

47th Meeting of the Italian Section of the Combustion Institute



Advancing Combustion for a Sustainable and Low-Carbon Future
Pisa | May 12-15, 2025



FINAL ANNOUNCEMENT AND CALL FOR PAPERS



Associazione Sezione Italiana
del Combustion Institute
ASICI



UNIVERSITÀ
DI PISA



47th Meeting of the Italian Section of the Combustion Institute

Advancing Combustion for a Sustainable and Low-Carbon Future

May 12-15, 2025

Centro Congressi Le Benedettine, Università di Pisa

Piazza S. Paolo a Ripa D'Arno, 16, 56125 Pisa (Italy)

The 47th Annual Meeting of the Italian Section of the Combustion Institute (ASICI) will take place in Pisa, Italy, from May 12–15 2025, at the Centro Congressi Le Benedettine, Università di Pisa, conveniently located near the city's historic center.

This conference aims to foster collaboration and discussion in an informal and dynamic environment, bringing together scientists, technologists, and engineers working in combustion research and related fields. Topics will cover both fundamental and applied aspects of combustion, including pyrolysis, gasification, fuel processing, and upgrading. A special focus will be given to net-zero emission systems for energy and transportation, reflecting the growing importance of sustainable solutions.

We strongly encourage Ph.D. students and early-career researchers to participate. The program will feature **parallel oral sessions**, a **poster session**, an **industrial round table**, and **plenary lectures**. A **Women in Combustion (WiC)** event will bring together young researchers and Ph.D. students for a **networking lunch** with leading women in combustion science, fostering discussion and mentorship.

Main Topics:

Low-Emission Combustion Technologies - Advancements in low-carbon and hydrogen-based fuels, MILD and oxy-fuel combustion, chemical looping, CO₂ capture, and pollutant (NO_x, SO_x) reduction strategies.

Reaction Kinetics - Insights into the kinetics of hydrocarbons, oxygenated fuels, and alternative energy carriers, as well as pollutant formation, elementary reactions, and mechanism development.

Laminar and Turbulent Flames - Experimental and numerical studies on ignition, propagation, extinction, stabilization, and flame dynamics.

Spray, Droplet, and Supercritical Combustion - Topics including atomization, droplet combustion, spray dynamics, and supercritical fluid behavior.

Detonation, Explosion, and Supersonic Combustion - Fundamental and applied research on ignition, flame acceleration, fire safety, detonation engines, and scramjet technology.

Solid Fuel Combustion - Pyrolysis, oxidation, and gasification of coal, biomass, and waste, along with combustion of propellants and metals.

Propulsion and Engines - Combustion processes in gas turbines, internal combustion engines, and rocket propulsion, with a focus on emissions, stability, and performance.

Soot, Nanomaterials, and Large Molecules - Formation, growth, and destruction of soot, PAHs, and carbon nanostructures, along with their impact on combustion processes.

Multi-Physics Phenomena - Plasma-assisted combustion, catalysis, electrochemical processes, coupled heat transfer, micro-channel reactors, and fuel synthesis.

Invited Speakers:

- Prof. Alessandro Parente - Université Libre de Bruxelles, Belgium
 - Prof. Andreas Kempf - University Duisburg-Essen, Germany
 - Prof. Francesca De Domenico - University of Technology TU Delft, Netherlands
 - Prof. Matteo Pelucchi - Politecnico di Milano, Italy
-

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 **April 28th**. The abstract (maximum 3 pages) should conform to the template available on the ASICI website (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 5th**. The WIP abstract should conform to the template available on the ASICI website (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 (841 mm x 1189 mm)

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

Poster session for Research project dissemination: Posters presenting Italian and EU funded research projects in line with the conference topics are welcome, offering a platform for visibility, collaboration and networking.

Registration details:

The following registration fees will apply:

- REDUCED Registration (for students)

300 EURO (**before May 2nd**); 350 EURO (**after May 2nd**)

- FULL Registration

400 EURO (**before May 2nd**); 450 EURO (**after May 2nd**)

payable to: "Associazione Sezione Italiana del Combustion Institute" (**registration form and payment** details will be available on the ASICI website in due time).

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

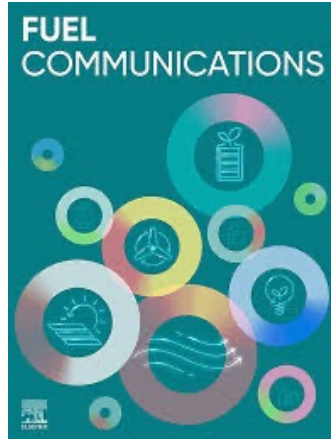
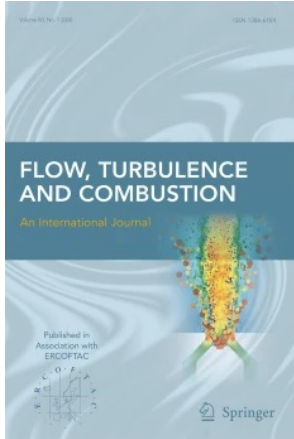
Accommodation information:

Each participant should make their own hotel reservation.

Close to the Congress Center "Le Benedettine" there is a residence called "**La Foresteria delle Benedettine**" which can be booked at a very affordable price. More details are available on the website: <https://www.residence.unipi.it/prezzi-e-camere/> **Only a limited number of rooms are available. We recommend to book your accommodation as early as possible by contacting info@residence.unipi.it**

Special Issues Publication:

Selected papers from the conference proceedings will be published in Special Issues on *Flow, Turbulence and Combustion* and *Fuel Communications*.



Papers will be selected after the conference and the authors will be invited separately.

Social Events:



MONDAY MAY 12
WELCOME COCKTAIL

CENTRO CONGRESSI LE BENEDETTINE
Piazza S. Paolo a Ripa D'Arno 16 - 56125
Pisa



TUESDAY, MAY 13
EARLY CAREER RESEARCHER MIXER

CAVALIERI – SPECIALITY COFFEE
Via Corsica 14 - 56126 Pisa



WEDNESDAY, MAY 14
EXPLORE PISA and SOCIAL DINNER

Starting from the Conference venue (centro congressi le Benedettine), a guided walking tour across the streets and the most characteristic sites in the city center of Pisa is planned.

Location for the social dinner:

BISTROT DELL'OPERA
Piazza del Duomo 23 - 56126 Pisa

Organizing and Scientific Committee

Dr. Mario Commodo (CNR-STEMS)
Prof. Chiara Galletti (Università di Pisa)
Dr. Rachele Lamioni (Università di Pisa)
Dr. Giancarlo Sorrentino (CNR-STEMS)
Dr. Gianluigi De Falco (CNR-STEMS)
Mr. Filippo Fruzza (Università di Pisa)

Local Organizer

Dipartimento di Ingegneria Civile e
Industriale
Università di Pisa
L.go Lucio Lazzarino, 56122 Pisa, Italy
website: www.dici.unipi.it



Supporting Institutions

Consiglio Nazionale delle Ricerche

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

Contact Person

Dr. Rachele Lamioni
E-mail: rachele.lamioni@ing.unipi.it



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
