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# WORKSHOP PROGRAM

## Wednesday, June 22nd

### *SS1 (Part 1): Special Session on Metrology for Radar Systems*

**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Alfonso Farina, LFIEEE, BoG AESS*

1 **Live data test of Electronic Counter Counter Measures (ECCM) on a multifunctional prototype radar**
*Alfonso Farina, Finmeccanica S.p.A., Italy*
*Luca Timmoneri, Finmeccanica S.p.A., Italy*

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*Carlo Bencini, Finmeccanica S.p.A., Italy*
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*Aldo Riccobono, Finmeccanica S.p.A., Italy*
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*Alfonso Farina, Leonardo, Italy*
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*Stefano Mosca, Leonardo, Italy*
*Stefano Pagliai, Leonardo, Italy*
*Luca Timmoneri, Leonardo, Italy*
*Emanuele Vacca, Leonardo, Italy*

### *SS2: Special Session on Measurement for Improving Quality, Reliability And Safety in Aerospace Applications*

**Room: Room 5, University of Florence, Via G. Capponi 9**
**Chairs:** *Lorenzo Ciani, University of Florence, Italy*
*Sergio Rapuano, University of Sannio, Italy*

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*Z. Jurányi, Institute for Aerosol and Sensor Technology, Switzerland*
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*P. Steigmeier, Institute for Aerosol and Sensor Technology, Switzerland*
*H. Burtscher, Institute for Aerosol and Sensor Technology, Switzerland*

25 **Vibration Energy Harvesters for Wireless Sensor Networks for Aircraft Health Monitoring**
*Yu Lu, SAMC, Commercial Aircraft Corporation of China Ltd., China*
*Al Savvaris, Cranfield University, United Kingdom*
*Antonios Tsourdos, Cranfield University, United Kingdom*
*Maurizio Bevilacqua, Cranfield University, United Kingdom*

33 **Possibilities of using software redundancy in low cost aeronautical control systems**
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*Andrzej Tomczyk, Rzeszów University of Technology, Poland*

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*Serhiy Belyayev, Lviv Centre of Institute for Space Research, Ukraine*
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**Room: Room 8, University of Florence, Via G. Capponi 9**
**Chairs:** *Marcantonio Catelani, University of Florence, Italy*
*Luca De Vito, University of Sannio, Italy*

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*Jacek Pieniazek, Rzeszow University of Technology, Poland*

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**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Alfonso Farina, LFIEEE, BoG AESS*

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*Marco Iorio, Thales Alenia Space Italia, Italy*
*Pasquale Pepe, Thales Alenia Space Italia, Italy*

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*Raffaele Vertucci, Finmeccanica S.p.A., Italy*
*Massimiliano Fusco, Finmeccanica S.p.A., Italy*

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## *Session on Advanced Measurement Systems and Sensors for Aerospace (Part 2)*

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**Chairs:** *Marcantonio Catelani, University of Florence, Italy*
*Luca De Vito, University of Sannio, Italy*

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*Giuseppe Addamo, IEIIT - National Council of Research, Italy*
*Oscar A. Peverini, IEIIT - National Council of Research, Italy*
*Riccardo Tascone, IEIIT - National Council of Research, Italy*
*Giuseppe Pupillo, IRA - National Institute of Astrophysics, Italy*
*Jader Monari, IRA - National Institute of Astrophysics, Italy*
*Marco Schiaffino, IRA - National Institute of Astrophysics, Italy*
*Federico Perini, IRA - National Institute of Astrophysics, Italy*
*Simone Rusticelli, IRA - National Institute of Astrophysics, Italy*
*Pietro Bolli, OAA - National Institute of Astrophysics, Italy*
*Andrea M. Lingua, Politecnico di Torino, Italy*
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*Irene Aicardi, Politecnico di Torino, Italy*
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*Ralf D. Pechstedt, Oxsensis Ltd, United Kingdom*

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## *SS3: Special Session on Meteorological Sensors and Sensor Systems for flight support*

**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Paola Mercogliano, Euro-Mediterranean Centre on Climate Change, REMHI, Italian Aerospace Research Center, Italy*

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*Fabrizio Cuccoli, National Laboratory of Radar and Surveillance Systems, CNIT, Italy*
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*Venkatachalam Chandrasekar, Colorado State University, USA*

