Workshop "Space It Up!: Un motore per l'innovazione scientifica e tecnologica"

16-17 novembre 2026

PRIMO GIORNO – 16 NOVEMBRE

Auditorio Luigi Broglio – ASI, Via del Politecnico

Inizio ore 10:00 – Fine ore 17:30

9:00 - 10:00 Registrazione

10:00 – 10:15 Saluti istituzionali ASI

Barbara Negri- Vicedirettore Direzione Scienza e Innovazione

10:15 – 10:30 Saluti HUB

Erasmo Carrera- Presidente della Space it Up! S.c.a.r.l

SESSIONE TECNOLOGIE, SISTEMI E SENSORISTICA

Chair: Alberto Fedele, Cristina Baldetti (10:30 – 12:30)

10:30 – 10:45

Towards a Distributed Network of Robotic Testbeds for Relative Navigation

Dario Modenini – Alma Mater Studiorum Università di Bologna

10:45 – 11:00

Reliable and Flexible AI Acceleration for Next-Generation Space Systems

Luca Fanucci – Università di Pisa

11:00 – 11:15

Development of air-fed cathodes for air-breathing electric propulsion

Fabrizio Paganucci – Università di Pisa

11:15 – 11:30

Advanced Geometric GNC Technologies for Autonomous VLEO and Distributed Space Missions

Elisa Capello – Politecnico di Torino

11:30 – 12:00 — Coffee Break

12:00 – 12:15

Development of a Space-Ready Resonant Micro-Optical Gyroscope with FPGA-Based Readout Electronics

Giuseppe Coviello – Politecnico di Bari

12:15 – 12:30

Process-Level and Design-Level Radiation Hardening in Commercial and Open-Source Integrated Circuits Technologies for Space Applications

Gianfranco Avitabile – Politecnico di Bari

Chair: Elisabetta Cavazzuti, Alberto Fedele (12:30 – 13:15)

12:30 – 12:45

STAR: Space mission Twin for Architecture Representation

Fabrizio Piergentili, Michele Pasquali - Sapienza Università di Roma

12:45 – 13:00

Design, qualification and testing of architected tailored lattice structures for space applications.

Stefano Foletti – Politecnico di Milano

13:00 – 13:15

SWIUZ – Space Weather It Up for Digital Twins and Simulations: An Integrated Environment Module for Solar-System Missions and Digital Twins and Simulations

Carlo Baccigalupi – SISSA per GSSI+

13:15 – 14:30 Pausa Pranzo

Chair: Giovanni Paolo Blasone, Maria Libera Battagliere (14:30 – 15:45)

14:30 – 14:45

Toward compact on-chip millimeter-wave spectroscopy for space-based atmospheric monitoring

Paolo De Bernardis – Sapienza Università di Roma

14:45 – 15:00

Distributed SAR for single-pass multi-baseline data collection: enabling new earth-observation products by formation flying satellites.

Alfredo Renga – Università degli Studi di Napoli Federico II

15:00 – 15:15

New digital SAR for high revisit constellations in demanding use cases application.

Leonardo Franchi – Thales Alenia Space Italia

15:15 – 15:30

Compressive sensing optical payload in the Medium Infrared for super-resolved imaging of high temperature events

Valentina Raimondi – CNR-IFAC

15:30 – 15:45

Fully-Depleted MAPS for Space Applications

Piero Giubilato – Università degli Studi di Padova

Chair: Luca Di Fino, Elisabetta Cavazzuti (15:45 – 16:45)

15:45 – 16:00

Advanced Silicon Detector Technologies for Space Radiation Monitoring and X-ray Imaging within the Space It Up! Program

Luca Latronico – INFN

16:00 – 16:15

Enabling new SiPM-based technologies for the detection and monitoring of ionizing radiation in space

Ivan De Mitri – GSSI e INFN

16:15 – 16:30

New time and frequency references for detectors synchronization and deep space exploration

Salvatore Micalizio – INRIM

16:30 – 16:45

SiPM sensors and Advanced Packaging for Space Applications

Fabio Acerbi – FBK

16:45 – 17:30 Domande e discussione

SECONDO GIORNO – 17 NOVEMBRE

Auditorio Luigi Broglio – ASI, Via del Politecnico

Inizio ore 09:30 – Fine ore 17:00

09:00 - 09:30 Registrazione

PROTEZIONE DELLA TERRA DALLO SPAZIO

Chair: Alberto Bigazzi, Denise Perrone (09:30 – 10:45)

09:30 – 09:45

Signals of Opportunity for Environmental Sensing: Integrating SML and GNSS-R Technologies

