



CENTRO INTERDISCIPLINARIO
DE ESTUDIOS ESPACIALES

INSTITUTIONAL PRESENTATION

Interdisciplinary Center for Space Studies



01.

“The future space race will be won not only by those whose technological advancements are superior but by the rule-makers- those whose economic, legal, social, and political institutions are most innovative, attractive, and popular to other spacefaring nations and entities.”

Deganit Paikowsky, “The Space Race’s Shifting Center of Gravity”, Foreign Policy, March 2023.

CONTENTS

What is the CIEE?	3
Mission	3
Vision	3
Objectives	4
Why?	5
Context	5
Strengthening the Latin American Perspective on Global Space Governance	6
Why Create a Center of Such Characteristics in Argentina?	6
Who Makes up the CIEE?	7
CONAE	7
International Cooperation	8
The National Space Plan	9
Argentina's Historical Commitment to Space Regulation	10
The UNLP	11
How?	12
Education	12
Research and Development	12
Sinergy	13
Divulgation	13
Research Lines	13
What Makes Us Different?	13
Our Team	14
What We Did in 2023	15
What We Have Done in 2024	16
Contact Us	17

WHAT IS THE CIEE?

The Interdisciplinary Center for Space Studies (CIEE) is an institute jointly created by the National Commission of Space Activities (CONAE) and the National University of La Plata (UNLP).

Mission

To promote and carry out both scientific research and the education of professionals in the fields of space law, space policy and space economy while integrating these areas to aerospace engineering.

We promote a environment of study, reflection and debate, and we encourage interdisciplinary dialogue as a way of facing the new challenges of space activity from a Latin American perspective.

Vision

We encourage the development of an equitable, sustainable, safe and responsible space environment. Our mission is to bridge theory and practice while we push for sustainable and ethical space development.

That is why the CIEE encourages a collaborative environment where experts from different fields come together so as to explore and deepen the political, legal and economic aspects of space. Here is where aerospace engineering plays a crucial role, as it integrates technology and knowledge in a way that enriches our practices and contributes to the assembly of innovative solutions that will be used to face tomorrow's space challenges.



Pedes in terra ad sidera visus

This latin saying, which means “feet on the ground and eyes in the sky”, aims at calling for a balance between ambition and prudence, and between innovation and responsibility. This duality reflects the inherent tension that comes with human expansion towards space: the aspiration to reach and explore the unknown (the wish to look into the stars), while staying rooted in the ethical human values (to keep one's feet on the ground).

It is a reminder of the fact that, even though humanity may want to go over its limits and explore the cosmos, we should not lose sight of the consequences of our actions nor forget the importance of sustainability, international cooperation and respect for existing principles, rules and treaties, which aim at preserving the general interest of the whole humanity in the process of exploring and using space for peaceful purposes.

Objectives

- To build an environment of education, debate and reflection on space activities through the organization of conferences, seminars, courses and more opportunities for learning.
- To foster interdisciplinary scientific research that contributes to the progress of space knowledge.
- To follow up on global trends and space legislation, both at a national and international level.
- To give technical support to governmental and non-governmental agencies in the production of public policies on priority subjects for our country and region's space agenda.
- To facilitate the integration of public administration, private companies and academic institutions in terms of technical assistance and exchange of both acquired knowledge and ongoing research.

EDUCATION

Conduct educational activities in space law, space policy and space economy.

R+D

Carry out interdisciplinary scientific research that contributes to the advancement of knowledge on the subject.

SYNERGY

Promote joint actions with universities, international organizations, private companies and the third sector.

Our objective is to expand the offer of formative and educational activities through seminars, post graduate courses, workshops and talks. We want to make leaders and experts who are capable of facing the challenges of the space sector with solid and up-to-date knowledge.

We strive to carry out interdisciplinary scientific research which contributes to the development of knowledge in priority topics for the space agenda of both Argentina and the region. Through our research, we aim to generate new ways of understanding and innovative solutions that can be applied in the space sector.

