PERSONAL INFORMATION

Pamela Cambianica

Via Santi Fabiano e Sebastiano, Padova (Pd),35124, Italy
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Sex Female | Date of birth 01/07/1988 | Nationality Italy

EDUCATION AND TRAINING

01/10/2016 - 30/10/2019

PhD in Space Sciences, Technologies and Measurements

Centre for Studies and Activities for Space “Giuseppe Colombo” (CISAS), University of Padova, Italy

Curriculum: “Sciences and Technology for Aeronautics and Satellite Application (STASA)”
Project Topic: **Analysis of OSIRIS data, the imaging system onboard Rosetta**
In cooperation with the National Institute for Astrophysics (INAF)
Supervisor: Prof. Giampiero Naletto (University of Padova)
Co-Supervisor: Dr. Gabriele Cremonese (National Institute for Astrophysics)

Planetary Surface Processes and Analysis, Geomorphology, Thermal Analysis and Simulation, Fragmentation Analysis, Statistical Analysis

01/10/2014 – 14/09/2016

Master Degree in Astronomy – 100 *cum laude* (out of 100)

Department of Physics and Astronomy – University of Padova, Italy

Solar System, Astrophysics, Astronomy, Physics, Mathematics, Chemistry, Informatics

Topic of Dissertation: **Correlation between insolation model and boulder deposits on comet 67P/Churyumov-Gerasimenko**
Supervisor: Prof. Francesco Marzari (University of Padova)
Co-Supervisor: Dr. Gabriele Cremonese (National Institute for Astrophysics)

01/10/2008 – 16/03/2014

Bachelor Degree in Astronomy

Department of Physics and Astronomy – University of Padova, Italy

Solar System, Astrophysics, Astronomy, Physics, Mathematics, Chemistry, Informatics

Topic of Dissertation: **Planetary Transits of the Inner Solar System Seen by Asteroids**
Supervisor: Dr. Lazzarin Monica (University of Padova)
Co-Supervisor: Dr. Simone Zaggia (National Institute for Astrophysics)

12/09/2003 – 20/07/2008

Scientific and Linguistic Certificate, Italian Secondary School Diploma – 83 (out of 100)

Lorenzo Federici High School - Trescore Balneario, Bergamo (Bg), Italy

SPACE MISSION INVOLVEMENT

2014 – Present

Associate Scientist: ESA /Rosetta OSIRIS camera , PI: Dr. Holger Sierks (Max Plank Institute, Goettingen, Germany)

INTERNATIONAL INVOLVEMENT

01/04/2019 - 30/06/2019

Visiting PhD Student - DLR, Deutsches Zentrum für Luft- und Raumfahrt, Berlin

Thermal analysis, Finite Element Method Simulation, Planetary Analysis, under the supervision of Mottola, Dr Stefano

2019 - Present

Co-Investigator, TNG/A40DDT2 - Observation of the first interstellar comet: 2I/Borisov.
PI: Gabriele Cremonese, INAF, Osservatorio Astronomico di Padova

2018 - Present

Co-Designer of the Calathus Mission to Occator Crater at Ceres, in collaboration with the European Space Agency (ESA) and the Austrian Research Promotion Agency (FFG)

GRANT, SCHOOL AND WORKSHOP PARTECIPATION

26/11/2018 - 30/10/2018
Post Alpbach Summer School - ESA Academy's Training and Learning Facility at ESEC-Galaxia in Belgium.
Design of the Calathus Mission to Occator Crater at Ceres

16/07/2018 – 27/07/2018
Summer School Alpbach 2018, **Sample Return Mission from a Small Body of the Solar System**, Alpbach/Tyrol – Austria.
Awarded a financial support for partecipating to the Alpbach Summer School from ASI, Italian Space Agency

09/05/2018
COMSOL Day - how to model your thermal flux with COMSOL Multiphysics® software

28/08/2017 – 02-09-2017
Summer School SDSM 2017, **"Satellite Dynamics and Space Mission"**, San Martino al Cimino, Viterbo, Italy

03/04/2017 – 07/04/2017
VII International Course: **"Detectors and Electronics for High Energy Physics, Astrophysics, Space Application and Medical Physics**", INFN, Legnaro,Italy

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	A2	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Computer skills: C++, Matlab-Octave, NAIF, ENVI, Arcgis 10, Excel, Access, Word, LaTeX, Powerpoint, Internet Explorer, Managing Files, COMSOL Multyphysiscs, European Computer Driving Licence (ECDL)
Operating systems: Windows, Unix , MacOSX
Photo editing software (Photoshop, Gimp)
Open Concurrent Design Tool - software package developed under a European Space Agency (ESA) contract to enable efficient multi-disciplinary concurrent engineering of space systems in the early life cycle phases

Driving licence: European driving licence B (vehicles)

Social and Organizational skills and Competences: Good team spirit, problem solving and organization skills learned in the six years as shop assistant and manager of employee schedules, receiving/shipping goods, selection and training of personnel. Working in a team during the PhD has allowed to apply these skills to my studies.