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*Giuliana Barbato, Euro-Mediterranean Centre on Climate Change, REMHI Division, Italy*
*Alessandra Lucia Zollo, Euro-Mediterranean Centre on Climate Change, REMHI Division, Italian Aerospace Research Center, Italy*
*Paola Mercogliano, Euro-Mediterranean Centre on Climate Change, REMHI Division, Italian Aerospace Research Center, Italy*

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### *SS4: Special Session on Complex Systems Operational Availability: Measurements, Methodologies and Requirements*

**Room: Room 8, University of Florence, Via G. Capponi 9**
**Chairs:** *Fabio Leccese, University of Rome 'Roma Tre', Italy*
*Luca Maiolo, IMM - National Council of Research, Italy*

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*Fabio Leccese, University of Rome 'Roma Tre', Italy*

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*Ferdinando Dolce, Italian Air Force - Flight Test Wing, Italy*
*Jennifer Kingston, Cranfield University, United Kingdom*
*Chiara Palla, Cranfield University, United Kingdom*
*Alessio Fanfani, D-orbit, Italy*
*Fabio Leccese, University of Rome 'Roma Tre', Italy*

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*Ruggero De Francesco, Se.Te.L s.r.l., Italy*
*Fabio Leccese, University of Rome 'Roma Tre', Italy*
*Marco Cagnetti, University of Rome 'Roma Tre', Italy*

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### *SS5: Special Session on Statistical Methods for Complex Electromagnetic Media and Wireless Environments*

**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Olivier Legrand, Université Nice-Sophia Antipolis, France*
*Gabriele Gradoni, University of Nottingham, United Kingdom*

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*Julien de Rosny, ESPCI ParisTech, PSL Research University, CNRS, Institut Langevin, France*
*Philippe Besnier, Institut d'Electronique et de Télécommunications de Rennes, CNRS, National Institute of Applied Sciences, France*

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*Sébastien Girard, Université Clermont Auvergne, UBP, Institut Pascal, France*
*Pierre Bonnet, Université Clermont Auvergne, UBP, Institut Pascal, France*
*Francoise Paladian, Université Clermont Auvergne, UBP, Institut Pascal, France*
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*Davide Micheli, 'Sapienza' University of Rome, Italy*
*Antonio Vricella, 'Sapienza' University of Rome, Italy*
*Valeria Corinaldesi, Università Politecnica delle Marche, Italy*
*Alida Mazzoli, Università Politecnica delle Marche, Italy*
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*Fabrice Mortessagne, Université Nice-Sophia Antipolis, France*
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## *SS6: Special Session on Non Destructive Testing and Evaluation for Aerospace*

**Room: Room 5, University of Florence, Via G. Capponi 9**
**Chairs:** *Shant Kenderian, The Aerospace Corporation, USA*

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*Leandro Maio, University of Naples Federico II, Italy*
*Ernesto Monaco, University of Naples Federico II, Italy*
*Fabrizio Ricci, University of Naples Federico II, Italy*
*Nicola Pasquino, University of Naples Federico II, Italy*

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## *SS7 (Part 1): Special Session on Measurement and Instrumentation for Aerospace Application*

**Room: Room 8, University of Florence, Via G. Capponi 9**
**Chairs:** *Stefano Debei, Center of Studies and Activities for Space (CISAS), Italy*

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*Jinpeng Zhou, National University of Defense Technology, China*

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*Rui Liu, Politecnico di Milano, Italy*
*Alberto Rolando, Politecnico di Milano, Italy*
*Federico Rossi, Politecnico di Milano, Italy*
*Potito Cordisco, Vicoter, Italy*
*Edoardo Vigoni, Vicoter, Italy*
*Matteo Redaelli, Finmeccanica, Italy*

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## *SS8 (Part 1): Special Session on Relativistic Metrology*

**Room: Room 7, University of Florence, Via G. Capponi 9**
**Chairs:** *Roberto Peron, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Enrico Lorenzini, University of Padova, Italy*

