Scientific Program

3rd International Conference and Exhibition on

Satellite & Space Missions

May 11-13, 2017 Barcelona, Spain
Day 1  May 11, 2017

08:00-08:30  Registrations

Gatwick

08:30-09:00  Opening Ceremony

Keynote Forum

09:00-09:05  Introduction

09:05-09:45  Title: A new era of planetary exploration with small satellite platforms
Benjamin K Malphrus, Morehead State University, USA

09:45-10:25  Title: Space research at AFOSR
Kent Miller, Air Force Office of Scientific Research, USA

Networking & Refreshments 10:25-10:45 @ Meeting Halls

10:45-11:25  Title: Post-ISS concept for 2025 and beyond
Oliver Romberg, German Aerospace Center, Germany

Group Photo


Session Chair: Nicolas H Younan, Mississippi State University, USA
Session Co-chair: Joseph Seckbach, The Hebrew University of Jerusalem, Israel

Session Introduction

11:25-11:45  Title: Lunar IceCube: Pioneering technologies for interplanetary small satellite exploration
Benjamin K Malphrus, Morehead State University, USA

11:45-12:05  Title: Electron photoavalanche diode arrays: A new technology for noiseless high speed near infrared sensors
Gert Finger, European Southern Observatory, Germany

12:05-12:25  Title: Nanosatellites, the tool for a new economy of space: Opening space frontiers to a wider audience
Gloria Garcia Cuadrado, Celestia Aerospace, Spain

12:25-12:45  Title: Research methodology in mechanical systems and bionics from Plato to contemporary science
Simona-Mariana Cretu, University of Craiova, Romania

12:45-13:05  Title: SUCHAI 2 and 3: Scientific grounds and challenges of the new space mission of the University of Chile
Marcos A Diaz, University of Chile, Chile

Lunch Break 13:05-13:45 @ Mediteraneo

13:45-14:05  Title: Proposals on multi-channel methods for the simultaneous remote sensing of [O(P)], [O3], and [CO2] altitude profiles in the mesosphere and lower thermosphere in daytime
Valentine A Yankovsky, St. Petersburg State University, Russia

14:05-14:25  Title: Single-satellite global positioning system
Alexander V Bagrov, Institute of Astronomy of the Russian Academy of Sciences (INASAN), Russia

14:25-14:45  Title: Optimal detection of changes in real-time data: Applications in satellites
Peter Johnson, University of Manchester, UK

14:45-15:05  Title: Using Object Based Image Analysis to monitor soil aggregate breakdown under natural conditions
Irena Ymeti, University of Twente, Netherlands

15:05-15:25  Title: Space exploration: A matter for governments or for private operators
Giancarlo Genta, Politecnico University of Turin, Italy
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
<th>Institution/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:25-15:55</td>
<td>Hypothetical discovery of life on Venus</td>
<td>Leonid V Ksanfomality</td>
<td>Space Research Institute, Russia</td>
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<tr>
<td>16:15-16:35</td>
<td>AURORA project: A challenge for synergistic exploitation of Sentinel-4/-5 ozone operational products</td>
<td>Ugo Cortesi</td>
<td>Institute for Applied Physics “Nello Carrara” (IFAC-CNR), Italy</td>
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<td>16:35-16:55</td>
<td>Micro-Satellite hosted laser-gated system for space debris tracking, forest fires and plants' health monitoring and underground facilities’ location</td>
<td>Yavor Yossifov Shopov</td>
<td>Sofia University, Bulgaria</td>
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<td>16:55-17:15</td>
<td>Necklaces theory applied to satellite constellation design</td>
<td>Eva Tresaco</td>
<td>University of Zaragoza, Spain</td>
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<tr>
<td>17:15-17:35</td>
<td>Spatial technology: Hydrological perspectives</td>
<td>Imran Ahmad</td>
<td>Debre Tabor University, Ethiopia</td>
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<td>17:35-17:55</td>
<td>Future intelligent earth observing satellites</td>
<td>George Zhou</td>
<td>Guilin University of Technology, China</td>
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<td>09:00-09:05</td>
<td>High resolution satellite precipitation estimation based on cloud classification</td>
<td>Nicolas H Younan</td>
<td>Mississippi State University, USA</td>
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<td>09:45-10:25</td>
<td>Visual analysis on multidimensional massive data</td>
<td>Dorian Gorgan</td>
<td>Technical University of Cluj-Napoca, Romania</td>
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<td>10:45-11:25</td>
<td>Unified satellite image fusion for sustainable urban environment</td>
<td>Bo Huang</td>
<td>Chinese University of Hong Kong, Hong Kong</td>
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<td>11:25-12:05</td>
<td>Fundamental principles of gyroscope theory</td>
<td>Ryspek Usubamatov</td>
<td>Kyrgyz State Technical University, Kyrgyzstan</td>
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<td>12:05-12:25</td>
<td>Engaging the user community in developing Earth observing remote sensing data products</td>
<td>Vanessa M Escobar</td>
<td>NASA Goddard Space Flight Center, USA</td>
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<td>12:25-12:45</td>
<td>Is there life on planets and satellites? Examples from extremophilic candidates on earth</td>
<td>Joseph Seckbach</td>
<td>Hebrew University of Jerusalem, Israel</td>
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<td>12:45-13:05</td>
<td>Modeling the space environment and its effects on spacecraft and astronauts using SPENVIS</td>
<td>Stijn Calders</td>
<td>Royal Belgian Institute for Space Aeronomy, Belgium</td>
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<td>13:45-14:05</td>
<td>New technologies applied to environmental remote sensing</td>
<td>Emilio Ramirez-Juidias</td>
<td>University of Seville, Spain</td>
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<td>14:05-14:25</td>
<td>Mars the harbinger of human survival</td>
<td>Donald C Barker</td>
<td>MAXD Inc., USA</td>
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14:25-14:45