ADDITIONAL INFORMATION

International Diving Licence Open Water Diver
Scuba Schools International (SSI).

ATTENDANCE AT CONFERENCES and PUBLIC OUREACH

From Giotto to Rosetta: 30 years of Cometary Science from Space and Ground
Padova, October 27th – 29th, 2016
LXI Congresso della Società Astronomica Italiana
Padova, September 12th-15th , 2017
Congresso Nazionale di Scienze Planetarie
Bormio, February 5th – 9th ,2018
European Planetary SCience (EPSC)
Berlin, September 2018
XVI Congresso Nazionale di Scienze Planetarie
3-7 Febbraio 2020, Padova

Seminars

"**Impactful Speeches**" Dr. Luigi Salmaso
"**How to disseminate scientific knowledge**", Dr. Massimo Polidoro
"Electro Magnetic Formation Flying (EMFF)"
"The SPHERES micro-satellites system"
"Sparse Aperture Synthesis"
"Reconfigurable Constellation" , Prof. David Miller
"Optical design of the Wide Angle Camera for the Rosetta mission: on-ground realization and in-flight results", Prof.ssa Da Deppo Vania
"Vehicle Mechanics" Prof. Franceschini Giordano
"Gravitational Waves and Quantum astrophysics", Prof Barbieri Cesare
"L'ASI, la Ricerca di Base e la Ricerca Applicata: tematiche e possibili sinergie", Lectio Magistralis del Prof. Roberto Battiston

Courses

Preparation of a research proposal (Prof. Giampiero Naletto UNIPD)
Space optics and detectors (Prof. Giampiero Naletto, Prof. Maria Guglielmina Pelizzo UNIPD)
Space system and their control (Prof. Enrico Lorenzini, Prof. Alessandro Francesconi UNIPD)
Exploring the Solar System and its environment (Prof. Gabriele Cremonese, Prof. Francesco Marzari UNIPD)
Mechanical and thermal properties of material for aerospace constructions (Prof. Ugo Galvanetto, Prof. Mirco Zaccariotto UNIPD)
Aerospace Propulsion (Prof. Daniele Pavarin, Dr. Marco Manente UNIPD)

PUBLIC OUTREACH and INTERVIEWS, EDUCATIONAL ACTIVITIES

2015, The night of researchers, Laboratory : "A piedi nudi su Marte" at the Astronomical Observatory of Padova, Italy
http://venetonight.it/

2015, Laboratory : "A piedi nudi su Marte", BergamoScienza, Bergamo, Italy
https://www.bergamoscienza.it/it/storico/1477/a-piedi-nudi-su-marte-realta-virtuale-e-planetologia

2016, The night of researchers, Laboratory: "Viaggio 3D tra pianeti e comete" at the Astronomical Observatory of Padova, Italy

2016, Laboratory : "Viaggio 3D tra pianeti e comete", BergamoScienza, Bergamo, Italy

2017, The night of researchers, Laboratory: "BepiRobot" at the Astronomical Observatory of Padova, Italy

2017, Laboratory: "BepiRobot", BergamoScienza, Bergamo, Italy

2019, Universo Misterioso, le ultime scoperte - Bignami - FOCUS TV

2019, Laboratory: "Viaggio multisensoriale su Marte", BergamoScienza, Bergamo, Italy
http://www.bergamoscienza.it/it/calendario/53664/viaggio-multisensoriale-su-marte

REFERRED PUBLICATIONS

R1. **Cambianica, P.**, Cremonese, G., Naletto, G., et al. (2019). Quantitative analysis of isolated boulder fields on comet 67P/Churyumov-Gerasimenko. Astronomy & Astrophysics, Volume 630, id.A15, 15 pp.
https://www.aanda.org/articles/aa/abs/2019/10/aa34775-18/aa34775-18.html

R2. Tognon, G., Ferrari, S., Penasa, L., La Forgia, F., Massironi, M., Naletto, G., Lazzarin, M., **Cambianica, P.**, et al. (2019). Spectrophotometric variegation of the layering in comet 67P/Churyumov-Gerasimenko as seen by OSIRIS. Astronomy & Astrophysics, Volume 630.
https://www.aanda.org/articles/aa/abs/2019/10/aa34884-18/aa34884-18.html

R3. Pajola, M., incl. **Cambianica, P.**, et al. (2019). Multidisciplinary analysis of the Hapi region located on Comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, Volume 485, Issue 2, p.2139-2154.
https://academic.oup.com/mnras/article-abstract/485/2/2139/5371141?redirectedFrom=fulltext

R4. Bertini, I., incl. **Cambianica, P**., et al. (2019). The backscattering ratio of comet 67P/Churyumov-Gerasimenko dust coma as seen by OSIRIS onboard Rosetta. Monthly Notices of the Royal Astronomical Society, Volume 482, Issue 3, p.2924-2933.
https://academic.oup.com/mnras/article-abstract/482/3/2924/5142315?redirectedFrom=fulltext

