

# **FINAL PROGRAMME**

# **3**<sup>rd</sup> International Space Forum 2018 - The Latin American and Caribbean Chapter

Space Science and Academia for better Solution to Latin America and Caribbean's Challenges.

Buenos Aires, Argentina 1 November 2018





Space Engineering is an Italian space industry leader with outstanding experience in space technologies and satellite communications, part of the Telecom Division in the Space System business line of Airbus Defence and Space.

Space Engineering has a wide and recognized experience in research, development, engineering, simulation, prototyping, integration, testing, validation, small-scale production for Space & Ground systems and components, owning a significant number of international patents on antennas, radars, scientific software and Digital Signal Processing.

Space Engineering innovates in 5G and EO through flexible antennas and payloads, multiband ground terminals, M2M gateways, smart modems, Inter-Satellite Link Solutions.

Space Engineering is a reliable partner for space agencies, satellite operators and prime integrators in the space domain, with projects and collaborations worldwide.

Space Engineering Rome Headquarters and Industrial Plant share the same industrial area in Rome. The 1250 sqm industrial plant has several facilities for Assembly, Integration and Test including Clean Room, Anechoic chamber, Climatic Chamber, Thermal-Vacuum Chamber, attitude simulator for SATCOM testing, Mechanical & RF labs.

### PRODUCTS AND SOLUTIONS

**Mobile multiband SatCom antennas** for airborne applications, including UAVs and helicopters

World leading supplier of **Broadband SatCom terminals for trains** 

Gateway and Professional Terminals for **Internet of things/ Machine-to-Machine applications using SatCom** 

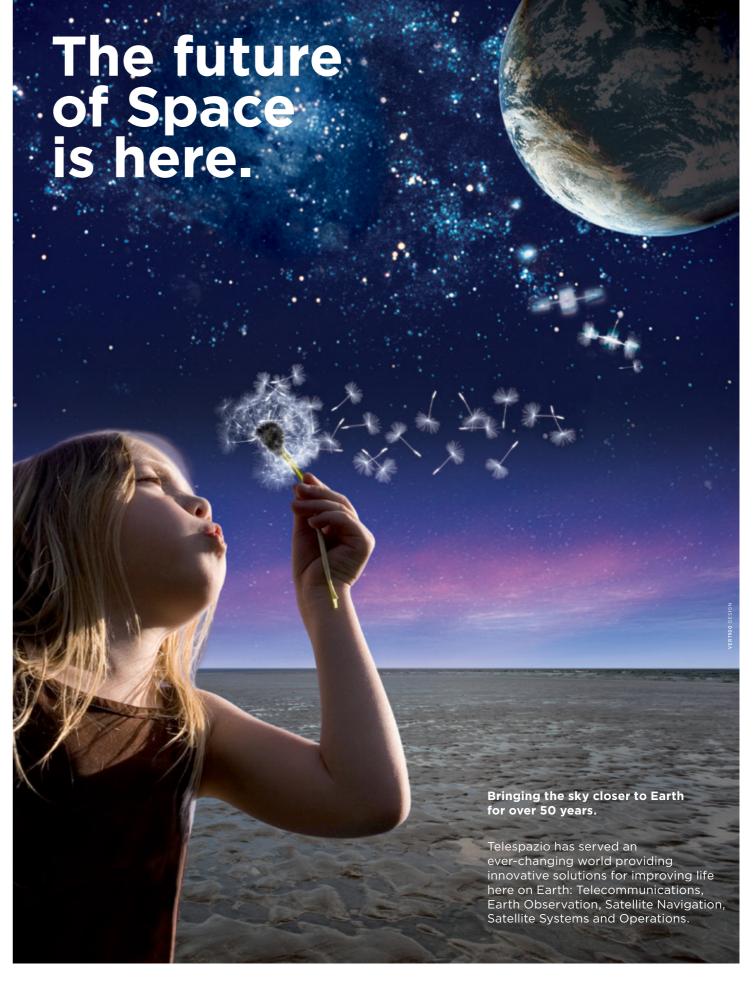
**Onboard Communication Equipment** for inter-satellite link including those enabling Data Relay systems like Globenet

**Payload Operational Software** for new generation satellites with flexible payload

**Passive Onboard RF components and Feed Chains**, including high bands (Q/V/W)

Active and reconfigurable onboard antennas, for High Throughput and Flexible Satellites

