

**Tuesday 15<sup>th</sup> May 2018**

**0900 – 1030      *Introduction & Keynote Speakers***

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**1030-1100      *Test & Verification (Short Papers)*  
*Session Chair, TBC***

- (51)      Stuart Mills, Chris McClements, David Paterson, Pete Scott, Steve Parkes; TESTING OVER ETHERNET WITH THE SPACEWIRE GBE BRICK
- (01)      Matthias Beer, Volker Ohlen; DEBUG AND VERIFICATION OF SPACEWIRE AND SPACEFIBRE LINK
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**1130-1220      *Missions & Applications (Long Papers)*  
*Session Chair, TBC***

- (31)      Ran Ginosar, Peleg Aviely, Tsvika Israeli, Fredy Lange; IMAGING NOGAH SOFTWARE-DEFINED SYSTEM COMPRISING MANY RC64 PROCESSORS FOR OPTICAL AND SAR OBSERVATION SATELLITES
- (59)      Susan Clancy, Matt Chase, Anusha Yarlagadda, Michael Starch, James Lux; SPACEWIRE AS A CUBE-SAT INSTRUMENT INTERFACE
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**1220-1235      *Standardisation (Short Papers)*  
*Session Chair, TBC***

- (30)      Felix Siegle; STANDARDISATION EFFORTS FOR A NETWORK MANAGEMENT AND DISCOVERY PROTOCOL FOR SPACEFIBRE
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**1350-1440      *Components 1 (Long Papers)*  
*Session Chair, TBC***

- (13)      Kevin Enouf, Stéphane Hermant; THE EVOLUTION OF SPACEWIRE ELECTRICAL INTERCONNECT
- (45)      Nils-Johan Wessman, Jan Andersson; STATUS UPDATE ON NEW STANDARD PRODUCTS WITH SPACEWIRE SUPPORT
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**1510-1600      *Components 2 (Long Papers)*  
*Session Chair, TBC***

- (56)      Albert Ferrer-Florit, Alberto Gonzalez Villafranca, Steve Parkes, Chris McClements; SPACEFIBRE INTERFACE AND ROUTING SWITCH IP CORES
- (57)      Ronald T Logan; PHOTONIC TRANSCEIVERS FOR SPACEFIBRE DATALINKS
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**Wednesday 16<sup>th</sup> May 2018**

**0900 - 0930**      ***Missions & Applications (Short Papers)***  
***Session Chair, TBC***

- (03)      Hans-Juergen Sedlmayr, Ralph Bayer, Alexander Beyer, Maximilian Maier, Nikolaus Seitz, Maxime Chalon, Wieland Bertleff, Werner Friedl, Thomas Obermeier; SPACEHAND: A MULTI-FINGERED ROBOTIC HAND FOR THE USE IN SPACE
- (44)      Gang Zhang, Xiaoyan Liu, Wei Liu, Lu Xiao, Xianglong Chen; APPLICABILITY ANALYSIS AND ARCHITECTURE DESIGN OF SPACEWIRE IP CORE BASED DATA HANDLING SYSTEM FOR EDUCATIONAL SATELLITE
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**0930 - 1045**      ***Networks & Protocols (Short Papers)***  
***Session Chair, TBC***

- (06)      Thomas Bahls, Markus Bihler; USING SPACEWIRE TIMECODES FOR GLOBAL SYNCHRONIZATION OF PLL-BASED LOCAL CLOCKS
- (09)      Markus Bihler, Thomas Bahls, EFFICIENT IMPLEMENTATION OF ON-CHIP COMMUNICATION OPTIMIZED FOR SPACEWIRE NETWORKS
- (35)      Makoto Tomitaka, Yasushi Igarashi, Satoshi Ichikawa, Noriyasu Inaba, Atsushi Tomiki, Keiichi Matsuzaki, Ryouhei Kobayashi, Minoru Kumakiri, Iwao Fujishiro, Masaharu Nomachi; FEASIBILITY STUDY OF WIRELESS COMMUNICATION SYSTEM OPERATING ON SPACEWIRE NETWORK
- (40)      Sadatoshi Eguchi, Takeshi Takashima, Iku Shinohara; SPACEWIRE NETWORK SYSTEM FOR ERG MISSION NETWORK AND THE RESULT OF ITS PERFORMANCE
- (16)      Alessandro Leoni, Luca Fanucci, David Jameux; SIMULATOR FOR HIGH-SPEED NETWORKS (SHINE): AN OMNET++ SIMULATOR FOR SPACEFIBRE AND SPACEWIRE NETWORKS
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**1115 - 1215**      ***On-board Equipment & Software (Short Papers)***  
***Session Chair, TBC***