We support the construction of capabilities and facilitate dialogue between different sectors, thus creating a unique space for collaboration. This synergy is essential so as to foster an integrated and efficient approach in the development of space policies and technology.

WHY?

Context

In the current context, the space sector has strategic importance due to the development of critical national infrastructures, among other factors. Space activities affect states' competitiveness and safety as well as other public management issues and have a strong impact on people's quality of living.



In 2023, the global space economy generated 384 thousand million dollars in profits, according to the annual report from the Satellite Industry Association (SIA). According to Euroconsult, this industry is also expected to see significant growth in the next few years.

By 2030, it is estimated that the space economy will have reached 642 thousand million dollars, which represents a 74% increment compared to 2021.

At the same time, the progress of the space industry represents a valuable opportunity for the international commercialization of high value-added products, which also comes with the generation of foreign currencies. This makes it necessary to build up the local capacity, which will be able to contribute and guide said progress through legal and economic analyses.

That is why research and education of CIEE professionals will focus on the development of bases, instruments and ways of finding knowledge that contribute to the progress of the national space sector.



Strengthening the Latin American Perspective on Global Space Governance

As space activities continue to evolve, it's our responsibility to ensure that the Latin American academic perspective is represented and integrated into the global discourse.

*"Latin America's satellite sector is going to generate businesses valued in 40.000 million dollars towards 2027; which is an 8% of what the global space economy is expected to make. At the same time, it is forecasted that 304 small satellites will be launched by Latin American companies and/or institutions between 2021 and 2031."**

** Pacome Revillon, Euroconsult, LATSAT 2023, Buenos Aires, Argentina*

Latin America is home to a diverse set of nations, each with its own space goals, priorities, and challenges. Some countries have made significant advancements in space technology, while others are emerging as key players in space research and applications.

Understanding the specific interests and concerns of each nation in the region is essential to fostering collaboration and building a more inclusive space community.

The important thing is not how much the sector is going to grow, but how it is going to grow. Latin America's participation in discussions on space challenges is essential to ensure a balanced and inclusive approach to global space governance.

Why Create a Center of Such Characteristics in Argentina?

Think globally, act locally

Space is no longer the domain of just a few global powerhouses. With the decrease of launch costs and the rise in commercial applications, more and more countries have started to participate in space activities. This includes several Latin American nations, which have been expanding their possibilities in terms of satellites, telecommunications, and Earth observation.

With over 50 years of experience in the space sector, Argentina is one of the region's leading countries when it comes to space development. The CIEE aims to provide the necessary guide for these efforts to be sustainable and efficient.

Who Makes up the CIEE?



