

Federico Dogo

Date of birth: [REDACTED] | Nationality: Italian | Phone: [REDACTED] | Email: [REDACTED]
[REDACTED] Address: [REDACTED]

INTRODUCTION

First research employment

I have been studying the effects of ionising radiation on matter since my PhD in physics. After that, I started applying this knowledge by working in a start-up company and university spin-off in the small satellite sector. In this context, I participated in **projects** supported by the European Space Agency (ESA) or the Italian Space Agency (ASI), as well as for private clients. Such projects were aimed at developing miniaturised devices for telecommunications and related applications:

- high-frequency transponders in the Ku-Ka bands (Radiosat);
- quantum telecommunications for remote control of unmanned vehicles (Quantum Ship);
- monitoring atmospheric water vapour on Earth through radiofrequency signals exchanged by a constellation of small satellites (SATCROSS).

During these activities, I held a dual role, dealing with research development and project management.

Project management

I managed or co-managed the company's most important projects as project manager or deputy, and was responsible for the SATCROSS's space segment. In all these projects:

- I had the opportunity to follow and monitor the overall processes, starting from the preparation of **proposals**, in all their parts: technical, managerial, implementation (team, logical flow, work breakdown structure, Gantt chart, assignment and organisation of individual tasks/work packages, risk management) and financial (PSS);
- subsequently, during the project progress, I was involved in the **requirement** definition, PA/QA and ECSS tailoring, mission and payload **design, implementation and verification** phases;
- in addition, I drafted **documents** for various stakeholders (space agency commissioners and consumers/customers): my deliverables covered technical topics (requirements, design, development plan, test plan and test report), administrative documents (contract extension), final evaluation and future roadmap reports;
- in parallel, I managed and supported the internal **team**, the external partners, the component/instrumentation/launch service providers and the relations with the space agencies' commissioners, also through the organisation of regular meetings.

Research and development

From a research perspective, I participated in various aspects of a space project.

- I conducted **mission analyses**, including orbital architecture definition by means of STK **dynamics simulations**.
- I dealt with payload/spacecraft **design**, including identification and sizing of all the subsystems.
- Above all, I deepened my specialisation about the **space environment**, especially with reference to **space weather**, the effects of **radiation** on electronic devices, and the related mitigation measures by means of shielding. These calculations were performed in accordance with the conditions dictated by each specific mission, by using the SPENVIS and OMERE software tools and their source models for trapped particles, solar events and cosmic rays.
- Complementarily, I devoted myself to other types of **analysis**, such as mass, power, thermal mechanical analyses. In particular, I was in charge of the **link budget**: indeed, I developed a personal software tool that can take into consideration all the details regarding the properties of the signal, the transmitter, the receiver, and the noise treatment; moreover, this link budget allows a great flexibility in the calculations, so that, starting from different initial conditions, any resolution can be approached in order to achieve the missing parameters.
- Besides I took care of testing, in terms of both **functional and thermal tests** of radiofrequency devices, and investigating radiation facilities to space-qualify the same devices.

As the company's first employee, and now a shareholder, I initiated all of the procedures described above, which have been then standardised as the company expanded, until the first product was in-orbit demonstrated.

University

In recent years, I moved to university as lecturer to further enhancing my research.

Space research

In particular, I have been involved in space missions regarding interplanetary exploration of Deimos' (TASTE mission) and Moon's (PROGReX) surfaces, by means of high-energy instrumentation.

- I have dealt with space weather, using **SPENVIS** and **OMERE** tools to simulate orbital transfer from Earth to the Martian radiation environment.
- In addition, for more detailed analysis, I am making use of **Geant4**: for studying the interactions between solar flares and the Deimos surface; and, as well, for achieving the optimal design of a collimator to be placed in front

of the onboard high-energy scientific instrument. Moreover, I am using Geant4 in astrobiological research concerning the radiation environment of plumes on icy moons.

- The high energy training activities I have already planned for late 2025 consist in becoming familiar with the usage of a X-Ray Fluorescence (XRF) laboratory; and with planetary remote sensing in the X and gamma bands, through a visiting period to be held at IIT - Indian Institute of Technology in Kanpur.

