

Giacomo Mantovan

Curriculum Vitae

Università degli studi di Padova
Dipartimento di Fisica e Astronomia
Vicolo dell'osservatorio 3
Padova, Italy
✉ giacomo.mantovan@unipd.it
📄 <https://gmantovan.github.io/>
🌐 GMantovan

Educational Background

2024

Post-doc in Astronomy, *Università degli Studi di Padova*, Padova, Italy.

Project title Analysis of light curves of exoplanets from space missions (CHEOPS, TESS and PLATO)

Advisor Professor Giampaolo Piotto

2020

2024

PhD in Astronomy, *Università degli Studi di Padova*, Padova, Italy.

Thesis title Validation of TESS exoplanet candidates orbiting Solar-type stars

Advisors Professor Giampaolo Piotto, Dr Marco Montalto

Defence date 05/04/2024

2018

2020

MSc in Astronomy, *Università degli Studi di Padova*, Padova, Italy.

Thesis title Validation of candidate exoplanets discovered by TESS

Advisors Professor Giampaolo Piotto, Dr Marco Montalto

Final grade Summa Cum Laude

2015

2018

BSc in Astronomy, *Alma Mater Studiorum - Università di Bologna*, Italy.

Thesis title Classification of galaxies: morphological, photometric and kinematic characteristics

Supervisor Professor Daniele Dallacasa

Final grade 102/110

Research Interests

EXOPLANETS

- Exoplanet Validation, Confirmation
- Architecture of exoplanets, Rossiter - McLaughlin effect
- Exoplanet Atmospheres

OTHERS

- Astrostatistics

Studies and experiences abroad

2022

European Union Program, Erasmus + traineeship, University of St Andrews **StaCES** (Scotland), duration 6 months.

Research visiting period at the University of St. Andrews (Scotland) from 01/03/2022 to 31/08/2022, under the supervision of Professor Andrew Cameron, as part of the PhD in Astronomy (Unipd).

Affiliations

ITALY Istituto Nazionale di Astrofisica Italiana (hereafter **INAF**)

ITALY Unipd

UK University of St Andrews, Centre for Exoplanet Science

Research group membership

ITALY Member of GAPS (Global Architecture of Planetary Systems) collaboration

International Member of the PLATO (PLANetary Transits and Oscillations of stars) Mission Consortium. Member of the PLATO Science Management (PSM)

International Member of the TFOP (TESS Follow-up Observing Program): member of the SG2 WG. Member of the TBDWG.

International Collaborator of the CHEOPS GTO program.

Teaching Experience

Teaching Assistant

2023
2024

Astrophysics Laboratory 2, *Corso di Laurea magistrale in Astrophysics and Cosmology*, Unipd, Padova, Italy.

SUPERVISOR Prof. Luca Malavolta; Duration: 24 hrs

2022
2023

Astrophysics Laboratory 2, *Corso di Laurea magistrale in Astrophysics and Cosmology*, Unipd, Padova, Italy.

SUPERVISOR Prof. Luca Malavolta; Duration: 24 hrs

Observing Experience and Proposals

Observing Experience

2020
2022

Asiago telescope - Afosc, 4 nights (2nd observer).

2021
2023

Asiago telescope - Echelle, 2 nights (2nd observer).

2023

Telescopio Nazionale Galileo (TNG) - HARPS-N, 5 nights (1st observer), 7 nights (2nd observer).

Observational Proposals

2024

ESO P113 call, 9hrs of HARPS and NIRPS to measure the 3D obliquity of two planets, through continuous RV monitoring, RM observations, **PI**.

2024

INAF AOT49 call, 19hrs of HARPS-N to measure the 3D obliquity of four planets, through continuous RV monitoring, RM observations, **PI**.

2023
2024

INAF AOT48 call, 18.2hrs of HARPS-N to measure the 3D obliquity of two planets, through continuous RV monitoring, RM observations, **PI**.

2023
2024

INAF AOT48 call, 17.5hrs of HARPS-N radial velocity follow-up, **PI**.

2023

INAF AOT46 call [DDT], 7.5hrs of HARPS-N to measure the 3D obliquity of a young planet, through continuous RV monitoring, RM observations, **PI**.

2023
2024

ESO P111 call, 28.5hrs of HARPS radial velocity follow-up, **PI**.

2022
2023

INAF AOT46 call, 10hrs of HARPS-N radial velocity follow-up, **PI**.

2022
2023

INAF AOT46 call, 60hrs of multi-band REM images, **PI**.

