2024 Netherlands Section of The Combustion Institute Report
Section Website: www.combustioninstitute.nl
Section Chair: Rob Bastiaans

Section officers and board members with titles:

- Officers
  - Rob Bastiaans – Chairman
  - Arvind Gangoli Rao – Secretary
  - Jim Kok - Treasurer until October 2023
  - Dirk Roekaerts – Treasurer ad interim (November 2023 – present)
- Board Members
  - Rob Bastiaans
  - Arvind Gangoli Rao
  - Jim Kok (until February 20, 2024)
  - Dirk Roekaerts
  - Claudia F. Lopez Camara (February 21, 2024-present)

Members of the section:

Active Members	140
Non-Student Members	100
Student Members	40

Has the section revised its by-laws since 2022?

- No

Section meetings and workshops since 2022:

- Section Meetings
  - Board meetings [Online meetings]
    - May 2, 2022 (all)
    - May 30, 2022 (all)
    - September 5, 2022 (all)
    - October 11, 2022 (Gangoli Rao, Kok, Roekaerts)
    - November 18, 2022 (all)
    - December 12, 2022 (all)
    - January 27, 2023 (all)
    - March 7, 2023 (Bastiaans, Gangoli Rao, Roekaerts)
    - April 14, 2023 (Bastiaans, Gangoli Rao, Roekaerts)
    - May 22, 2023 (all)
    - October 31, 2023 (Bastiaans, Gangoli Rao, Roekaerts)
    - January 10, 2024 (all)
    - January 24, 2024 (all)
    - February 19, 2024 (all)
  - Member meetings
    - December 16, 2022, TU/e, (~20 participants, 2/3 students)
    - May, 26, 2023, TU Delft (~20 participants, 2/3 students)
    - January, 26, 2024, TU/e (~20 participants, 1/3 students)

- Workshops and Symposia
  - Workshops
    - The Combura Symposium, 23 & 24 November 2022, Soesterberg, The Netherlands (3 key note lectures, 12 oral presentations, ~20 poster presentations), ~75 participants.
      - Keynotes:
        - "High-speed measurements for short duration experiments in harsh environment. Application to high pressure cryogenic combustion for rocket engines." by Prof. Dr. Sebastien Ducruix, Laboratoire EM2C, CNRS & CentraleSupelec, Université Paris-Saclay, France
        - "New developments on laser and optical diagnostics for combustion studies" by Prof. Dr. Yannis Hardalupas, Mechanical Engineering Department, Imperial College, London, UK
        - "Metal energy carriers: renewable fuels for the future?" by Prof. Dr. Phillip de Goey,Department Mechanical Engineering, Power & Flow, TU/e, Eindhoven, Netherlands
    - The Combura Symposium, 23 & 23 November 2023, Eindhoven, The Netherlands (2 key note lectures, industrial combustion workshop, 12 contributed oral presentations, ~25 poster presentations), ~75 participants.
      - Keynotes:
        - “MILD Combustion: overview of current research and challenges” By dr. Anh Khoa Doan, Aerospace Engineering, TU Delft, the Netherlands
        - “Ammonia, the other hydrogen for clean thermal applications” By Prof. Christine Rousselle, University of Orléans, France
    - Industrial combustion workshop speakers:
      - Christine Bertrand (Origen Carbon Solutions): Vertical shaft convertor for the calcination of lime.
      - Sethu Ramalingan (Danieli-Corus): Furnaces for the production of hot blast used as preheated oxidizer for hot blast stoves used in the production of steel.
      - Dmitry Gyrontsev (CelSian): Furnaces for the production of glass.
  - Webinars on Combustion Research in the Netherlands (for title, abstract and links to slides and recordings: see www.combustioninstitute.nl)
    - Webinar 9 by dr. ir. Giel Ramaekers, April 22, 2022 (40)
    - Webinar 10 by dr. Ivan Langella, May 20, 2022 (45)
    - Webinar 11 by dr. Josué Melguizo Gavilanes, September 23, 2022 (12)
    - Webinar 12 by dr. ir. Nijso Beishuizen, October 28, 2022 (11)
    - Webinar 13 by Ir. Thijs Hazenberg, November 25, 2022
    - Webinar 14 by prof. dr. Bénédicte Cuenot, December 16, 2022 (25)
    - Webinar 15 by dr. Xiaocheng Mi, February 24, 2023 (22)
    - Webinar 16 by dr. Stefano Mania, May 26, 2023 (32)
    - Webinar 17 by Prof. dr. Stefan Hickel, June, 9, 2023 (24)
    - Webinar 18 by dr. Yuriy Shoshin, January 26, 2024 (30)