For the CUBE (CME Catcher Carousel) mission, a monitoring and alert system for extreme space weather events through a Cubesat constellation, I studied the mission architecture, particularly with reference to the **link budget**, in order to ensure the maximum effectiveness of the alarm system.

I do research also through an Aerosol Jet Printer, that allows printing circuits of different materials along micrometer lines: so, I initiated and manage the study about small high frequency patch antennas for space applications.

Teaching

Simultaneously, I have brought my experience to university students. I teach

- "Physical Foundations of Modern Technology" (about devices up to link budget), for the bachelor degree in physics;
- a "X-ray Laboratory" for an advanced master in medical physics supported at ICTP by UNESCO and IAEA;
- and "Laboratory of Space Astrophysics" at the master degree level. Regarding the latter, at the end of the course, the enrolled students become able to prepare competitive space mission proposals for space agencies, taking into account all the aspects a space segment requires.

International cooperation project management with responsibility of fund management

From this last teaching experience, the MIT - Massachusetts Institute of Technology financed a project I proposed: it intends to bring such teaching to set up a space education curriculum at high school level, according to the fact that a widespread basic knowledge on space will be required in the next future.

I lead and manage also other activities for physics education in Africa.

- Through the SEIP - Supporting Education In Physics project, I am involved in the creation of affordable physics laboratories for universities in Rwanda (where I have been visiting professor of engineering physics for two years), Somalia (where I am advisor for physics teaching) and other countries.
- I also contribute to the development of STACK, a software that allows the delivery of STEM exercises to large university classes (such as those ones in Africa), as both a teaching tool and a means of research.

Contextually, I am interested in space diplomacy, teaching a doctoral course, organising conferences/seminars, and actively participating in various working groups of the EUSDA - European Union Science Diplomacy Alliance.

● **WORK EXPERIENCE**

 **UNIVERSITÀ DEGLI STUDI DI TRIESTE** – TRIESTE, ITALY

UNIVERSITY RESEARCH LECTURER – 01/01/2022 – CURRENT

Science

- teaching: "Laboratory of Space Astrophysics" (master's degree in physics), "Physical Foundations of Technology" (bachelor's degree in physics), "X-ray Laboratory" (advanced master's degree in medical physics), "Meteorology of Space: from the Universe to the Geosphere" (PhD in physics), "Science Diplomacy" (PhD, transdisciplinary)
- supervisor and co-supervisor of bachelor, master and doctoral theses
- CubeSat space mission projects: TASTE (addressed to Mars's satellite Deimos), CUBE-CME Catcher Carousel (space weather), local manager in charge of the space segment of SATCROSS (an atmospheric water vapor content observatory from space)
- space radiation analysis (SPENVIS / OMERE, GEANT4), including dynamical transfer orbits
- astrobiology: radiation effects on planetary habitability by GEANT4
- aerosol jet printer (AJP) manufactured circuits and antennas, in collaboration with CERN local group
- space debris sustainability through life cycle assessment (LCA)
- space telecommunication systems, link budget and radiofrequency (RF) tests
- developing space and physics education in collaboration with MIT - Massachusetts Institute of Technology

International Cooperation and Science Diplomacy

- Board of Professors member at the Master of Advanced Studies in Medical Physics, which is held at UN International Centre for Theoretical Physics (ICTP) and co-supported by UNESCO and International Atomic Energy Agency (IAEA)
- Trieste University delegate for Early Career Scholars (ECS) of Italian University Coordination for Development Cooperation (CUCS)
- Research Center for Migrations and Development Cooperation (CRMCS) at University of Trieste
- visiting professor at INES-Ruhengeri University (Rwanda)
- advisor at Somali National University (SNU) for physics study plan and teaching
- development of affordable physics laboratories for African universities
- development of physics exercises and laboratories through STACK (an international STEM educational software used also in African universities)
- European Union Science Diplomacy Alliance (EUSDA): member of "Capacity Building working group", "Priority 3: Science diplomacy and Global South", "Review committee", "Journal Task Force"

