

### Members

#### Officers

Mika Hannula, Finland – 2024 President  
Vedran Mornar, Croatia – 2024 Past-President  
Katherine Woodthorpe, Australia – 2024 President-Elect  
Ruth David, United States – Secretary/Treasurer

#### 2023-2024 Board Members

Nadine Aubry, United States  
Lucas Noldus, Netherlands  
Norbert Babscan, Hungary  
Jaime Dominguez, Spain

#### 2024-2025 Board Members

Tian Qi, China  
Rahman Bello, Nigeria  
*Milos Nedeljkovic, Serbia - absent*  
*Igor Skrjanc, Slovenia - absent*

### Additional Attendees

Cather Simpson, New Zealand  
Shane McHugh, United Kingdom  
Chris Frantz, Canada  
Ulrich Wagner, Germany  
Indranil Manna, India  
Peter Derbyshire, Australia  
Elin Elliot, Sweden  
WU Siegfried Zhiqiang, China  
Wang Chen, China  
Stane Pejovnik, Slovenia (virtual)

Meredith Ettridge, United Kingdom  
Al Romig, United States  
Axel Meisen, Canada  
Oscar Vignart, Argentina  
Liu Chang, China  
David Kilham, Australia  
Gosta Lemne, Sweden  
Patrik Faltstrom, Sweden  
Zhu Yu, China (virtual)  
Barry O'Sullivan, Ireland (virtual)

### Meeting Summary

CAETS President Mika Hannula opened the meeting by welcoming all attendees to Helsinki and providing a brief overview of the events ahead.

**Action:** The meeting agenda was approved as presented. Minutes from the 9 October 2023 Board Meeting were approved as presented.

**Information:** CAETS Secretary/Treasurer Ruth David noted that the 2023 Audit Report, which was provided in advance meeting materials, had been approved by the Audit Committee in April 2024 with no issues identified. She acknowledged and thanked Jaime Dominguez, Committee Chair, for his leadership.

**Information:** The Treasurer then discussed the year-to-date financial status noting that she expected to end the year under budget in terms of Operating Expenses, but that Reserve Expenses were incurred from a follow-up Visiting Committee trip to Singapore. She also noted that three member academies were in arrears for 2024 dues payments, one of which also is in arrears for 2023 dues. Finally, she observed that CAETS was in a strong financial position, with approximately \$430 thousand in total assets.

**Action:** The Treasurer presented a proposed 2025 Operating Budget for Board Approval. She noted that for the first time, projected revenues included interest on the investment account. She also noted that the projected 2025 Operating Expenses were higher due to anticipated increases in the communications budget as a new website is developed together with projected growth in travel expenses given that the 2025 Annual Meetings will be held in Australia. The projected expenses remain below the projected revenues. The 2025 Operating Budget was approved as presented for presentation to the Council.

**Information:** The Secretary briefly discussed the CAETS Rotation Schedule, noting that Norway had signaled its intent to withdraw from CAETS and therefore would not host CAETS 2027. She reported that efforts were underway to recruit another member academy to fill that slot, and that while the United States had confirmed for CAETS 2028, she had some concerns regarding hosts for subsequent years. Issues are to be worked over the coming year.

**Information:** The Secretary noted that background materials for the 2025 Board Nominees were provided with the advance meeting materials. Nominees include:

2025 President-Elect	Johann-Dietrich Worner	Germany
Board Member	Sean Finlay	Ireland
Board Member	Indranil Manna	India
Board Member	Gosta Lemne	Sweden
Board Member	Julio Fernandez Odella	Uruguay

**Information:** The Secretary noted that other than the addition of two new members there were no changes to the CAETS Dues Schedule previously approved for 2025-2026.

**Information:** The Secretary briefly described highlights from the Visiting Committee trip to Singapore; a more complete Trip Report was provided in the advance meeting materials. CAETS participants Lucas Noldus and Cather Simpson were invited to add their observations. In summary, participants found that Singapore's Academy of Engineering is actively engaged in critical national programs, has strong ties to Singapore's top universities, maintains strong ties to industry partners, and is keenly interested in expanding its already strong portfolio of international partnerships via CAETS membership.

