

Calendar of Events

November 22, 2024

Dutch Section of The Combustion Institute (DSCI) 21: Combustion-generated Carbonaceous Nanoparticles

The webinar will begin at 13:00 CET and end at 14:00 CET

combustioninstituteNL@gmail.com

Date: 22 November 2024, 13:00-14:00 CET

Title: Combustion-generated Carbonaceous Nanoparticles: From Air Pollutants to Functional Materials

Speaker: Georgios A. Kelesidis, Delft University of Technology, Delft, Netherlands

Abstract: Combustion-generated carbonaceous nanoparticles (CNPs) are both a nuisance and a blessing: Soot from fossil fuel combustion and wildfires is a major global warming and toxic pollutant but has a lifetime of 2-10 days in the atmosphere. So eliminating it provides an immediate relief and buys time to develop technologies to capture the longer living CO₂ emissions. On the other hand, carbon black (CB), the largest nanostructured material produced industrially by fuel oil combustion, is a key component of energy storage devices that are crucial for CO₂-free transportation. A research frontier lies in the close control of the CNP morphology and internal porosity that determine the impact of soot emissions on climate and public health, as well as the performance of CB in batteries and supercapacitors.

Here, state-of-the-art experimental platforms and novel computational algorithms are used to advance the current understanding of the CNP structural dynamics during combustion. Soot nanoparticles having similar morphology with aircraft emissions are produced by a burner for enclosed spray combustion of kerosene that emulates the rich-quench-lean concept of jet engines. The high throughput generation of aircraft-like soot emissions using this burner enables the detailed characterization of the soot internal porosity and health effects. The oxidation dynamics of such soot in the lean zone of kerosene combustion are elucidated to facilitate the efficient elimination of aircraft soot emissions by a judicious air injection. Similarly, oxidation of CB at well-controlled conditions enhances the internal particle porosity and the performance of CB in supercapacitors. The detailed characterization of the CNP structure enables the derivation and validation of a lattice Monte Carlo model for evolution of the CB and soot porosity during oxidation. This can assist the design of soot-free combustion engines, as well as the synthesis novel CB grades for advanced energy storage systems of electric and hybrid vehicles.

You can join the webinar [here](#).

Registration is recommended in case updates have to be sent out.

November 22, 2024

40 Under 40: E-Lecture Series on Combustion, Featuring Dr. Sven Eckart (TU Bergakademie F

[https://us02web.zoom.us/meeting/register/tZEdeyvvrzgjHNZNNEFCyzkq3EoBdndxDEFZ9T](https://us02web.zoom.us/j/83263956307)

03:00 PM - 04:00 PM CET

Prof. Salvatore Iavarone,

The 40 Under 40: E-Lecture Series on Combustion is hosted by the Belgian Section of The Combustion Institute, with the goal of highlighting 40 young scientists and engineers who have done high-quality research in combustion. These 50-minute sessions are held virtually via Zoom, presenting a valuable opportunity for attendees to learn about past, current, and future research activities in the field. For a list of upcoming sessions in this lecture series, you can refer to the schedule. You can find recordings of previous sessions on YouTube.

Any questions or proposals to serve as the featured speaker for a future session can be sent to Prof. Salvatore Iavarone

(salvatore.iavarone@centralesupelec.fr, salvatore.iavarone@ulb.be).

December 5, 2024

Machine Learning for Combustion Meeting

Queen Mary University of London

09:00-17:00

Amin Paykani,

a.paykani@qmul.ac.uk

The field of Machine Learning (ML) for combustion research is rapidly advancing, with the UK playing a pivotal role in integrating ML and combustion science, as demonstrated by the increasing volume of research in this area. Machine Learning for Combustion Meeting is co-organised by research groups from Queen Mary University of London, Imperial College London, and the University of Southampton, and provides a forum to present recent advances in ML for combustion science and engineering in (but not limited to) the following areas:

- ?Combustion Chemistry Acceleration*
- Modelling Subgrid Scales in Large-Eddy Simulation*
- Flame Diagnostics and Emissions Prediction*
- Anomaly Detection*
- Fuel Design and Engine Optimisation*
- Thermal Runaway Prediction in Li-ion Batteries*

The one-day meeting organised under the auspices of Combustion Institute British Section (CIBS) will feature two keynotes and ten invited talks from leading researchers in ML for combustion and wider research community. The event will conclude with a panel discussion involving key stakeholders in the field.

In addition, early career researchers who are interested in presenting their work as a contributed poster are invited to submit an abstract of 200 to 300 words before the 20th of November 2024. Abstracts should be sent as a PDF through email to ml4com2024@gmail.com and the authors of accepted abstracts will be notified by 25th of November 2024.

