

44th MEETING THE ITALIAN SECTION OF THE COMBUSTION INSTITUTE



Combustion for Sustainability – June 5-8, 2022

Announcement and Call for Papers



The Annual Conference of the Italian Section of the Combustion Institute will be held *in Naples (Italy)*, on June 5-8, 2022.

The venue of the meeting is the *Complesso dei SS. Marcellino e Festo* of the University Federico II of Naples, located in the historical center of Naples.

The meeting is aimed at giving the opportunity for exchange of expertise and discussion between scientists and technologists working in the field of combustion, in all its fundamental and applied aspects, with specific emphasis to low-emission and sustainable technologies.

Participation of PhD students and young researchers to the meeting is warmly solicited.

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.

Plenary lectures

Prof. Heinz Pitsch
RWTH Aachen University



Dr. Teresa Marchione
GE Power



Dr. Ezio Mancaruso
STEMS-CNR



Prof. Antonio Andreini
Università di Firenze



Instruction to authors

Those wishing to present a paper at the conference should send to the section secretary (info@combustion-institute.it) an abstract, no later than **April 22nd** (the template will be available on the ASICI website: www.combustion-institute.it).

Conference details and updates will also be posted on the ASICI website.

As for the last meetings, an **award** will be given to the best presentations delivered by PhD students or young researchers during the meeting.

Registration details

The following registration conditions will apply:

- **REDUCED** registration (for students and post-docs)

250 EURO (before April 29th)

300 EURO (after April 29th)

- **FULL** registration

350 EURO (before April 29th)

400 EURO (after April 29th)

Payable to: “Associazione Sezione Italiana del Combustion Institute”
registration form and payment details will be available on the ASICI website (www.combustion-institute.it)

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Social Events



WELCOME COCKTAIL

Sunday 05 June 2022

Archivio Storico

Via Alessandro Scarlatti, 30 – Napoli

Nearby attractions:

Castel Sant'Elmo

Villa Floridiana

Certosa di San Martino



TOUR AND VISIT

Monday 06 June 2022

**Complesso monumentale
San Lorenzo Maggiore**

Piazza S. Gaetano, 316 – Napoli



SOCIAL DINNER

Tuesday 07 June 2022

Bertolini's Hall

C.so Vittorio Emanuele, 165/b – Napoli

CONFERENCE VENUE

Complesso dei SS. Marcellino e Festo

Largo S. Marcellino, 10 – Napoli



Nearby attractions:

Complesso monumentale Santa Chiara

Napoli Cathedral

Via San Gregorio Armeno

Spaccanapoli and Napoli sotterranea



Organizing Committee:

Mario Commodo (STEMS - CNR)

Giancarlo Sorrentino (STEMS - CNR)

Antonio Tregrossi (STEMS-CNR)

Andrea D'Anna (Università Federico II)

Gianluigi De Falco (Università Federico II)

Fabrizio Scala (Università Federico II)

Scientific Committee:

Eugenio Giacomazzi (ENEA)

Carlo Beatrice (STEMS – CNR)

Francesco Di Natale (Università Federico II)

Alberto Cuoci (Politecnico di Milano)

Raffaele Ragucci (STEMS – CNR)

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Maria Grazia De Giorgi (Università del Salento)

Francesco Creta (Università la Sapienza)

Ernesto Salzano (Università di Bologna)

Stefano Cimino (STEMS – CNR)

Chiara Galletti (Università di Pisa)

ASICI

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Consiglio Nazionale delle Ricerche



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



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