Title: Application of remote sensing in mapping potential gold mineralization in Muteh gold mining area, Iran

Hooshang Asadi Haroni, The University of Western Australia, Australia

14:45-15:05

Title: The panorama of European launchers and their evolution

Jean-Marc Astorg, National Center for Space Studies (CNES), France

15:05-15:25

Title: An online batch-based fusion filter for navigation in Mars final approach phase

Zhengshi Yu, Beijing Institute of Technology, China

Networking & Refreshments+ Poster Presentations 15:25-15:55 @ Meeting Halls

REC 01

Title: Current status of development of solar coronagraph system

Jihun Kim, Korea Astronomy & Space Science Institute, South Korea

REC 02

Title: Hamiltonian model of formation flying satellites in the critical circular orbits

Shaheera A Altalhi, King Abdul-Aziz University, KSA

REC 03

Title: The combined Kepler 3\textsuperscript{rd} law with universal stellar law: Derivation and application to extra solar systems investigation

Alexander M Krot, United Institute of Informatics Problems-NAS, Belarus

REC 04

Title: Non-rocket launch from Mars

Vladislav A Leonov, Institute of Astronomy of the Russian Academy of Sciences (INASAN), Russia

REC 05

Title: Solar 3-D printer for lunar construction

Valentin K Sysoev, Lavochkin Association, Russia

Session Continues…

15:55-16:15

Title: Sequential quadratic programming and metaheuristic methods applied to low-thrust interplanetary transfers

Porzia Federica Maffione, Polytechnic University of Turin, Italy

16:15-16:35

Title: Using of thermal vision cameras for remote location of caves on Mars for immediate shelters for astronauts and storage chambers

Yavor Yossifov Shopov, Sofia University, Bulgaria

16:35-16:55

Title: Flying Vehicles (FV) for air and space medium, which reactive force is generated by acceleration of electrically charged particles in a constant electric field implemented both inside and outside of the FV

Gennady Semenovich Luk'yanchikov, Prokhorov General Physics Institute-RAS, Russia

16:55-17:15

Title: The evolvement of the university orbital constellation of small satellites series AIST for scientific, educational and applied tasks in the field of remote sensing

Ivan S Tkachenko, Samara University, Russia

17:15-17:35

Title: Forcing of sunspot number oscillations on North Atlantic oscillations

Shahinaz Yousef, Cairo University, Egypt

17:35-17:55

Title: Evolution of mission, design and utilization trends of small and miniaturized satellites in developing countries

Mohamed B Argoun, Cairo University, Egypt

Day 3 May 13, 2017

Extended Networking & Lunch 12:30-13:15 @ Mediteraneo

Award & Closing Ceremony