Programme

In co-ordination with:
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>07:00</td>
<td>Registration &amp; Welcome coffee</td>
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<tr>
<td>07:30</td>
<td>DASIA welcome: Introduction to DASIA - Presenter: Finn Hass, DASIA Chairman Room A</td>
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<tr>
<td>08:00</td>
<td>DASIA welcome by Eurospace - Presenter: Giuseppe Morrillo, Secretary General Room A</td>
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<tr>
<td>08:45</td>
<td>Activities of UK Space Agency - Presenter: Dan Jones, Space Technology Cluster Manager, UK Space Agency Room A</td>
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<tr>
<td>10:15</td>
<td>ESA and ESEC activities in Harwell - Presenter: Michael Haverson, head of Space Segment Products &amp; Technologies Section, Directorate of Telecommunications &amp; Integrated Applications Room A</td>
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<tr>
<td>10:45</td>
<td>SPACE ROBOTICS &amp; BIG DATA MISSIONS - Chaired by R. WARD, Thales Alenia Space UK</td>
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<td>11:15</td>
<td>Developing the Next Generation Space Robotics Processing Platform - Presenters: Michael Walcha, Thales Alenia Space UK &amp; Kristoffer Nyborg Gregersen, SINTEF, Norway</td>
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<td>11:15</td>
<td>Exomars 2020 Mission Management Software, Enabling the Delivery of Science Data - Presenter: Mark Hamn SciSys UK Ltd</td>
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<td>11:45</td>
<td>Sentinel-2, Big Data in Space - Presenter: Gunther Lautenschlager, Airbus Defence &amp; Space GmbH, Germany</td>
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<td>12:15</td>
<td>O B NETWORK ARCHITECTURES &amp; COMMUNICATION PROTOCOLS - Chaired by C. JOERGENSEN, Terma A/S</td>
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<td>12:15</td>
<td>OSRA-NET a new network paradigm for the savoir on-board reference architecture - Marco Panunzi, Thales Alenia Space France</td>
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<td>13:00</td>
<td>LUNCH</td>
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<td>14:00</td>
<td>A Modular Scalable Avionics Architecture for Future Exploration Missions - Presenter: Christian Fidi, TTech Computertechnik AG, Austria</td>
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<td>14:30</td>
<td>Design and Validation of Onboard Protocols using TASTE - Presenter: Steve Duncan, Thales Alenia Space UK</td>
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<td>15:00</td>
<td>‘Space In-Orbit Services, needs and stakes’ by Space TUG Team - Presenter: Andreas Schüttauf, Airbus Defence &amp; Space GmbH, Germany</td>
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<td>15:30</td>
<td>COFFEE BREAK</td>
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<tr>
<td>16:00</td>
<td>O B DATAHANDLING FOR HIGH DATA RATES &amp; VOLUME SAVINGS - Chaired by A. ROSSIGNOL, Airbus Defence &amp; Space SAS</td>
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<tr>
<td>16:00</td>
<td>Space-PowerLink: A Two Wire Distributed ‘Terminal’ Architecture to reduce Harness Mass - Presenter: John Conforth, Thales Alenia Space UK</td>
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<td>16:30</td>
<td>Euclid Data Handling: an innovative file based design - Presenter: Roberto Bogiatto, Thales Alenia Space Italy</td>
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<td>17:00</td>
<td>SpaceFibre Image Sensor and Data Processing Units - Presenter: Steve Parkes, University of Dundee UK</td>
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<td>ROVER RELATED SIMULATION &amp; NAVIGATION - Chaired by R. GERALCH, BSSE</td>
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<td>17:30</td>
<td>Rover Operational Simulator for EXomars - Task &amp; Action Planning Simulator (ROSEX-TAPS) - Presenter: Steve Parkes, University of Dundee UK</td>
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<td>HIGH PERFORMANCE MICROPROCESSORS - Chaired by U. HOCH, Airbus Defence &amp; Space GmbH</td>
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<td>DAHLIA, very high-performance microprocessor for space applications - Presenter: Jean-Luc Poupat, Airbus Defence &amp; Space SAS, Israel</td>
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<td>11:15</td>
<td>Space Level Reliability for High-Performance COTS Microprocessors - Presenter: Thomas Guillemain, Teledyne e2v, France</td>
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<td>High Performance Data Processor (HPDP) – a new generation space processor becomes real - Presenter: Tim Hallers, Airbus Defence &amp; Space GmbH, Germany</td>
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<td>12:15</td>
<td>RC54 Applications in Space - Presenter: Peleg Aviely, Ramon Chips, Israel</td>
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<td>GR716-Rad-Hard Microcontroller for space applications - Presenter: Fredrik Johannson, Cobham Gaither Sweden</td>
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<td>14:30</td>
<td>FPGA HIGH PERF. SYSTEMS - Chaired by J.-L. POUPAT, Airbus Defence &amp; Space SAS</td>
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<td>Evaluation of a Hardware accelerated on-board Processing Pipeline for Solar Orbiter’s PHI Instrument - Presenter: Tobias Lange, IDA TU Braunschweig, Germany</td>
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<td>A Wideband Spectrometer in the Microsemi RTG4 FPGA - Presenter: Steve Parkes, University of Dundee UK</td>
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<td>FUSIO RT - A New Space Modular Computer Core based on European Space FPGA - Presenter: Charles Sailer, 3D Plus, France</td>
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<td>GLOBAL SATELLITE NAVIGATION RECEIVER - Chaired by J.-L. POUPAT, Airbus Defence &amp; Space SAS</td>
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<td>GNSS Receiver Family Status Achievement &amp; Outlook - Presenter: Uwe Hoch, Airbus Defence &amp; Space GmbH, Germany</td>
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<td>RAD HARDENING SOLUTIONS &amp; COTS - Chaired by G. MAGISTRATI, ESA/ESTEC</td>
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<td>17:30</td>
<td>CMOS-based Radiation-hardened Solutions - Presenter: Kevin Klein VORAGO Technologies, USA</td>
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A4 ROVER RELATED SIMULATION & NAVIGATION - Chaired by R. GERLICH, BSSE