March 16, 2025
- March 19, 2025

14th United States National Combustion Meeting
10 Huntington Ave
Boston, Ma 02116

A multi-day national meeting on combustion.
Paul Papas,
papasp@rtx.com

The 14th U.S. National Combustion Meeting (USNCM) will be held at The Westin Copley Place in Boston, Massachusetts, with the ESSCI serving as hosts. The technical program will begin on Monday morning, March 17 and will end mid-day on Wednesday, March 19. More details about the meeting are available on the 14th USNCM website: <https://combustioninstitute.wixsite.com/14th-usncm>

Abstracts, full papers and work-in-progress poster (WiPP) abstracts must be submitted through the 14th USNCM submission portal. Paper and poster abstracts should be within 500 words and include 2-4 keywords. Detailed instructions for formatting the initial abstract submissions are available here. For a full list of Colloquia and Emphasized Thematic Topics, please consult the Call for Papers.

Hotel Reservation Information

The organizers of this meeting have reserved hotel rooms at The Westin Copley Place in Boston at discounted rates. You can take advantage of these discounted accommodations here.

March 19, 2025
- March 20, 2025

5th International Workshop on Oxy-Fuel Combustion
RWTH Aachen University - Super C Building
Templergraben 64
Aachen, 52062

09:00 AM - 05:00 PM MEA
Stefan Pielsticker, +49 241 80 97519
oxyflame-ws@wsa.rwth-aachen.de

The 5th International Workshop on Oxy-Fuel Combustion will focus on the combustion of solid fuels in air and CO₂/O₂ atmosphere. It addresses researchers in industry, universities, and research centers who are concerned with solid fuel combustion and heat transfer processes. The workshop topics are:

Reaction of solid fuel particles in air and oxy-fuel atmosphere
Turbulent combustion in air and oxy-fuel atmosphere
Heat and mass transfer processes during solid fuel combustion
CFD modeling and validation for burner and boiler development

April 8, 2025
- April 11, 2025

12th European Combustion Meeting

**John McIntyre Conference Center, Pollock Halls, The University of Edinburgh
18 Holyrood Park Rd
Edinburgh, EH16 5AY**

The Technical Program will be held throughout the week.

The British Section of the Combustion Institute is organizing the 12th European Combustion Meeting (ECM), which will take place in Edinburgh from 8th to 11th April 2025. The ECM is a forum of knowledge transfer in the field of combustion science and related scientific disciplines.

The three-day conference will include 5 invited lectures and 5 poster presentations that will cover a wide variety of combustion-related topics. This conference provides a wonderful opportunity for academics and those in industry to gather for insightful discussions in combustion science. The ECM anticipates to welcome over 400 participants from countries all across Europe and beyond. The ECM 2025 will reach a maximum capacity near 500 delegates. Please register early to secure your attendance, and enjoy all that the ECM 2025 has to offer.

Each poster submission will require an abstract limited to one page. Poster abstracts will be reviewed by the organizing committee, and upon acceptance, authors will be asked to submit a 6-page manuscript. These manuscripts will not be published and are intended to facilitate poster discussions.

Please see the ECM 2025 website (www.ecm2025.eng.ed.ac.uk) for further information about the conference including registration, venue, accommodation, and more. We look forward to welcoming you to Edinburgh in April 2025!

May 18, 2025
- May 22, 2025

15th Asia-Pacific Conference on Combustion (ASPACC 2025)
Suntec Singapore Convention & Exhibition Centre
1 Raffles Boulevard
, 039593

This is a multi-day event.

ASPACC 2025 Organizing Committee,
information@kit-group.org

The 15th Asia-Pacific Conference on Combustion (ASPACC) will be held on 18 – 22 May 2025 at Suntec Singapore Convention & Exhibition Centre. It will be hosted by the Singapore Section of The Combustion Institute. With the theme of “build a zero-carbon and sustainable future”, the ASPACC will feature a comprehensive technical program, reflecting the significant growth and evolving scope of combustion research in the Asia-Pacific region. Scientists and engineers are invited to submit high quality research papers to ASPACC-2025.