UNIVERSIDAD
NACIONAL
DE LA PLATA

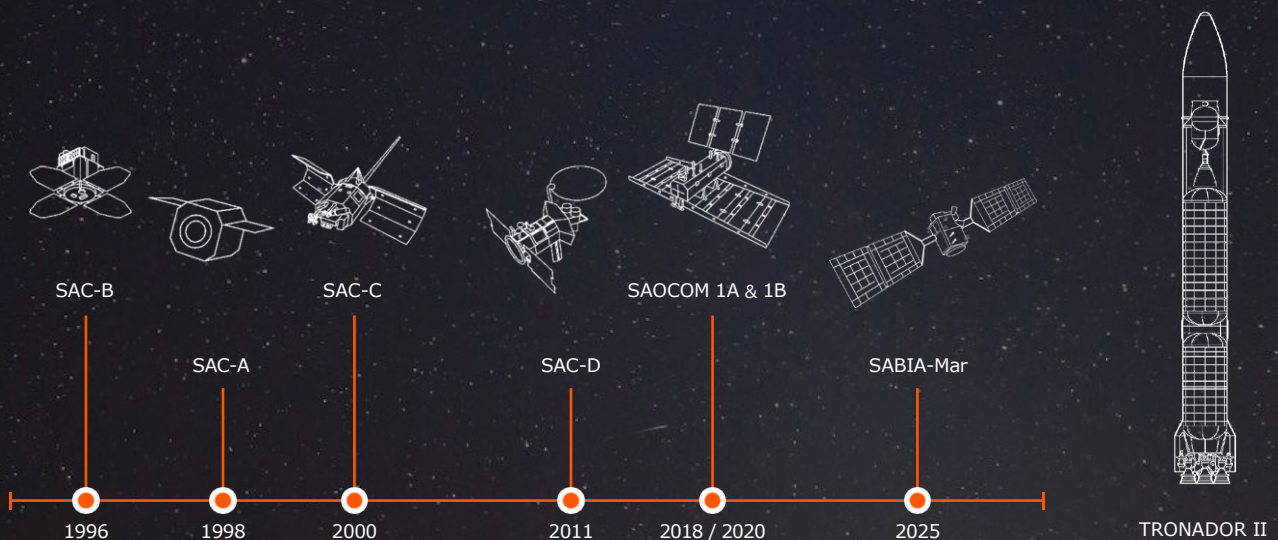


CENTRO INTERDISCIPLINARIO
DE ESTUDIOS ESPACIALES

The CONAE

The National Space Activities Commission (CONAE) is Argentina's space agency, responsible for coordinating space-related policies and activities. Succeeding the CNIE, founded in 1960, CONAE's main mission is the development and implementation of space projects.

Through its satellite projects, particularly the SAC satellite series (Satellite for Scientific Applications) and the SAOCOM mission (Argentine Satellite of Observation with Microwaves), CONAE provides critical data for agriculture, hydrology, climate emergencies, and disaster management, which significantly contributes to the sustainable planification and development of the country.



Not only is it one of Latin America's leaders in terms of satellite development, but it also actively collaborates with international space agencies and universities, promoting global cooperation and knowledge exchange. Its commitment to education in space science is reflected in its active participation in educational programmes that aim to inspire and prepare the next generation of Space Professionals both in Argentina and in the rest of the world.

International Cooperation

CONAE has a reputation for its remarkable international cooperation with several of the main space agencies in the world, which consolidates its position as an important actor in the global scientific and technological space community.

SAC-D AQUARIUS

CONAE developed and launched this satellite in 2011, in collaboration with NASA. It was primarily designed to study ocean salinity and water cycles, contributing vital data to climate and oceanographic research.

[Credit : CONAE]



TIANWEN-1 MISSION TO MARS

CONAE has also participated in interplanetary missions, as is the case of its collaboration with the China National Space Administration (CNSA). Argentina provided support in tracking and data transmission through its Neuquén-based ground station, thus facilitating a crucial piece of communication infrastructure for the mission.

[Credit : CONAE]

ESA's DSA-3 ANTENNA

ESA's DSA-3 Antenna: Within the extensive collaboration that CONAE maintains with the European Space Agency (ESA), the installation of the Deep Space Antenna 3 in Malargüe, Mendoza, is certainly a milestone. This antenna is a part of the strategic ESA network for communication with interplanetary space missions, and it provides essential capabilities for the tracking of missions and the gathering of scientific data from deep space.

[Credit: CONAE]



These collaborations strengthen Argentina's capacity in the space sector and facilitate CONAE's integration to international projects and missions, promoting scientific and technological advances at a global level.

The National Space Plan

CONAE has the mission of propose and execute a National Space Plan, which has the character of a Strategic Plan for space activities, establishing itself as a clear State Policy and national priority. The fundamental objective of the Plan is the development of knowledge and technology in the space field.

At the same time, the Plan must contribute to the national scientific-technological field, both advanced knowledge and new education and work opportunities through the creation of specific careers and related specialties.

Main milestones of CONAE's first 30 years



Argentina's Historical Commitment to Space Regulation

Argentina has played an active role in the formation and activities of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), highlighting the importance that the country has assigned to space activities since its beginning.