PROJECT MANAGER AND RESEARCHER – 02/11/2015 – 31/12/2024

2015-2021

- project manager for European Space Agency (ESA) and Agenzia Spaziale Italiana (ASI) projects: coordination, documentation
- technician: space environment analyses (mission, radiation, reliability, telecommunications link budget), radiofrequency electronics tests, device programming

2022-2024

- advisor: radiation, ECSS, PA/QA, documentation and management

 **MUSEUM OF MINERALOGY AND MUSEUM OF HISTORY OF PHYSICS AT UNIVERSITÀ DEGLI STUDI DI PADOVA – PADOVA, ITALY**

Address Palazzo Cavalli, 1 Via Giotto, (IT) 35123, Padova, Italy | **Website** www.musei.unipd.it

UNIVERSITY MUSEUM CURATOR ASSISTANT – 02/11/2006 – 31/05/2008

- cataloguing collection items
- research on history of physics, radiation effects studies of the first half of the XX century in Italy, physics instruments, minerals
- implementation of a Radio Frequency Identification database

EDUCATION AND TRAINING

2021 – CURRENT Bologna, Italy

MASTER'S DEGREE IN PHILOSOPHY Università di Bologna

Website www.unibo.it | **Field of study** Epistemology / Philosophy of science | **Level in EQF** EQF level 7

09/2016 – 30/10/2020 Venezia, Italy

BACHELOR'S DEGREE IN PHILOSOPHY, INTERNATIONAL STUDIES AND ECONOMICS Università Ca' Foscari di Venezia

- evaluation: 110 / 110 cum laude
- thesis: "Labour time reduction in macroeconomics"
- supervisor: Prof. Andrea Teglio
- research area: macroeconomics, labour economics, simulations

Address 3246 Dorsoduro, (IT) 30123, Venezia, Italy | **Website** www.unive.it |

Field of study Economics, international relations/law/politics, philosophy, history and sociology | **Level in EQF** EQF level 6

16/09/2019 – 20/12/2019 Venezia, Italy

GLOBALIZATION PROGRAM Venice International University

- History of economics and statistics

Address Isola di San Servolo, 30133, (IT) 30133, Venezia, Italy | **Website** www.univiu.org |

Field of study Globalization, Ethics, Welfare and Human Rights | **Final grade** 96 / 100 | **Level in EQF** EQF level 6

06/2018 – 21/06/2019 Milano, Italy

DIPLOMA IN GEOPOLITICS AND GLOBAL SECURITY Istituto per gli Studi di Politica Internazionale (ISPI)

- European foreign, security and defense policy // L'Europa nel mondo: la politica estera, di sicurezza e difesa dell'UE
- NATO: transformation, interventions and current challenges // NATO: trasformazione, interventi e sfide attuali
- Emerging Africa: development, resources and conflicts // Africa emergente: sviluppo, risorse e conflitti

- Geopolitics of the Middle East // Geopolitica del Medio Oriente
- Russian foreign policy in the new international order // La politica estera russa nel nuovo (dis)ordine internazionale

Address Palazzo Clerici, 5 Via Clerici, (IT) 20121, Milano, Italy | **Website** www.ispionline.it |

Field of study International relations and law | **Final grade** 25 / 30

30/09/2018 – 31/01/2019 Venezia, Italy

VENICE STUDENT EXCHANGE (ERASMUS VENEZIANO) IUAV (Istituto Universitario di Architettura di Venezia)

- methods and techniques of urban design

Address 191, Santa Croce, Venezia, Italy | **Website** www.iuav.it | **Field of study** Architecture and urban planning |

Level in EQF EQF level 6

03/2012 – 20/03/2015 Trieste, Italy

DOCTORATE IN PHYSICS Università degli Studi di Trieste

- XXVII cycle
- 3 years fellowship by Italian Ministry of Education, University and Research
- thesis: "Models of DNA damage, repair, and misrepair"
- supervisor: Prof. Edoardo Milotti
- research area: biophysics, radiobiology, computational biology

