

2024 11th International Workshop on Metrology for AeroSpace (MetroAeroSpace 2024)

**Lublin, Poland
3-5 June 2024**



**IEEE Catalog Number: CFP2432W-POD
ISBN: 979-8-3503-8505-2**

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IEEE Catalog Number:	CFP2432W-POD
ISBN (Print-On-Demand):	979-8-3503-8505-2
ISBN (Online):	979-8-3503-8504-5
ISSN:	2575-7482

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Bortolino Saggin, Politecnico di Milano, Italy

Elimar Vieira Vaz Junior, Politecnico di Milano, Italy

Ernesto Palomba, INAF-IAPS, Italy

Andrea Longobardo, INAF-IAPS, Italy

Chiara Gisellu, INAF-IAPS, Sapienza University of Rome, Italy

Fabrizio Dirri, INAF-IAPS, Italy

Emiliano Zampetti, National Research Council, Italy

Maria Pedone, Italian Space Agency, Italy

Raffaele Pepe, Italian Space Agency, Italy

Angelo Olivieri, Italian Space Agency, Italy

427 Feasibility Design of LD GRIDS, a Dust Analyzer for the Moon

Diego Scaccabarozzi, Politecnico di Milano, Italy

Abdelrahman Mohamed Ragab M. Ahmed, Politecnico di Milano, Italy

Bortolino Saggin, Politecnico di Milano, Italy

Francesca Esposito, INAF-OAC, Italy

Carmen Porto, INAF-OAC, Italy

Giuseppe Mongelluzzo, INAF-OAC, Italy

Gabriele Franzese, INAF-OAC, Italy

Simone Silvestro, INAF-OAC, Italy

Immacolata Donnarumma, Italian Space Agency, Italy

Alessandro Turchi, Italian Space Agency, Italy

Ugo Cortesi, IFAC-CNR, Italy

Fabio D'Amico, INAF, Italy

Marco Gai, IFAC-CNR, Italy

Andrea Argan, INAF, Italy

- 432 **Feasibility Design of MiLi, a Miniaturized Lidar for Mars Observation**
Diego Scaccabarozzi, Politecnico di Milano, Italy
Kirill Potemkin, Politecnico di Milano, Italy
Bortolino Saggin, Politecnico di Milano, Italy
Elimar Vieira, Politecnico di Milano, Italy
Marco Giovanni Corti, Politecnico di Milano, Italy
Chiara Martina, Politecnico di Milano, Italy
Andrea Appiani, Politecnico di Milano, Italy
Alberto Martin-Ortega, INTA, Spain
Ignacio Arruego, INTA, Spain
Juan Jose Jimenez Martin, INTA, Spain
Luis Miguel Gonzalez Fernandez, INTA, Spain
Miguel Sanz Palomino, INTA, Spain
Daniel Garranzo Garcia-Ibarrola, INTA, Spain
Andrea Garcia Moreno, INTA, Spain
Marianela Fernandez Rodriguez, INTA, Spain
Nacho Muñoz Rebate, INTA, Spain
Andy Braukhane, DLR German Aerospace Center, Germany
Dominik Quantius, DLR German Aerospace Center, Germany
- 437 **A Precise Positioning Methodology for Autonomous Navigation of a Tethered UAV for Photogrammetry**
Alberto Jiménez Hormeño, Universidad Carlos III de Madrid, Spain
David Martin Gomez, Universidad Carlos III de Madrid, Spain
Arturo de la Escalera, Universidad Carlos III de Madrid, Spain
José María Armingol, Universidad Carlos III de Madrid, Spain

POSTER SESSION

Room: Lublin University of Technology

- 443 **Design of Wireless Optical System for Data Transmission Inside the Aircraft Cabin**
Fabio Leccese, Roma Tre University, Italy
Giuseppe Schirripa Spagnolo, Roma Tre University, Italy
- 449 **A New Approach to Reliability Evaluation and Fault Diagnosis of UAV as a Complex System**
Enrico Petritoli, Roma Tre University, Italy
Fabio Leccese, Roma Tre University, Italy
- 455 **Aircraft Detection Approach Based on YOLOv9 for High-Resolution Remote Sensing**
Ivan Saetchnikov, Belarusian State University, Belarus
Victor Skakun, Belarusian State University, Belarus
Elina Tcherniavskaia, Belarusian State University, Belarus
- 460 **A Method of Solving Doppler Navigation Parameters Using Only Unidirectional Dual Beams**
Tao Yu, China Academy of Management Science, China
- 466 **CO₂ Conversion Into Methane Over Ru/CeO₂ Catalysts Prepared From Different Metal Ion Precursors**
Umberto Pasqual Laverdura, ENEA, Italy
Rosa Chierchia, ENEA, Italy
Seyed Sepehr Moeini, Roma Tre University, Italy
Claudia Romano, Roma Tre University, Italy
Fabio Leccese, Roma Tre University, Italy
Simonetta Tuti, Roma Tre University, Italy
- 472 **3D LiDAR Sensor Characterization for Obstacle Detection in Autonomous UAS Applications**
Aniello Menichino, CIRA Italian Aerospace Research Center, Italy
Antonio Serpico, University of Campania L. Vanvitelli, Italy
Vittorio Di Vito, CIRA Italian Aerospace Research Center, Italy
Gennaro Ariante, University of Naples Parthenope, Italy
Salvatore Ponte, University of Campania L. Vanvitelli, Italy
Giuseppe Del Core, University of Naples Parthenope, Italy

