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## VITA

### **EDUCATION AND PROFESSIONAL QUALIFICATION**

- 2000-Present. Researcher Astronomer at the Astronomical Observatory of Padova, INAF.
- 1988. Graduated Technician at the Astronomical Observatory of Padova
- 1987. Master Degree in Astronomy at Padua University

### **TEACHING EXPERIENCE**

- 1990-1999 collaboration to the course of Physics of the Solar System for the students of astronomy and physics at the University of Padova
- 2002-2003 course of astronomy to the students of Technology and Sciences of the Nature at the University of Padova
- 2004 course of Space Exploration of the terrestrial planets to the students of the master of Astronautics and Satellite Sciences at the University of Padova
- 2007 docent at the National School of Astrophysics for PhD students on the atmospheres of the terrestrial planets.
- 2006-present collaboration at the course of Geology, Geodynamics and exploration of the terrestrial planets for the students of geology.
- 2006 – present, member of the board of the PhD Course in Space Sciences, Technologies and Measurements (CISAS) of University of Padova
- 2011 Examiner PhD course in Astronomy at University Pierre and Marie Curie, Paris
- 2015-2017 course “Exploring the Solar System and its environment” for the PhD course of CISAS, University of Padova
- Tutor or co-tutor of 13 undergraduated thesis in astronomy and physics
- Tutor or co-tutor of 3 master thesis
- Tutor or co-tutor of 10 PhD thesis

### **RESEARCH AREAS**

- High resolution spectroscopy and cataloguing of emission lines, in the visible spectral range, of comets
- Observations and modelling of the sodium exosphere of the Moon and Mercury
- Modelling of meteoroid flux and impacts on the surface of Mercury and the Moon
- Geology of Mercury, the Moon and Mars
- Age determination of planetary surfaces
- Impact crater simulations with hydrocode
- Design and project of visible imagers for space missions
- Stereo reconstruction techniques

### **INDIVIDUAL AWARDS AND HONORS**

- 2017: Certificate of outstanding contribution to ESA Rosetta Mission

### **SPACE MISSION PARTICIPATION**

- 1995 Co-I of the imaging system OSIRIS in the ESA mission ROSETTA
- 2000 associate of the LFI instrument of the ESA mission PLANCK
- 2004-2015 CoPI di SIMBIO-SYS (Spectrometers and Imagers for Mpo BepiColombo Integrated Observatory SYStem) on board the ESA mission BepiColombo
- 2004 – present, CoI of PHEBUS in BepiColombo
- 2004 – present CoI of MSASI (Mercury Sodium Imager) in BepiColombo

- 2004 – present team member of SERENA in BepiColombo
- 2008-2009 CoPI of the study of the visible cameras for ESA Marco Polo
- 2009-2010 PI of the study of the Wide Angle and Medium Resolution Cameras for the ESA EJSM-Laplace
- 2010-2011 Col in the NASA instrument High resolution Stereo Color Imager (HiSCI) for the ExoMars TGO
- 2012 – present, CoPI of the camera CaSSIS in ExoMars TGO
- 2012-2013 PI of the study of the Narrow Angle and Wide Angle Cameras for ESA Marco Polo-R
- 2013 – present Col in High Resolution Imaging Science Experiment (HiRISE) in Mars Reconnaissance Orbiter
- 2013 – present, deputy PI and instrument scientist of Janus the camera on board the ESA mission JUICE
- 2015 – present, scientific consultant in BIO-SIGNatures and habitable Niches (BIOSIGN), astrobiology experiment on board the International Space Station
- 2016 – present, PI SIMBIO-SYS in BepiColombo
- 2016-2017 PI stereo camera on board Asteroid Redirect Robotic Mission of NASA

#### **ESA service:**

- 2001-2004 member of the ESA Science Advisory Group for the BepiColombo mission
- 2017-2019 Member of the ESA Solar System Exploration Working Group
- 2017 Member of the panel review for the ESA M5 candidate selection
- 2018-2019 Member of the panel review for the ESA F-Class mission selection

#### **SCIENTIFIC MEMBERSHIPS**

- 1989-1996 Col in the NASA project International Jupiter Watch
- 1995-1997 Col in the European team for the ground-based observations, of the first target of the ROSETTA mission, with the ESO telescopes
- 1996-1997 Col of the European team obtaining the 5% of all the telescopes in the Canary islands to observe comet Hale-Bopp
- 1997 member of the LOC of the conference "The Three Galileos" in Padova, Italy
- 1998 member of the SOC of the conference "First International Conference on Hale-Bopp", in Tenerife, Canary islands
- 1999 member of the LOC of DPS 99 dell'American Astronomical Society, in Padova, Italy
- 1999 Col in the NASA project to study the sodium in the comets
- 1999-2002 Leader for the italian participation to the INTAS-ESA project on the study of the Mercury regolith
- 2000-2003 secretary of the IAU Commission n.15
- 2002 member of the SOC for the conference "1st Planck Galactic and Solar System science meeting", Toulouse, France
- 2004-2006 Col in the italian project of exploration and study of sub-glacial lakes in Antarctica
- 2006, Convener at the European Geosciences Union assembly of the session *Relation between Exosphere-Magnetosphere-Surface on Mercury and the Moon*.
- 2010, Main Scientific Organizer at the COSPAR of the event *The new exploration of Mercury*.
- 2014 - present, Science Organizing Committee of the European Planetary Science Congress
- 2016 - present, member of the program Italy (ASI) – China named "Joint Lunar Map Drawing Project by Chinese and Italian College Students", also known as *Moon Mapping Project*
- 2016 - present, member of the Italian team, led by ASI, associated to the NASA Solar System Exploration Research Virtual Institute

**PUBLICATIONS**

Author of 211 refereed papers and 281 proceedings and other publications.