- (04)      Toru Sasaki; SPACEWIRE AND SPACEFIBRE FOR INTERNAL ARCHITECTURE IN NVDRs
- (12)      Rolf Hartmann, Falk Ahlendorf, Olivier Ballereau, Pawel Buczek, Ingolf Steinbach; EFFICIENT PROCESSING OF HIGH THROUGHPUT SPACEWIRE DATA STREAMS FOR SPACE NAVIGATION
- (14)      Joseph Marshall; STANDARDIZED HIGH PERFORMANCE SPACEVPX MODULES LEVERAGE SPACEWIRE AS AN INTERNAL/EXTERNAL CONTROL FABRIC
- (58)      Susan Clancy, James Lux; ABSTRACTED SPACEWIRE INTERFACE FOR DEEP SPACE RADIO
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**1330 - 1515**      ***Components (Short Papers)***  
***Session Chair, TBC***

- (07)      Daniel González, Jesús López, Adrien Frouin, Jürgen Beister, David Levaq; SPACE-QUALIFIED EUROPEAN LVDS COMPONENTS FOR SPACEWIRE NETWORKS

- (19) Richard Johannes; COMPARATIVE PERFORMANCE OF VITA 78 CONNECTOR SYSTEMS FOR DAUGHTER CARD TO BACKPLANE APPLICATION
- (20) Richard Johannes; MODULAR INTERCONNECT FOR POINT TO POINT AND BACKPLANE APPLICATION
- (29) Marco Ruiz, Jean-Brieuc Feron; CONTROL LOOP PROCESSOR: A RELIABLE AND AGILE PROCESSING PLATFORM FOR MISSION CRITICAL APPLICATIONS
- (47) Gil Baterina, Alan Senior; GALVANIC ISOLATION OF SPACEWIRE PORTS – AN INNOVATIVE DESIGN APPROACH
- (22) Mikko Karppinen, Antti Tanskanen, Jyrki Ollila, Demetrio Lopez Molina, Juan Barbero, Cesar Boatella Polo, Richard Jansen, Iain McKenzie; RADIATION TOLERANT OPTICAL TRANSCEIVERS FOR SPACEFIBRE DATA LINK
- (34) Hiroki Hihara, Mitsunobu Kuribayashi, Kyoko Murozono, Kazuyuki Yamada, Yu Otake, Kazutoshi Kobayashi, Yuto Tsukita, Haruki Marouka, Jun Furuta; PROGRAMMABLE SPACEFIBRE INTERFACE WITH NANOBIDGE FIELD PROGRAMMABLE GATE ARRAY
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**1515 – 1700      Poster Presentations**

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**Thursday 17<sup>th</sup> May 2018**

**0900 - 1015      *On-board Equipment & Software (Long Papers)*  
*Session Chair, TBC***

- (46) Erich Weih, Richard Wiest; SPACEFIBRE BASED MASS MEMORY – EXTREME RAPID MASS MEMORY UNIT (EXTRA MMU) ENABLED BY SPACEFIBRE
- (54) Steve Parkes, Ashish Srivastava, Pete Scott, David Dillon, Albert Ferrer Florit, Alberto Gonzalez Villafranca; SPACEFIBRE CAMERA
- (55) Steve Parkes, Pete Scott, David Dillon; SPACEVPX-RTG4 BOARD WITH SPACEWIRE OR SPACEFIBRE BACKPLANE
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**1045 - 1225      *Networks & Protocols (Long Papers)*  
*Session Chair, TBC***

- (36) Elena Suvorova, Alexey Khakhulin, Igor Orlovsky, Yuriy Sheynin, Ilya Korobkov, Valentin Olenev, Irina Lavrovskaya; REAL TIME VIDEO DATA TRANSMISSION IN SPACEFIBRE NETWORKS WITH THE ESDP TRANSPORT PROTOCOL
- (37) David Jameux, Alessandro Leoni; ASSESSMENT OF SPACEFIBRE WITH RESPECT TO OSRA-NET REQUIREMENTS
- (42) Charles Patrick Collier; A SWAPC SCALABLE HIGH PERFORMANCE HARDWARE STANDARD FOR 3U VPX BASED PROCESSING AND I/O SYSTEMS
- (48) Krzysztof Romanowski, Wojciech Mich, Piotr Tyczka, Rafal Renk, Vangelis Kollias, Nikos Pogkas; EVALUATION AND INTEROPERABILITY TESTING OF THE SPACEWIRE-R PROTOCOL
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**1340 - 1430**      ***Test & Verification 1 (Long Papers)***  
***Session Chair, TBC***

