

United Nations/Austria Symposium

"Access to Space: Holistic Capacity Building for the 21st Century"

Programme

Venue:

Institute of Communication Networks and Satellite Communications Inffeldgasse 12 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 Forschungsgesellschaft mbH, 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. 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 Forschungsgesellschaft mbH, 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 University of Vienna

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 Forschungsgesellschaft mbH and Graz University of

Technology

D. Müller JOANNEUM RESEARCH Forschungsgesellschaft mbH

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

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 Societ

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.

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:

http://www.unoosa.org/oosa/en/aboutus/history/unispace.html

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 (Selected Participants Only)
	Moderators: Jorge Del Rio Vera / Markus Woltran
16:00 – 18:00	Inputs and experience from participants
	(Selected participants)
Presentations	
16:15	Engaging with stakeholders in preparation of UNISPACE+50
	Alessandra Vernile
	European Policy Institute
16:30	Capacity-Building: A comparison of international collaboration at two different levels
	Reuben Umunna
	Kyushu Institute of Technology

18:00	Dinner Buffet
19:30	Transfer to Hotels

Monday, 4 September 2017

08:00 - 09:00	Registration of Participants

Morning Session	Moderators: Otto Koudelka / Irmgard Marboe
09:00 – 09:40	Opening Ceremony (Short) Welcome Addresses
	Mr. Heinz Mayer, CEO Joanneum Research
	Ms. Isabelle Duvaux-Béchon, European Space Agency
	Ms. Maria-Helene Fuchs, Counsellor, Permanent Mission of Austria to the United Nations
	Ms. Margit Mischkulnig, Ministry of Transport, Innovation and Technology
	Ms. Pascale Ehrenfreund, DLR
	Mr. Peter Piffl-Perčević, Counsellor, City of Graz
	Ms. Sandra Holasek, Member of the Provincial Government, Government of Styria
	Ms. Simonetta Di Pippo, United Nations Office for Outer Space Affairs
09:40 - 10:00	Setting the Scene
	Ms. Simonetta Di Pippo
	Director of the United Nations Office for Outer Space Affairs
10:00 – 10:15	Coffee Break
	High Level Discussion Panel
	Moderator: Simonetta Di Pippo
10:15 – 11:45	Ms. Pascale Ehrenfreund – Chair of German Aerospace Center (DLR) Executive Board
	Mr. 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. Stephan Mayer – Member of the Austrian Aeronautics and Space Agency, Austrian Delegate to
	ESA
	Ms. Qi Yu – Deputy Director General Department of International Cooperation China National
	Space Administration

11:45 – 12:00	Questions and Answers
12:00 – 13:00	Lunch Break

Afternoon Session	Session 1: Tools and technologies for capacity-building in the 21st Century
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	Moderator: Johannes Ortner / Rapporteur: Hui Du
13:00	Capacity-Building as a tool to eradicate poverty and inequalities through the sustainable
	development of nations: the role of space
	Petra Bayr
	Austrian Parliament
13:20	Leadership transformation – tools and approaches in international development cooperation
	Blanka Bellak Leadership Associates
13:40	Creating a dialogue platform between space and NGOs to enhance sustainable development:
	the case of Change Onlus in Madagascar
	Isabella Mazza
	Change Onlus
14:00	Capacity Building in the Context of the International Astronautical Federation
	Christian Feichtinger
	International Astronautical Federation – Executive Director
14:20	The Open Universe Initiative
	Paolo Giommi
	Italian Space Agency
14:40	Outreach in 21st Century: Kurzgesagt on youtube
	Patrizia Mosca
	Kurzgesagt
15:00	The Dream Chaser Mission in cooperation with UN
	Luciano Saccani
	Sierra Nevada Corporation
15:20	New Visions, Methods and Tools for Capacity-Building in the 21st Century
	Stefano Ferretti
	European Space Policy Institute
15:40 – 16:00	Coffee Break and Poster Session

16:00 – 18:00	Session 2: UNISPACE+50 Panel Discussion
	Round table on the landing points for Capacity-Building in the 21st Century
	Ms. Simonetta Di Pippo, Office for Outer Space Affairs
	Ms. Dominique Tilmans, EURISY
	Ms. Ana M. Avila Becerril, Permanent Mission of Costa Rica
	Ms. Hilcea Santos Ferreira, INPE / GEO Foundational Task on Capacity-Buildin Coordination
	Mr. Christian Feichtinger, International Astronautical Federation
	Mr. Luciano Saccani, Sierra Nevada Corporation
	Moderators: Otto Koudelka / Irmgard Marboe
	Rapporteurs: Markus Woltran / Jorge Del Rio Vera

18:15	Transfer to the Hotels
19:00	Transfer from the Hotels to the Centre of Graz
19:30	Reception hosted by the Mayor of the City of Graz, Siegfried Nagl
	Assembly Hall of the City Parliament of Graz