**Ground Transponders and Calibrators** for EO Optical and SAR satellites













# **Organizers:**







# **Sponsors:**











# IAF Alliance Programme Partners:

















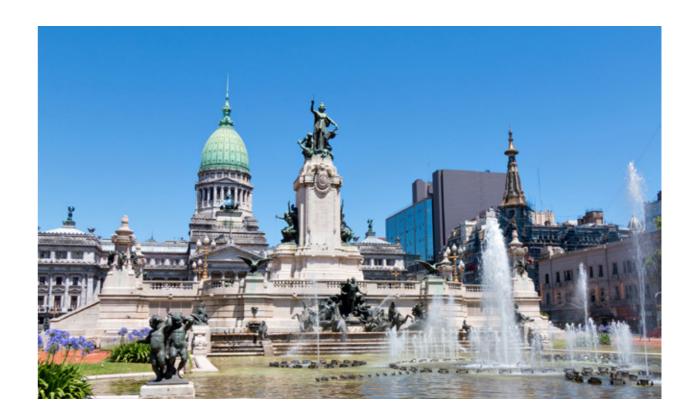






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# 1 WELCOME MESSAGE FROM IAF, ASI AND CONAE

Dear ISF 2018 participants,

We are delighted to welcome you all to the 3<sup>rd</sup> edition of the International Space Forum at Ministerial Level - the Latin American and Caribbean Chapter. As it happened last year in Africa, this new chapter of the Forum aims at foster the encounter between Space Authorities, space agencies and the world of Academia, encouraging the discussion on important space topics for the region.

This year, by involving the Latin American and the Caribbean countries, we hope to promote the sharing of new ideas and point of views concerning the possibilities that Space Sciences, Technologies and related applications offer to the socio-economic development of the region. In particular, the Forum will focus on the topics of Education and Capacity Building, Management of Natural Resources and Prevention of Disasters, and Space Partnerships.

To achieve such a goal the Forum will present prominent Keynote space cases as well as statements by the represented countries' delegations. The three keynotes will bring the attention to: presenting the importance of scientific education and capacity building for a better awareness and development of the region; illustrating how the satellite technologies could support the protection of the environment and prevent natural disasters; underlining the importance of cooperation among developing, emerging and space faring countries to achieve the goals that Latin American and Caribbean region foresees.

At the same time, the Statements provided by delegations will give a concrete picture of the actions that are considered relevant and necessary in their respective countries and for the region as a whole.

We are confident that you will find the programme enlightening, full of challenging ideas and proposals. Indeed, we hope that it can concretely contribute to give the participants a deeper awareness of their needs, capacities and abilities in using space sciences and applications to improve the welfare and economic development of the Latin American and Caribbean's societies. We are glad to welcome you in Buenos Aires and we are sure that the time spent here will grant new opportunities of cooperation for all of you, adding a further stone to the building of a better world.



President
International Astronautical
Federation (IAF)



Roberto Battiston

President

Italian Space Agency (ASI)



Raúl Kulichevsky

Executive and Technical Director,

Comisión Nacional de Actividades

Espaciales (CONAE)

### 2 ORGANIZERS INFORMATION

### 2.1 The International Astronautical Federation (IAF)

Founded in 1951 to foster dialogue between scientists around the world and support international cooperation in all space-related activities, the International Astronautical Federation is the world's leading space advocacy body with over **360 members**, including all key space agencies, companies, societies, associations and institutes across 68 countries.

**Over 40 administrative and technical committees** support the Federation in its mission to advance knowledge about space and to foster the development of space assets by facilitating global cooperation.

Following its theme "A space-faring world cooperating for the benefit of humanity", the Federation advances knowledge about space and fosters the development and application of space assets by advancing global cooperation.

As the organiser of the annual International Astronautical Congress (IAC), and other meetings on specific space-related topics, the IAF actively encourages the development of astronautics for peaceful purposes and supports the dissemination of scientific and technical information related to space.

#### THE IAF'S MISSION

- Promoting cooperation: The IAF's International Astronautical Congress and various IAF committees provide unique collaborative platforms for experts from space agencies, industry and research
- Advancing international development: The IAF is building a future of cooperation, development and international friendship, bringing together experts from experienced and emerging space nations alike
- **Sharing knowledge:** The Federation has many well-established channels to disseminate information within its global network and the wider space community
- Recognising achievements: The Federation's prestigious awards are presented annually to individuals and groups who have distinguished themselves in the global space community
- **Preparing the workforce of tomorrow:** To nurture new talent, the Federation has many activities targeting students and young professionals
- Raising awareness: The global network of the IAF, and IAF publications, help promote the public appreciation of space activities worldwide













### 2.2 The Italian Space Agency (ASI)

The Italian Space Agency, created in 1988, coordinates and implements Italy's capabilities and expertise in Space under the high responsibility of the Prime Minister and the instructions of the Ministerial Board for the space policies and aerospace research.

ASI activities range from space science to earth observation, telecommunications and navigation, launchers, space technologies and related applications, education and capacity building.

Italy is a founding member of the European Space Agency (ESA) since 1975 and it is the third country in terms of investment, participatin in the major European programs and missions such as the exploration mission to Mars (EXOMARS).

Italy is one of the major European contributor in the realization of the International Space Station, considering that more than 50% of the ISS pressurized volume has been realized by the Italian industry.

