

United Nations/Austria Symposium

**“Access to Space: Holistic Capacity Building
for the 21st Century”**

Programme

Venue:

**Institute of Communication Networks and Satellite Communications
Graz, Austria**

Graz, Austria, 3 – 7 September 2017

Organized by

The United Nations Office for Outer Space Affairs

Co-organized by

The Government of Austria

With the support of

**European Space Agency (ESA),
Deutsches Zentrum für Luft- und Raumfahrt (DLR),
Austrospace, Joanneum Research, NPOC Space Law, Graz University of Technology,
City of Graz, State of Styria, the Ministry for Transport, Innovation and Technology**

Honorary Committee (in alphabetical order):

S. Di Pippo	Director, Office for Outer Space Affairs, United Nations
J. Wörner	Director General, ESA
P. Foing-Ehrenfreund	Chair of the Executive Board, DLR
M. Kowatsch	President, AUSTROSPACE, Austria
H.Kainz	Rector of Graz University of Technology
S. Nagl	Mayor, City of Graz, Austria
W. Pribyl	CEO, JOANNEUM RESEARCH, Austria
I. Schädler	Director, Ministry of Transport, Innovation and Technology, Austria
H. Schützenhöfer	Governor, Federal State of Styria, Austria
C. Stix-Hackl	Ambassador, Ministry for Europe, Integration and Foreign Affairs, Austria

Programme Committee (in alphabetical order):

I. Duvaux-Béchon	ESA
G. Götz	Ministry for Europe, Integration and Foreign Affairs
C. Lechtenboerger	DLR
O. Koudelka	JOANNEUM RESEARCH and Graz University of Technology
I. Marboe	Universität Wien
J. Ortner	EURISY
J. Del Rio Vera	Office for Outer Space Affairs, United Nations
M.Woltran	Office for Outer Space Affairs, United Nations

Local Organizing Committee (in alphabetical order):

A. Fuchs-Fehringer	Graz Tourism
N. Hofer	City of Graz
O. Koudelka	JOANNEUM RESEARCH and Graz University of Technology
D. Müller	JOANNEUM RESEARCH
M.Schaffer	JOANNEUM RESEARCH

General Information

At its Fifty-ninth Session in June 2016, the Committee on the Peaceful Uses of Outer Space endorsed seven thematic priorities for the implementation of UNISPACE+50, including “Capacity-building for the twenty-first century” which is the most cross-cutting aspect of the initiative. Member States seek to define new innovative and effective approaches to overall capacity-building and development needs as a fundamental pillar of global space governance.

The Symposium will build around innovative approaches to capacity-building in the space sector, including the need to measure progress and development. The determination of the long term impact of an activity can be a challenging task but can be overcome by creating a set of standardized set of Space Capabilities indicators covering all space related domains and applications and will provide orientation to countries in the evaluation of their capabilities and their prioritization. Therefore, this set of indicators (hereafter referred as Space for Development Profile) becomes a key decision support tool for countries in space related matters. It could also serve the Office for Outer Space Affairs to measure the impact of its activities and can help propose targeted initiatives by identifying gaps or areas of improvement.

Based on the 2016 United Nations/International Astronautical Federation Workshop on Space Technology for Socioeconomic Benefits: Integrated Space Technologies and Applications for a Better Society in Guadalajara, Mexico¹, which recommended that the Office for Outer Space Affairs should develop a space capacity index and a space solutions compendium, the Symposium will provide a unique opportunity to discuss ‘Access to Space: Holistic Capacity Building for the 21st Century’ and the contributions of space technology and its applications for sustainable development in the light of the technical, legal, political, regulatory developments.

Set up and Location

Venue:

Graz University of Technology
Institute of Communication Networks and Satellite Communications
Inffeldgasse 12
8010 Graz
Austria

Objectives

This symposium is a flagship event towards UNISPACE+50 Thematic Priority 7 (TP7). Under TP7, the Office for Outer Space Affairs has started a pilot project on a Space for Development Profile (SDP), to create a profile of the space domain of countries, and a Space Solutions Compendium, to provide solutions to improve the indicators defined in the SDP.