Address 1 Piazzale Europa, (IT) 34127, Trieste, Italy | **Website** www.units.it | **Field of study** Physics and life sciences |

Level in EQF EQF level 8

10/2006 – 14/12/2010 Padova, Italy

MASTER'S DEGREE IN ASTRONOMY Università degli Studi di Padova

- evaluation: 110 / 110
- thesis: "The backreaction of cosmological inhomogeneities and dark energy"
- supervisor: Prof. Sabino Matarrese, Prof. Giuseppe Tormen
- research area: theoretical cosmology, general relativity

Address 2 via 8 Febbraio 1848, (IT) 35122, Padova, Italy | **Website** www.unipd.it | **Field of study** (Astro)Physical sciences |

Level in EQF EQF level 7

10/2002 – 21/09/2006 Padova, Italy

BACHELOR'S DEGREE IN ASTRONOMY AND PHYSICS Università degli Studi di Padova

- evaluation: 104 / 110
- thesis: "The greenhouse effect and the climate on Earth"
- supervisor: Prof. Sergio Ortolani, Prof. Guido Barbaro
- research area: geoscience, climatology, planetology

Address 2 via 8 Febbraio 1848, (IT) 35122, Padova, Italy | **Website** www.unipd.it | **Field of study** (Geo)Physical sciences |

Level in EQF EQF level 6

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

● PROJECTS

Projects with responsibility of fund management

- (2025-2026) MIT - Massachusetts Institute of Technology funded "From Earth to orbit" project: development of a space education curriculum for high school and low-income countries - Principal Investigator
- (2025) Trieste University call for international cooperation funded "Supporting Education In Physics" project: development of affordable physics laboratories for East Africa universities - Principal Investigator
- (2025) I wrote the ERASMUS KA171 project for the SubSaharan Africa area, which was fully funded with evaluation 59/60

Space projects

- (2025-current) INAF supported PROGRex: development of a spectrometer for Lunar surface
- (2023-current) ASI supported "TASTE (Terrain Analyzer and Sample Tester Explorer)": development of a spectrometer for a CubeSat which will observe the surface of Deimos, a Mars' satellite
- (2023-current) "CUBE - CME Catcher Carousel": a CubeSat constellation for the prompt surveillance of the solar activity to safeguard Earth from extreme solar events; I work on mission and subsystem analyses
- (2023-2024) ESA supported "mVision" / InterSatellite Link: a high data rate smallsat MEO infrastructure for quickly transferring data from LEO satellites to ground; in this large project with big space industry partners, I co-manage the local work and make analyses
- (2020-2024) ASI "SATCROSS": a CubeSat constellation to monitor the atmospheric water vapor content; I am in charge for the space segment (mission and payload definition) & work-package manager
- (2023-2024) "Quantum Ship": space remote control of ground vehicles in hazardous areas by means of CubeSat constellations and quantum telecommunications (a typical case study regards the safeguard of autonomous ships from piracy, but many other applications are envisaged); I am deputy project manager, and in charge for the mission architecture and the radiofrequency part
- (2021-2022) ESA AO/1-16373//19/NL/AF "Driving a Quantum Ship"
- (2017-2021) ESA ARTES-5.1 AO8465 "Miniaturised Ka-band FSS Transponder for Small Satellites" - project manager (2019-2021) and technician developer
- (2019-2020) ESA "E2ES-Tool" - technician
- (2017-2018) ESA RF14820 "Space Science End-To-End Simulator (SS-E2ES)" - deputy project manager

● THESIS SUPERVISOR

Thesis supervisor

Bachelor's degree

- M.Salvador (F. Adamo, S.Pauletto); "Measurements prior to radiation testing of high frequency HEMT devices"; Università di Trieste, 2023
- M.Fabris (G.Fiorito, M.Deluca, C.Chiandetti); "Applications and analysis of EEG signals"; Università di Trieste, 2023