R5. Ferrari, S., Penasa, L., La Forgia, F., Massironi, M., Naletto, G., Lazzarin, M., Fornasier, S., Hasselmann, P.H, Lucchetti, A., Pajola, M., Ferri, F., **Cambianica, P**., et al. (2018). The big lobe of 67P/Churyumov-Gerasimenko comet: morphological and spectrophotometric evidences of layering as from OSIRIS data. Monthly Notices of the Royal Astronomical Society, Volume 479, Issue 2, p.1555-1568.
https://academic.oup.com/mnras/article-abstract/479/2/1555/5042950?redirectedFrom=fulltext

R6. Acciarini, G., Bates, H., Berge, N., Caballero, M.**, Cambianica, P**. et al (2019). The Calathus Mission Concept to Occator Crater at Ceres: Science, Operations and Systems Design. Submitted.

R7. Lucchetti, A., Penasa, L., Pajola, M., Massironi, M., ..., **Cambianica., P**., et al. (2019). The rocky-like behavior of cometary landslides on 67P/Churyumov-Gerasimenko, Geophysical Research Letters, Volume 46, Issue 24, pp. 14,336-14,346
DOI: 10.1029/2019GL085132

R8. **Cambianica, P**., Fulle, M., Cremonese, G., et al. (2020), Time evolution of dust in the Hapi region of comet 67P/C-G, A&A. Accepted.

INTERNATIONAL ABSTRACTS

IA1. **Cambianica, P**., et al. (2018). Thermal analysis of boulders on the 67P/Churyumov-Gerasimenko comet. European Planetary Science Congress 2018, held 16-21 September 2018 at TU Berlin, Berlin, Germany, id.EPSC2018-267.

IA2. Acciarini, G., Bates, H., Berge, N., Caballero, M., 4 **Cambianica, P**., et al (2019). SAMPLE RETURN FROM A RELIC OCEAN WORLD: THE CALATHUS MISSION TO OCCATOR CRATER, CERES. International Planetary Probe Workshop 2019, Oxford, UK.

IA3. Vincent, J.B., Birch, S., Hayes, A., Zacny, K., Oklay, N., **Cambianica, P**. (2019). Bouncing boulders on comet 67P. EPSC-DPS Joint Meeting 2019, held 15–20 September 2019 at Centre International de Conférences de Genève (CICG), Geneva, Switzerland.

IA4. Simioni, E., Re, C., Mudrich, T., Pajola, M., Lucchetti, A., Pozzobon, R., **Cambianica, P**., et al. (2018). 3DPD application to the first CaSSIS DTMs. European Planetary Science Congress 2018, held 16-21 September 2018 at TU Berlin, Berlin, Germany, id.EPSC2018-380.

IA5. Ferrari S., Feller, C., Massironi, M., Penasa, L., **Cambianica, P**. Naletto, G., Fornasier, S. (2018). Geomorphological units of Khepry and Imhotep regions of comet 67P/Churyumov-Gerasimenko. European Planetary Science Congress 2018, held 16-21 September 2018 at TU Berlin, Berlin, Germany, id.EPSC2018-927

IA6. Lucchetti, A., Cremonese, G., **Cambianica, P.**, Daubar, I., McEwen, A. S., Re, C. (2015). Numerical Modelling and Ejecta Distribution Analysis of a Martian Fresh Crater. American Geophysical Union, Fall Meeting 2015, abstract id.P53D-2152

IA7. Cremonese, G., Borin, P., **Cambianica, P**., Lucchetti, A., Daubar, I., McEwen, A. S., Marzari, F. (2015). New Impactor Flux Estimate on Mars and Its Application on Fresh Craters. Bridging the Gap III: Impact Cratering In Nature, Experiments, and Modeling, held 21-26 September, 2015 at University of Freiburg, Germany. LPI Contribution No. 1861, p.1044.

IA8. Vincent, J.B., Birch, S., Hayes, A. Zacny, K., Okay, N., **Cambianica, P**. (2019). Bouncing boulders on comet 67P. EPSC-DPS Joint Meeting 2019, held 15-20 September 2019 in Geneva, Switzerland, id. EPSC-DPS2019-502

IA9. Cambianica, P., Fulle, M., Cremonese, G., Simioni, E., Naletto, G., et al. (2020). Time evolution of dust in the Hapi region of Comet 67P/C-G comet. XVI Congresso Nazionale di Scienze Planetarie, 3-7 Febbraio, Padova

IA10. Lazzarotto, F., Cremonese, G., Lucchetti, A., Re, C., Simioni, E., Pajola, M., **Cambianica, P**., Munaretto, G. (2020). High Quality Software for Planetary Science from Space. XVI Congresso Nazionale di Scienze Planetarie, 3-7 Febbraio, Padova

In compliance with the GDPR and Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned Decree

Curriculum Vitae updated in March 2020