Tuesday, 5 September 2017

Morning Session	Session 3: Infrastructure for Capacity-Building
	Moderator: Jorge Del Rio Vera / Rapporteur: Yukiko Okumura
09:00	Three decades of '3i's space education – the International Space University at 30
	Christopher Welch
	International Space University – Programme director of 3i
09:15	Investments in Space are made on Earth – but can developing countries really benefit from investing in space programs?
	Pontsho Maruping
	South African Council for Space Affairs
09:30	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
	Milind Primpikar
	CANEUS
09:45	The European Space Agency Concurrent Design Facility
	Robin Biesbroek
	European Space Agency
10:00	Availability of Space Science and Technology Infrastructure in Africa
	Rayan Imam
	Space Research Centre University of Khartoum
10:15	Developing the Space Workforce through LEAP2 and LCATS Industry Clusters and International Student Exchange
	Samuel Ximenes
	WEX Foundation
10:30	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
	Hilde Stenuit
	Space Applications Services NV/SA
10:45 – 11:00	Coffee Break
11:00	The importance of infrastructure in capacity-building to perform space-related projects in Iran
	Haleh Ansari Lari
	Iranian Space Agency

11:15	The First Kenya University NanoSatellite 1KUNS-PF: capacity building using the KiboCube launch opportunity
	John Kimani
	Kenya National Space Secretariat
11:30	The Overview development of Ghana First Satellite: GHANASAT-1
	Benjamin Bonsu
	All Nations University
11:45	Nanosatellites for Technological and Science Missions
	Otto Koudelka
	Graz University of Technology
12:00 – 12:30	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
12:00 – 13:00	Poster Session (Posters will be on display during the whole Symposium)
13:00 – 14:00	Lunch Break

Afternoon Session	Session 4: Workshop on UNOOSA Pilot project on Space for Development Profile and Space Solutions Compendium Moderator: Luc St-Pierre / Rapporteur: Hui Du
14:00	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	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	PATENTSCOPE and WIPO's activities
	Iustin Diaconescu
	World Intellectual Property Organization
14:45	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	Space capabilities in Ethiopia
	Aster Yilma, Economic Commission for Africa

Overview of corporate initiatives contributing to the UN SDG Agenda
Sebastian Straube
Interstellar Ventures
ESA Catalogue of activities supporting UN SDGs
Isabelle Duvaux-Béchon
European Space Agency
Discussion
Coffee Break
Session 5: Cross-Cutting Aspects of Capacity-Building
Moderator: Irmgard Marboe / Rapporteur: Yukiko Okumura
Changing the landscape for the 21st century space: the role of private enterprise in the 3rd
generation of space ventures
Robert Schingler
Planet Labs
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)
Reducing the Digital Gap and vulnerability of indigenous communities by using Satellite Communication
Sandra Mejia
Instituto de Promocion Humana
Using online social media channels
Stefania Pandolfi
European Organization for Nuclear Research (CERN)
Utilizing the Full Potential of Space for the Implementation of the Europe 2020 Strategy in the Field of Education
Panagotis Mastorakis

18:15	Transfer to the Hotels
19:00	Transfer from the Hotels to the Centre of Graz - 'Burgring'
19:30	Reception hosted by the Governor of Styria, Hermann Schützenhöfer Staterooms of Grazer Burg

Wednesday, 6 September 2017

Morning Session	Session 6: Workshop on specific tools for Space Law Capacity-Building
	Moderator: Peter Stubbe / Rapporteur: Jorge Del Rio Vera
09:00	Overview of UNOOSA capacity-building in space law and policy
	Niklas Hedman
	United Nations Office for Outer Space Affairs
09:20	Endeavours for a renewed capacity building in space law for the Space Agenda 2030
	Laura Jamschon Mac Garry
	Permanent Mission of Argentina to Austria
09:40	A Holistic Approach to National Space-Law and Policy Education and Capacity-Building
	Kuan-Wei Chen
	McGill University
10:00	Russian translation of the Cologne Commentary on Space Law
	Olga Volynskaya
	Russian Delegation to COPUOS Legal Sub-Committee 2017
10:20	The Chinese Version of Cologne Commentary on Space
	Guoyu Wang
	Space Law Institute / Beijing Institute of Technology
10:40 - 11:00	Perspectives of the future Space Law Compendium as an outcome of UNISPACE+50
	Bernhard Schmidt-Tedd
	German Aerospace Center
11:00 – 11:15	Coffee Break
	Session 7: How to attract women and youth to space-related careers
	Moderator: Markus Woltran / Rapporteur: Yukiko Okumura
11:15	Space for Women: An Initiative of the United Nations Office for Outer Space Affairs
	Markus Woltran
	United Nations Office for Outer Space Affairs
11:30	Inspiring and Engaging the next generation! - the ESA Education Programme
	Isabelle Duvaux-Béchon
	European Space Agency
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11:45	Space Generation Advisory Council: A platform for capacity-building and professional development
	Clementine Decoopman
	Space Generation Advisory Council
12:00	Challenges and Opportunities that exist in the Space Sector for Mexican women
	Lourdes Garcia Hernandez
	Mexican Space Agency
12:15	The privileged astronomical position of Ecuador known from the time of the Aboriginal
	culture Quitu-Cara, and how this can stimulate the young people to study astronomy
	Geovanna Vasquez
	Netware for Astronomy School Education
12:30	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
12:45	Inspiring youth and women towards space science and astronomy in Nepal
	Sabin Gautam
	Phokara Astronomical Society
13:00 – 13:15	Breaking the glass ceiling for women in the world of government and commercial space
	Agnieszka Lukaszczyk
	Planet Labs
13:15 – 14:00	Lunch Break