Master's degree

- M.Sesso (F.Fiore); "Space radiation and planetary surfaces: GEATN4 applications to space missions and astrobiology"; Università di Trieste, 2025
- M.Fabris (G.Tasquier, P.Rebusco); "Physics laboratories in Somalia and Rwanda" Università di Bologna, 2025
- P.Naclerio (G.Buttazzoni); "Aerosol Jet Printing for microstrip antennas"; Università di Trieste, 2025
- T.Fagotto (R.Campana); "Study on the radiation environment between Earth and Mars applied to CubeSat missions"; Università di Trieste, 2024
- G.Simoni (S.Ivanovski, F.Fiore); "Scientific scenario for CUBE (CME Catcher Carousel): events simulations, mission and payload analyses"; Università di Trieste, 2024
- S.Trevisan (F.Fiore); "The X/gamma-ray spectrometer HERMES: calibrations and applications for planetary surface spectroscopy"; Università di Trieste, 2023
- G.Galletta (M.Frallis); "Comparison and optimisation of software for background estimation for the instrument NISP of the Euclid mission"; Università di Trieste, 2023
- L.Severin (A.Gregorio); "Mission analysis of new space system concepts: application to SATCROSS and Quantum Ship"; Università di Trieste, 2021

PhD

- L.Severin; Università di Trieste, 2022

● PUBLICATIONS

Referred papers

- L.Biasotti *et al.*; "Astrobiological effects of strong radiation ejections on atmospheres"; under preparation
- F. Dogo *et al.*; "Dual K/Ka-Band 3D-Printed Ortho-Mode Transducer for CubeSat Applications"; submitted to EuCAP2026

- A. Cimini *et al.*; "Design and Fabrication of a Microstrip Antenna Using Aerosol Jet Printing Technology"; submitted to EuCAP2026
- A.Mio, F.Dogo, E.A.Slejko; "Implementing materials fragmentation in the Life Cycle Assessment of orbital spacecraft"; *Advances in Space Research*, Volume 73, Issue 6, 15 March 2024, Pages 3116-3124
- J.R.Brucato *et al.*; "Deimos Moon investigation through remote and in situ science: the TASTE mission"; *Proceedings of the International Astronautical Congress*, IAC 2023
- L.Facheris *et al.*; "Towards Space Deployment of the NDSA Concept for Tropospheric Water Vapour Measurements"; *Atmosphere* 2023, Volume 14, Issue 3, 550
- G.Orecchini *et al.*; "Low-Noise Block Downconverter based on COTS and SIW Filters for Ku-band Cubesat Transponders"; *EEE Space Hardware and Radio Conference, SHaRC* 2023, pp. 1–4
- G.Schiavolini *et al.*; "Novel Architecture for Beacon Signal Generation in Satellite Applications"; *IEEE MTT-S International Microwave Symposium Digest* This link is disabled., 2023, 2023-June, pp. 815–818
- G.Orecchini *et al.*; "Low-Noise Ku-band Receiver Frontend with Switchable SIW filters for Cubesat Applications"; *ICECS 2022 - 29th IEEE International Conference on Electronics, Circuits and Systems, Proceedings*, 2022
- F.Alimenti *et al.*; "A Ka-band Receiver Front-End with Noise Injection Calibration Circuit for CubeSats Inter-Satellite Links"; *IEEE Access* This link is disabled., 2020, 8, pp. 106785–106798, 9110602
- F.Alimenti *et al.*; "K/Ka-Band Very High Data-Rate Receivers: A Viable Solution for Future Moon Exploration Missions"; *Electronics*, 2019, 8(3), 349
- A.Cuttin *et al.*; "A Ka-band transceiver for cubesat satellites: Feasibility study and prototype development"; *European Microwave Conference*, Madrid 2018
- E.Milotti *et al.*; "Analysis of the fluctuations of the tumour/host interface"; *Physica A: Statistical Mechanics and its Applications*, 2017, 486, pp. 587–594
- S.Stella *et al.*; "Neighbor Search Algorithm for Lattice-Free Simulations with Short-range Forces"; *IEEE HPCS* 2014
- E.Milotti *et al.*; "Computer-Aided Biophysical Modeling: A Quantitative Approach to Complex Biological Systems"; *IEEE/ACM* 2013