2022
2023

CNTAC 2022B call, 2 nights of Magellan/IMACS images, **co-PI**.
In charge of: scientific rationale, target selection, and technical description.

2021
2022

INAF AOT44 call, 60hrs of multi-band REM images, **PI**.

Skills

Programming

Python (Advanced), Fortran (Intermediate), Matlab (Intermediate), R (Foundation), HTML (Basic), Supermongo (Basic), \LaTeX (Advanced), BASH (Basic)

Tools

GitHub

Softwares in data
analysis

DS9, TOPCAT

Operating systems

Linux (Advanced), Microsoft Windows (Highly Specialised)

Office Suite

LibreOffice (Advanced), Microsoft Office (Advanced)

Raste graphic editor

GIMP (Intermediate)

Languages

Italian

Native

English

C1 level

Certificates

English

Language assessment result (CEFR Level C1)

OLS language assessment, Erasmus+ (EU), 7 Mar 2022

Attendance certificate (Academic English for PhD, 30hrs)

University of Padova Language Centre (IT), 1 Jan 2022

Attendance certificate (Intermediate Level B2)

School of Science, University of Padova (IT), 31 Jan 2020

Grants

2023	Univ. Cal. Santa Cruz (UCSC) grant to attend the Other World Laboratory (OWL) Summer Program 2023 , USA, UCSC, euros 1800€.
2023	Gini scholarship grant , Padova, Fondazione Aldo Gini, euros 4600€, renounced.
2022	COST grant (Exoplanets and astro-statistical analysis techniques Summer School) , Geneva, euros 1300€.
2021	Erasmus+ for Traineeship grant , Padova, University of Padova, euros 2400€.
2020	PhD Scholarship , Padova, University of Padova.
2018	Maestro Elio Todeschi merit scholarship , Rovereto, Cassa rurale, euros 300€.

Presentations at international meetings and seminars

Contributed Talks at international meetings

2024	XX Progress Meeting GAPS , Padova (Italy). Title Status of AOT48 and AOT49 Junior proposal (15 min)
2023	XIX Progress Meeting GAPS , Torino (Italy). Title Analysis of the Rossiter-McLaughlin effect and atmospheric characterisation of TOI-5398 (10 min) Title Unveiling the nature of TESS warm giants exoplanets amenable for atm. characterisation with JWST & Probing the orbital obliquity of tidally young planets through the Rossiter-McLaughlin effect (10 min)
2023	OWL Summer Program 2023 , Santa Cruz, California (USA). Title The GAPS programme at the TNG. TOI-5398, the youngest compact multi-planet system composed of an inner sub-Neptune and an outer warm Saturn (12min)
2023	TOE III 2023 , Centro de Astrofísica (Porto, Portugal). Title The GAPS programme at the TNG. TOI-5398, the youngest compact multi-planet system composed of an inner sub-Neptune and an outer warm Saturn (15min)
2023	Telescopio Nazionale Galileo's talks , Breña Baja (Spain). Title Validation of TESS exoplanet candidates orbiting solar analogues in the all-sky PLATO input catalogue (30 min)
2022	Scottish Exoplanet/BD Spring meeting , St. Andrews (Scotland). Title Validation of TESS candidates orbiting PLATO, Solar-analog stars (15min)

Posters

2022	NAM 2022 , The University of Warwick (England). Title Validation of TESS exoplanet candidates orbiting solar analogues in the all-sky PLATO input catalogue
2021	TESS Science Conference II , US (Online). Title Validation of TESS candidates orbiting Solar-type stars

2021

PLATO Mission Conference, Online.

Title Validation of TESS exoplanet candidates orbiting Solar-analog stars

Seminars

2022

Exoplanets and astrostatistical analysis techniques Summer School, Geneva (Switzerland).

2021

Scientific Communication in Astronomy School 2021, Bertinoro, Italy.
TALK SPRITZ talk (5min). 1st prize for best observational proposal competition.

2021

RED School 2021 "Astrobiology Introductory Course", France (Online).
TALK PhD project presentation (2min)

Outreach

2022

NameExoWorlds 2022, Museo civico di Rovereto, Italy.
Public, outreach talk on exoplanets (20 min)

2022

NameExoWorlds 2022, Liceo artistico Vittoria, Trento, Italy.
Outreach talk on exoplanets, to a fourth-year high-school class (40 min)

2022

Notte dei Ricercatori - 2022, Padova, Italy.

2021

Notte dei Ricercatori - Veneto Night 2021, Padova, Italy.

