

Joint Meeting of the Belgian and Italian Sections of The Combustion Institute

45th Meeting of the Italian Section of the Combustion Institute

Combustion for Energy Transition and Sustainable Mobility - Florence, May, 28-31, 2023



ANNOUNCEMENT AND CALL FOR PAPERS



UNIVERSITÀ
DEGLI STUDI
FIRENZE

JOINT MEETING
THE BELGIAN AND ITALIAN SECTIONS OF THE COMBUSTION INSTITUTE
45th Meeting of the Italian Section of the Combustion Institute
Combustion for Energy Transition and Sustainable Mobility
28-31 May, 2023
Auditorium di Santa Apollonia – Via S. Gallo 25, Florence

The Joint Meeting of the Belgian and Italian Sections of the Combustion Institute, including the 45th Annual Meeting of the Italian Section (ASICI), will take place in Florence (Italy), May 28-31, 2023. The venue of the meeting will be the lovely Auditorium di Santa Apollonia, located nearby the historic center of Florence. The style of the meeting will conform to the informal nature of these events. They aim to exchange expertise and discussion between scientists and technologists working in the field of combustion, in all its fundamental and applied aspects, as well as in neighboring fields (pyrolysis, gasification, fuel processing, and upgrading), with specific emphasis on low-emission and sustainable technologies. Participation of Ph.D. students and young researchers in the meeting is warmly solicited.

The meeting will consist of parallel sessions for oral presentations. A work-in-progress poster session will also be available.

Main Topics:

Low-Emission Combustion Technologies: including low-carbon and hydrogen-based fuels, MILD combustion, oxy-fuel combustion, chemical looping, NO_x and SO_x reduction, and CO₂ capture strategies.

Reaction Kinetics: including the kinetics of hydrocarbons, oxygenated fuels, and alternative energy carriers, formation of pollutants, elementary reactions, and mechanism generation and reduction.

Laminar and Turbulent Flames: including experiments, theory, and modeling applied to ignition, propagation, extinction, stabilization, dynamics, and instabilities.

Spray, Droplet, and Supercritical Combustion: including atomization, combustion of droplets, sprays, and supercritical fluids.

Detonation, Explosion, and Supersonic Combustion: including fundamental aspects of ignition and flame acceleration, fire safety aspects, rotating- and pulse-detonation engines, constant volume combustion engines, and scramjet engines.

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.

Propulsion and engines: including device-specific aspects of fuels, emissions, injection, stability, combustion dynamics, internal combustion engines, gas turbines, and rocket engines.

Soot, Nanomaterials, and Large Molecules: including the formation, growth, and destruction of soot, PAHs, carbon nanostructures, and other nanoscale materials.

Multi-Physics Phenomena: including assisted combustion (plasmas, electric and magnetic fields), catalysis, coupled heat transfer, micro-channel reactors, fuel cells, fuel synthesis and transformation, and electrolysis.

Invited Speakers:

- Prof. Fabrizio Scala - Università degli Studi di Napoli Federico II, Italy
 - Prof. Aurélie Bellemans - Vrije Universiteit Brussel, Belgium
 - Prof. Hervé Jeanmart - Université Catholique de Louvain, Belgium
 - Prof. Andrea Giusti - Imperial College London, UK
-

Instruction to authors:

All presentations at the meeting will be oral. Those wishing to present a paper at the conference should send to the ASICI section secretary (info@combustion-institute.it) an extended abstract, **indicating the most closely related topical area** among those listed above, no later than **May 5th**. The extended abstract (maximum 6 pages) should conform to the template available on the [ASICI website](http://www.combustion-institute.it) (www.combustion-institute.it).

Those wishing to present a work-in-progress (poster presentation) should send to the section secretary (info@combustion-institute.it) a 1-page abstract no later than **May 12th**. The WIP abstract should conform to the template available on the [ASICI website](http://www.combustion-institute.it) (www.combustion-institute.it).

Oral presentations: Each presentation should be **15 minutes** including time for questions.

WIP poster presentation: Posters must be in **A0 format** portrait orientation (841mmx1189mm).

The best presentations delivered by students or young researchers will be awarded during the meeting.

Registration details:

The following registration fees will apply:

- REDUCED Registration (for students)
300 EURO (**before May 12th**); 350 EURO (**after May 12th**)
- FULL Registration
400 EURO (**before May 12th**); 450 EURO (**after May 12th**)

payable to: "Associazione Sezione Italiana del Combustion Institute" (registration form and payment details will be available in due time on the [ASICI website](http://www.combustion-institute.it)).

Registration fee includes: attendance to the technical sessions, conference proceedings, welcome cocktail, lunches and coffee breaks, tour and social dinner.

Accommodation information:

Each participant should make his/her own hotel reservation. Selected hotels, within walking distance from the meeting venue, with special prices for the meeting participants are directly available through the [accommodation booking page](#) or via [ASICI web site](#).

Note: May is high season in Florence, therefore we recommend making your booking as early as possible.

Organizing and Scientific Committee:

Dr. Mario Commodo (CNR-STEMS)
Prof. Alessandro Parente (Université Libre de Bruxelles)
Prof. Antonio Andreini (Università degli Studi di Firenze)
Dr. Giancarlo Sorrentino (CNR-STEMS)
Prof. Ward De Paepe (Université de Mons)
Dr. Gianluigi De Falco (Università degli Studi di Napoli Federico II)
Dr. Antonio Tregrossi (CNR-STEMS)

Local Organizer

Dipartimento di Ingegneria Industriale
Università degli Studi di Firenze
Via S. Marta, 3 – Firenze, Italy
website: www.dief.unifi.it



UNIVERSITÀ
DEGLI STUDI
FIRENZE

Secretariat

Ilaria Giorgi
E-mail: ilaria.giorgi@unifi.it

Supporting Institutions

Consiglio Nazionale delle Ricerche

Istituto di Scienze e Tecnologie per
l'Energia e la Mobilità Sostenibili



DI
C
Ma
PI

Dipartimento
di Ingegneria Chimica,
dei Materiali e della
Produzione Industriale
Università degli Studi
di Napoli Federico II



ASICI

Associazione Sezione Italiana del
Combustion Institute
P.le V. Tecchio, 80 – 80125 Napoli – Italia
ASICI website: www.combustion-institute.it
E-mail: info@combustion-institute.it



Belgian Section of the
Combustion Institute