- (15)      Irina Lavrovskaya, Yuriy Sheynin, Valentin Olenev, Ilya Korobkov, Lev Kurbanov, Dmitry Dymov; COMPUTER-AIDED DESIGN SYSTEM FOR ONBOARD SPACEWIRE NETWORKS
- (25)      Ran Ginosar, Peleg Aviely, Roy Neshet, Zeev Meister, Tsvika Israeli, Dror Reznik; TESTING AND VALIDATION OF SPACEWIRE CONTROL AND DATA LINKS OF RC64

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**1500 - 1550**      ***Test & Verification 2 (Long Papers)***  
***Session Chair, TBC***

- (52)      Stephen Mudie, David Gibson, Chris McClements, Stuart Mills, Steve Parkes; TESTING SPACEFIBRE EQUIPMENT AND SYSTEMS
- (53)      Stephen Mudie, David Gibson, Chris McClements, Stuart Mills, Steve Parkes; SPACEWIRE LINK ANALYSER MK3 AND SPACEWIRE RECORDER

## *Poster Presentations*

- (05) Thomas Bahls, Markus Bihler, Sergey Tarassenko; SPACEWIRE MEETS BIG DATA – REALTIME DATA MINING
- (17) Ilya Korobkov; APPROACH TO INCREASE SPACEFIBRE LINK BANDWIDTH USAGE FOR STREAMING DATA TRANSFER
- (24) Ran Ginosar, Tsvika Israeli, Gilad Danin, Moshe Goren, Peleg Aviely; WIDEBAND DVB-S2X FOR EOS DOWNLINK ON SPACEFIBRE-INTERCONNECTED DUAL RC64
- (26) Ran Ginosar, Peleg Aviely, Tsvika Israeli; RC64-A DOZEN SPACEFIBRE AND HALF A DOZEN SPACEWIRE LINKS FOR EXTREME HIGH PERFORMANCE
- (27) Ran Ginosar, Peleg Aviely, Tsvika Israeli; SPACEFIBRE/SPACEWIRE NETWORK IN A VPX SUPERCOMPUTER COMPRISING MANY RC64 CARDS
- (28) Ran Ginosar, Peleg Aviely, Roy Neshet, Zeev Meister, Tsvika Israeli, Dror Reznik; TESTING AND VALIDATION OF 6.25GBPS SPACEFIBRE LINKS OVER VPX BACKPLANE CONNECTING MULTIPLE RC64
- (32) Ran Ginosar, Peleg Aviely, Tsvika Israeli, Fredy Lange; TELECOM NOGAH SOFTWARE-DEFINED SYSTEM COMPRISING MANY RC64 PROCESSORS FOR GEO SATELLITES AND LEO CONSTELLATIONS
- (33) Yi Xiaosu, Zeng Huasong, Zhang Chunxi; IMPLEMENTATION OF SPACEWIRE OPTICAL FIBER LINK FOR HIGH-SPEED AND LONG-DISTANCE DATA ACQUISITION
- (39) Sadatashi Eguchi, Takeshi Takashima, Iku Shinohara; DEVELOPMENT OF THE NEW MISSION DATA RECORDER (MDR) WITH SPACEWIRE INTERFACE ONBOARD THE ERG SPACECRAFT AND THE RESULT OF ITS PERFORMANCE ON ORBITS
- (41) Yu Junhui, Niu Yuehua, Li Xiaojuan; COMMUNICATION PROTOCOL BASED ON TIME MULTIPLEXING FOR SPACEWIRE DATA HANDLING NETWORKS
- (43) Charles Patrick Collier, Bill Ripley; SPACEVNX: A SCALABLE AND HIGHLY FLEXIBLE SMALL FORM FACTOR STANDARD FOR SMALL-SATS AND CUBESATS
- (49) Tatiana Solokhina, Jaroslav Petrichkovich, Alexander Glushkov, Leonid Menshenin, Denis Kuznetsov, Steve Parkes, Dmitri Dymov; RADIATION TOLERANT MICROPROCESSOR FOR THE COMPUTER VISION WITH SPACEFIBRE LINKS
- (50) David Poudereux, Juan Barbero, José Manuel G. Tijero, Ignacio Esquivias, Iain Mackenzie; OPTICAL SWITCHES WITH NO MOVING PARTS FOR SPACE APPLICATIONS
- (60) Jih-Jong Wang, Nadia Rezzak, Stephen Varela, Ken O'Neill; SERDES SINGLE EVENT EFFECTS IN 65NM FLASH-BASED FPGA-RTG4