Publications

ADS [See here for an interactive and most updated list of all publications](#)
ORCID <https://orcid.org/0000-0002-6871-6131>
Google Scholar

Peer-reviewed publications

- [1] D. Nardiello, M. Deleuil, **Mantovan, G.**, L. Malavolta, G. Lacedelli, M. Libralato, L. R. Bedin, L. Borsato, V. Granata, and G. Piotto. [A PSF-based Approach to TESS High quality data Of Stellar clusters \(PATHOS\) - IV. Candidate exoplanets around stars in open clusters: frequency and age-planetary radius distribution](#). *MNRAS*, 505(3):3767–3784, August 2021.
- [2] M. Montalto, L. Malavolta, J. Gregorio, **Mantovan, G.**, S. Desidera, G. Piotto, V. Nascimbeni, V. Granata, E. E. Manthopoulou, and R. Claudi. [TIC 257060897b: An inflated, low-density, hot-Jupiter transiting a rapidly evolving subgiant star](#). *MNRAS*, 509(2):2908–2919, January 2022.
- [3] **Mantovan, G.**, M. Montalto, G. Piotto, T. G. Wilson, A. Collier Cameron, F. Z. Majidi, L. Borsato, V. Granata, and V. Nascimbeni. [Validation of TESS exoplanet candidates orbiting solar analogues in the all-sky PLATO input catalogue](#). *MNRAS*, 516(3):4432–4447, November 2022.

- [4] F. Z. Majidi, J. M. Alcalá, A. Frasca, S. Desidera, C. F. Manara, G. Beccari, V. D’Orazi, A. Bayo, K. Biazzo, R. Claudi, E. Covino, **Mantovan, G.**, M. Montalto, D. Nardiello, G. Piotto, and E. Rigliaco. [New members of the Lupus I cloud based on Gaia astrometry. Physical and accretion properties from X-shooter spectra.](#) *A&A*, 671:A46, March 2023.
- [5] J. Maldonado, A. Petralia, **Mantovan, G.**, M. Rainer, A. F. Lanza, C. Di Maio, S. Colombo, D. Nardiello, S. Benatti, L. Borsato, I. Carleo, S. Desidera, G. Micela, V. Nascimbeni, L. Malavolta, M. Damasso, A. Sozzetti, L. Affer, K. Biazzo, A. Bignamini, A. S. Bonomo, F. Borsa, M. B. Lund, L. Mancini, E. Molinari, and M. Molinaro. [The GAPS programme at TNG. XLIII. A massive brown dwarf orbiting the active M dwarf TOI-5375.](#) *A&A*, 674:A132, June 2023.
- [6] A. Sozzetti, M. Pinamonti, M. Damasso, S. Desidera, K. Biazzo, A. S. Bonomo, D. Nardiello, R. Gratton, A. F. Lanza, L. Malavolta, P. Giacobbe, L. Affer, A. Bignamini, F. Borsa, W. Boschin, M. Brogi, L. Cabona, R. Claudi, E. Covino, L. Di Fabrizio, A. Ghedina, A. Harutyunyan, C. Knapic, J. Maldonado, A. Maggio, L. Mancini, **Mantovan, G.**, F. Marzari, S. Messina, G. Micela, E. Molinari, M. Montalto, L. Naponiello, I. Pagano, M. Pedani, G. Piotto, E. Poretti, G. Scandariato, R. Silvotti, and D. Turrini. [The GAPS Programme at TNG. XLVII. A conundrum resolved: HIP 66074b/Gaia-3b characterised as a massive giant planet on a quasi-face-on and extremely elongated orbit.](#) *A&A*, 677:L15, September 2023.
- [7] I. Carleo, L. Malavolta, S. Desidera, D. Nardiello, S. Wang, D. Turrini, A. F. Lanza, M. Baratella, F. Marzari, S. Benatti, K. Biazzo, A. Bieryla, R. Brahm, M. Bonavita, K. A. Collins, C. Hellier, D. Locci, M. J. Hobson, A. Maggio, **Mantovan, G.**, S. Messina, M. Pinamonti, J. E. Rodriguez, A. Sozzetti, K. Stassun, X. Y. Wang, C. Ziegler, M. Damasso, P. Giacobbe, F. Murgas, H. Parviainen, G. Andreuzzi, K. Barkaoui, P. Berlind, A. Bignamini, F. Borsa, C. Briceño, M. Brogi, L. Cabona, M. L. Calkins, R. Capuzzo-Dolcetta, M. Cecconi, K. D. Colon, R. Cosentino, D. Dragomir, G. A. Esquerdo, T. Henning, A. Ghedina, R. F. Goeke, R. Gratton, F. Grau Horta, A. F. Gupta, J. M. Jenkins, A. Jordán, C. Knapic, D. W. Latham, I. Mireles, N. Law, V. Lorenzi, M. B. Lund, J. Maldonado, A. W. Mann, E. Molinari, E. Pallé, M. Paegert, M. Pedani, S. N. Quinn, G. Scandariato, S. Seager, J. N. Winn, B. Wohler, and T. Zingales. [The GAPS programme at TNG. L. TOI-4515 b: An eccentric warm Jupiter orbiting a 1.2 Gyr-old G-star.](#) *A&A*, 682:A135, February 2024.
- [8] G. Guilluy, M. C. D’Arpa, A. S. Bonomo, R. Spinelli, F. Biassoni, L. Fossati, A. Maggio, P. Giacobbe, A. F. Lanza, A. Sozzetti, F. Borsa, M. Rainer, G. Micela, L. Affer, G. Andreuzzi, A. Bignamini, W. Boschin, I. Carleo, M. Cecconi, S. Desidera, V. Fardella, A. Ghedina, **Mantovan, G.**, L. Mancini, V. Nascimbeni, C. Knapic, M. Pedani, A. Petralia, L. Pino, G. Scandariato, D. Sicilia, M. Stangret, and T. Zingales. [The GAPS Programme at TNG: LIV. A Hel survey of close-in giant planets hosted by M-K dwarf stars with GIANO-B.](#) *arXiv e-prints*, page arXiv:2403.00608, March 2024.
- [9] A. Ruggieri, S. Desidera, K. Biazzo, M. Pinamonti, F. Marzari, **Mantovan, G.**, A. Sozzetti, A. S. Bonomo, A. F. Lanza, L. Malavolta, R. Claudi, M. Damasso, R. Gratton, D. Nardiello, S. Benatti, A. Bignamini, G. Andreuzzi, F. Borsa, L. Cabona, C. Knapic, E. Molinari, L. Pino, and T. Zingales. [The GAPS Programme at TNG. LIII. New insights on the peculiar XO-2 system.](#) *A&A*, 684:A116, April 2024.
- [10] **Mantovan, G.**, L. Malavolta, S. Desidera, T. Zingales, L. Borsato, G. Piotto, A. Maggio, D. Locci, D. Polychroni, D. Turrini, M. Baratella, K. Biazzo, D. Nardiello, K. Stassun, V. Nascimbeni, S. Benatti, A. Anna John, C. Watkins, A. Bieryla, J. J. Lissauer, J. D.