Important Dates

September 15, 2024: ASPACC paper submissions open

December 01, 2024: Deadline for contributed (4-page or 8-page) papers (23:59 PST)

February 01, 2025: Notification of paper acceptance/rejection for presentation at ASPACC

February 28, 2025: Deadline for submission of WiPP abstracts (23:59 PST)

March 14, 2025: Notification of WiPP abstract acceptance

Local Organizers:

Huangwei Zhang, National University of Singapore

Wai Lee Chan, Nanyang Technological University, Singapore

Steering Committee Chairs:

Siew Hwa Chan, Nanyang Technological University, Singapore

Assaad Masri, The University of Sydney

Technical Program Co-Chairs:

Huangwei Zhang, National University of Singapore

Zheng Chen, Peking University

Mani Sarathy, King Abdullah University of Science and Technology

If you are interested in organizing a satellite workshop before or after ASPACC in Singapore, please contact Prof. Huangwei Zhang (huangwei.zhang@nus.edu.sg) or Prof. Wai Lee Chan (chan.wl@ntu.edu.sg). For any questions regarding the paper submission process or conference details, please contact the ASPACC 2025 Organizing Committee at aspacc-information@kit-group.org or visit our website <https://www.aspacc2025.org>.

May 25, 2025
- May 29, 2025

16th International Conference on Combustion Technologies for a Clean Environment
Instituto Superior Técnico, Universidade de Lisboa
Av. Rovisco Pais
Lisboa, 1049-001
09:00 AM - 06:00 PM GMT
Pedro J. Coelho, +351-218418194
pedro.coelho@tecnico.ulisboa.pt

16th International Conference on Combustion Technologies for a Clean Environment

The 16th International Conference on Combustion Technologies for a Clean Environment (Clean Air 2025) will take place in Lisbon, Portugal, from 25 to 29 of May 2025. The aim of the conference is to bring together graduate students, researchers, academics and industry experts to discuss the progress in the development of combustion technologies that minimize the environmental impact. Contributions on innovative combustion technologies that reduce the harmful emissions, low-carbon fuels, improvements in energy efficiency, post-combustion emission control systems and industrial applications are welcome.

The topics of the conference include but are not limited to:

- *Combustion fundamentals*
- *Reaction kinetics*
- *Combustion diagnostics*
- *Computational methods*
- *Laminar flames*
- *Turbulent combustion*
- *Droplets and spray combustion*
- *Solid fuels combustion*
- *Pyrolysis and gasification*
- *Engines, gas turbines, boilers and furnaces*
- *CO₂ capture and sequestration*
- *Pollutants formation and control*
- *Alternative and low-carbon fuels*
- *New combustion concepts*
- *Machine learning applications to combustion*
- *Detonations, fires and explosions*

June 1, 2025
- June 5, 2025

13th Mediterranean Combustion Symposium

Corfu Holiday Palace

A multi-day combustion symposium to be held in Corfu, Greece.

Contact the Organizers,
info@mcs2025.com

The Mediterranean Combustion Symposium (MCS) has become one of the primary regional conference series in combustion science and application. Combustion is a useful, beautiful, complex and interdisciplinary phenomenon, that has provided heat and power for ages and fascinated humans since the dawn of history. It now plays a prime role in decarbonisation of our energy system with the combustion of new low-carbon fuels, is important for wildfires and battery fires, and is a major research and development topic worldwide.

The 13th MCS will be held from 1-5 June 2025 in Corfu, Greece, and will feature a technical program of research and presentations, as well as a social program that includes a welcome reception, tour of Corfu and the Old Fortress, a gala dinner, and more!

Plenary Lecturers:

Dr. Mario Commodo (STEMS, Italy)

Prof. Andreas Dreizler (University of Darmstadt, Germany)

Dr. Daniel Mira (Barcelona Supercomputing Centre, Spain)

Dr. Paul Papas (RTX Technology Research Center, United States)

October 14, 2025
- October 17, 2025

International Conference on Numerical Combustion (ICNC2025)

Roma Eventi - Fontana di Trevi

Piazza della Pilotta, 4

Rome,

This is a multi-day event focused on numerical combustion.

Organizing Secretariat,
icnc2025@jeangilder.it

The Twentieth International Conference on Numerical Combustion (ICNC2025) will be held from 14-17 October 2025 in the City of Rome, Italy. The Conference will continue the tradition as a premier global forum that brings together leading combustion researchers worldwide employing cutting-edge mathematical and computational methods to tackle many challenging problems in conventional and renewable fuel utilization for power and transportation. From the inaugural event in Sophia Antipolis, France, in 1985 to the latest rendition in Kyoto, Japan in May 2024, the ICNC has attracted many researchers in the academia, government laboratories and industry, in venues alternating between Europe, North America, and Asia. The conference program consists of invited talks and parallel sessions of mini-symposia on focused subjects as well as general contributed presentations aligned with the conference topics. The social program will include a welcome reception, a social dinner, and a guided tour of Rome.

Important Dates:

Mini-symposia proposal deadline: 31 January 2025

Abstract submission deadline: 15 April 2025

Early bird registration deadline: 15 July 2025