



CAETS 2021
ARGENTINA

Engineering a Better World

THE FUTURE OF ENERGY

**ANNUAL MEETING 2021 IN BUENOS AIRES OF THE
INTERNATIONAL COUNCIL OF ACADEMIES OF ENGINEERING AND
TECHNOLOGICAL SCIENCES (CAETS)**

September 20-24, 2021



**ACADEMIA NACIONAL DE INGENIERÍA
REPÚBLICA ARGENTINA**

<http://www.acadning.org.ar/>

**INTERNATIONAL COUNCIL OF ACADEMIES OF
ENGINEERING AND TECHNOLOGICAL SCIENCES
(CAETS)**

<https://www.newcaets.org/>

Council of Academies
CAETS
of Engineering and Technological Sciences

ANNUAL MEETING 2021 IN BUENOS AIRES OF THE INTERNATIONAL COUNCIL OF ACADEMIES OF ENGINEERING AND TECHNOLOGICAL SCIENCES (CAETS)

CAETS is an international organization of engineering and technological sciences academies. It has one member academy per country.

The First International Convocation of Academies of Engineering was held in 1978. CAETS was formally created in 1985. Thirty countries are currently members of CAETS. The Academia Nacional de Ingeniería of Argentina became a member in 1999.

MEMBERS OF CAETS

- Argentina– Argentine National Academy of Engineering
- Australia – Australian Academy of Technology and Engineering
- Belgium – Royal Belgian Academy Council of Applied Sciences
- Canada – Canadian Academy of Engineering
- China – Chinese Academy of Engineering
- Croatia – Croatian Academy of Engineering
- Czech Republic – Engineering Academy of the Czech Republic
- Denmark – Danish Academy of Technical Sciences
- Finland – Council of Finnish Academies
- France – National Academy of Technologies of France
- Germany – National Academy of Science and Engineering
- Hungary – Hungarian Academy of Engineering
- India – Indian National Academy of Engineering
- Japan – The Engineering Academy of Japan
- Korea – The National Academy of Engineering of Korea
- Mexico – Academy of Engineering of Mexico
- Netherlands – Netherlands Academy of Technology and Innovation
- New Zealand - Royal Society Te Aparangi
- Nigeria - Nigerian Academy of Engineering
- Norway – Norwegian Academy of Technological Sciences
- Pakistan – Pakistan Academy of Engineering
- Serbia - Academy of Engineering Sciences of Serbia (AESS)
- Slovenia – Slovenian Academy of Engineering
- South Africa – South African Academy of Engineering
- Spain – Royal Academy of Engineering of Spain
- Sweden – Royal Swedish Academy of Engineering Sciences
- Switzerland – Swiss Academy of Engineering Sciences
- United Kingdom – Royal Academy of Engineering
- United States – National Academy of Engineering
- Uruguay – National Academy of Engineering

CAETS OBJECTIVES

- Advise governments and international organizations on technical and policy issues related to its areas of expertise;
- Contribute to the strengthening of engineering and technological activities to promote sustainable economic growth and social welfare throughout the world;
- Foster a balanced understanding of the applications of engineering and technology by the public;
- Provide an international forum for discussion and communication of engineering and technological issues of common concern;
- Foster cooperative international engineering and technological efforts through meaningful contacts for development of programs of bilateral and multilateral interest;
- Encourage improvement of engineering education and practice internationally.

ANNUAL MEETINGS

Every year CAETS holds a meeting attended by members of all associated engineering academies. A relevant issue to engineering is chosen and analyzed. Meetings from 1978 to 2019 were organized each year in different countries by the corresponding member of CAETS. The last meetings were:

2019: Royal Swedish Academy of **Engineering (IVA) focused on Engineering a Better World – The Next 100 Years.**

2018: National Academy of Engineering of Uruguay (ANIU) focused on **Engineering a Better World – Sustainable Development of Agricultural and Forestry Systems.**

2017: Spain's Real Academia de Ingeniería hosted CAETS 2017 focused on **Engineering the Bioeconomy.**

2016: United Kingdom's Royal Academy of Engineering focused on **Engineering a Better World.**

**CAETS 2021 ANNUAL MEETING
BUENOS AIRES SEPTEMBER 20 TO 24, 2021**

THE FUTURE OF ENERGY

TOPICS

1. Change on the future energy matrix due global warming

- 1.1 Competition between different energy sources. Costs versus environmental impact
- 1.2 International agreements and commitment to reduce CO2 emissions
- 1.3 Energy policy in the main developed countries

2. Renewable energy: Its future evolution - generation, storage, transport and consumption

- 2.1. Solar energy
- 2.2. Wind power
- 2.3. Hydroelectricity
- 2.4. Geothermal
- 2.5 Biomass; Waste
- 2.6. Tides and Waves

3. Conversion and energy storage. Lithium

4. The future of Nuclear Energy

- 4.1 Nuclear Energy versus other energy sources.
- 4.2 Safety conditions of nuclear generation plants.
- 4.3 New developments and research.

5. Oil and Gas

- 5.1. Perspectives of shale oil and gas. Environmental considerations.
- 5.2. Energy and petrochemical use of gas and oil.

6. Biofuels: Food versus energy use

7. Coal: Reserves; costs; countries. Environmental constraints

8. Energy saving. Programs and Results

9. Electric vehicles

10. Training of human resources for new energy challenges in the next energy revolution

THE IMPORTANCE OF THE MEETING

High level of specialists and professionals of the country members will attend the Buenos Aires meeting.

Many of them have important responsibilities managing or advising oil & gas and energy related companies. Because of their membership in national academies, many participants and speakers are researchers in advanced technologies. Some of them are working for the governments of their own country.

The 2021 meeting in Buenos Aires will be an opportunity for people involved in energy projects and companies, to make contact with the last technology advances.

REGISTRATION

The National Academy of Engineering is the host of the event and will cover all expenses, except air tickets and accommodation, which will be paid by participants. Foreign participants must pay an individual registration fee of U\$S 400. Local participants will pay U\$S 150, and students U\$S 50. The registration fee paid by local attendants who are not invited by sponsors will not include the final dinner, the technical tour and outings. If they decide to attend them, they will be paid separately.

SPONSORS

The National Academy of Engineering will pay event costs that are not covered by registration fees through contributions made by sponsors in three categories: A, B and C. The first one is a U\$S 20,000 package that includes 8 complimentary invitation for assistance and an outstanding identification and recognition on signage at the venue, programme and materials. Package B requires a U\$S 10,000 payment and includes 4 complimentary invitation for assistance, as well as visibility on signage and printed materials proportional to the contribution. Category C is a U\$S 5,000 package that includes 2 complimentary invitation for assistance and identification and recognition proportional to the contribution.