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*Maria Guglielmina Pelizzo, INFN Padova, CNR-IFN Padova, Italy*
*Davide Cuccato, University of Padova, INFN Padova, Italy*
*Alessandro Beghi, University of Padova, INFN Padova, Italy*
*Antonello Ortolan, INFN - Laboratori Nazionali di Legnaro, Italy*
*Jacopo Belfi, INFN Pisa, Italy*
*Filippo Bosi, INFN Pisa, Italy*
*Angela Di Virgilio, INFN Pisa, Italy*
*Nicolò Beverini, University of Pisa, Italy*
*Giorgio Carelli, University of Pisa, Italy*
*Enrico Maccioni, University of Pisa, Italy*
*Rosa Santagata, Paris 13 University, France*
*Andreino Simonelli, Ludwig Maximilian University of Munich, Germany, INFN Pisa, Italy*
*Alberto Porzio, CNR-SPIN, INFN Napoli, Italy*
*Angelo Tartaglia, Politecnico di Torino, Italy*

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## *Poster Session*

**Room: University of Florence, Via G. Capponi 9**
**Chairs:** *Maria Riccio, Dept. of Engineering, University of Sannio, Italy*
*Gianluca Mazzilli, Dept. of Engineering, University of Sannio, Italy*

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*Salvatore Rampone, University of Sannio, Italy*

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*Marco Mugnaini, University of Siena, Italy*
*Valerio Vignoli, University of Siena, Italy*
*Elisa Bertolucci, Scuola Normale Superiore, Italy*
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*Maurizio Spadavecchia, Politecnico di Bari, Italy*
*Amerigo Trotta, Politecnico di Bari, Italy*

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*A. Attridge, University of Warwick, United Kingdom*
*J. Warnett, University of Warwick, United Kingdom*
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*Henryk Kowalczyk, Air Force Institute of Technology, Poland*
*Paweł Janik, Air Force Institute of Technology, Poland*

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*Laura Mihai, National Institute for Laser, Plasma and Radiation Physics, Romania*
*Adelina Sporea, National Institute for Laser, Plasma and Radiation Physics, Romania*
*Daniel Ighigeanu, National Institute for Laser, Plasma and Radiation Physics, Romania*
*Daniel Neguţ, "Horia Hulubei" National Institute of Physics and Nuclear Engineering, Romania*

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*Antonio Vricella, 'Sapienza' University of Rome, Italy*
*Roberto Pastore, 'Sapienza' University of Rome, Italy*
*Davide Micheli, 'Sapienza' University of Rome, Italy*
*Andrea Delfini, 'Sapienza' University of Rome, Italy*
*Samantha Iannelli, 'Sapienza' University of Rome, Italy*
*Marta Albano, 'Sapienza' University of Rome, Italy*
*Mario Marchetti, 'Sapienza' University of Rome, Italy*
*Giorgio Giannini, National Interuniversity Consortium of Materials Science and Technology, Italy*
*Giulio Rubini, National Interuniversity Consortium of Materials Science and Technology, Italy*

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*A. Renga, University of Naples Federico II, Italy*
*M. Grassi, University of Naples Federico II, Italy*

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*Alberto Madonna, Italian National Institute for Astrophysics, Italy*
*Mattia Pezzato, University of Padova, Italy*
*Filippo Trevisi, University of Padova, Italy*
*Eugenio Di Iorio, Center of Studies and Activities for Space (CISAS), Italy*
*Davide Scalzi, University of Padova, Italy*
*Francesco Nalin, Center of Studies and Activities for Space (CISAS), Italy*
*Stefano Debei, Center of Studies and Activities for Space (CISAS), Italy*
*Carlo Bettanini, Center of Studies and Activities for Space (CISAS), Italy*

413 **Effect of gyroscope's error on attitude-correlated frames approach for a star sensor**
*Hao Zhang, National University of Defense Technology, China*
*Wenfeng Tan, National University of Defense Technology, China*
*Xingshu Wang, National University of Defense Technology, China*
*Dejun Zhan, National University of Defense Technology, China*

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*Gregorio Andria, Politecnico di Bari, Italy*
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*Anna M. L. Lanzolla, Politecnico di Bari, Italy*
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*David M. Lucchesi, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Francesco Santoli, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Roberto Peron, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Emiliano Fiorenza, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Carlo Lefevre, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Marco Lucente, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Carmelo Magnafico, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Valerio A. Iafolla, Assist in Gravitation and Instrumentation*
*Maciej Kalarus, Polish Academy of Sciences, Poland*
*Janusz Zielinski, Polish Academy of Sciences, Poland*

