



**2013 INTERNATIONAL WORKSHOP ON  
ENVIRONMENT AND ALTERNATIVE ENERGY**  
**"Increasing Space Mission Resiliency through Sustainability"**  
**Frascati, Italy – October 22 – 25, 2013**

**TECHNICAL PROGRAM**  
(as of October 21, 2013)

**Tuesday, October 22**

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**Registration and Check - In**

**8:00 – 9:15am**

**\*Please Note: Your passport is required daily for entry into the ESRIN facility**

**Welcome and Opening Remarks**

**9:15am - 10:30am**

Nathalie Meusy, Head of ESA's Coordination Office on Sustainable Development, ESA HQ  
Simonetta Cheli, Head of the Coordination Office, Dir. of Earth Observation Programmes, ESA  
Olga Dominguez, Assistant Administrator, NASA Office of Strategic Infrastructure, NASA HQ

**Panel Discussion: Sustainability as a Policy Tool**

**11:00am - 12:30pm**

Olga Dominguez, Assistant Administrator, NASA Office of Strategic Infrastructure, NASA HQ  
Nathalie Meusy, Head of ESA's Coordination Office on Sustainable Development, ESA  
Nicola Dambra, Head of Sustainability, Alitalia

**Increasing Space Mission Critical Ground Infrastructure Resiliency through Sustainability:**

**Part 1 – Energy/Water Security Measures**

**1:00pm - 6:00pm**

***Planning – Energy and Water Security***

- Holger Fischer – Energy Water Manager, NASA HQ

***Facility Management Issues Including Water Security***

- Paul Cannock – Head of ESA's Facility Management Department, ESA HQ

***Wave Energy Generation***

- Michele Grassi – CEO and Chairman , 40south Energy Group

***Assessing the Potential Impacts of Climate Change on Critical Ground Infrastructure***

- Robert Spencer – URS Infrastructure & Environment UK Ltd

***Towards Sustainable Ground Stations at ESA***

- Marc Roubert, Ground Facilities Infrastructure Section Maintenance Engineer, ESA

***Clean Space***

- Kai-Uwe Schrogl – Head of ESA's Policy Department, ESA HQ

***ESRIN Data Centres Monitoring and Management***

- Stefano Ferretti – ESRIN Infrastructure Engineer, ESA

***Tour of ESRIN Facility***

- Stefano Ferretti – ESRIN Infrastructure Engineer, ESA
- Roberto Franciosi – ESRIN Infrastructure Engineer, Head of ESRIN Facility Management Service, ESA

**Wednesday, October 23**

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**Opening Remarks and Keynote Speaker**

**9:00am – 9:40am**

Holger Fischer, NASA HQ

Olga Dominguez, Assistant Administrator, NASA Office of Strategic Infrastructure, NASA HQ

Kai-Uwe Schrogl, Head of ESA's Policy Department, ESA HQ

**Student Presentations and Poster Session on Related International and Domestic Research**

**9:40am – 4:30pm**

***Modeling the Energy System of Mauritius and its Interlinkages to Water, Land-use and Climate Systems***

- Manuel Welsch, KTH – Royal Institute of Technology

***Wind Energy Assessment in Africa; A GIS-based Approach***

- Dimitris Mentis – KTH, Royal Institute of Technology

***Supplying Services to a City – Urban CLEWs***

- Rebecka Segerstrom – KTH, Royal Institute of Technology

***Glucose – Providing Resources for a Growing Planet***

- Constantinos Taliotis – KTH, Royal Institute of Technology

***Providing Resilient Facility Management***

- Abhishek Shivakuma and Nawfal Saaid Failali – KTH, Royal Institute of Technology

