral or poster mode when they submit their paper. A review committee, considering the author's choice and the criteria, (available [here](#)), will assess the best mode of presentation of each paper and will split them into the OPP or the PPP track. The final decision will be made by the PCCs.

## Instructions to Authors of Contributed Papers

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

### Submission Deadline: 04 December 2023

Submissions must be received by 23:59 Pacific Standard Time (GMT-8hrs) for receipt of completed paper. Please note: the "time" of submission is determined by the time you "Approve Submission" in Editorial Manager.

**27 December 2023:** Authors are notified if paper was selected for OPP or PPP track, or desk rejected.

### OPP Track

27 December 2023: OPPs are sent to Colloquium Co-Chair for review.

31 January 2024: OPP authors will receive their paper reviews.

14 February 2024: Authors submit one-page rebuttal.

15 February 2024: Rebuttals are sent to reviewers for consideration.

29 March 2024: Authors are notified of acceptance for oral presentation at the symposium. Papers are sent to Proceedings Editors. These accepted papers will appear online after the symposium.

### PPP Track

27 December 2023: Papers are sent to Proceedings Editors for review.

05 May 2024: Decision on PPPs will be completed. Once accepted and processed by publisher, fully citable papers will start appearing online.

## Work-in-Progress Posters (WiPPs)

To provide a forum for presentation and discussion of works in progress, poster sessions will be displayed in a forum, accessible to all, for viewing and discussion with authors. 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](#).

### Submission Deadline for WiPP Submissions: 08 May 2024

Abstracts must be received by 23:59 Pacific Standard Time (GMT-8 hrs) for consideration.

**15 May 2024:** Authors notified of decision for Work-in-Progress Posters.

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