¹ A/AC.105/1128 Report on the United Nations/International Astronautical Federation Workshop on Space Technology for Socioeconomic Benefits: Integrated Space Technologies and Applications for a Better Society

The Symposium will be an opportunity to open a dialogue on TP7 to discuss innovative approaches to capacity-building in the space domain, particularly in the areas of policy, applications and technology, including the need to measure progress and development, identification of partners, tools for capacity-building and funding opportunities and aims at providing recommendations to COPUOS for UNISPACE+50 concerning this Thematic Priority.

The Symposium will deliver plans and identify required partnerships for consideration by the Committee on the Peaceful Uses of Outer Space for its strategy towards Space2030 . Its objectives are to:

1. Identify innovative and effective approaches to overall capacity building;
2. Discuss infrastructure for cross-sectoral and integrated applications;
3. Enhance existing partnerships and forge new ones for capacity building and institutional support;
4. Promote participation of women and youth in space science;
5. Provide recommendations on the Space for Development Profile and Space Solutions Compendium;
6. Discuss the role of the regional centers for capacity building
7. Discuss the role of UNOOSA in implementing capacity building activities

For the SDP and SSC, the particular objectives are:

- Provide measurable indicators of space capabilities and space applications currently used in a country
- Enable the identification of long term plans for developing its space capabilities based on the indicators, targeting the needs of each country
- Support Result Based Management
- Offer a catalogue of solutions which can be used to enhance particular indicators

Expected Outputs and Contributions to UNISPACE+50

The outputs of the Symposium must help countries to equip themselves with the technical and policy capabilities to integrate space technology and applications in their strategic planning towards the 2030 Agenda for Sustainable Development. The UNISPACE+50 process shall provide recommendations on how to proceed with the implementation of this thematic priority.

To this aim, the Space for Development Profile has to be accompanied by a collection of solutions specifically addressing capabilities in the areas of interest. For each indicator of the Space for Development Profile, the Space Solutions Compendium offers a set of possible solutions that can be applied to improve the future measurements of a particular indicator. The Symposium will discuss plans to design and build the Space for Development Profile and its associated Space Solutions Compendium.

2018: UNISPACE+50 years of space cooperation and development

UNISPACE+50 will take stock of the contributions of the three UNISPACE conferences (UNISPACE I, held in 1968, UNISPACE II, held in 1982 and UNISPACE III, held in 1999) to global space governance. In line with the 2030 Agenda for Sustainable Development and sustainable development goals, UNISPACE+50 aims to chart the future role of the Committee on the Peaceful Uses of Outer Space (COPUOS), its subsidiary bodies and the United Nations Office of Outer Space Affairs at a time of an evolving and more complex space agenda when more actors, both governmental and non-governmental, are increasingly involved in space activities. The activities of the United Nations Programme on Space Applications are an integral part of the UNISPACE+50 thematic cycle, contributing to space economy, space society, space accessibility and space diplomacy. More detailed information is available at the website of the Office for Outer Space Affairs:

The Symposium will deliver plans and identify required partnerships for consideration by the Committee on the Peaceful Uses of Outer Space for its strategy towards Space 2030. Additionally, it could consider the following issues for recommendations to UNISPACE+50:

- Recommendations for the way forward on the Space for Development Profile and Space Solutions Compendium based on the results of the pilot projects.
- Identify and propose new and innovative capacity-building approaches to UNISPACE+50, including recommendations on tools and means to be used, supporting a Result Based Management approach for capacity building.
- Propose holistic solutions on space capacity building encompassing from space law to space applications and technologies;
- Provide recommendations on partnerships for capacity building considering the existing ones and potential ones as identified during the symposium
- Provide recommendations specifically targeted at the promotion the participation of women and youth in space science
- Provide recommendations on the role of UNOOSA as institutional capacity-building organisation in developing countries upon request and in cooperation with developed countries

Programme of the Symposium

The symposium is aligned with the objective of UNISPACE+50 to strengthen international coordination and cooperation in the use and applications of space science and technology. In particular, the symposium expects to contribute mainly to Thematic Priority 7: Capacity building for the 21st Century. The program is designed to cover these objectives. Sessions might be added or modified depending on the availability of speakers.