Deliverables for space agency projects

ASI TASTE

- TASTE-INAF-MIS-RS-ENVSP-0001 Environmental Requirements
- TASTE-INAF-PL-DD-SDD0001 Breadboard Design Description - Spectrometer
- TASTE-POLIMI-MIS-RS-EDS0001 Environmental Design Specification
- TASTE-POLIMI-MIS-RS-MRD0005 Mission Requirements Document
- TASTE-POLIMI-SYS-RS-SRD0001 System Requirements Document
- TASTE-POLIMI-PQA-AN-RA0001 Risk Management Plan and Assessment Report
- TASTE-INAF-SCI-RS-SciRD0001 Scientific Requirements

ASI SATCROSS

- As WP manager of the space segment, I was in charge of writing the regarding deliverables
- Final report
- Mission analysis report
- Payload specifications and preliminary design report

ESA mVISION – Miniaturised Ka-band Transceiver for Small Satellites

- ESA-2023-mVIS-TTF Transceiver Technology Feasibility
- ESA-2023-mVIS-TPD Transceiver Preliminary Design
- ESA-2023-mVIS-SoC Statement of Compliance

ESA ARTES-5.1 AO8465 Miniaturised Ka-band FSS Transponder for Small Satellites

- As project manager, I was in charge of writing all the deliverables
- Final Presentation
- Final Report
- Executive Summary Report
- Summary Report
- Transponder Final Analysis Document
- Transponder Test Report
- Transponder Development Plan
- Transponder Detailed Design Document
- Test Plan
- Design, Development and Verification Plan
- Transponder Preliminary Design Document
- Hardware Review Document
- Transponder Requirement Document
- Statement of Compliance to PA/QA
- Statement of Compliance to ECSS Standards
- Commercial Evaluation
- Mission Scenario Document
- Deliverable Document List

ESA AO/1-16373//19/NL/AF "Driving a Quantum Ship"

- As deputy project manager, I was in charge of writing all the deliverables
- Telecommunication System

ESA "Space Science End-To-End Simulator SS-E2ES-Tool"

- Final Report
- Demo Mission Requirements and High Level Architecture
- Requirement Baseline

ESA RF14820 "Space Science End-To-End Simulator (SS-E2ES)"

- As deputy project manager, I was in charge of writing all the deliverables

CONFERENCES & SEMINARS

Conferences and seminars (since 2023)

- J.R.Brucato *et al.*; "Italian TASTE mission to the Martian moon Deimos"; EPSC-DPS, Helsinki 7-12 September 2025
- P.Simonetti *et al.*; "A new energy balance model to map the habitability of tidally locked rocky planets: application to the aariEL target list"; EPSC-DPS Joint Meeting, Helsinki 2025
- F.Dogo; "Kenyatta-Trieste"; Kenyatta University, Nairobi 2025
- F.Dogo; "MMUST-Italy STEM Present and Future Collaborations"; MMUST, Kakamega 2025
- D.Lewanski *et al.*; "Empowering STEM Education and Equal Opportunities in low resourced African Universities through STACK"; VIII CUCS Congress 2024
- F.Dogo; "CUCS, CRMCS ... ECS-CUCS?"; Maths Education Reading Group towards Epiphanies (MERGE), Università di Trieste, 2024
- F.Dogo; "La Diplomazia scientifica e le missioni dell'Università"; Workshop Science Diplomacy, Università di Trieste, 2024
- J.R.Brucato *et al.*; "TASTE Mission: Small-Satellite and Miniaturized To the Martian Moon Deimos"; Europlanet Science Congress 2024
- J.R.Brucato *et al.*; "TASTE - a CubeSat mission with a miniaturized Lander to Martian Moon Deimos"; ASI workshop "L'impegno italiano nel settore dei CubeSat: tecnologie e missioni future" - 2° edizione, 2024
- J.R.Brucato *et al.*; "TASTE Mission - A Smallsat and Miniaturized Lander to Deimos"; COSPAR 2024
- F.Fiore *et al.*; "Planetary HERMES: towards a hybrid high-energy detector for planetary surface spectroscopy and navigation"; SPIE - Space Telescopes and Instrumentation 2024
- A.Meneghin *et al.*; "TASTE: A CubeSat Mission to Deimos"; Congresso Nazionale di Scienze Planetarie, Bormio 2024