Italy is in the forefront in the studies related the origin of life and understanding of the Universe. In 30 years ASI participated in many scientific missions in collaboration with ESA and NASA. In the field of Earth Observation, ASI has developed the COSMO-SkyMed satellite constellation, a radar satellite system devoted, in particular, to the natural disasters management. Since 2005 ASI and CONAE are realizing the unique civil earth observation satellite system, SIASGE (Italian Argentinean Satellite System for the management of Emergencies and Economic development), composed by the Italian COSMO-SkyMed constellation and the Argentinean SAOCOM satellites.

In the field of research and space propulsion, Italy developed the European medium size VEGA launcher vehicle, fully designed in Italy and successfully active with the other European launcher vehicles as Ariane and Soyuz.

Bilateral and multilateral space cooperation is a fundamental pillar of the Italian space policy. Many space agreements are in force between ASI and the other space agencies around the world. Italy, through ASI, is member of different International Space Organisations and Committees, among the others the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS).

Italy remains firmly committed in the promotion of international cooperation for peaceful purposes and for safe, secure and sustainable use of outer space.

# 2.3 Comisión Nacional de Actividades Espaciales (CONAE)

CONAE is the national space agency of Argentina. It functions under the umbrella of the Ministry of Education, Culture, Science and Technology, and it is the national organization in charge of designing and implementing space-related projects and activities for peaceful purposes, through the elaboration and implementation of the National Space Program. This is a long-term strategic program that provides for the development of CONAE's EO satellite missions, creating national capacities and working in associative cooperation with international partners.

Since its creation in 1991, CONAE has developed and flown, in partnership with NASA four satellite missions, which were designed and built in Argentina with participation of local companies and scientific and technical institutions: SAC-A, SAC-B, SAC-C and SAC-D/Aquarius. This series included participation from ASI (Italy), CNES (France), DSR (Denmark) and AEB/INPE (Brazil), and CSA (Canada). Currently, CONAE is developing a Synthetic Aperture Radar (SAR) Mission: SAOCOM, composed of two satellites: SAOCOM 1A and 1B, each carrying an identical Polarimetric L-Band SAR instrument. SAOCOM 1A was launched on October 7, 2018, and 1B will follow a year later. Both satellites were built in Argentina with local companies like INVAP (main contractor) and VENG, as well as national scientific and technical institutions like CNEA. SAOCOM is part, together with the Italian COSMO-Skymed, of the SIASGE (Italian-Argentine Satellite System for Emergency Management).

With both constellations flying along the same orbit will enable a rapid response in the provision of SAR information at emergency situations. ASI is the main international partner and there is also a collaboration with ESA's ground segment and technical support from CSA and NASA. CONAE's national Ground Segment is composed of the Cordoba Ground Station and the Tolhuin Ground Stations (in Tierra del Fuego Province), which provide TT&C and Data Acquisition services.

CONAE also promotes the regional development of human capacities with several training and education programs (from elementary to Master levels, in collaboration with national universities), and the organization of activities to foster the use of space information in disaster management, environmental monitoring and productive activities through the Gulich Institute for Advanced Space Studies, located in the Space Center in Cordoba.











### 3 FORUM GENERAL INFO

#### **INTRODUCTION**

The International Space Forum – the Latin American and Caribbean Chapter – is the 3<sup>rd</sup> international event organised in the International Astronautical Federation (IAF) framework on the initiative of the President of the Italian Space Agency (ASI), Prof. Roberto Battiston, in his role as IAF Vice-President for Science and Academia relations. The first event was held in Trento, Italy on 24 October 2016 and resulted in the adoption of the Trento Space Statement.

This Forum is expected to bring together Latin American and Caribbean Ministers of Education, Science and Research, Heads of Space Agencies, representatives of Universities and Academia involved in space activities as well as members of International Space Organisations, with the aim of encouraging the discussion on how Space education and technology can support the understanding and exploitation of Space benefits for Latin America and Caribbean's socio-economic development.

#### **FORUM OBJECTIVES**

Space is a global and multidisciplinary system requiring a high level of technical and scientific knowledge, in both upstream and downstream areas. Universities and Academia constitute a worldwide network of privileged knowledge that could support the conception, preparation and exploitation of the Space programmes, regardless of geographical location. Universities and Academia in Latin America and the Caribbean need to become part of the global Space network to benefit from scientific and technological knowledge.

The main objective of the Forum is to facilitate Latin America and Caribbean's exploitation of Space benefits for the socio-economic development of the Latin American and Caribbean Countries.

#### **FORUM PROGRAMME**

The program of the Forum will see keynote addresses from distinguished speakers and a debate on the contribution of Science and Academia to the identification of better solutions for Latin America's challenges, with the aim of: contributing to socioeconomic development, improving the number of Latin American professionals in the space sector, promoting the protection of natural resources and sustainable environmental practises to prevent disasters.