***Polygeneration Energy Container: Modeling Energy Services for Remote Developing Communities***

- Rita Paleta – IST University of Lisbon

***ESRIN Data Centres Configuration Management Tools***

- Antonio Di Fabio – University of Rome
- Antonio Pochiero – University of Rome

***Development of SMART Coatings for Corrosion Protection of Aluminum Alloys for Aeronautical Applications***

- Darya Snihirova, – Institute Superior Tecnico

***Biohydrogen Production Using Bionanocoatings for Immobilizing Highly Efficient Hydrogen-Producing Bacteria***

- Angela Abreu– University of Minho

***Silica Nanocontainers for Development of Multifunctional Coatings***

- Frederico Maia – University of Aveiro

***Corrosion Protection AA2024 by Sol-Gel Coatings with Nanocapsules of Inhibitor***

- Kiryl Yasakau – University of Aveiro

***An Innovative Bioelectrochemical System for the Recovery of Phosphorus, Ammonia and Electricity from Urine***

- Sonia Barbosa – University of Minho

***Carbon Nanotube/Silicon Hybrid Solar Cell Devices***

- Francesco De Nicola – University of Rome

***Integrating Short-term Dynamics into Long-term Models***

- Manuel Welsch – KTH, Royal Institute of Technology

**Poster Session Judging and Reception**

**4:30pm - 6:30pm**

**Thursday, October 24**

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**Environmentally-Driven Changes to Aerospace Materials and Processes:**

**Part 1 – Corrosion Prevention**

**9:00am – 12:00pm**

***NASA Technology Evaluation for Environmental Risk Mitigation (TEERM) Overview***

- Brian Greene, Program Manager, ITB, Inc.

***NASA's Role in Meeting Environmentally Driven Challenges in Corrosion Protection***

- Luz Calle, Senior Research Scientist, NASA KSC

***NASA TEERM Coatings Projects***

- Matt Rothgeb, Senior Engineer, ITB, Inc.

***Environmentally-Preferable Corrosion Protection***

- Pattie Lewis, Senior Engineer, ITB, Inc.

***Reinforced Concrete Prevention and Protection with CATODICH Protection Techniques***

- Valerio Carusi, Senior Engineer, Global Engineering Services and Consulting

**Environmentally-Driven Changes to Aerospace Materials and Processes:**

**Part 2 – REACH**

**12:00pm – 5:00pm**

***The European Space Industry within REACH – Roles, Challenges and Responses***

- Tim Becker, Chief EU Compliance Officer, ESA

***Impact of REACH Legislation on European Space Programs***

- Thomas Rohr, Materials Engineer, ESA, ESTEC

***MAP management according European regulations (i.e. REACH) for Critical Substances***

- Guillaume Sierra, R&D Manager, MAP

***Development and Testing of an Additive Manufactured Propulsion System (AMPS) for Use as a High Impulse Thruster for Small to Micro Cubical Satellites***

- Mattia Dall'Oglio, Sales Director, CRP Group

***Environmentally-driven Materials Obsolescence: Material Replacements and Lessons Learned from NASA's Space Shuttle Program***

- Anne Meinhold, Senior Engineer, ITB, Inc.

***Supply Chain and REACH Issues in the Space Sector***

- Eric Guilmet, Head of the Supply Chain Policy, ESA Policies Department

***Results of a Recent Benchmark in Industry Regarding the Best Practices of "Responsible Procurement"***

- Marion Mirailles and Karoline Marburge, Coordination Office on Sustainable Development, ESA Policies Department

**Friday, October 25**

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**Increasing Space Mission Critical Ground Infrastructure Resiliency through Sustainability:  
Part 2 - Other Infrastructure Resilience Measures and Analytical Tools**

**9:00am - 1:00pm**

***Y 2007 - 2012 ESA Facilities Environmental Report***

- Alessandro Gigante, Health, Safety and Security Officer, ESA

***Non Conservative Errors on Prospective Short Circuit Current Evaluation Downstream  
UPS: Experimental Test Comparison***

- Umberto Grasselli, Professor, University of Rome

**Increasing Space Mission Critical Ground Infrastructure Resiliency through Sustainability:  
Part 2 - Other Infrastructure Resilience Measures and Analytical Tools**

**9:00am - 1:00pm**

***Green Airports***

- TBD, Head of Airports Infrastructure, ADR

***Best Practice for Sustainable Supply Chain Management in Aerospace Industry***

- Danny Kil, Sr. Consultant, URS (Germany)

***ExxFire CoolGas Generators Introduction***

- Harm Botter, Founder & CEO, ExxFire

***ESRIN Data Centres Monitoring and Management***

- Stefano Ferretti – ESRIN Infrastructure Engineer, ESA

***Tour of ESRIN Facility***

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