434 **Investigation of very low gas flow measurement for lunar sample acquisition**
*Xuemin Sheng, Lanzhou Institute of Space Technology and Physics, China*
*Detian Li, Lanzhou Institute of Space Technology and Physics, China*
*Yongjun Cheng, Lanzhou Institute of Space Technology and Physics, China*

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## *SS9: Special Session on In-flight Verification and Tuning of the GNC systems for Satellites and Aerospace Vehicles*

**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Yevgeny Somov, Samara State Technical University, Russia*
*Klaus Schilling, University of Würzburg, Germany*

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## *SS10 (Part 1): Special Session on Global Navigation Satellite System Technologies and Applications*

**Room: Room 5, University of Florence, Via G. Capponi 9**
**Chairs:** *Patrizia Tavella, National Institute for Metrological Research, Italy*
*Sabrina Ugazio, Politecnico di Torino, Italy*

484 **Performance results of the Galileo Precise Timing Facility**
*Quirino Morante, Thales Alenia Space Italia S.p.A, Italy*
*Daniele Cretoni, Thales Alenia Space Italia S.p.A, Italy*
*Giulia Putortì, Thales Alenia Space Italia S.p.A, Italy*
*Enrico Varriale, Thales Alenia Space Italia S.p.A, Italy*
*Marco Blanchi, Thales Alenia Space Italia S.p.A, Italy*
*Claudio Cantelmo, Thales Alenia Space Italia S.p.A, Italy*
*Jordi Fontdecaba Baig, Thales Alenia Space France S.A., France*
*Jean Francois Nogues, Thales Alenia Space France S.A., France*
*Anas Tajdine Aouad, Thales Alenia Space France S.A., France*
*Marco Siccardi, SKK Electronics, Italy*
*Alexander Mudrack, ESA/ESTEC, Netherlands*
*Bernhard Schlarmann, ESA/ESTEC, Netherlands*

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## *SS7 (Part 2): Special Session on Measurement and Instrumentation for Aerospace Application*

**Room: Room 8, University of Florence, Via G. Capponi 9**
**Chairs:** *Stefano Debei, Center of Studies and Activities for Space (CISAS), Italy*

489 **Metrological characterization of strain gauges until superfluid helium temperature**
*Carlo Ferrero, National Institute of Metrological Research, Italy*

495 **Characterization of ISA - BepiColombo internal calibration source**
*Marco Pisani, National Institute of Metrological Research, Italy*
*Milena Astrua, National Institute of Metrological Research, Italy*
*Valerio Iafolla, Institute for Space Astrophysics and Planetology, Italy*
*Francesco Santoli, Institute for Space Astrophysics and Planetology, Italy*
*David Lucchesi, Institute for Space Astrophysics and Planetology, Italy*
*Carlo Lefevre, Institute for Space Astrophysics and Planetology, Italy*
*Marco Lucente, Institute for Space Astrophysics and Planetology, Italy*

500 **Miniature Airflow Probe for an Unmanned Aerial Vehicle**
*Bartosz Brzozowski, Military University of Technology, Poland*
*Zdzisław Rochala, Military University of Technology, Poland*
*Konrad Wojtowicz, Military University of Technology, Poland*
*Bartosz Gawełda, Air Force Institute of Technology, Poland*
*Krzysztof Kazmierczak, Polish Academy of Sciences, Poland*

506 **Electrical Measurement of Free Space Electric Field Sensors**
*Wu Kang, Beijing Orient Institute of Measurement and Test, China*
*Cui Yang, Lanzhou Institute of Physics, China*
*Song Jiayun, Beijing Orient Institute of Measurement and Test, China*
*Liu Min, Beijing Orient Institute of Measurement and Test, China*

511 **Absolute distance interferometric measurement for on board satellite metrology**
*Marco Pisani, National Institute of Metrological Research, Italy*
*Massimo Zucco, National Institute of Metrological Research, Italy*
*Sergio Mottini, Thales Alenia Space Italy, Italy*

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## *SS8 (Part 2): Special Session on Relativistic Metrology*

**Room: Room 7, University of Florence, Via G. Capponi 9**
**Chairs:** *Roberto Peron, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Enrico Lorenzini, University of Padova, Italy*