The following topics will be considered in dedicated sessions:

- **Education and Capacity Building:** a greater development of space education and training in Latin America and Caribbean would serve as a catalyst for high-level scientific and technical capacity building and contribute to a greater socio-economic development of the region.
- Management of Natural Resources and Prevention of Disasters: Earth observation, navigation and telecommunications satellite technology and applications are precious tools to support governmental, regional and local management activities, in particular, to protect the environment, to ensure a peaceful and secure region, to manage diversity as source of wealth, harmony and socio-economic transformation.
- **Space Partnerships:** partnerships and collaborations among countries with different levels of space knowledge would facilitate its dissemination and technology transfer. Space partnerships among Latin American and Caribbean scientific and academic institutions would allow making the best of their capacities in space activities establishing the conditions for all countries of the region.

Each Head of delegation may make a Statement on behalf of his Government. The time available for each Statement will be of 5 minutes. **Delegations that wish to make a Statement are kindly requested to inform the International Astronautical Federation (IAF):** spaceforum@iafastro.org.

During the Forum the Authorities and delegates will adopt the **Buenos Aires Page** to be added to the Trento 2016 International Space Statement and the Nairobi Page.

### 4 EVENT PROGRAMME

#### WEDNESDAY, OCTOBER 31<sup>ST</sup>

Arrival of Delegations in Buenos Aires

19:00 – 21:00 Welcome Reception at the Italian Ambassador's Residence in Buenos Aires

(Av. del Libertador 2100. Buenos Aires)

#### **THURSDAY, NOVEMBER 1ST**

**08:30 – 09:30** Accreditation of the Delegations at the at Centro Cultural de la Ciencia (Godoy Cruz 2270, Buenos Aires)

09:30 – 10:00 International Space Forum 2018 – Opening Ceremony

#### **Welcome Remarks by:**

- Lino Barañao, Secretary of Government for Science, Technology and Productive Innovation
- Jean-Yves Le Gall, President, International Astronautical Federation (IAF)
- Roberto Battiston, President, Italian Space Agency (ASI)
- Jan Woerner, Vice President for Agency, Parlamentarian and Ministerial Relations, International Astronautical Federation (IAF)
- Gabriella Arrigo, Vice President for Science & Academic Relations and Global Networking Forum, Interntional Astronautical Federation (IAF)

10:00 – 10:05 ISF2018 – Latin America Welcome video

**10:05 – 10:20** Keynote speech on Management of Natural Resources and Prevention of Disasters by Dr. Jan Woerner, *Director General, European Space Agency (ESA)* 

10:20 – 11:30 Statements by delegations

**11:30 – 11:50** *Coffee Break* 

11:50 – 13:00 Statements by delegations

**13:00 – 14:15** Lunch Break







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14:15 – 14:30	<b>Keynote speech Space Partnerships</b> by Rosa Maria Ramírez de Arellano y Haro, <i>Chair of the 2018-2019 UNCOPUOS</i>
14:30- 15:30	Statements by delegations
15:30 – 15:45	<b>Keynote speech on Education and Capacity Building</b> by Raúl Kulichevsky, <i>Executive and Technical Director, Comisión Nacional de Actividades Espaciales (CONAE)</i>
15:45 – 16:45	Statements by delegations
16:45 – 17:00	<b>Adoption of the Buenos Aires Page</b> to be added to the Trento Space Statement and Nairobi Page
17:00 – 17:15	Closing Remarks
17:15 – 17:30	Official Group Picture with the Heads of Delegations
19:00 – 21:00	Gala Dinner with Tango Show



(Taconeando, Balcarce 725, San Telmo. Ciudad de Buenos Aires)

# 5 BUENOS AIRES PAGE (to be added to the Trento Space Statement)

3<sup>rd</sup> International Space Forum at Ministerial Level -The Latin American & Caribbean Chapter "Space Science and Academia for better Solution to Latin America and Caribbean's Challenges"

On November 1<sup>st</sup>, 2018, the Argentinean Minister of Science, Technology and Innovation, Ministers of Science, University and Research and other Space governmental Authorities of the Latin America and Caribbean countries, representatives and experts of national and international space agencies and organizations, met in Buenos Aires (Argentina), under the auspices of the International Astronautical Federation (IAF), the Italian Space Agency (ASI) and the Comisión Nacional de Actividades Espaciales (CONAE), for open and productive discussions on the opportunity of a greater involvement of Latin American and Caribbean universities and Academia in the space programs to search for better solutions to Latin America's challenges.

Following the first International Space Forum (ISF) held in Trento (Italy) in 2016 with the adoption of the Trento Space Statement and the 2<sup>nd</sup> International Space Forum - The African Chapter - held in Nairobi (Kenya) with the adoption of The Nairobi Page, delegates, experts, representatives of Academia gathered in Buenos Aires for the 3<sup>rd</sup> International Space Forum – The Latin American & Caribbean Chapter - and exchanged views, shared experiences and made statements, in which they declared that:

- space technology and applications provide and contribute to find solutions to several challenges that affect human life
  on Earth and represent a precious support to the implementation of the United Nations 2030 Agenda for sustainable
  development:
- · space activities require high-level scientific and technical knowledge, as well as a multidisciplinary approach;
- academic institutions represent an immense reservoir of knowledge and human talents, very well distributed all over the world and characterized by a great propensity for cooperation;
- the greater involvement of Academia and scientific community in space activities would increase the chances to find even better space solutions to global challenges.