The programme includes plenary sessions and sufficient time for discussions among participants to identify the priority areas where pilot projects should be launched and examine possible partnerships that could be established. The programme is as follows. **Please note that is a draft version and the order of speakers and split in sessions may be subject to some changes:**

Sunday, 3 September 2017

15:30-16:00	Registration of Participants
Session 0 : Challenges for Capacity-Building	
16:00 – 18:00	Inputs and experiences from participants (Selected participants) Moderator: Markus Woltran / Jorge Del Rio Vera
18:00	Dinner Buffet
19:30	Transfer to Hotels

Monday, 4 September 2017

Morning Session	
08:30-09:00	Registration of Participants
09:00-09:30	<p>Opening Ceremony (Short) Welcome Addresses</p> <p>Mr. Wolfgang Pribyl, CEO Joanneum Research</p> <p>Mr. Harald Kainz, Rector of TU Graz</p> <p>Mr. Hans M.Steiner, Director AUSTROSPACE</p> <p>Ms. Isabelle Duvaux-Bechon, Head of Member States Relation and Partnerships Office, ESA</p> <p>Ms. Pascale Foing-Ehrenfreund, Chair of DLR Executive Board, DLR</p> <p>Mr. Ingolf Schädler – Director for Innovation, Austrian Federal Ministry for Transport, Innovation and Technology</p> <p>Mr. Peter Piffl-Percevic, Counsellor, City of Graz</p> <p>Ms. Barbara Eibinger-Miedl, Minister, Government of Styria</p> <p>H.E. Christine Stix-Hackl – Ambassador, Permanent Mission of Austria to UN</p> <p>Moderators: Irmgard Marboe, Otto Koudelka</p>
09:30 -10:00	<p>Setting the Scene</p> <p>Ms. Simonetta Di Pippo</p> <p>Director of the United Nations Office for Outer Space Affairs</p>
10:00-10:15	Coffee Break

10:15-11:30	High Level Discussion Panel Ms. Pascale Foing-Ehrenfreund – Chair of German Aerospace Center (DLR) Executive Board Ms. Jean-Jacques Tortora – Director of the European Space Policy Institute Ms. Isabelle Duvaux-Bechon – ESA’s Head of Member States Relation and Partnerships Office Mr. Andreas Geisler – Austrian Research Promotion Agency Ms. Qi Yu – Deputy Director General Department of International Cooperation China National Space Administration Moderator: Simonetta Di Pippo
11:45-12:00	Questions and Answers
12:00-13:30	Lunch Break

Afternoon Session	Session 1: Tools and technologies for capacity-building in the 21st Century Moderator: Johannes Ortner Rapporteur: Hui Du
13:30-13:45	Capacity-Building as a tool to eradicate poverty and inequalities through the sustainable development of nations: the role of space Petra Bayr Austrian Parliament
13:45-14:00	Thematic Priority 7 Capacity Building for the 21st Century Jorge Del Rio Vera United Nations Office for Outer Space Affairs
14:00-14:15	Three decades of '3i's space education – the International Space University at 30 Chris Welch International Space University – Programme director of 3i
14:15-14:30	Utilizing the Full Potential of Space for the Implementation of the Europe 2020 Strategy in the Field of Education Panos Mastorakis Permanent Mission of Cyprus to UN in Vienna
14:30-14:45	Capacity Building in the Context of the International Astronautical Federation Christian Feichtinger International Astronautical Federation – Executive Director
14:45-15:00	The Open Universe Initiative Paolo Giommi Italian Space Agency
15:00-15:15	Outreach in 21st Century: Kurzgesagt on youtube Patrizia Mosca Kurzgesagt
15:15-15:30	The Dream Chaser Mission in cooperation with UN Luciano Saccani Sierra Nevada Corporation