- 478 **Analysis of Selected Physical Phenomena Accompanying the Cutting Process With a High-Pressure Abrasive Waterjet and Their Influence on Geometric Structure of the Surface**
Michał Leleń, Lublin University of Technology, Poland
Jerzy Józwik, Lublin University of Technology, Poland
Grzegorz Skorulski, Bialystok University of Technology, Poland
- 484 **Reproducibility of Properties of the Zirconia-Based Composites**
Edvin Hevorkian, University of Life Sciences in Lublin, Poland
Jerzy Józwik, Lublin University of Technology, Poland
Vasyl Kolodnitskyi, National Academy of Sciences of Ukraine, Poland
Mirosław Rucki, Kazimierz Pulaski University of Technology and Humanities in Radom, Poland
Oksana Morozova, Ukrainian State University of Railway Transport, Poland
Krzysztof Dziedzic, Lublin University of Technology, Poland
- 490 **Assessing COTS Sensor Suitability for CubeSat Missions in Near-Space Environments**
Karen Vidaurre Torrez, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Franklin Ticona Coaquira, Beihang University, China
Miguel Silva Plata, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Abigail Lopez Tarqui, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Guillermo Auza Banegas, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Jazmin Jimenez Huanca, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Nayara Lara Ramos, Universidad Catolica Boliviana, CIDIMEC, Bolivia
Fabio Diaz Palacios, Universidad Catolica Boliviana, CIDIMEC, Bolivia
- 496 **Enhancing TCVCXO Stability Using the 1 PPS Signal From the GPS**
Piotr Warda, Lublin University of Technology, Poland
Ryszard Szplet, Military University of Technology, Poland
Dominik Sondej, Military University of Technology, Poland
Paweł Kwiatkowski, Military University of Technology, Poland
- 501 **Simulation of Experimental Tests in Electronic Devices**
Roberto Paggi, ItalConsul, Italy
Gian Luca Mariotti, ItalConsul, Italy
Anna Paggi, ItalConsul, Italy
Fabio Leccese, Roma Tre University, Italy

Session 7.1 - Optical and Innovative Sensors for Aerospace

Room: Auditorium I

- 507 **Smart Composites Manufacturing and Testing by Insertion of Fiber Bragg Gratings Sensors**
Alessandro Aimasso, Politecnico di Torino, Italy
Andrea Facci, Politecnico di Torino, Italy
Matteo Bertone, Politecnico di Torino, Italy
Matteo Davide Lorenzo Dalla Vedova, Politecnico di Torino, Italy
- 513 **A Wavelet-Based Method for Defect Detection in Aircraft Components by Using Ultrasonic Technology**
Cosimo Patrino, STIIMA-CNR, Italy
Adriano Liso, STIIMA-CNR, Italy
Vito Renò, STIIMA-CNR, Italy
Veronica Vespini, CNR-ISASI, Italy
Sara Coppola, CNR-ISASI, Italy
Pietro Ferraro, CNR-ISASI, Italy
Nicola Gallo, Leonardo S.p.A., Italy
Giuseppe Del Prete, Leonardo S.p.A., Italy
Valerio Denticò, Leonardo S.p.A., Italy
Davide Chirico, Leonardo S.p.A., Italy
Ettore Stella, STIIMA-CNR, Italy

519 Augmented Reality Visualization of Fiber Bragg Grating Sensor Data for Aerospace Application

Antonio C Marceddu, Politecnico di Torino, Italy
Alessandro Aimasso, Politecnico di Torino, Italy
Matteo Bertone, Politecnico di Torino, Italy
Luca Viscanti, Politecnico di Torino, Italy
Bartolomeo Montrucchio, Politecnico di Torino, Italy
Paolo Maggiore, Politecnico di Torino, Italy
Matteo Davide Lorenzo Dalla Vedova, Politecnico di Torino, Italy

Session 7.2 - Manufacturing and Metrology in the Aerospace Industry - PART III

Room: Auditorium II

525 Geometric Structure of the Surface of Impulse Shot-Peened Titanium Alloy Ti6Al4V

Agnieszka Skoczylas, Lublin University of Technology, Poland
Jakub Matuszak, Lublin University of Technology, Poland
Krzysztof Ciecieląg, Lublin University of Technology, Poland
Kazimierz Zaleski, Lublin University of Technology, Poland

531 Measurement of Cutting Forces in Conventional and Climb Milling by Recurrence Analysis

Krzysztof Ciecieląg, Lublin University of Technology, Poland
Agnieszka Skoczylas, Lublin University of Technology, Poland
Jakub Matuszak, Lublin University of Technology, Poland

537 Evaluation of the Dimensional Accuracy of a Milled Thin-Walled Part as Measured With a CNC Machine Tool Inspection Probe and a Coordinate Measuring Machine

Magdalena Zawada-Michałowska, Lublin University of Technology, Poland
Paweł Pieško, Lublin University of Technology, Poland

Session 7.3 - General Session - PART III

Room: Auditorium III

543 Data-Driven Identification for Model Predictive Control of a Ground Robot

Fabio Faliero, Politecnico di Torino, Italy
Enza Incoronata Trombetta, Politecnico di Torino, Italy
Elisa Capello, Politecnico di Torino, Italy

549 Preliminary Design Optimization Tool for Lighter-Than-Air Platform With Different On-Board Power Systems

Luca de Pasquale, Politecnico di Torino, Italy
Piero Gili, Politecnico di Torino, Italy

555 Optimizing Energy Consumption of the UAV Swarm Performing Coverage Task With Stochastic Sweep Coverage Control Algorithm

Michał Duda, Military University of Technology in Warsaw, Poland
Krzysztof Falkowski, Military University of Technology, Poland