Three keynote speeches were delivered by distinguished space experts on the following three topics:

- **Education and Capacity Building:** a greater development of space education and training in Latin America and Caribbean would serve as a catalyst for high-level scientific and technical capacity building and contribute to a greater socio-economic development of the region.
- Management of Natural Resources and Prevention of Disasters: Earth observation, navigation and telecommunications satellite technology and applications are precious tools to support governmental, regional and local
  management activities, in particular, to protect the environment, to ensure a peaceful and secure region, to manage
  diversity as source of wealth, harmony and socio-economic transformation.
- **Space Partnerships:** partnerships and collaborations among countries with different levels of space knowledge would facilitate its dissemination and technology transfer. Space partnerships among Latin American and Caribbean scientific and academic institutions would allow making the best of their capacities in space activities establishing the conditions for all countries of the region.

Governmental representatives and delegates noted that:

- the Latin American and Caribbean region has been developing its space capacities since the 1970s: several countries have established national space agencies with planned space programs and activities;
- the Region has a very active scientific community, with historical Universities and scientific institutions that would benefit from their inclusion and active participation in the global space community, which would facilitate the exchange of space knowledge and increase space capacity-building opportunities;





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space partnerships among academic institutions of the Region and between these and the international space community is a challenging opportunity to support the socio-economic regional development and insert "Space activities" in the governmental agendas and also to support an adequate infrastructural development on ground and in space.

Ministers, Heads of delegations, Heads of space agencies and all distinguished delegates present in Buenos Aires welcomed the 3<sup>rd</sup> International Space Forum - The Latin American & Caribbean Chapter - and identified the following points as the main objectives to be pursued in a medium-short term:

- increase and deepen networking in space cooperation activities among Latin American and Caribbean scientific and academic institutions, and with spacefaring countries, in order to facilitate capacity building and technology transfer;
- consider the existing space Centers and facilities in the region to build up a space network of infrastructures to develop a sustainable roadmap for a challenging regional Capacity Building Program linked to the global IAF community;
- consider the opportunities offered by the regional Center for Space Science and Technology education for Latin American and the Caribbean (CRECTEALC) affiliated to the United Nations;
- among the space educational institutions, the Mario Gulich Institute in Space Advanced Studies, located in Cordoba (Argentina) at the Teofilo Tabanera Space Center of CONAE, represents a unique Centre of excellence in the region for earth observation data use, training, teaching, processing and information for the management of natural resources and disasters;
- promote an ever greater space cooperation in the Region to prepare the adequate environment for the development of a future regional space agency;
- promote the peaceful use of outer space for the benefit of the present and future generation of men and women and as a contribution to the achievement of the goals of the 2030 agenda of the United Nations.

Finally, the Latin American and Caribbean delegations expressed the wish to replicate this regional space Forum in the following years, to enhance the participation of local scientific communities, academic institutions and experts, involving also new actors and private companies to continue and expand the discussion on space capabilities and technology opportunities for a greater socio-economic development of the Region.



### **6 KEYNOTE SPEECHES ABSTRACTS**

# Keynote speech on Management of Natural Resources and Prevention of Disasters by Dr. Jan Woerner, Director General, European Space Agency (ESA)



ESA is an intergovernmental organisation to serve the Member States in the space domain. In the sense that "competition is a driver" and "cooperation is an enabler" ESA develops space missions to save our planet. This includes the processes of BIG DATA and artificial intelligence for evaluation and decision support. A sustainable Earth needs a comprehensive view including opportunities and threats in space and on the surface.

By combining national interests, capabilities and funding possibilities a cooperation scheme is existent which satisfies national and continental needs as well as cooperation on a global scale.

# Keynote speech Space Partnerships by Rosa Maria Ramírez de Arellano y Haro, Chair of the 2018-2019 UNCOPUOS



Nowadays, more and more countries are carrying out space activities and using space technology in various practical applications; this has been largely possible thanks to the fact that data and technology access is increasingly more open and less expensive. However, there is a growing disparity between countries that have acquired capacity and developed space technology and those that have not yet done. Latin America, being an emerging region, is counted within this group of countries; hence the need to continue promoting the design of study programs for the training of technicians,

engineers, scientists and professionals in the space field in order to strengthen their own capacities in space science and technology, (without ignoring the necessary cooperation that must prevail with the most developed countries in the field). Additionally, it is true that Latin America has higher education centers where high-quality research is carried out, it is necessary to promote a greater link between space research and its applicability in solving the major problems that affect us as a region, in alignment with the SENDAI Summit, PARIS Agreement, ODTs (Guidelines of sustainability development goals; and SPACE2030 Agenda and its plan of implementation that is being formulated. In a complementary manner, it is important to formulate specific cooperation schemes among academic institutions in the region, promoting the exchange of knowledge and the development of projects together with a long-term regional vision.