Filippo Giannetti – Università di Pisa

09:45 – 10:00

SPACE-TSUNAMI-MED: compact space sensing and AI/HPC nowcasting for Mediterranean tsunamis and meteotsunamis

Roberto Battiston – Università degli Studi di Trento

10:00 – 10:15

Sentinels of the Sun: New Payloads, New Metrics, New Architecture for Space Weather Early Warning

Silvano Fineschi – INAF e Francesco Berrilli – Università degli Studi di Roma Tor Vergata

10:15 – 10:30

From Scientific Understanding to Operational Space Weather Services: An Integrated Sun-to-Earth Framework

Sergio Servidio – Università della Calabria e Paolo Romano – INAF

10:30 – 10:45

A proof-of-concept for a space weather pre-operational service

Monica Laurenza – INAF e Lucilla Alfonsi – INGV

Chair Maria Libera Battagliere, Giovanni Paolo Blasone (10:45 - 12:30)

10:45 – 11:00

An operational geospatial intelligence framework for environmental monitoring and multi-hazard disaster management

Piero Boccardo – Politecnico di Torino

11:00 – 11:15

New indicators based on hyperspectral and multispectra data for monitoring lakes, rivers, lagoons and transitional ecosystems

Vittorio E. Brando – CNR-ISMAR

11:15 – 11:40 Coffee Break

11:40 – 11:55

Distributed testbeds and facilities for Cal/Val of next-gen sensors and platforms

Domenico Cimini – CNR-IMIOT

11:55 – 12:10

From Multi-Sensor Earth Observation to Operational Environmental Services

Andrea Taramelli – GSSI+ e IUSS

12:10 – 12:30 Domande e Discussione

SESSIONE – ESPLORAZIONE E HABITAT PER L'UOMO

Chair: Micol Bellucci, Sara Piccirillo (12:30 – 15:20)

12:30 – 12:45

Additive manufacturing technologies for in-situ resource utilization

Susanna Laurenzi – Sapienza Università di Roma

12:45 – 13:00

SIU! Lunar Pressurized Rover: A National Approach to Integrated Design and Digital Twin towards a Functional Breadboard

Erasmo Carrera – Politecnico di Torino

13:00 – 13:15

Lunar Ants: a swarm of mini-rover for lunar exploration and resources scouting

Giuseppe Mongelluzzo (INAF) e Riccardo Caccavale (UniNA)

13:15 – 13:30

TALISE Towards Autonomous Lunar Integrated Sensing and Exploration

Giacomo Colombatti – Università degli Studi di Padova CISAS

13:30 – 14:30 — Pausa Pranzo

14:30 – 14:45

READESS – Regolith and Extraterrestrial Analogs for Bioregenerative LifE Support Systems

Giovanni Pratesi – Università degli Studi di Firenze

14:45 – 15:00

NEXUS – Next-generation EXploration Technologies for hUman Health and Sustainable Lunar Operations

Myrka Zago – Università degli Studi di Roma Tor Vergata

15:00 – 15:20 Domande e discussione

SESSIONE IDEE INNOVATIVE

Chair: Alberto Bigazzi, Denise Perrone (15:20 – 16:00)

15:20 – 15:30

Generation of Double Emulsions by microfluidics, for Controlled Drug Delivery in Space Medicine

Concetta Di Natale – Università degli Studi di Napoli Federico II – DICMAPI

15:30 – 15:40

Topside Ionospheric Sounding: from Observational Gap Analysis to Preliminary Payload Requirements

Loredana Perrone – INGV

15:40 – 15:50

Small Satellites constellations for Thermal Monitoring end-to-end approach

Maria Fabrizia Buongiorno – INGV

15:50 – 16:00

Co-production of a remote-sensing based approach for the management of small agricultural reservoirs in southern Tuscany

Giulio Castelli – Università degli Studi di Firenze

Chair: Luca Di Fino, Cristina Baldetti (16:00 – 16:40)

16:00 – 16:10

Single-Beam Interferometry: a tool for navigation in the lunar environment

Vincenzo Mariani – Sapienza Università di Roma

16:10 – 16:20

Mars Micro Gliders, atmospheric microprobe for interplanetary missions

Prof. Carlo Bettanini – C.I.S.A.S. Giuseppe Colombo – Università degli Studi di Padova

16:20 – 16:30

Hydrogen-Rich Polymer-Based Materials for Radiation Protection in Human Space Exploration

Elisa Toto – Sapienza Università di Roma

16:30 – 16:40

Multifunctional Graphene-Oxide Textile Composites for Lightweight Radiation Protection in Future Space Missions

Sabina Botti – ENEA

16:40 – 17:00 — Chiusura lavori