516 **LARES Satellite Thermal Forces and a Test of General Relativity**
*Richard Matzner, University of Texas at Austin, USA*
*Phuc Nguyen, University of Texas at Austin, USA*
*Jason Brooks, University of Texas at Austin, USA*
*Ignazio Ciufolini, University of Salento, Museo Storico della Fisica e Centro Studi e Ricerche, Italy*
*Antonio Paolozzi, Museo Storico della Fisica e Centro Studi e Ricerche, 'Sapienza' University of Rome, Italy*
*Erricos C. Pavlis, University of Maryland, USA*
*Rolf Koenig, GFZ German Research Centre for Geosciences, Germany*
*John Ries, University of Texas at Austin, USA*
*Vahe Gurzadyan, Alikhanian National Laboratory and Yerevan State University, Armenia*
*Roger Penrose, University of Oxford, United Kingdom*
*Giampiero Sindoni, 'Sapienza' University of Rome, Italy*
*Claudio Paris, Museo Storico della Fisica e Centro Studi e Ricerche, 'Sapienza' University of Rome, Italy*
*Harutyun Khachatryan, Alikhanian National Laboratory and Yerevan State University, Armenia*
*Sergey Mirzoyan, Alikhanian National Laboratory and Yerevan State University, Armenia*

522 **Measurements of General Relativity precessions in the field of the Earth with laser-ranged satellites and the LARASE program**
*David M. Lucchesi, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Carmelo Magnafico, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Roberto Peron, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Massimo Visco, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Luciano Anselmo, ISTI-CNR, Italy*
*Carmen Pardini, ISTI-CNR, Italy*
*Massimo Bassan, University of Rome 'Tor Vergata', INFN, Italy*
*Giuseppe Pucacco, University of Rome 'Tor Vergata', INFN, Italy*

530 **High-Accuracy Gravity Acceleration Measurements at the Moon from the GRAIL Mission**
*David Edmund Smith, MIT, USA*
*Maria T. Zuber, MIT, USA*

533 **Sensitivity study of systematic errors in the BepiColombo relativity experiment**
*Giulia Schettino, University of Pisa, Italy*
*Luigi Imperi, 'Sapienza' University of Rome, Italy*
*Luciano Iess, 'Sapienza' University of Rome, Italy*
*Giacomo Tommei, University of Pisa, Italy*

538 **The BepiColombo ISA accelerometer: ready for launch**
*Valerio Iafolla, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Emiliano Fiorenza, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Carlo Lefevre, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*David M. Lucchesi, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Marco Lucente, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Carmelo Magnafico, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Roberto Peron, Istituto di Astrofisica e Planetologia Spaziali, Italy*
*Francesco Santoli, Istituto di Astrofisica e Planetologia Spaziali, Italy*

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## *SS11: Special Session on Quality Measurement Techniques for Critical Software Systems*

**Room: Room 4, University of Florence, Via G. Capponi 9**
**Chairs:** *Massimo Tipaldi, OHB System AG/CGS SpA*
*Bernhard Bruenjes, OHB System AG, Germany*

545 **Measurement and analysis of schedulability of spacecraft on-board software**
*Nunzio Cecere, Intelligentia s.r.l., Italy*
*Massimo Tipaldi, Compagnia Generale per lo Spazio, University of Sannio, Italy*
*Ralf Wenker, OHB System AG, Germany*
*Umberto Villano, University of Sannio, Italy*

551 **Test Automation for Critical Space Software**
*Ignacio Fernandez, GTD Sistemas de informacion SA, Spain*
*Antonio Di Cerbo, Intelligentia s.r.l., Italy*
*Erik Dehnhardt, OHB System AG, Germany*
*Massimo Tipaldi, Compagnia Generale per lo Spazio, University of Sannio, Italy*

556 **Probabilistic Model Checking applied to Autonomous Spacecraft Reconfiguration**
*Vittoria Nardone, University of Sannio, Italy*
*Antonella Santone, University of Sannio, Italy*
*Massimo Tipaldi, Compagnia Generale per lo Spazio, University of Sannio, Italy*
*Luigi Glielmo, University of Sannio, Italy*

561 **Space Payload Test System**
*Leonardo Amoruso, Planetek Italia srl, Italy*
*Cristoforo Abbattista, Planetek Italia srl, Italy*
*Luca Cinquepalmi, Planetek Italia srl, Italy*
*Luigi Agrimano, Planetek Italia srl, Italy*

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## *SS10 (Part 2): Special Session on Global navigation satellite system technologies and applications*