09:00 PANGU v4: A software tool for testing vision-based guidance and navigation systems for in-orbit, entry descent and landing and surface mobility operations - Presenter: Steve Parkes, University of Dundee, UK

A5 ON BOARD CONTROL PROCEDURES - Chaired by R. GERLICH, BSSE

09:30 Micropython Virtual Machine for On Board Control Procedures - Presenter: Paul Patisas, Spacebel, Belgium

A6 REQUIREMENTS MODELLING & TESTING - Chaired by M. HERNEK, ESA/ESTEC

10:00 Inking formal requirements models to both model-checkers and theorem-provers - Presenter: Andrew Butcherfield, Lero, Trinity College Dublin, Ireland

10:30 COFFEE BREAK

11:00 Application of a Complete Model-Based Testing Theory to Satellite Control Software - Presenter: Felix Hübben, OHB Systems AG, Germany

11:30 Generating Random Telecommand Test Data Using Genetic Algorithms - Presenter: Ralf Gerlich, BSSE, Germany

12:00 From ATV to Ariane 6, a practical MBSE approach for the flight software - Presenters: Patrick Comery/Olivier Baudillet, Ariane Group SAS, France

13:00 LUNCH

A7 INDEPENDANT S/W VERIFICATION & VALIDATION - Chaired by P. CORMERY, Ariane Group France

ColaJoint collaboration of Independent Verification and Validation Programs across:

14:00
- ESA - Presenter: Pedro A. Barrios Garcia
- JAXA - Presenter: Naoko Okubo
- NASA - Presenter: Jennifer D. Neptune

15:30 COFFEE BREAK

16:00 PANEL SESSION: STANDARDS FOR MODULAR O. B. ARCHITECTURES

This is an ‘Open Panel’ with a lot of Q&A involving the audience between short presentations by panel members:

1. Giorgio Magistretti, ES/ESTEC: Overview of backplanes, theoretical and practical solutions, real contrainsts
2. Hans-Jürgen Herpel, Airbus: System configuration vs. ‘Re-use’ - potential benefits of standards
3. Mathieu Albinet, CNES: Optimization and diversity of designs: Can one standard do it alone?
4. Brice Delandrea, TAS-F: Modularity and standards vs. The integration of platform and payload units

Gala Dinner and Entertainment hosted by Eurospace
Meeting point and time: 6:15 pm in the lobby of the Randolph MacDonald hotel
A8  ADAPTING S/W TO PROCESSORS INCL. EMULATORS AND SDE’S - Chaired by M. MONTAGNA, Thales Alenia Space SpA
09:00  A Software Development Environment for the Control Loop Processor - Presenter: Paul Panis, Spacebel, Belgium
09:30  T-EMU: A Multi-Target Full System Simulator - Presenter: Mattias Holm, TERMA A/S, Denmark
10:00  RC64 Software Development Tools - Presenter: Peleg Aviely, Ramon Chips, Israel
10:30  COFFEE BREAK
11:00  GRMON3 LEON Multi-Processor Systems Software Debugging - Presenter: Fredrik Johansson, Cobham Gaisler, Sweden
11:30  Design and safety assessment of on-board software applications using the AMASS Platform - Presenter: Tiago Manuel Da Silva Jorge, GMV, Spain
12:00  Towards an FDIR process: the SAVOIR FDIR handbook - Presenters: Marcel Verhoef, Avaro Martinex Barrio, ESA/ESTEC, The Netherlands
13:00  LUNCH
14:00  SpaceWire Network Management Service Suite Demontrator for Fault Detection, Isolation and Recovery (N-MaSS SpW-FDIR) - Presenter: Guillaume Salval, Airbus Defence & Space Ltd, UK
14:30  Survey of Time and Space Partitioning for Space Avionics - Presenter: Jan Bredereke, City University of Applied Sciences Bremen, Germany
15:00  Microbenchmarks for multicore timing analysis of space critical software - Presenter: Guilhem Bernal, Rapita Systems, UK
15:30  LibPUS and M&C partition - Presenter: Julien Galizzi, CNES, France
16:00  CHAIRMAN’S CONCLUSION

