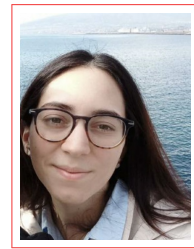


Serena Maria Lezzi

Curriculum Vitae

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ID [ORCID/Serena-Lezzi](#)



Overview

Thanks to my studies I acquired a very strong logical-mathematical thinking and problem solving skills. I am driven by a passion for research and curiosity for what I do not know, which is why I am always looking for new experiences and challenges. I am currently a post-doctoral researcher at the CMCC Foundation, working on the implementation of AI-based tools for Digital Twins of the Coastal Ocean and the creation of innovative solutions for coastal management and protection through oceanographic data analysis.

Current Position

- present - 11/2024 **Scientific Software Developer at Centro Euro-Mediterraneo sui Cambiamenti Climatici**
- 02/2025 - 11/2021 **Ph. D. in Physics at University of Naples “Federico II”, Italy**
INAF (Istituto Nazionale di Astrofisica) scholarship in preparation for the JAXA solar mission Solar-C.
Dissertation : Dark Halos around active regions in the Solar Atmosphere.

Education

- 07/2021 - 10/2019 **Masters degree in Astrophysics and Theoretical Physics at University of Salento, Italy**
Dissertation : X-analysis of an XMM-Newton Intermediate Polar sample.
Final mark : 110/110 *cum laude*
- 10/2019 - 09/2016 **Bachelors degree in Physics at University of Salento, Italy**
Dissertation : The EUCLID Project : Visible Imaging Channel (VIS) and Hough Transform.
Final mark : 110/110 *cum laude*
- 07/2016 - 09/2011 **Maturità Scientifica at Liceo Scientifico “G. Banzi Bazoli”, Lecce, Italy**
Final mark : 100/100 *cum laude*
- 2011 - 2018 **Flute player at Conservatorio di Musica “Nino Rota”, Monopoli (BA), Italy**

Skills

Technical skills

- Programming Languages :
 - Python ★★★★★ IDL ★★★★★
 - C/C++ ★★★★★ Bash ★★★★★
 - Pascal ★★☆☆☆
- Operating Systems - MAC OS, GNU/Linux, Windows.
- Markup language for high quality typesetting - \LaTeX .
- Office packages - Excel, PowerPoint, Word.
- Hosting service for software development and version control GitHub.

Soft skills

- **Strong emotional intelligence**
Her self-awareness and social skills make her an excellent team worker and team player. Empathy is her strength point. She is also an active listener, open to feedbacks, and great in negotiations and conflict management.
- **Excellent communicator**
Confident in both public speaking and networking, she is able of exposing technical concepts with ease and clarity to expert and non-expert audience.
- **Great ability for independent work**
She is ambitious, serious, reliable, with a strong sense of responsibility. She is able of decision making, managing time and organizing the work effectively. She has the ability to focus and creative and critical thinking, which are essential for problem solving.
- **Curious, passionate, self-motivated, enthusiast**
Her positive and patient attitude makes her particularly flexible and adaptable to a vast range of working situations.

Languages

Italian, Native language

English, Full professional proficiency

French, Basic knowledge

Spanish, Basic knowledge

Main Internships & International Experiences

- 9 - 20/12/2024 International High-Level Course “Data Driven Modeling and Predictions of the Earth System”, Bertinoro, Italy
- present - 04/2024 **Science Coordinator** of the ESA’s Solar Orbiter Observing Plan (SOOP) targeted to observe Dark Halos around active regions in the solar atmosphere
- 04/2024 - 09/2023 **Science Planner** for NASA/Lockheed Martin solar physics mission IRIS (Interface Region Imaging Spectrograph)
- 08/2023 - 07/2023 **Co-PI and Observer** at GREGOR Solar Telescope, Observatorio del Teide, Tenerife, Canary Islands, Spain
- 27 - 17/07/2023 Culham Plasma Physics Summer School - Oxford, UK
- 07/2023 - 04/2023 **Visitor Researcher** for the SOLARNET Mobility Young researcher Programme at Mullard Space Science Laboratory (MSSL), University College London, UK
- 04/2023 - 02/2023 **Visitor Researcher** at the Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge, Cambridge, UK
- 15 - 11/04/2022 International School of Space Science “The different spatio-temporal scales of the solar magnetism”, L’Aquila, Italy
- 08/2013 **One-month GRUPPO POSTE ITALIANE scholarship** for *AFS Intercultural Program* at “Ranum Efterskole”, Denmark