In 1959, through Resolution 1472 (XIV) of the United Nations General Assembly, COPUOS was established as a subsidiary body of the General Assembly to address issues related to the exploration and use of outer space for peaceful purposes. In the beginning, Argentina was among the 18 founding members.

Argentina was a co-sponsor of the Space Treaty of 1967, one of the fundamental agreements proposed by COPUOS, which establishes principles for the activity of States in the exploration and use of outer space, including the moon and other celestial bodies.

Argentina's participation in COPUOS and in the adoption of international treaties reflects its commitment to maintaining Space as an area for peace and the benefit of all humanity. This approach is part of the national strategy to ensure that space activities advance in technological and scientific terms, promoting international cooperation and sustainable development.

[Credit: UN]



The UNLP

The National University of La Plata (UNLP) has a key role in Argentina's space sector, particularly, through its collaboration with CONAE, which includes research, satellite development, and the education of highly specialized professionals.

The UNLP has collaborated in important Argentine space projects among which the SAC series stands out, in which it participated in the construction and development of satellite instrumentation. It was also part of the team that was in charge of manufacturing the various prototypes of the VEX launcher and the Tronador II project.



Teófilo M. Tabanera

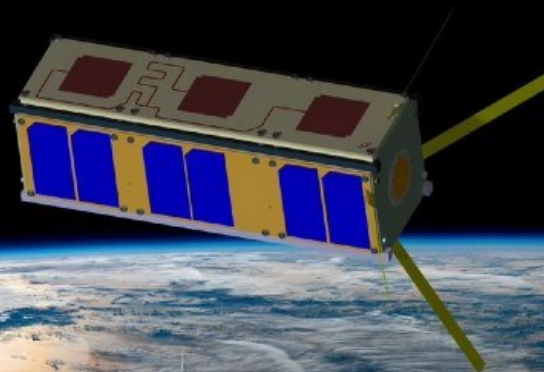


A prominent member of the UNLP was Teófilo Tabanera, first as a student and later as a professor. He is considered the father of the Argentine space program. Since the mid-20th century, his vision and dedication laid the foundation for the development of space technology in the country.

Tabanera was invited to the First International Astronautical Congress, organized at the University of La Sorbonne in Paris in 1950, and served as vice president of the International Astronautical Federation (IAF) for five consecutive years.

Currently, students and professors from the Faculty of Engineering at UNLP are developing the USAT-I satellite. Its objective is to demonstrate the functioning of the GNSS system, a tool intended for use in navigation and orbital determination, as well as for measurements using the radio occultation technique. Additionally, it aims to provide an educational and research platform for the academic community.

[Credit: UNLP]



Besides, the UNLP offers study and training programs that prepare students to contribute to the space industry, not just regarding technical aspects, but also in areas related to policies and Space management.

The university has also worked in collaboration with other international institutions and participated in research networks that promote the development of space technology at a global level.



Members of the Grupo de Ensayos Mecánicos Aplicados (GEMA), from UNLP, in front of SAOCOM 1A satellite. Crédito: UNLP

HOW?

Education

Conferences and workshops for students and professionals: these activities aim to provide substantial knowledge on the regulations, policies, and economic aspects that space is ruled by.

Postgraduate program on Space Law and Policy: our course is both practical and theoretical, and ranges from space project management to sustainability in space exploration.

Research and Development

Interdisciplinary scientific research: we facilitate collaboration between specialists in physics, engineering, and social science, among other disciplines.

Sinergy

We establish collaboration agreements with academic institutions and organizations for joint research projects and educational programs. At the same time, we promote intersectoral dialogue to facilitate communication between the public sector, companies, academia, and non-governmental organizations on common space challenges.

Divulgation

We conduct workshops, conferences, and seminars, and we participate in comunitary activities so as to promote education and awareness on space science.

Research Lines

We are committed to generating knowledge on the development of space science and technology, which will contribute to the creation of informed and effective policies and regulations. Through these research lines, we aim at being a catalyst for both the sustainable development and the responsible use of Space.