Other activities:

- N/A

Awards given by section:

- Best poster award winners Combura 2022
  - First prize
    - Xin Liu, Niels Deen, Yali Tang (TU Eindhoven)
    - Investigating the (de-)fluidization behavior of combusted iron fines in a fluidized bed
  - Second Prize
    - Yu Wang, Noud Maes, Bart Somers (TU Eindhoven)
    - Spray Combustion of Fast Pyrolysis Bio-oil
  - Third Prize
    - Max Peters, Noud Maes, Nico Dam, Jeroen van Oijen (TU Eindhoven)
    - The Argon Power Cycle: Characterization of Hydrogen Injections
- Best poster award winners Combura 2023
  - First Prize
    - Conrad Hessels, Giulia Finotello, Xiaocheng Mi, Roy Hermanns and Philip de Goey (Eindhoven University of Technology)
    - Analysis of combusted iron powder using X-ray computed tomography
  - Second Prize
    - Sylwia Oles (University of Twente)
    - Super (critical) Combustion
  - Third Prize
    - MohammadReza Kohansal, Rob Bastiaans and Anatoli Mokhov
    - (University of Groningen and Eindhoven University of Technology)
    - AmmoniaDrive: Ignition Delay Time and Burning Velocity of Ammonia/Anode-Off-Gas mixtures

Special achievements attained by section members:

- Francesca De Domenico (Aerospace Engineering, TU Delft) has been awarded a NWO (Dutch Research Council) VENI grant for a project titled “Unveil with Laser Diagnostics the local NOx and Flashback physics of H2 flames”. This grant for promising research allows the laureates to further develop their own research ideas over the next three years.
- Ivan Langella (Aerospace Engineering, TU Delft) has been awarded a European Research Council (ERC) Starting Grants for young researchers for his project on “Control of Hydrogen and Enriched-hydrogen Reacting flows with Water injection and Intensive Strain for ultra-low Emissions”. This is a grant for a five-year programme designed to allow individual scientists to build their own teams and carry out pioneering research.
- Philip de Goey (Mechanical Engineering, TU Eindhoven) received an ERC Proof of Concept Grant for research into metal fuel, titled “ICONIC – A Breakthrough Technology for Iron Power”
- Artur Pozarlik (University Twente) was successful securing funding for and is coordinating EU Horizon Europe RIA project HERMES that started on November 1, 2022. HERMES (Highly Efficient Super Critical ZERO eMission Energy System) aims to contribute to the renewable future by pioneering a zero-emission, highly efficient directly fired supercritical power system, operating in closed loop on renewable fuels

- Leon Thijs, Toos van Gool, Giel Ramaekers, Jeroen van Oijen, and Philip De Goey won the Distinguished Paper Award in the Solid Fuel Combustion Colloquium at the 39th International Symposium on Combustion in Vancouver, Canada.
- Leonardo Castellanos, Francesco Mazza, and Alexis Bohlin won the Distinguished Paper Award in the Diagnostics colloquium at the 39th International Symposium on Combustion in Vancouver, Canada.

Does your Section plan to organize the international Combustion Institute Summer School (CI-SS)?

- No

If you selected "Yes" which year will it be carried out?

- N/A

Other information you may want to report:

- The LinkedIn account of the Section currently has 838 followers and 4312 connections. See https://www.linkedin.com/in/dutch-section-of-the-combustion-institute-a0b82121b/