

United Nations / Austria / European Space Agency
Symposium on
Small Satellite Programmes for Sustainable Development
“Implementing Small Satellite Programmes:
Technical, Managerial, Regulatory and Legal Issues”

Programme

Austrian Academy of Sciences, Institute for Space Research
Schmiedlstrasse 6, Graz, Austria

Hosted by the Austrian Federal Ministry for European and International Affairs,
State of Styria and City of Graz
and co-sponsored by the European Space Agency

13 - 16 September 2011

Honorary Committee (in alphabetical order):

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J.J. Dordain	European Space Agency
K. Edlinger-Ploder	Member of the Government, State of Styria, Austria
S. Nagl	Mayor, City of Graz, Austria
M. Othman	Director, Office for Outer Space Affairs, United Nations
F. Voves	Governor, State of Styria, Austria

Programme Committee (in alphabetical order):

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J. Aigner	Federal Ministry for European and International Affairs, Austria
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J.-C. Bigot	European Space Agency
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A. Rupprecht	State of Styria
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Tuesday, 13 September 2011

Morning

08:00 **Registration**

09:00 **Opening Ceremony**

Master of Ceremony: Willibald Riedler, Austrian Academy of Sciences

09:00 Welcome / Opening Remarks

- *Wolfgang Baumjohann, Austrian Academy of Sciences*
- *Frederic Nordlund, European Space Agency*
- *Peter Piffel-Perčević, City of Graz*
- *Helmut Böck, Austrian Federal Ministry for European and International Affairs*
- *Mazlan Othman, United Nations Office for Outer Space Affairs*

10:00 **Keynote Addresses**

10:00 Small satellites and the long-term sustainability of outer space activities

*Paul Brooks
University of Surrey
United Kingdom*

10:30 ESA's Small Satellite Activities

*Frederic Nordlund
European Space Agency*

11:00 *Coffee/Tea Break*

11:00-12:30 *Press Conference*

(by invitation)

11:30 United Nations Basic Space Technology Initiative and Objectives of the 2011 Symposium

*Werner Balogh
United Nations Office for Outer Space Affairs*

12:15 Practical arrangements for the Symposium

*Ayoni Oyeneyin
United Nations Office for Outer Space Affairs*

12:30 *Lunch*

Afternoon

13:30 **Session 1: Review of Small Satellite Activities**

Chairperson: Johannes Ortner, Eurisy

Rapporteur: Danielle Renee Wood, Massachusetts Institute of Technology

13:30 Collaborative nano-satellite programmes for socio-economic development in Africa

*Robert Van Zyl
Cape Peninsula University of Technology
South Africa*

13:50 Small Sat Programmes in Asia Pacific Region UNIFORM/STARS

*Hiroaki Akiyama
Wakayama University
Japan*

14:10	Small Satellite Programmes in the Latin America and the Caribbean Region	<i>Esau Vicente Vivas Universidad Nacional Autónoma de México Mexico</i>
14:30	Small Sat Programmes in the Western Asian Region: Dubai-Sat2 Program and Design Developments	<i>Hamad Al-Jaziri and Abdulla Saif Harmoul Emirates Institute for Advanced Science and Technology, United Arab Emirates</i>
14:50	<i>Coffee/Tea Break</i>	
15:30	HUMSAT	<i>Fernando Aguado Agelet University of Vigo, Spain</i>
15:50	Nano-satellite Mission Idea Contest	<i>Rei Kawashima, Japan</i>
16.10	Presentations by Participants on their Small Satellite Activities (approx. 5 min each, 8 slots)	<i>Symposium Participants (a sign-up list will be made available at the Symposium)</i>
17:30	<i>Transfer to the hotel</i>	
19:00	<i>Transfer from the hotel to the “Burgring” (center of Graz)</i>	
19:30	<i>Reception by the Governor of the State of Styria F. Voves (Orangerie Graz Burg)</i>	

Wednesday, 14 September 2011

Morning

09:00 Session 2: Programmatic and Managerial Issues

Chairperson: Otto Koudelka, TU Graz

Rapporteur: Maria Victoria Alonsoperez, Universidad de la Republica, Uruguay

09:00	GENSO Network	<i>Lars Mehnen FH-Technikum Wien, Austria</i>
09:20	Launch Opportunity for Small Satellites by PSLV	<i>R. Sateesh Kumar Indian Space Research Organisation, India</i>
09:40	Technology Transfer in Small Satellite Programmes	<i>Tom Segert Berlin Space Industry Association, Germany</i>
10:00	International Standardization of Nanosatellite Technologies	<i>Mengu Cho Kyushu Institute of Technology, Japan</i>
10:20	<i>Coffee/Tea Break</i>	
10:40	Small satellite project in Nigeria - Challenges and opportunities	<i>Spencer Onuh National Space Research and Development Agency, Nigeria</i>