**Room: Room 5, University of Florence, Via G. Capponi 9**
**Chairs:** *Letizia Lo Presti, Politecnico di Torino, Italy*
*Sabrina Ugazio, Politecnico di Torino, Italy*

567 **Development and Test Campaign of a GPS-Based Navigation Sub-System for the ESEO Mission**
*Alfredo Locarini, University of Bologna, Italy*
*Paolo Tortora, University of Bologna, Italy*
*Alessandro Avanzi, SITAEL S.p.A, Italy*

573 **Multi-scale volumetric soil moisture detection from GNSS SNR data**
*Nicolas Roussel, GET, CNRS, OMP, France*
*José Darrozes, GET, CNRS, OMP, France*
*Cuong Ha Minh, GET, CNRS, OMP, France*
*Karen Boniface, GET, UPS, OMP, France*
*Frédéric Frappart, GET, UPS, OMP, France*
*Guillaume Ramillien, GET, CNRS, OMP, France*
*Michel Gavart, AJS UAS, France*
*Laura Van de Vyvere, M3 Systems, Belgium*
*Olivier Desenfans, M3 Systems, Belgium*
*Frederic Baup, CESBIO, UPS –IUT A, France*

579 **Multipath Distance Detector Algorithm (MPDD): Enhancement and application to Galileo signals**
*Mattia Berardo, Politecnico di Torino, Italy*
*Sabrina Ugazio, Politecnico di Torino, Italy*

591 **Time and frequency at LNE-SYRTE related to Global Navigation Satellite Systems**
*G. D. Rovera, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*S. Bize, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*B. Chupin, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*J. Guéna, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*Ph. Laurent, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*P. Rosenbusch, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*P. Uhrich, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*
*M. Abgrall, LNE-SYRTE, Observatoire de Paris, PSL Research University, CNRS, Sorbonne Universites, UPMC Univ. Paris 06, France*

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## *SS7 (Part 3): Special Session on Measurement and Instrumentation for Aerospace Application*

**Room: Room 8, University of Florence, Via G. Capponi 9**
**Chairs:** *Stefano Debei, Center of Studies and Activities for Space (CISAS), Italy*

593 **Progress in the realization of the INRIM centrifugal balance for mass measurements in space**
*Andrea Malengo, National Institute of Metrological Research, Italy*
*Gaetano La Piana, National Institute of Metrological Research, Italy*
*Giovanni Martini, National Institute of Metrological Research, Italy*
*Antonio Rivetti, National Institute of Metrological Research, Italy*

598 **Effect of rolling shutter on visual odometry systems suitable for planetary exploration**
*Marco Pertile, Center of Studies and Activities for Space (CISAS), Italy*
*Sebastiano Chiodini, Center of Studies and Activities for Space (CISAS), Italy*
*Riccardo Giubilato, Center of Studies and Activities for Space (CISAS), Italy*
*Stefano Debei, Center of Studies and Activities for Space (CISAS), Italy*

604 **Preliminary design of the inlet duct of a dust analyzer for Mars**
*Gianandrea Vittorio Messa, Politecnico di Milano, Italy*
*Stefano Malavasi, Politecnico di Milano, Italy*
*Diego Scaccabarozzi, Politecnico di Milano, Italy*
*Bortolino Saggin, Politecnico di Milano, Italy*
*Marco Tarabini, Politecnico di Milano, Italy*
*Francesca Esposito, INAF - Osservatorio Astronomico di Capodimonte, Italy*
*Cesare Molfese, INAF - Osservatorio Astronomico di Capodimonte, Italy*

609 **Innovative Configuration for a Far Infrared Space Interferometer**
*Valerio Antonio Iafolla, AGI, INAF - IAPS, Italy*
*Emiliano Fiorenza, AGI, INAF - IAPS, Italy*
*Lorenzo Iafolla, AGI, Italy*
*Carlo Lefevre, AGI, INAF - IAPS, Italy*
*Carmelo Magnafico, INAF - IAPS, Italy*
*Francesco Santoli, AGI, INAF - IAPS, Italy*
*Giorgio Savini, University College London, United Kingdom*

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## *Session on Advanced Measurement Systems and Sensors for Aerospace (Part 3)*

**Room: Room 7, University of Florence, Via G. Capponi 9**
**Chairs:** *Ada Fort, University of Siena, Italy*