15:30-15:45	<p>New Visions, Methods and Tools for Capacity-Building in the 21st Century</p> <p>Stefano Ferreti European Space Policy Institute</p>
15:45 – 16:00	<p>Coffee Break</p>
16:00 – 18:00	<p>Session 8: UNISPACE+50 Panel Discussion Round table on the landing points for Capacity-Building in the 21st Century</p> <p>Moderator: United Nations Office for Outer Space Affairs</p>
19:30	<p>Reception Dinner offered by the City of Graz</p>

Tuesday, 5 September 2017

Morning Session	<p>Session 2: Infrastructure for Capacity-Building</p> <p>Moderator: Jorge Del Rio Vera Rapporteur: Yukiko Okumura</p>
08:30-09:00	Registration of Participants
09:00-09:15	<p>Investments in Space are made on Earth - but can developing countries really benefit from investing in space programs?</p> <p>Pontsho Maruping South African Council for Space Affairs</p>
09:15 - 09:30	<p>Proposed Infrastructure and Development Facilities at Nagpur, India Aimed at Facilitating Global Capacity Building and Access to Satellite Technology Including Design and Construction of Small Satellites To Serve the Needs of UN Member States, and To Support UNISPACE+50 & 2030 Agenda</p> <p>Milind Primpikar CANEUS</p>
09:30-09:45	<p>The road to a developing country's space agency: Costa Rican Case</p> <p>Ana Avila Becerril Permanent mission of Costa Rica to the United Nations</p>
09:45-10:00	<p>The importance of infrastructure in Capacity-Building to perform Space-related projects in Iran</p> <p>Haleh Ansari Lari Iranian Space Agency</p>
10:00-10:15	Coffee Break
10:15-10:30	<p>The First Kenya University NanoSatellite 1KUNS-PF: capacity building using the KiboCube launch opportunity</p> <p>Jon Kimani University of La Sapienza</p>
10:30-10:45	<p>The Overview development of Ghana First Satellite: GHANASAT-1</p> <p>Benjamin Bonsu All Nations University</p>
10:45-11:00	<p>Nanosatellites for Technological and Science Missions</p> <p>Otto Koudelka Technical University of Graz</p>

11:00-11:15	<p>The European Space Agency Concurrent Design Facility</p> <p>Isabelle Duvaux-Bechon European Space Agency</p>
11:15-11:30	<p>Developing the Space Workforce through LEAP2 and LCATS Industry Clusters and International Student Exchange</p> <p>Samuel Ximenes WEX Foundation</p>
11:30-11:45	<p>The Importance of Product and Quality Assurance in the Development Process</p> <p>Wolfgang Veith European Space Agency</p>
11:45-12:00	<p>Availability of Space Science and Technology Infrastructure in Africa</p> <p>Rayan Iman Space Research Centre University of Khartoum</p>
12:00-12:15	<p>ICE CUBES – International Commercial Experiment Cubes establishing a fast-track, simple, affordable access service to allow for capacity building with small experiments to the ISS</p> <p>Hilde Stenuit Space Applications Services NV/SA</p>
12:15-12:45	<p>Visit the test facilities where a nanosatellite for ESA is being implemented and the ground station/mission control centre for our BRITE-Austria/TUGSAT-1 satellite</p>
12:45-14:00	<p>Lunch Break</p>