11:00	Small satellite development in Vietnam, from education to potential application	<i>Thu Vu Trong FSpace laboratory, FPT Technology Research Institute, FPT University, Viet Nam</i>
11:20	International University Collaboration for the Development of Small Satellites Activities	<i>Ramón Martínez Universidad Politécnica de Madrid, Spain</i>
11:40	Architecting Small Satellite Programs: Opportunities for Capability Building and Spinoff Benefits	<i>Danielle Wood Massachusetts Institute of Technology United States of America</i>
12:00	Presentations by Participants on their Small Satellite Activities (approx. 5 min each, 4 slots)	<i>Symposium Participants (a sign-up list will be made available at the Symposium)</i>
12:30	<i>Lunch</i>	
<i>Afternoon</i>		
13:30	<u>Session 3: Programmatic and Managerial Issues</u> <i>Chairperson: Robert Ryk Van Zyl, African Institute of Technology Rapporteur: Thu Vu Trong, FSpace laboratory</i>	
13:30	Management experience on a small satellite project involving the participation of 4 universities in Northwest part of Mexico, using certified management tools	<i>Enrique Pacheco Centro de Investigacion Cientifica y educacion Superior de Ensenada (CICESE) Mexico</i>
13:50	United Nations/Japan Fellowship Programme on Nano-Satellite Technologies	<i>Mengu Cho Kyushu Institute of Technology Japan</i>
14:10	Experiences of the managerial aspects of the UNOSAT project	<i>Fernando Stancato Universidade de São Paulo, Brazil</i>
14:30	Space mission management for nano- and small satellite programmes	<i>Daniel Rockberger Israel Aerospace Industries, Israel</i>
14:50	Management and operational aspect of the BRITE constellation	<i>Otto Koudelka TU Graz, Austria</i>
15:10	<i>Coffee/Tea Break and departure for TU Graz</i>	
15:30	TU Graz Small Satellite Ground Station	<i>Symposium Participants</i>
16:45	<i>Transfer to city and free time until 18:30</i>	
18:30	<i>Meeting Point "Hauptplatz - Brunnen"</i>	
19:00	<i>Reception by the Mayor of the City of Graz S. Nagl (Rathaus)</i>	

Thursday, 15 September 2011

Morning

9:00	Session 4: Regulatory and Legal Issues <i>Chairperson: Irmgard Marboe, University of Vienna</i> <i>Rapporteur: Rei Kawashima, UNISEC</i>	
9:00	Regulatory/Legal Issues of Small Satellites	<i>Mildred Troegeler</i> <i>European Space Policy Institute</i>
9:20	Frequency Registration for Small Satellite Missions	<i>Chuen-Chern Loo</i> <i>International Telecommunications Union</i>
10:30	<i>Coffee/Tea Break</i>	
11:00	Discussion: "Experiences with frequency coordination in small satellite programmes"	<i>Symposium Participants</i>
11:45	Presentations by Participants on their Small Satellite Activities (approx. 5 min each, 6 slots)	<i>Symposium Participants (a sign-up list will be made available at the Symposium)</i>
12:30	<i>Lunch</i>	
<i>Afternoon</i>		
13:30	Session 5: Small Satellites and Long-term Sustainability of Outer Space Activities <i>Chairperson: Mengu Cho, Kyushu Institute of Technology</i> <i>Rapporteur: Fernando Stancato, Universidade de São Paulo, Brazil</i>	
13:30	Satellite Registration, Launching State and Space Debris Mitigation Issues	<i>Werner Balogh</i> <i>United Nations Office for Outer Space Affairs</i>
13:50	Technical measures for space-debris mitigation in small satellite missions	<i>Alex Da Silva Curiel</i> <i>Surrey Satellite Technology Ltd, United Kingdom</i>
14:10	National Space Law and Small Satellite Programmes	<i>Irmgard Marboe</i> <i>University of Vienna, Austria</i>
14:30	Discussion on experiences with satellite registration/space debris mitigation and on possible voluntary guidelines for the implementation of small satellite missions	<i>Symposium Participants</i>
15:30	<i>Coffee/Tea Break</i>	
16:00	Presentations by Participants on their Small Satellite Activities (approx. 5 min each, 12 slots)	<i>Symposium Participants (a sign-up list will be made available at the Symposium)</i>
17:30	<i>Transfer to the "Andreas Hofer Platz" (City of Graz)</i>	
18:00	<i>Visit of the Needle at the Kunsthhaus and Dinner at the "iku" in the "Kunsthhaus"</i>	

Friday, 16 September 2011

Morning

9:00 **Session 6: Working Groups on the Future of the Basic Space Technology Initiative**

Chairperson: Werner Balogh, United Nations Office for Outer Space Affairs

9:00 Presentation of the results of the ISU Space Studies Programme Team Project on Small Satellites *Participants in the Team Project Small Satellites of the 2011 Space Studies Programme of the International Space University*

9:20 Discussion on the Basic Space Technology Initiative and on the observations and recommendations to be included in the report to the United Nations Committee on the Peaceful Uses of Outer Space *All Symposium Participants*

Discussion on the Establishment of a Working Group for a Space Technology Development Education Curriculum *All Symposium Participants*

Presentations by Participants on their Small Satellite Activities (time permitting) *Symposium Participants (a sign-up list will be made available at the Symposium)*

12:30 *Lunch*

Afternoon

13:30 **Session 7: Way Forward**

13:30 Symposium Review and discussion of forthcoming future activities under the Basic Space Technology Initiative *All Symposium Participants*

Remaining Presentations by Participants on their Small Satellite Activities (time permitting) *Symposium Participants (a sign-up list will be made available at the Symposium)*

15:00 *Coffee/Tea Break*

15:30 **Closing Session**

Master of Ceremony: Willibald Riedler, Austrian Academy of Sciences

15:30 Distribution of Certificates and Closing Remarks

- *Austrian Academy of Sciences*
- *Austrian Federal Ministry for European and International Affairs*
- *United Nations Office for Outer Space Affairs*

16:30 *Transfer to the hotel and end of the Symposium*