

Mario Damiano

3rd year Ph.D. student in Astrophysics

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Education

2015

3rd year Ph.D. student **Astrophysics**, *University College London (UCL)*, Data analysis of space and ground observations of exoplanetary atmosphere using Machine Learning algorithms. London, England, UK.

Expected Viva: September 2018

2015

MSc Physics (Astrophysics), *University of Palermo (UNIPA)*, thesis title: Exoplanetary atmosphere: high resolution spectrum with instruments iLocater and HIRES, Summa cum laude. Palermo, Italy.

2013

BSc Physics Science, *University of Palermo (UNIPA)*, thesis title: Exoplanets and stellar activity on IR-band, First-class. Palermo, Italy.

Research interests

Characterization of exoplanetary atmospheres. Observations and data analysis. Machine and Deep Learning.

Grant scholarships

- European Research Council (ERC) and National Institute of Astrophysics (INAF), *PhD scholarship*.

Languages

Italian Native
English Fluent

Mother Tongue
Daily practice

Publications list

First Author

Analyzing high-resolution data using a machine learning approach.

Damiano, M., Micela, G., Tinetti, G., AAS journal, submitted.

Near-IR transmission spectrum of HAT-P-32 b using HST/WFC3.

Damiano, M., Morello, G., Tsiaras, A., Zingales, T., Tinetti, G., AJ, 154, 39, Jul 2017.

DOI: 10.3847/1538-3881/aa738b

Co-Author

A Population Study of Gaseous Exoplanets.,

A. Tsiaras, I. P. Waldmann, T. Zingales, M. Rocchetto, G. Morello, **M. Damiano**, K. Karpouzias, G. Tinetti, L. K. McKemmish, J. Tennyson, and S. N. Yurchenko, AJ, 155, 156, Mar 2018.

DOI: 10.3847/1538-3881/aaaf75

A chemical survey of exoplanets with ARIEL.,

Tinetti, G., ... **Damiano, M.**, ... plus 242 co-authors, Experimental Astronomy, ExA, Sep 2018

DOI: 10.1007/s10686-018-9598-x

The Transiting Exoplanet Community Early Release Science Program for JWST,

Bean, J. L., ... **Damiano, M.**, ... plus 96 co-authors, arXiv, Mar 2018.
arXiv: 1803.04985

A New Approach to Analyzing HST Spatial Scans: The Transmission Spectrum of HD 209458 b,
Tsiaras, A.; Waldmann, I. P.; Rocchetto, M.; Varley, R.; Morello, G.; **Damiano, M.**; Tinetti, G., ApJ, 832, 202,
Dec 2016.
DOI: 10.3847/0004-637X/832/2/202

Detection of an Atmosphere Around the Super-Earth 55 Cancri e,
Tsiaras, A.; Rocchetto, M.; Waldmann, I. P.; Venot, O.; Varley, R.; Morello, G.; **Damiano, M.**; Tinetti, G.;
Barton, E. J.; Yurchenko, S. N.; Tennyson, J., ApJ, 820, 99, Apr 2016.
DOI: 10.3847/0004-637X/820/2/99

Presentations

Talks at conference and seminars:

- Talk at Centre for Planetary Science (CPS) meeting, Mullard Space Science Laboratory (MSSL), England, UK. June 2018.
- Invited talk at University College London (UCL), "Workshop for cooperation with Indian Astrophysics Community", London, England, UK. May 2018.
- Talk at European Planetary Science Congress (EPSC) 12, Riga, Latvia. September 2017.
- Talk at 10th GAPS2.0 meeting, Palermo, Italy. May 2017.
- Invited seminar INAF-Astronomical Observatory Palermo (INAF-OAPa), Palermo, Italy. January 2017.
- Talk at Division for Planetary Sciences (DPS) 48 / European Planetary Science Congress (EPSC) 11, Pasadena, California, USA. October 2016.

Posters at conference:

- Poster at UK Exoplanet Community Meeting (UKEXOM2018), Oxford, England, UK. March 2018.
- Poster at UK Exoplanet Community Meeting (UKEXOM2017), St. Andrews, Scotland, UK. March 2017.
- Poster at Ariel meeting, Brussels, Belgium. November 2016.

IT Skills

Coding Python

Advance

Software IDE for Python (PyCharm, Spyder), Github

OS MacOS (preferred), Linux, Windows

Text editing L^AT_EX, Microsoft Office, Apple Keynote

Other information

Online courses Advanced Courses on Udemy platform on Machine Learning (ML) and Deep Learning (DL) for Python.

Tutoring activity Supervised master student for data analysis project on high resolution spectroscopic observations. October 2017. Palermo, Italy.

Associated projects Global Architecture of Planetary Systems (GAPS 2.0) and Atmospheric Remote-sensing Exoplanet Large-survey (ARIEL).