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# Keynote speech on Education and Capacity Building by Raúl Kulichevsky, Executive and Technical Director, Comisión Nacional de Actividades Espaciales (CONAE)

Capacity building has typically been defined as the development and strengthening of human and institutional resources, but, in a broader sense, capacity building encompasses a country's human, scientific, technological, organizational, and institutional resources and capabilities.



The space sector can play a fundamental role in the socioeconomic growth and sustainable development of Latin American and Caribbean countries contributing to the formulation and implementation of policies in connection with productive areas, emergency management, security, urban planning, water management, marine and coastal ecosystems, health care, etc. with the provision of space-based information. However, as necessary as generating the technology to provide the information, it is necessary to ensure that the community is ready to take complete advantage of all these data from satellite EO missions and convert them efficiently into products that can support decision-making.

With this view in mind, building human capital is a strategic policy at CONAE since its creation. These activities have been oriented to the use of Earth Observation (EO) data not only with training courses for our Institutional Users but also with different programs oriented to high level education courses (Masters Degrees and a PhD degree very recently approved). We have also created and implemented the 2MP Program devoted to children between 8 and 15 years old and their teachers at school.

This keynote presents the experience of more than 20 years at CONAE in Education and Capacity Building.



### 7 LOGISTICAL INFO

#### PARTICIPANTS REQUIREMENTS

Participation is expected from Latin American and Caribbean Ministers in charge of Space Science & Technology, Authorities in charge of Space affairs, Space Agencies, Local Scientific Communities and Academia from Latin American and Caribbean Countries.

#### **DATES AND LOCATION**

The Forum will be held on Thursday, 1 November 2018 at Centro Cultural de la Ciencia (C3) in Buenos Aires, Argentina.

An optional visit is also planned on **Friday, 2 November 2018 to CONAE's Teofilo Tabanera Space Center (CETT)** situated in Falda del Carmen, Province of Cordoba.

#### LANGUAGE OF THE FORUM

The participants should have a working knowledge of English. English-Spanish interpretation will be provided. Keynote Speeches and documents for the Forum shall be in English only.

#### SECURITY DURING THE EVENT

National and local authorities will take all necessary security measures.

Delegates are required to wear their identity badges at all times both at the Welcome Reception and at the Forum Session venue.

Badges will be provided by a dedicated desk before starting the Forum Session at the Venue.

#### LIFE AND HEALTH INSURANCE

Life and major health insurance is the responsibility of each selected participant or his/her nominating institution or government. The co-sponsors will not assume any responsibility for life and major health insurance, nor for any expenses related to medical treatment or accidents.

#### **ARRIVAL IN BUENOS AIRES**

Located on the shore of the Rio de la Plata, the Autonomous City of Buenos Aires is the federal capital of Argentina.

Buenos Aires is served by three airports:

#### • Ministro Pistarini International Airport, Ezeiza (EZE)

The biggest airport in Argentina is located in Ezeiza, 32km (20 miles) from the centre of Buenos Aires city. Most long-haul international flights arrive and depart from here, along with some domestic and regional flights. The journey from the airport to the centre of the city takes about 50 minutes.

#### Jorge Newbery Airport, known as Aeroparque (AEP)

Located in the city itself, in the Palermo neighbourhood, this airport is within 25 minutes of the main hotels in Buenos Aires. It serves mainly domestic flights and flights to neighbouring countries.





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#### El Palomar (EPA)

Located 18km (11 miles) from the city, El Palomar Airport began serving a range of low-cost domestic flights to destinations throughout Argentina in 2018.

Getting to the city from the airports

- Taxis are readily available at both airports.
- Private transfers can be booked in advance or on arrival. Tienda León runs buses from Ezeiza airport to its base in Puerto Madero, in the center of Buenos Aires city.
- Several public bus lines stop at Jorge Newbery Airport. You'll need a SUBE card to use them ask at Jorge Newbery Tourist
  Assistance Center)

For more information on the airports, enter the site of Aeropuertos Argentina 2000: http://www.aa2000.com.ar/

#### By coach

The Terminal de Omnibus de Retiro, or Retiro coach station, provides hundreds of coach services to destinations in Argentina and other Latin American countries. Long-distance bus travel is common in Argentina and most coach companies offer very comfortable "cama-ejecutivo" (executive bed) class seats, and often provide food on long-distance services. Dozens of companies operate from the coach station. Tickets can be bought at the booths on the upper floor, at authorised vendors in the city, or online. If in doubt, ask for help at our Tourist Assistance Center at unit 83.