Afternoon Session	Session 3: Workshop on UNOOSA Pilot project on Space for Development Profile and Space Solutions Compendium Moderator: Pending Confirmation
14:00-14:15	Space for Development Profile and Space Solutions Compendium - A new approach for Capacity Building Luc St Pierre United Nations Office for Outer Space Affairs
14:15-14:30	Space for Development Profile and Space Solutions Compendium: Pilot Project results and lessons learnt Jorge Del Rio Vera United Nations Office for Outer Space Affairs
14:30-14:45	ESA Catalogue of activities supporting UN SDGs Isabelle Duvaux-Bechon European Space Agency
14:45-15:00	2Mp Education Program from Argentinian Space Agency: Spatial Technology as a learning tool for children and young people. Maximiliano Pisano National Space Activities Commission
15:00-15:15	Space capabilities in Ethiopia Aster Yilma Economic Commission for Africa
15:15-15:30	Experiences on Sustainability Indexes Sebastian Straube Interstellar Ventures
15:30-15:45	Speaker Contacted/Pending Confirmation
15:45-16:00	Speaker Contacted/Pending Confirmation
16:00-16:15	Coffee Break

Afternoon	Session 9: Cross-Cutting Aspects of Capacity-Building
Session	Moderator: Pending Confirmation
16:15-16:30	CEOS Working Group on Capacity Building and Data Democracy (WGCapD) Initiatives: Lessons Learned and Best Practices Hilcea Santos Ferreira National Institute for Space Research (INPE)
16:30-16:45	Creating a dialogue platform between space and NGOs to enhance sustainable development: the case of Change Onlus in Madagascar Isabella Mazza Change Onlus
16:30-16:45	Reducing the Digital Gap and vulnerability of indigenous communities by using Satellite Communication Sandra Mejia Instituto de Promocion Humana
16:45-17:00	Maximizing the benefits of a United Nations Regional Centre for Space Science and Technology Education for SDGs Ganiyu Agbaje African Regional Centre for Space Science and Technology Education
17:00-17:15	Speaker Contacted - Pending Confirmation
17:15-17:30	Changing the landscape for the 21st century space: the role of private enterprise in the 3rd generation of space ventures Robbie Schingler Planet Labs
19:30	Reception Dinner offered by the State of Styria

Wednesday, 6 September 2017

Morning Session	Session 4: Workshop on specific tools for Space Law Capacity-Building Moderator: Peter Stubbe
08:30-09:00	Registration of Participants
09:00-09:20	Russian translation of the Cologne Commentary on Space Law Olga Volynskaya Russian Delegation to COPUOS Legal Sub-Committee 2017
09:20 - 09:40	The Chinese Version of Cologne Commentary on Space Wang Guoyu Space Law Institute / Beijing Institute of Technology
09:40-10:00	Perspectives of the future Space Law Compendium as an outcome of UNISPACE+50 Bernhard Schmidt-Tedd German Aerospace Center (DLR)
10:00-10:20	Coffee Break
10:20-10:40	Speaker Contacted - Pending Confirmation
10:40-11:00	A Holistic Approach to National Space-Law and Policy Education and Capacity-Building Kuan-Wei Chen McGill University
11:00-11:20	Endeavours for a renewed capacity building in space law for the Space Agenda 2030 Laura Jamschon Mac Garry Permanent Mission of Argentina to Vienna
11:20-11:40	Speaker Contacted - Pending Confirmation
11:40-12:00	Speaker Contacted - Pending Confirmation
12:00-13:30	Lunch Break