Afternoon Session	Session 8: Workshop on education curricula for space technology and space law
	Moderator: Otto Koudelka / Rapporteur: Hui Du
14:00	Overview of the existing UN curricula on space technology and space law
	Niklas Hedman
	United Nations Office for Outer Space Affairs
14:20	UNOOSA Space Technology Curricula: the GNSS case
	Sharafat Gadimova
	United Nations Office for Outer Space Affairs
14:40	Modern Science in the Classroom
	Sascha Schmeling
	European Organization for Nuclear Research (CERN)

15:00	Space Law Curriculum Development
	Tanja Masson-Zwaan
	International Institute of Air and Space Law, Leiden University
15:20	Education Curricula for Space Law Capacity-Building
	Ram Jakhu
	McGill University
15:40	New Space Law Issues Arising with Private Enterprise in Outer Space
	Paul B. Larsen
	formerly Georgetown University Law Center
16:00-16:15	Coffee Break
16:15	The unique Space, cyber and telecommunications law LLM program at the University of Nebraska-Lincoln
	Frans von der Dunk
	University of Nebraska-Lincoln
16:35 – 16:55	Challenges in using the UN Curricula at universities and in online-courses
	Irmgard Marboe
	University of Vienna
	Session 9: Institutional Capacity-Building (First part)
	Moderator: Niklas Hedman / Rapporteur: Jorge Del Rio Vera
16:55	Challenges of Capacity-Building in Multi-State Environment
	Mohammad Ebrahimi Seyedabadi
	Asia-Pacific Space Cooperation Organization
17:10	Capacity building in Space Law in Europe at the example of ECSL
	Christian Brünner
	University of Graz
17:25	The road to a developing country's space agency: Costa Rican Case
	Ana Avila Becerril
	Permanent mission of Costa Rica to the United Nations
17:40 – 18:00	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
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18:15	Transfer to the Centre of Graz - 'Andreas Hofer Platz'
18:30	Guided Tour through Old City of Graz
	Dinner at Krebsenkeller,
	Sackstrasse 12
	Centre of Graz
21:30	Departure at 'Andreas Hofer Platz'

Thursday, 7 September 2017

Morning Session	Session 9: Institutional Capacity-Building (continued)
	Moderator: Niklas Hedman / Rapporteur: Jorge Del Rio Vera
09:00	UNOOSA New Capacity-Building Initiatives: the Global Partnership and the Capacity-Building Network
	Luc St-Pierre
	United Nations Office for Outer Space Affairs
09:15	Promoting Space Science in Basic Education in the Philippines
	Josette Biyo
	Science Education Institute
09:30	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
	Mamfe Vaatyough
	National Space Research and Development Agency
09:45	GEO: delivering Global Earth Observing System of Systems (GEOSS) and building global capacity
	Hilcea Santos Ferreira
	Member of GEO Foundational Task on Capacity Building Coordination
10:00	Capacity development in the space field. The Mexican experience
	Balan Gutierrez Herrera
	Mexican Space Agency
10:15	Capacity building at the Brazilian National Institute for Space Research (INPE): an overview of the current activities and future challenges
	Adriana Thome
	National Institute for Space Research
10:30	Capacity-Building in Earth Observation in Morocco: Objectives and achievements by CRTS
	Amal Layachi
	Royal Centre for Remote Sensing
10:45	Buthan in Space
	Yeshey Choden
	Ministry of Information and Communications
11:00 – 11:15	Space Science Outreach and Capacity-Building in Nepal
	Suresh Bhattarai
	Nepal Astronomical Society

11:15 – 11:30	Coffee Break

	UNISPACE+50 and Wrap Up
11:30 – 12:45	Wrap Up Session and Recommendations for UNISPACE+50
11.30 – 12.43	Wrap Up Session and Recommendations for UNIST ACE #30
	Chaired: Luc St-Pierre / Niklas Hedman
12:45 – 13:00	Closing Ceremony

13:30	Transfer to the Hotels