#### By boat

- Ferries

There are regular ferry services between Buenos Aires and Montevideo and Colonia de Sacramento in Uruguay. The ferry terminals in Buenos Aires are located in Puerto Madero and La Boca. The following companies run services:

- Buquebus
- Seacat
- Colonia Express

All delegations are kindly requested to arrange their transport from Airport to the hotels in Buenos Aires.

#### **VISAS**

Visitors of most nationalities can enter Argentina for up to 90 days without a visa. To find out whether you need a visa to enter Argentina, see here: <a href="http://csidn.mrecic.gov.ar/en/content/do-i-need-visa-enter-argentina">http://csidn.mrecic.gov.ar/en/content/do-i-need-visa-enter-argentina</a>. Note that Argentina no longer charges reciprocity fees to US or Australian citizens.

Citizens from Mercosur nations need only their national ID to enter the country.

#### **Embassies and consulates**

It is recommended that you check visa requirements with your local Argentine Embassy or consulate well in advance to your travel

The Argentine customs website has a list of Argentine embassies and consulates abroad: <a href="http://www.mrecic.gov.ar/en/representaciones/embajadas">http://www.mrecic.gov.ar/en/representaciones/embajadas</a>

Click here for a list of foreign embassies and consulates in Argentina <a href="http://www.aduanaargentina.com/listado.php?seccion=23">http://www.aduanaargentina.com/listado.php?seccion=23</a>.

If you are required to obtain a visa, please contact **Mr. Stanislav Makarchuk** (<a href="mailto:smakarchuk@conae.gov.ar">smakarchuk@conae.gov.ar</a>) for advice on the requirements.

#### **HEALTH & SECURITY**

Buenos Aires is a safe, modern city with high police presence and good quality health provision.

There are no major health risks in the city (recent outbreaks of zika elsewhere in the Americas have not affected temperate Buenos Aires) and no vaccinations are required for entry into Argentina.

Tap water is drinkable. Public hospitals are open 24 hours a day and attend patients free of charge, and pharmacies are easily found all over the city.

Like with any large metropolis, petty crime and theft does exist, and visitors should always take precautions, particularly in tourist hot spots and crowded places. We recommend keeping your belongings with you at all times, taking licensed taxis, and ensuring your bags or rucksacks are kept closed. Stick to well-lit streets in the evenings and keep "bling" to a minimum.

Any medical costs incurred during their stay in Argentina shall be borne by the meeting participants; it is therefore strongly recommended that the participants arrange for their own health insurance.

#### **WEATHER**

Spring time in Buenos Aires is the best time to be in the city. Temperatures are warm but comfortable with ranging from (high)22C/72F – (low) 14C/57F. There is lots of sun but it also does rain quite a bit during this time of the year. The jacaranda trees are in full bloom, making purple arches along Buenos Aires streets. People in town will be happy that winter has come to an end and everyone spends their free time outside to celebrate. With warm days and cool nights, you can enjoy the city 24 hours per day.

What to pack: Light clothing, light jacket, sweater/sweatshirt, rain coat, close toed shoes, sunscreen.

#### **MOVING AROUND**

#### Public transport

Buenos Aires has a quick, efficient and economical public transport system with more than 180 bus lines linking every area of the city and six underground metro (subte) lines, which connect the city's historic political and financial centre with the main avenues, train stations and coach stations.

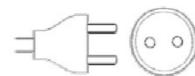
#### **SUBE travelcard**

To travel on public transport, you'll need a SUBE travelcard, which you can get from one of our Tourist Assistance Centers, subte stations and many kiosks throughout the city. Simply charge the card with credit and you're ready to travel. To check the best way to get from A to B, download the free app **Cómo Llego** for your smartphone.

#### **ELECTRICITY**

The standard voltage is 220v AC, 50Hz.

Plugs have three pins. Adaptors for European and American electrical items are available at any electrical store.













Buenos Aires, Argentina | 1 November 2018







#### **MORE INFORMATION**

You can find more information about the city, practical information and attractions at: <a href="https://turismo.buenosaires.gob.ar/en/article/first-time-city">https://turismo.buenosaires.gob.ar/en/article/first-time-city</a>

#### **ACCOMMODATION IN BUENOS AIRES**

Participants are kindly requested to make their own hotel reservation. The area near the venue has a wide variety of choices. For reference, we include attached a table with some of the hotels near the venue of forum are:

Hotel	Address	Telephone	e-mail
Whyndham Dazzler Palermo	Humboldt 1650,	(54-11) 5217-5799	https://www.wyndhamhotels.com/dazzler/destinations
Krista Boutique Hotel	Bonpland 1665	(54-11) 4771-4697	http://www.kristahotel.com.ar
Aspen Square Palermo Soho	Thames 2313	(54-11) 5166-1998	http://aspen-square. buenosaireshotelsargentina.com/en/
BA Sohotel	Paraguay 4485	(54-11) 4832-4474	http://www.basohotel.com/
Nuss	El Salvador 4916- Palermo Soho	(54-11) 4833-6222	https://www.nusshotel.com/en-gb
Malabia House	Malabia 1555	(54-11) 4833-2410 / 4832-3345	malabiahouse.eml
Vain Boutique hotel	Thames 2226/8	(54-11) 4776-8246	http://www.vainhotel.com/
Hotel Cristoforo Colombo	Fray Justo S. M. de Oro 2747	(54-11) 4778-4945	http://www.hotelcc.com.ar/

#### DEADLINE FOR ACCREDITATION AND CONFIRMATION OF ATTENDANCE

#### Accreditation should be done through the diplomatic channel.

Delegations are also encouraged to confirm their participation and composition of delegation (up to a maximum of 4 members, including Minister and/or Head of Delegation) sending an email to: <a href="mailto:spaceforum@iafastro.org">spaceforum@iafastro.org</a>.

• It is also very important to confirm if the Head of delegation (with an accompanying person) would like to **visit the**CONAE Teófilo Tabanera Space Center in Cordoba on Friday, 2 November 2018.

#### FORUM POINT OF CONTACT

**International Astronautical Federation (IAF)** 

Ms. Giulia Maria Berardi 100 Avenue de Suffren 75015 Paris (France) spaceforum@iafastro.org

Should you require any further help or information, please contact: <a href="mailto:spaceforum@iafastro.org">spaceforum@iafastro.org</a>



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# 70<sup>th</sup> INTERNATIONAL ASTRONAUTICAL CONGRESS

21-25 October 2019 | Washington, D.C. United States



Space: The Power of the Past, the Promise of the Future









www.glec2019.org









MARRAKECH, **MOROCCO** 

24-26 APRIL 2019

#IAC2018 Delegates: Do not miss the Global Conference on Space for Emerging Countries – GLEC 2019 Press Conference, on Tuesday 2 October 2018 from 17:15 – 17:45 at CCB Gallery in the Bremen Conference Center.

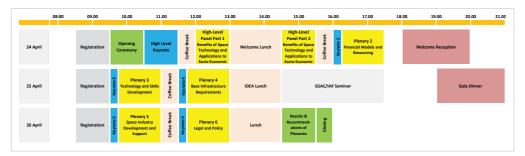
The International Astronautical Federation (IAF) together with the Centre Royal De Télédétection Spatiale (CRTS) and with the support of the Centre National D'Études Spatiales (CNES) are very proud to officially invite you to the Global Conference on Space for Emerging Countries (GLEC2019) to be held in Marrakech, Morocco from 24 to 26 April 2019.

Being the first Conference of its kind, GLEC2019 aims at actively engaging emerging countries in the global space sector by highlighting the socio-economic benefits of space applications; by understanding the various financial models for the optimal resourcing of national space programmes; by identifying opportunities for technology and skills transfer; by creating awareness about the base infrastructure requirements needed for operationalizing national space programmes and by creating awareness on the essential legislative and policy elements that must be considered in establishing the foundation for national space programmes.

#### High-level Keynotes and Round Tables focusing on:

- Benefits of Space Technology and Applications to Socio-Economic Development,
- Financial Models and Resourcing,
- Technology and Skills Development,
- Base Infrastructure Requirements,
- Space Industry Development and Support,
- Legal and Policy.

#### Conference at a glance:



#### **IPC Co-Chairs:**



Driss El Hadani Director General Centre Royal de (CRTS)



### Jean-Pascal Le Franc

Director of Planning, nternational Relations & Centre National d'Études Spatiales (CNES),



#### Valanathan Munsami

VP: Developing Countries and Emerging Countries, IAF, Chief Executive Officer (CEO), South African National Space Agency (SANSA),

#### For more information:

Website: www.glec2019.org E-mail: glec2019@iafastro.org Be part of the conversation @iafastro and #GLEC2019













# Bridging the Space Divide in Emerging Countries







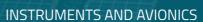


The cooperation between Riyadh and Beijing comes in the implementation of a memorandum of understanding concluded between the two countries during the visit of the Custodian of the Two Holy Mosques King Salman bin Abdulaziz Al Saud to China on the 16th of March 2017, which laid the foundation for cooperation with the China National Space Administration to explore the moon. The Saudi participation reflected in the development and manufacturing an advance deep space remote sensing payload aiming to map and explore the lunar surface include the far side. The payload was developing and manufacturing in a record time of no more than 12 months during which the Saudi research team faced numerous challenges, most prominent of which was the importance of manufacturing a compact payload with a high capability and performance while withstanding the environment of deep space.

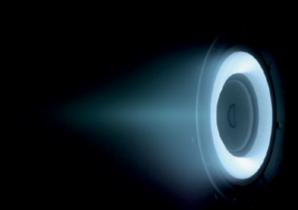












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