B4  RAD HARDENING SOLUTIONS & COTS - Chaired by G. MAGISTRATI, ESA/ESTEC
09:00  HYPERION: Low cost, high performance OBC for integrated avionics - Presenter: Mathieu Abinel, CNES, France
09:30  Radiation Testing on Standard Products for HiRel Applications - Presenter: Christian Sayer, Cobham Semiconductor Solutions, USA
10:00  USE OF TTETHERNET - Chaired by O. NOTEBAERT, Airbus Defence & Space SAS
10:30  Development Status of the Rad-Tolerant TTEthernet Controller - Presenter: Christian Fidi, TTTech Computertechnik Austria
11:00  A few suggestions to help you build SpaceWire networks - Presenter: Paul Walker, 4Links Ltd, UK
11:30  Qualification results of GR718B, a radiation-tolerant 18x SpaceWire router - Presenter: Fredrik Johansson, Cobham Gaisler Sweden, Sweden
12:00  SpW EMC Tests - Presenter: Giorgio Magistrati, ESA/ESTEC, The Netherlands
13:00  LUNCH
14:00  Multi-gigabit photonic transceivers for SpaceFibre data networks - Presenter: Ronald Logan, Gnanair Inc, United States of America
14:30  The Evolution of SpaceWire Electrical Interconnect - Faster, Lighter, Smaller - Presenter: Nigel Kellet, ‘Axon’ Cable, UK
15:00  MMUs - Chaired by: L. HILLI, ESA/ESTEC
15:30  FPGA-based Advanced Mass Memory Controller Architecture for future Spacecraft Mass Memory Systems - Presenter: Lei Jia, Institute of Computer and Network Engineering (IDC), Germany
16:00  Airbus next-generation Mass Memory Portfolio - Presenter: Arnaud Wagner - Airbus Defence & Space GmbH, Germany
16:30  CHAIRMAN’S CONCLUSION Room A
LOCATION

Macdonald Randolph Hotel, Oxford
Beaumont Street, Oxford, OX1 2LN
T: +44 (0) 344 879 9132. F: +44 (0) 1865 791 678
www.macdonalldhotels.co.uk/randolph

Please contact Eurospace before booking your room in order to get the Dasia 2018 code and contact details.

REGISTRATION

Advance: Please download and complete the electronic Conference Registration Form (http://eurospace.org/dasia-2018.aspx) and send it to Eurosace before April 30th, 2018.

On site: The Conference Secretariat will open on May 29th, 2017 for late registration, documentation and information, and will remain in operation throughout the Conference.

CONFERENCE FEES

A Conference fee of 940 € is requested from all participants, including speakers and chairmen. This fee will include lunches, coffee breaks, reception and proceedings.

Students are kindly asked to contact Eurosace before making any registration at dasia2018@eurospace.org

The fee for a Vendor Display is 2 200 € and includes one attendance fee for the Conference.

PAYMENT

Before the Conference:

By cheque: in Euro to the order of EUROSPACE payable in a French Bank to be sent to: EUROSPACE – 15/17, avenue de Ségur – 75007 PARIS, France.

By bank transfer: in Euro to EUROSPACE – IBAN: FR76 3006 6100 9100 0103 6880 245 – B.I.C: CMCFRPP

C.I.C. Paris – Agence Bosquet – 16 ter avenue Bosquet – F-75007 PARIS.

Charges on bank orders shall be borne by the sender

In cash or credit card: In Euro only by cash, with a VISA or with a MASTERCARD (AMERICAN EXPRESS will not be accepted)

CANCELLATIONS

Refunds of 50% will be made if a written request is received before April 29th, at the latest.

No refunds will be made for cancellations received after this date, but substitutions will be possible.

HOTEL RESERVATIONS

A block reservation has been made at special conference rates at Randolph MacDonald hotel.

After April 31st, reservations will be on normal request and upon availability.

Once the booking is confirmed, please contact the hotel directly regarding any subsequent question/change.

LANGUAGES

English will be the working language of the Conference. The time allocated for each presentation will include a discussion at the end.

TRAVEL & BANK FACILITIES

Travel and exchange arrangements can be made by the Concierge of the Hotel.

PROCEEDINGS

The Proceedings will be published after the Conference:

Via Eurospace server: Authors are requested to deliver the pdf version of their final paper(s) by June 20th, 2018 at the latest, via the following address exclusively: dasia2018@eurospace.org

CHAIRMAN & PROGRAMME COMMITTEE

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Conference Manager: N. Alecton, Eurosace

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J.C. Damery, CNES
B. Dellandréa, Thales Alenia Space France
G. Estaves, Thales Alenia Space France
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J.L. Poupat, Airbus Defence & Space SAS France
A. Rossignol, Airbus Defence & Space SAS France
A. Schuettauf, Airbus Defence & Space GmbH
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