

# Ioannis Koutalios

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Faculty of Science  
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Education	<b>M.Sc., Astronomy and Data Science</b> Leiden University, (September, 2024)  <b>B.Sc., Physics</b> Aristotle University of Thessaloniki, (November, 2020)
Publications	<b>Predicting binary neutron star postmerger spectra using artificial neural networks</b> with Dr. Nikolaos Stergioulas and PhD candidate Dimitrios Pesios September 2024
Research	<b>M.Sc. Thesis Project: Applying a cross-power model for power suppression in FLAMINGO</b> supervised by Dr. Marcel van Daalen September 2023 - June 2024  <b>Reinforcement learning for adaptive optics and exoplanet imaging</b> supervised by PhD candidate Rico Landman, Dr. Thomas Moerland, and Dr. Aske Plaat October 2023 - February 2024  <b>M.Sc. Thesis Project: Finding the best exoplanets to search for exomoons by radial velocity</b> supervised by Dr. Matthew Kenworthy March 2022 - December 2022  <b>B.Sc. Thesis Project: Spectral Classification of Neutron Star Post-Merger Gravitational Wave Emission</b> supervised by Dr. Nikolaos Stergioulas Gravitational waves group, Physics Department, Aristotle University of Thessaloniki September 2019 - September 2020
Conference Presentations	<b>79th Dutch Astronomers' Conference</b> Poster Presentation, Applying a cross-power model for power suppression in FLAMNGO Egmond aan Zee, The Netherlands, 13-15 May, 2024
Conferences Attended	<b>78th Dutch Astronomers' Conference</b> Leeuwarden, The Netherlands, 15-17 May, 2023  <b>Gravitational-Wave Open Data Workshop (#3 - #7)</b> Remote, May 2020, May 2021, May 2022, May 2023, April 2024  <b>2<sup>nd</sup> g2net Training School</b> University of Malta, Valetta, Malta, 9-13 March, 2020  <b>School on Neutron Star Physics in the Era of Gravitational Wave Astronomy</b> Eberhard Karls University of Tuebingen, Germany, 13-15 November, 2019

**14<sup>th</sup> Hellenic Astronomical Conference**  
Volos, Greece, 8-11 July, 2019

**3<sup>rd</sup> HEL.A.S. Summer School and DAAD School  
on Neutron Stars and Gravitational Waves**  
Thessaloniki, Greece, 8-12 October, 2018

**17<sup>th</sup> Conference of the Hellenic Physical Society**  
Thessaloniki, 15-18 March, 2018

## Experience

**Teaching Assistant for the Course "Reinforcement Learning" (M.Sc.)**  
Leiden University, 2024

**Teaching Assistant for the Course "Science and the Public" (M.Sc.)**  
Leiden University, 2023 - 2024

**Teaching Assistant for the Course "Astronomy Lab and  
Observing Project" (B.Sc.)**  
Leiden University, 2024

**Private Tutor for Physics, Mathematics and Chemistry**  
2018 - 2024

**Instructor for the Preparation of the Greek Team for the International  
Olympiad on Astronomy and Astrophysics**  
Summer 2016, Summer 2018, Summer 2019, Fall 2021, Summer 2022  
Fall 2022, Summer 2023

**Grading Assistant for the Course "Astronomy and Astrophysics"**  
Aristotle University of Thessaloniki, 2018-2020

**Public Outreach Guide at the Astronomical Observatory of the Aristotle  
University of Thessaloniki**  
2018-2021

## Distinctions

**Scholarship from Cosmote for undergraduate studies**  
Greece, 2015-2019

**Honorable Mention, International Olympiad on Astronomy and Astrophysics**  
Indonesia, 2015

**Participation, International Olympiad on Astronomy and Astrophysics**  
Romania, 2014

## Computer Skills

**Experties:** Python, Jupyter, Git (Github & Gitlab) Linux OS, L<sup>A</sup>T<sub>E</sub>X, VS Code

**Familiar:** SQL, C, Mathematica, Matlab

**Machine and Deep Learning:** PyTorch, Tensorflow, Keras, Scikit-learn, Jax

**Data Science and Mining:** Pandas, Numpy, Matplotlib, Seaborn, Scipy, Nbodykit

**I.T. Skills:** Bash, SSH, Anaconda, JupyterHub

**github/gitlab link:** <https://github.com/johnkou97>, <https://gitlab.com/johnkou97>

## Languages

English (C2), German (B1), Greek (native speaker), Dutch (beginner)