Twicken, A. F. Lanza, J. N. Winn, S. Messina, M. Montalto, A. Sozzetti, H. Boffin, D. Cheryasov, I. Strakhov, F. Murgas, M. D'Arpa, K. Barkaoui, P. Benni, A. Bignamini, A. S. Bonomo, F. Borsa, L. Cabona, A. C. Cameron, R. Claudi, W. Cochran, K. A. Collins, M. Damasso, J. Dong, M. Endl, A. Fukui, G. Fűrész, D. Gandolfi, A. Ghedina, J. Jenkins, P. Kabáth, D. W. Latham, V. Lorenzi, R. Luque, J. Maldonado, K. McLeod, M. Molinaro, N. Narita, G. Nowak, J. Orell-Miquel, E. Pallé, H. Parviainen, M. Pedani, S. N. Quinn, H. Relles, P. Rowden, G. Scandariato, R. Schwarz, S. Seager, A. Shporer, A. Vanderburg, and T. G. Wilson. [The GAPS programme at TNG. XLIX. TOI-5398, the youngest compact multi-planet system composed of an inner sub-Neptune and an outer warm Saturn](#). *A&A*, 682:A129, February 2024.

- [11] **Mantovan, G.**, L. Malavolta, D. Locci, D. Polychroni, D. Turrini, A. Maggio, S. Desidera, R. Spinelli, S. Benatti, G. Piotto, A. F. Lanza, F. Marzari, A. Sozzetti, M. Damasso, D. Nardiello, L. Cabona, M. D'Arpa, G. Guilluy, L. Mancini, G. Micela, V. Nascimbeni, and T. Zingales. [Orbital obliquity of the young planet TOI-5398 b and the evolutionary history of the system](#). *A&A*, 684:L17, April 2024.

References

Dr Giacomo Mantovan

Post-doc in Astronomy

Dipartimento di Fisica e Astronomia "G. Galilei"

Università degli Studi di Padova

Vicolo dell'Osservatorio 3, 35122 Padova, Italy

✉ giacomo.mantovan@unipd.it