Conferences and seminars (up to 2022)

- A.Mio, F.Dogo, E.A.Slejko; "A life cycle assessment of alternative materials for a cubesat manufacturing"; ESA Clean Space Industry Days 2022
- A.Feta *et al.*; "The SATCROSS measurement campaign on a ground-to-ground radio link: NDSA technique towards space application"; ESA Living Planet Symposium, Bonn 2022
- L.Facheris *et al.*; "Tropospheric water vapor observation from space through a new measurement concept: the SATCROSS project"; ESA ATMOS Conference 22-26 November 2021
- F.Dogo *et al.*; "SATCROSS space mission analysis and payload"; ATMOS, ESA, 2021
- F.Dogo *et al.*; "AO8465 Final Presentation"; SpaceToConnet, ESA, 2021
- J.Barbosa *et al.*; "An MBSE End-to-End Simulation Modeling Tool - from a Reference Architecture model to working simulation code"; Simulation and EGSE for Space Programmes - SESP conference, 2021
- V.Palazzi *et al.*; "A 28-30 GHz Receiver Front-End for High Data Rate Cubesat Applications"; Società Italiana di Elettronica (SIE), Trieste, 2021
- A.Gregorio, F.Dogo, F.Alimenti; "RADIO SAT, un ricetrasmittitore miniaturizzato in banda K/Ka per Cubesat, basato su componenti commerciali: dal sistema di comunicazione a strumento scientifico"; Research day - Tavolo Tematico "Strumentazione Scientifica", 2020
- F.Alimenti *et al.*; "Future Cubesat Moon Missions: K/Ka-Band Receiver Front-Ends Based on Commercial Components"; IEEE ISAECT, Rome, 2019
- F.Alimenti *et al.*; "K/Ka-Band Receiver Front-Ends Based on Commercial Components for Future Moon Exploration Missions"; PIERS, Rome, 2019
- J.Barbosa *et al.*; "End-to-End Mission Performance Simulators for Space Science missions - a model-based Reference Architecture"; Workshop on Simulation and EGSE for Space Programmes (SESP), ESA ESTEC, 2019
- M.Maris, F.Dogo; "AgriSat: a general purpose Earth observing nanosatellite constellation"; International Conference of the Aerial Archaeology Research Group (AARG), Venice, 2018
- E. Milotti *et al.*; "Synthetic Life in Extreme Conditions", presented by E. Milotti at the workshop "Life in a Cosmic Context", Trieste, 2015
- E.Milotti *et al.*; "Computational and Mathematical Approaches to Tumor Metabolism and Microenvironment"; ISCaM meeting - METABOLISM and MICROENVIRONMENT in CANCER PLASTICITY - Venice, 2015
- S.Stella *et al.*; "3D modeling of tumor growth"; Cross-border Biomedical Conference - Trieste, 27th Febr. 2014

- R.Chignola *et al.*; "From Tumor microenvironment dynamics to scaling laws in oncology" , XCIX Congresso Nazionale SIF - Trieste, 2013
- F.Dogo *et al.*; "Ionizing radiation damage" XCIX Congresso Nazionale SIF - Trieste, 2013

• NETWORKS & MEMBERSHIPS

Network member

- Istituto Nazionale di AstroFisica (INAF)
- Planetary Systems and Origin of Life group @ INAF Trieste Observatory (POTs)
- Centro di Ricerca Migrazioni e Cooperazione allo Sviluppo (CRMCS) @ Università degli Studi di Trieste
- Early Career Scholars - Coordinamento Universitario Cooperazione allo Sviluppo (ECS-CUCS)
- Institute for Fundamental Physics of the Universe (IFPU) - astrobiology, high energy
- Trieste Quantum Initiative - Seminar Organizing Committee
- European Union Science Diplomacy Alliance (EUSDA)