**Information:** Prior to presentations by the CAETS Communications Committee and Working Groups, the Secretary noted that the Final Report had been received from the e-Mobility Working Group and would be disseminated for review by member academies.

**Information:** Communications Committee Chair Lucas Noldus summarized activities since the prior annual meetings, emphasizing both committee charter elements and the sharing of best practices among member academies. He noted that Jose Albarran Nunez, Mexico, had agreed to serve as Deputy Chair and that administrative support would transition from the Australian Academy of Technological Sciences and Engineering to the Chinese Academy of Engineering. He also discussed the progress and outcomes from the 2024 CAETS Communication Prize competition, noting that information regarding the winning entrant remained embargoed pending the public announcement. He observed that the quality of the entries continued to improve year-over-year. Proposed activities for the 2024-2025 period were summarized; resources needed were described. He ended the presentation with an invitation to member academies not yet represented on the Communications Committee to appoint one or more representatives to participate.

**Information:** Diversity and Inclusion (D&I) Working Group (WG) Chair Shane McHugh provided a status update, noting that the WG has been reframed as a community of practice—intended to share good practices and develop guidance and toolkits for use by all CAETS academies. Over the past year, the focus was on developing guidance for inclusive events; over the coming year the emphasis may shift to co-create guidance or best practice on inclusivity in election of and engagement with Fellowship. He indicated that a draft toolkit for inclusive events and a database of member academies' D&I activities will be shared with members in the near future. While the Royal Academy of Engineering of the United Kingdom, currently chairing this working group, remains committed to development of the community of practice model, it was made clear that other member academies are invited to assume chair/co-chair responsibilities.

**Information:** Chair of the CAETS Sequel Project Axel Meisen noted that the effort was nearing completion and initiation of external reviews. The project team includes sub-working groups focusing on Forestry; Oil & Gas Industry; Chemical Industry; Food & Agriculture; Carbon Capture & Storage; Hydrogen; Cement Industry; Iron & Steel Industry; Buildings & Smart Cities; and ICT & Data Centres. Each sub-WG is developing strategies to ensure that sufficient technologies are available and realistically deployable to ensure low-GWH emissions from energy use in the selected sectors. The project adopted the Foresight/Scenario Creation methodology to identify drivers; identify critical uncertainties; develop scenario characteristics; and determine implications & strategies. He noted that some strategies are applicable to all sectors, while others are sector-specific.

**Information:** Chair of the Engineering Education Working Group (EEWG) Indranil Manna provided an overview of membership and activities since the prior annual meetings. He also described both the overall (long-term) objectives of the EEWG together with immediate goals. He noted that sub-groups had been formed to develop position papers for publication on two topics; the topics and motivations are described below.

- **The language of instruction in Engineering Education** – Native languages are central to culture and comprehension, but global languages such as English are important for collaboration, technology development, and employment. Many nations are considering this issue; a broader view may help.
- **The adoption of artificial intelligence (AI)/natural language processing (NLP)/machine learning (ML) in engineering education** – These technologies have many advantages but will require changes to training, pedagogy, and assessment. An international view of the challenges will be helpful to all nations.

**Information:** Shane McHugh, speaking on behalf of David Thomlinson, Chair of the Engineering for SDGs Working Group, provided an overview of the WG and plans for its future. He recognized David's superb leadership in building and nurturing the WG since its inception and announced that Professor Peter Guthrie OBE FREng would assume the Chair position with the Royal Academy of Engineering's continued support. He also reported that the WG intended to rename itself to the Engineering for Sustainability Working Group and adopt as its overall purpose: **Promote the pivotal role of engineering in addressing global sustainability issues by positioning CAETS as an advocate for sustainable engineering practices globally.** Going forward, the WG will continue to facilitate knowledge exchange among member academies, while also generating positive examples of engineering interventions that could be used to engage and influence external stakeholders, and developing positions and messaging that represent the global engineering academies' collective voice on key sustainability issues.