Afternoon	Session 5: How to attract women and youth to space-related careers
Session	Moderator: Christiane Lechtenboerger/Markus Woltran
13:30-13:45	Space for Women: An Initiative of the United Nations Office for Outer Space Affairs Markus Woltran United Nations Office for Outer Space Affairs
13:45-14:00	Thematic Priority 7 of UNISPACE+50 and women in developing countries
14:00-14:15	Inspiring and Engaging the next generation! - the ESA Education Programme Isabelle Duvaux-Bechon European Space Agency
14:15-14:30	Space Generation Advisory Council: A platform for capacity-building and professional development Clementine Decoopman Space Generation Advisory Council
14:30-14:45	Challenges and Opportunities that exist in the Space Sector for Mexican women Lourdes Garcia Hernandez Mexican Space Agency
14:45-15:00	The privileged astronomical position of Ecuador known from the time of the Aboriginal culture Quito-Cara, and how this can stimulate the young people to study astronomy Geovanna Vasquez Netware for Astronomy School Education
15:00-15:15	Activities of the African Regional Centre for Space Science and Technology Education to Promote the Participation of Girls in Space Science in Nigeria Omowumi Alabi African Regional Centre for Space Science and Technology Education
15:15-15:30	Inspiring youth and women towards space science and astronomy in Nepal Sabin Gautam Phokara Astronomical Society

15:30-15:45	Breaking the glass ceiling for women in the world of government and commercial space Agnieszka Lukaszczyk Planet Labs
15:45-16:00	Coffee Break

Afternoon Session	Session 6: Workshop on model curricula for space technology and space law Moderator: Irmgard Marboe/Otto Koudelka
16:00 – 16:15	Speaker Contacted - Pending Confirmation
16:15-16:30	Capacity Building: A Comparison of International Collaboration at Two Different Levels Reuben Umunna Kyushu Institute of Technology
16:30-16:45	UNOOSA Space Technology Curricula: the GNSS case Sharafat Gadimova United Nations Office for Outer Space Affairs
16:45-17:00	Title pending Paul B. Larsen University of Aberdeen
17:00-17:15	Space Law Curriculum Development Tanja Masson-Zwaan International Institute of Air and Space Law, Leiden University
17:15-17:30	Education Curricula for Space Law Capacity-Building Ram Jakhu McGill University
17:30-17:45	The unique Space, cyber and telecommunications law LLM program at the University of Nebraska-Lincoln Frans von der Dunk University of Nebraska-Lincoln

19:30	Reception Dinner
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Thursday, 7 September 2017

Morning Session	<p>Session 7: Institutional Capacity-Building</p> <p>Moderator: Pending Confirmation</p>
08:30-09:00	Registration of Participants
09:00-09:10	<p>Capacity-Building Network</p> <p>Werner Balogh United Nations Office for Outer Space Affairs</p>
09:10 - 09:20	<p>Challenges of Capacity-Building in Multi-State Environment</p> <p>Mohammad Ebrahimi Seyedabadi Asia-Pacific Space Cooperation Organization</p>
09:20-09:30	<p>Open Access to information and data at the European Space Agency</p> <p>Marco Trovatiello European Space Agency</p>
09:30-09:40	<p>Promoting Space Science in Basic Education in the Philippines</p> <p>Josette Biyo Science Education Institute</p>
09:40-09:50	<p>Novel Approaches by Nigeria's Space Agency (NASRDA) in Geospatial Intelligence Training and Capacity Development of Institutions and MDAs for Sustainable Implementation of socio-economic projects and programmes in the Country</p> <p>Vaatyough Mamfe National Space Research and Development Agency</p>
09:50-10:00	<p>Capacity development in the space field. The Mexican experience</p> <p>Balan Gutierrez Herrera Mexican Space Agency</p>
10:00-10:10	<p>Capacity building at the Brazilian National Institute for Space Research (INPE): an overview of the current activities and future challenges.</p> <p>Adriana Thome National Institute for Space Research</p>

10:10-10:20	Capacity-Building in Earth Observation in Morocco: Objectives and achievements by CRTS Amal Layachi Royal Centre for Remote Sensing
10:20-10:30	Space Science Outreach and Capacity-Building in Nepal Suresh Bhattarai Nepal Astronomical Society
10:30-10:40	Buthan in Space Yeshey Choden Ministry of Information and Communications
10:40-12:30	Wrap Up Session – Recommendations for UNISPACE+50
12:30-13:00	Closure Ceremony