Atanas K. Stefanov

Résumé

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Education

11/2023 – present **PhD Astrophysics**, *Universidad de La Laguna*, La Laguna, IC
EQF8 Stellar magnetic activity and rocky planets in cool dwarf stars with NIRPS.

09/2019 – 06/2023 **MSci Astrophysics**, *University College London*, London, UK
EQF7 Main modules: Physics of Stars, Physics of Exoplanets, Astronomical Spectroscopy, Quantum Physics. Mathematical Methods, Theory of Dynamical Systems, Techniques of High-Performance Computing.

09/2014 – 06/2019 **System Programming**, *MHS "Acad. Kiril Popov"*, Plovdiv, BG
EQF4 A professional qualification obtained alongside secondary education.
Main modules: Electronics, Object-Oriented Programming, Web Development, Database Management.

09/2014 – 05/2019 **Secondary Education**, *MHS "Acad. Kiril Popov"*, Plovdiv, BG
EQF4 Main modules: Mathematics, Natural Sciences, Bulgarian, English, Russian.

Experience

11/2023 – present **Graduate Student Researcher**, *Instituto de Astrofísica de Canarias*, La Laguna, IC
Analysis of stellar activity and potential exoplanetary signals in the spectra of cool dwarf stars. Associated with PhD Astrophysics, Universidad de La Laguna.

12/2022 – 03/2023 **Research & Development Associate**, *Synaptic*, Sofia, BG
Technical documentation and consultancy work in the field of natural sciences and information technologies. Engaged with the data visualisation and documentation of a prototype device in the area of rehabilitation and well-being, using Python and LaTeX.

06/2021 – 08/2021 **Research Intern**, *University College London*, London, UK
A Brian Duff studentship award by the UCL Astrophysics group, with topic "Exploration of exoplanet transits around gravity-darkened stars". Documented the use of TESS data products and the Python packages Lightkurve and eleanor. Worked with exoBush, a Fortran-based spectroscopic and photometric simulation tool described in Howarth & Smith (2001). Developed PEPPER, a Python wrapper that: (1) rapidly executes exoBush across a parameter space, (2) provides low-level tools for working with exoBush inputs/outputs, (3) provides affine-invariant Markov chain Monte Carlo fitting through emcee.

10/2018 – 03/2019 **Web Development Intern**, *Viscomp Ltd.*, Plovdiv, BG
10/2017 – 03/2018 Two part-time internships, each over a span of six months. Collaborated on a prototype web-based grade-book for a local university. Worked primarily on back-end development using PHP and MySQL.

Programming, markup and observing

Current rotation		Prior experience		Observing	
LaTeX	*7 yr*	C++, SQL, PHP	*4 yr*	ESO 3.6m	*8 n*
Python	*5 yr*	CSS, JS, Wolfram	*2 yr*	TNG 3.5m	*4 n*
		Go	*1 yr*	Rozhen 2m	*4 n*

Awards

07/2023 Doctoral INPhINIT Fellowship — *"la Caixa" Foundation*
06/2021 Brian Duff Award — *University College London*
09/2018 Joint Research Centre Award — *European Union Contest for Young Scientists*

Selected publications

S. Y. Stefanov and A. K. Stefanov. Tilted discs in six poorly studied cataclysmic variables. *MNRAS*, 520(3):3355–3367, April 2023.

A. Suárez Mascareño et al. TESS and ESPRESSO discover a super-Earth and a mini-Neptune orbiting the K-dwarf TOI-238. *A&A*, 685:A56, May 2024.