Richard Stiskalek

| CONTACT INFORMATION | www.richard-sti.github.io/
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INTERESTS	Astrophysical tests of gravity and galaxy formation, gravitational-wave astronomy, Bayesian inference

EDUCATION

Ludwig Maximilian University of Munich   2020 –
M.Sc. Physics
    Thesis: "Frequency and Polarisation Dependent Propagation of Gravitational Waves"
    Supervisor: Miguel Zumalacárregui, Marius A. Oancea

University of Glasgow   2016 – 2020
B.Sc. Physics with Astrophysics
    Thesis: "Gravitational-wave Cosmology"
    Supervisor: Martin Hendry

Hong Kong University of Science and Technology   2017 – 2018
Undergraduate Student Exchange Program

Gymnazium Jakuba Skody   2008 – 2016

EMPLOYMENT

Primer Research[1], Munich   2021
    Project: "Development of a Gaussian process-based portfolio optimiser and probabilistic regressors for high-frequency trading"

Max Planck Institute for Gravitational Physics (Hannover)   2020
    Project: "EPSIE: an Embarrassingly Parallel Sampler for Inference Estimation"
    Supervisor: Dr. Collin Capano

University of Oxford   2019
    Project: "The dependence of subhalo abundance matching on galaxy photometry and selection criteria"
    Supervisor: Dr. Harry Desmond

University of Glasgow   2018
    Project: "Are stellar–mass binary black hole mergers isotropically distributed?"
    Supervisors: Dr. John Veitch and Dr. Chris Messenger

Amper Market, Prague   2017
    Project: Prediction of imbalances in an electricity distribution system

PUBLICATIONS

1. "The scatter in the galaxy–halo connection: a machine learning analysis" **R. Stiskalek**, Deaglan J. Bartlett, Harry Desmond, Dhayaa Anbajagane. [arXiv:2202.14006]

2. "The dependence of subhalo abundance matching on galaxy photometry and selection criteria" **R. Stiskalek**, H. Desmond, T. Holvey, M. G. Jones. MNRAS 506:3205. [arXiv:2101.02765]

3. "Are stellar-mass binary black hole mergers isotropically distributed?" **R. Stiskalek**, J. Veitch & C. Messenger. MNRAS 501:970. [arXiv:2003.02919]

AWARDS AND SCHOLARSHIPS

DAAD Study Scholarship (German Academic Exchange Service)	2021 - 2022
Kerr Bursary (University of Glasgow)	2020
Lang Scholarship (University of Glasgow)	2019
Undergraduate Summer Bursary (Royal Astronomical Society)	2018
Dean's List (Hong Kong University of Science and Technology)	2018
Astronomy 1 Prize (University of Glasgow)	2017
Matthew A Muir Bursary (University of Glasgow)	2017
South East Asia Study Abroad Scholarship (University of Glasgow)	2017 - 2018

SERVICE

Referee for *MNRAS*, *PNAS*	2022 -
"Middle of Scotland Science Festival" organiser	2018

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[1] part-time

Selected Talks *Frequency and polarisation dependent propagation of gravitational waves*

        Physical Cosmology Group (Ludwig Maximilian University of Munich)   2022
        Max Planck Institute for Gravitational Physics, Potsdam   2022

        The scatter in the galaxy–halo connection

        Machine Learning Group (Baryon Pasters Collaboration)   2022
        Cosmology and Artificial Intelligence Group (Ludwig Maximilian University of Munich)   2021
        Emmy Noether Group (Ludwig Maximilian University of Munich)   2021

        Reversible-jump MCMC in gravitational-wave astronomy
        Max Planck Institute for Gravitational Physics, Hannover   2020

        Are binary-black hole mergers isotropically distributed?
        LIGO Scientific Collaboration Data Analysis Telecon   2020

        The relation between galaxies and dark matter halos
        Cosmology Group, University of Oxford   2019

Skills *Coding & data analysis*
  - Python, Julia, Mathematica, C, C++, MPI parallel programming
  - Markov chain Monte Carlo & nested sampling diagnostics, decision tree models, neural networks, Gaussian processes, hierarchical Bayesian models
  - Galaxy clustering statistics, numerical integration, automatic differentiation

        Languages
  - English, Czech, Slovak, French (intermediate), German (beginner)