With a Latin America-oriented approach, our research lines are designed to have a significant impact at a local, regional, and global level. These include:

- 01 Space Sustainability
- 02 Latin American Space Policy
- 03 Development of National Space Framework
- 04 Space Mining
- 05 Space Economy
- 06 Regulation of Telecommunication Satellites

What Makes Us Different?

We stand out thanks to our interdisciplinary and hands-on approach.

A space mission is, essentially, an interdisciplinary project that involves science and technology as well as politics, economics, and a key element: space law. From start to finish, space activities are regulated by an international legal framework.

OUR TEAM



Director
Mg. Juan C. González Allonca

He is a lawyer from the University of Buenos Aires (UBA), specialized in space law and holds a master's degree in Information Systems Engineering from the National Technological University (UTN). He serves as a professor at the Universidad Nacional de La Plata (UNLP) and participates in various postgraduate courses. His extensive experience includes serving on the board of directors of the National Commission for Space Activities (CONAE). He is also member of the International Institute of Space Law (IISL), TEDx speaker and contributor to various national and international publications with articles related to space law and policy.



Deputy director
Mg. Sonia Botta

She holds a degree in aeronautical engineering from the Universidad Nacional de La Plata (UNLP) and a master's degree in Space Exploration Systems from the University of Leicester, England. She is a Systems Engineer at the Aerospace Technology Center (CTA) of the Faculty of Engineering of the UNLP and coordinator of the #SatéliteUniversitario Project, which aims to take the first nanosatellite of the UNLP into space.

Coordination Secretary

Julieta Palmieri

Advisory Committee

Carola Bianco (UNLP)
Carolina Catani (CONAE)
Anabel Cisneros (ARSAT)
Jorge Pablo Puig (UNLP)
Mariano Rodríguez Capristo (CONAE)
Jimena Schiaffino (MRECIC)

Staff (professors and researchers)

Roberto Cárdenas Arturi
Melisa Kohan Martínez
Lautaro Montecino
Ruben Pesoa
Martina Puchet
María Florencia Raimondi
Carlos Villulla

WHAT WE DID IN 2023

We conducted the "Space Law and Policy" seminar for teachers of the School of Legal Science.



01

We toured the Punta Indio Space Center with students from the Space Law course of the Space Engineering Career.



02

We participated in the 2023 edition of Argentina's CANSAT Competition.



03

We gave several talks, seminars and workshops.



04

We organized the first Congress on Space Law, Policy and Economy.



05

We signed an agreement with the Planetary Geology Laboratory of the IDEAN (UBA-CONICET).



06

WHAT WE HAVE DONE IN 2024

We started the "CIEE Lectures" series, in which we invite specialists and representatives from national and international organisms to talk about the current issues in the space sector.

01

#1: "Opportunities and Challenges of Artemisa Accords", Steven Mirmina and Brian Wessel, NASA.

#2: "How to Avoid Star Wars", Almudena Azcárate Ortega, UNIDIR

#3: "The Wonders (and Challenges) of Space Law", Steven Freeland, Western Sydney University.

#4: "Regulation of Space Activities: Politics and Legislation of the People's Republic of China" Juqian Li, China University of Political Science and Law.

02

We offer a new subject at the UNLP School of Law



03

We are a members of the Zero Debris Charter of the European Space Agency.



04

We started two research projects:

- Space Debris Impact and Management in Latin America.
- Introduction to Space Mining: challenges for its regulation.

05

We participated in the "Study and Development of Strategic Alloys for the Strengthening of National Sovereignty" project of the Department of Mechanics, UIDET-Research and Development of Industrial Processes and Technological Services (ProInTec I&D) of the Faculty of Engineering of the UNLP.

CONTACT US

Website: www.ciee.unlp.edu.ar

Instagram: @ciee_arg

Bluesky: @cieearg.bsky.social

Twitter: @cieearg

YouTube: @cieearg

Linkedin: <https://www.linkedin.com/company/cieearg/>

Mail: info@ciee.unlp.edu.ar