• PATENTS

Patents

- International patent n. 102020000007681 - "TRASDUTTORE ORTOMODO PER ANTENNA E ANTENNA PER SATELLITI"
- International patent n. 21169960.8 - "DISPOSITIVO RICEVITORE A MICROONDE"

• OTHER ACADEMIC/RESEARCH ACTIVITIES

Other academic/research activities

- Trieste Quantum Seminar Organizing Committee; 2024-2025
- organiser and moderator of the international conference "International Cooperation and Science Diplomacy"; Trieste, 26-05-2025
- organiser and moderator of the ECS-CUCS Webinar "Science Diplomacy"; online, 31-10-2024
- I was found to be suitable and selected for the XXXIX Spedizione Italiana in Antartide (novembre 2023-novembre 2024) for the astronomer position
- assistant examiner in physics courses at Univeristà degli Studi di Trieste: "Metodi di trattamento del segnale", "Advanced Statistics for Data Analysis"; Trieste, Italia; 2013-2014 , 2014-2015
- teaching of biological experiments for the course "Introduction to Biophysics" of the master degree course in Physics; Trieste, Italia; 2013-2014
- organisation of the XCIX Congresso Nazionale of the Società Italiana di Fisica; Trieste, Italia; 23-27 September 2013
- astronomical observations (TAC_38) at Galileo National Telescope; La Palma, Canary Islands, Spain; 13-15 May 2013

• OTHER TRAINING

Other training

Science Diplomacy

- "Science Diplomacy of the XXI Century"; International School of Science & Diplomacy; Erice, Italy; 2-8 October 2024

Archaeology

- Excavation stage at "via Gemina, Aquileia" site; Università degli Studi di Trieste (Italy); September 2017

Technology

- "1st Workshop on Hamamatsu Camera Solution for Biotech Industry"; Elettra-Sincrotrone; Trieste, Italy; 4 June, 2014

Biophysics

- XVIII International School "Nanomechanics in biomolecular adhesion"; Società Italiana di Biofisica Pura e Applicata, Istituto Veneto di Scienze, Lettere ed Arti; Venice, Italy; 27-31 January, 2014

Modeling

- "Modelling radiation effects from initial physical events"; DoReMi, DF Università di Pavia; Pavia, Italy; 27-7 May-June, 2013

Radiobiology

- "CELOD: cellular effects of low doses and low dose-rates with focus on DNA damage and stress response"; DoReMi, Stockholm Universitet; Stockholm, Sweden; 22-3 April-May, 2013

Radiation

- V Scuola Nazionale "Rivelatori ed elettronica per fisica delle alte energie, astrofisica, applicazioni spaziali e fisica medica"; INFN Laboratori Nazionali di Legnaro; Padua, Italy; 15-19 April, 2013

Complex systems

- "Analysis of Complex Networks: Structure and Dynamics"; Società Italiana Caos e Complessità, DEI Politecnico di Milano; Milan, Italy; 20-22 February, 2013

Astrophysics

- "Star Formation and Chemical Enrichment Workshop"; CosmoComp; Trieste, Italy; 14-16 March, 2012

Astrobiology

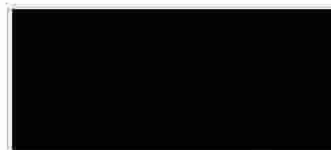
- "Il Workshop of the Thermodynamics, Disequilibrium and Evolution"; NASA Astrobiology Institute Focus Group; Florence, Italy; 12-14 September, 2011

Web programming

- courses on web design and developing; Padua, Italy; Spring, 2011
-

Le informazioni contenute nel presente "curriculum vitae et studiorum" sono rese sotto la personale responsabilità del sottoscritto, ai sensi degli articoli 46 e 47 del Decreto del Presidente della Repubblica 28 dicembre 2000, numero 445, e successive modifiche e integrazioni, consapevole della responsabilità penale prevista dall'articolo 76 del medesimo Decreto per le ipotesi di falsità in atti e/o dichiarazioni mendaci.

Trieste, Italia , 21/10/2025



Federico Dogo