Grants and Awards

- 07/2024 Financial Support for participation at 45th Scientific Assembly of the Committee on Space Research (COSPAR), Busan, South Korea. E2.2 event “Energy and mass transport of small scales in the low solar atmosphere”, **Invited talk**
- 10/2023 **Metcalf Travel Award** and **Metcalf Lecturer** for the Hinode-16/IRIS-13 meeting in Niigata (Japan) released by the American Astronomical Society, Solar Physics Division
- 04/2023 SOLARNET Young Researcher Mobility Programme 2023

Publications

Lezzi, S.M., Long, D.M., Andretta, V., Baker, D., Dolliou, A., Murabito, M., Parenti, and Zambrana Prado, N., 2024, A&A, 690, A342, *First Solar Orbiter observation of a dark halo in the solar atmosphere*

Lezzi, S.M., Andretta, V., Murabito, M., Del Zanna, G. 2023, A&A, 680, A61, *Dark halos around solar active regions I. Emission properties of the dark halo around NOAA 12706*

IRIS nugget, Dark Halos around active regions in the solar atmosphere

Nucita, A.A, **Lezzi, S.M.**, De Paolis, F., Strafella, F., Licchelli, D., Franco, A. and Maiorano, M. 2022, MNRAS, 517, 118–129, *Timing analysis of a sample of five cataclysmic variable candidates observed by the XMM–Newton satellite*

Conferences & seminars

Talks

- 9 - 13/09/2024 17th European Solar Physics Meeting ESPM-17, Turin, Italy
- 13 - 21/07/2024 COSPAR 2024 “Energy and mass transport of small scales in the low solar atmosphere” event E2.2, Busan, South Korea, **Invited**
- 1 - 5/07/2024 European Astronomical Society meeting, Symposium S15, “High-Resolution Solar Observations in the Time, Space, and Spectral Domains”, Padua, Italy
- 06/12/2023 Lockheed Martin seminar series, Lockheed Martin Solar and Astrophysics Laboratory, Palo Alto, California
- 25 - 27/10/2023 SoHe 2023 - Fourth Meeting of the Italian Solar and Heliospheric Community, INAF Osservatorio Astronomico di Arcetri, Florence, Italy
- 16 - 18/10/2023 MUSE Team meeting, ASI Headquarter, Rome, Italy
- 25 - 29/09/2023 “The 6th NAOJ Symposium Hinode-16 / IRIS-13” International meeting, Niigata, Japan, **Metcalf Award Lecturer**
- 4/05/2023 MSSL solar seminar series, Mullard Space Science Laboratory, University College London, Dorking, UK
- 16/02/2023 ESPOS seminar hosted by INAF Capodimonte Astronomical Observatory, virtual seminar
- 1 - 3/02/2023 Workshop ASI “Science with current and future solar physics missions”, Rome, Italy

Posters

- 08 - 12/04/2024 Solar Eclipse Meeting 2024, San Antonio, Texas
- 11 - 15/09/2023 SOLARNET-S3 “Sun in Science and Society” International meeting, Venice, Italy
- 19 - 23/09/2022 “Hinode-15 / IRIS-12 Multi-messenger physics of the solar atmosphere” International meeting, Prague, Czech Republic

Work Experience

- 01/2023 **ACQUIN peer review expert** for international accreditation procedure at the Kazakh National Women’s Teacher Training University in Almaty, Kazakhstan.
- 09/2022 - 01/2023 **Physics author** for “Qui si risolve”
- 02/2018 - 06/2019 **Mathematics, Physics and Chemistry tutor** for “IL DONO Centro didattico”, Monteroni di Lecce, Italy
- 01/2018 - 07/2019 **Flute teacher** at “Associazione Musicale M. Rocco Quarta”, Monteroni di Lecce, Italy

Associations & Hobbies

- 2023 Member of the Royal Astronomical Society, RAS
- Outreach activities (Cambridge Festival 2023, participation at local TV shows)