**Information:** Chair of the Artificial Intelligence (AI) Working Group Barry O'Sullivan, described the recently formed working group and its near-term focus. He noted that the WG, which held its first meeting in June, intends to meet monthly. Its initial work will include development of a brief position paper that identifies broad challenges and opportunities relating to the nexus between AI and Engineering. The paper is intended to highlight both diverse views and areas of consensus. Subsequent work will likely include deep dives into specific areas of interest identified in this paper. The WG also intends to support other CAETS WGs as they consider the use/implications of AI within specific domains by providing a sounding-board and AI-related expertise. Finally, the WG intends to inventory and archive AI projects/reports by individual member academies.

**Information:** Gosta Lemne, Sweden, provided opening remarks for the IVA Working Group on Cyber Threats, which is focusing on the implications for nuclear weapons. [This group has been underway for

several years and provides periodic status updates to the Board.] Gosta introduced Patrik Faltstrom, who leads the effort, to provide additional information. The group is focusing on IT (Information Technology)-related risks stemming from modernized systems. A working paper will be circulated when available; CAETS member academies interested in this topic were invited to contact Gosta for additional information.

**Information:** The Secretary briefly discussed the results received to date from the 2024 CAETS Member Survey, noting that fewer than half of CAETS member academies had responded. A summary was provided in the advance meeting materials. After discussion, it was agreed that the Secretary would again solicit a response from those academies that did not respond to the first request. Additional responses will be included in a more complete summary and provided to all members. *[The second request for responses was disseminated on 1 August with responses due 1 September 2024.]*

**Discussion:** The Secretary introduced three interrelated topics for Board discussion:

- CAETS Bylaws: Membership criteria limits engagement with small, multi-disciplinary academies in which engineering is a sub-component. How might CAETS engage such engineering bodies with the end goal of strengthening the engineering voice in such countries? [CAETS Objective: Foster establishment of additional engineering academies in countries where none exist.]
- The Norwegian Academy of Technological Sciences recently notified the Secretariat of its intent to withdraw from CAETS due to limited resources.
- CAETS Bylaws: Annual meeting hosting responsibilities are tied to a rotation schedule that establishes hosting and CAETS presidency sequencing and includes all member academies.

After discussion, it was agreed that a small ad hoc committee of Board Members, assisted by the Secretariat, would draft policy changes to address these issues for consideration by the full Board and subsequent recommendations to the Council. Members of the ad hoc committee include Katherine Woodthorpe, President of the Australian Academy of Technological Sciences, a founding member of CAETS; Indranil Manna, President of the Indian Academy of Engineering, a 25-year member of CAETS; Rahman Bello, President of the Nigerian Academy of Engineering, CAETS member since 2019; and Cather Simpson, Convenor of Technology, Applied Sciences & Engineering (TASE) within the Royal Society te Aparangi of New Zealand, which was elected into CAETS in 2019 as the first multidisciplinary academy that includes a broad science base among its membership. The ad hoc committee will meet over the coming months, targeting a full Board discussion of policy options prior to the end of 2024.

**Action:** The Secretary reported that CAETS President had been contacted by Professor Tariq Durrani, Chair of the IEEE Climate Change Committee, International Member of the United States National Academy of Engineering and the Chinese Academy of Sciences, and Research Professor at the University of Strathclyde, Glasgow, Scotland, seeking CAETS endorsement of a proposal to the UN Framework Convention on Climate Change to designate an Engineering Day during COP-30 in Brazil (to be held 10-21 November 2025). A draft of the proposal was provided in advance meeting materials. It observes that engineers and engineering organizations worldwide play pivotal roles in the development of deployable solutions for mitigation, adaptation, and resilience in the face of ongoing climate change. Noting that several CAETS member academies (Australia, Canada, China, India, United Kingdom) had already endorsed the proposal and that endorsement did not imply financial obligation, after discussion, the Board agreed to recommend to the Council that CAETS endorse this proposal.

There being no new business, CAETS President Mika Hannula adjourned the meeting at 16:30.