

Jan Rybizki

+49 (0) 6221 / 528 443
rybizki@mpia.de
Twitter • Github • LinkedIn

ACADEMIC CAREER

POSTDOC | MAX PLANCK INSTITUTE FOR ASTRONOMY

Since 2017 | Gaia group of Coryn Bailer-Jones | Heidelberg, Germany

Science themes and selected results (1st and 2nd author):

- Galactic forward model / accessible mock Galaxy catalogs
 - A Gaia DR2 mock stellar catalog | PASP
 - A Gaia early DR3 mock stellar catalog | PASP
 - galaxia_wrap: a fast Galactic forward model in python | ASCL
- Gaia selection function
 - Gaia radial velocity sample selection function | MNRAS
 - New stellar encounters discovered in Gaia DR2 | A&A
 - gdr2_completeness: selection function and ADQL query chunker | ASCL
- Stellar parameter estimation
 - Distances to 1.33 billion stars in Gaia DR2 | AJ
 - TESS exoplanet candidates validated with HARPS archival data | A&A

2017 - 2016 | Milky Way group of Hans-Walter Rix | Heidelberg, Germany

- chempy: constraining chemical evolution | A&A, ASCL
- Optimal choice of chemical evolution parameters | ApJ

PH.D IN ASTROPHYSICS | RUPRECHT-KARLS-UNIVERSITY

2015 - 2011 | Final grade: "cum laude" | Heidelberg, Germany

Thesis: Inference from modelling the chemodynamical evolution of the Milky Way

- Constraining the stellar initial mass function | MNRAS
- The local stellar luminosity function | MNRAS

DIPLOMA IN PHYSICS | GOTTFRIED WILHELM LEIBNIZ UNIVERSITY

2011 - 2005 | Final grade: 1.1 (equiv. to M.Sc. with GPA: 3.9) | Hannover, Germany

Thesis: LISA on-board optical fibers — Quantifying the impact of back reflections

2009 - 2008 | Student exchange year at USTB | Beijing, China

DEPARTMENT CITIZENSHIP

SUSTAINABILITY GROUP | MPIA

Since 2019 | Founding the group and organising weekly meetings

- CO₂ assessment of MPIA published in Nature Astronomy
- Geothermal and Photovoltaic proposal to MPG for current and new buildings
- Presenting on the 2020 MPG-wide sustainability network meeting

POSTDOC REPRESENTATIVE | MPIA

2020 - 2017 | Representing Postdoc (with kids) interests

- Organising "Career outside of Astronomy" talk series
- Evaluating the GC mental stress at work survey

PHD STUDENT REPRESENTATIVE | ZAH / IMPRS / UNI HD

2015 - 2012 | Member of the department's equal opportunity committee

2015 - 2012 | Member of the IMPRS board and ZAH scientific council

2015 - 2014 | Weekly participation in employee council, voted deputy member

RECREATIONAL ACTIVITIES

Going to the playground with my family | Bouldering | Watching plays

EXPERIENCE

TEACHING

ISSS | GAIA SUMMERSCHOOL

2019 | Lectures and hands-on exercise

HGSFP | GRADUATE DAYS

2018 | Analysis of Gaia Data - Course

OLIVER PHILCOX | MPIA INTERNSHIP

2017 | chempy follow-up projects 1 & 2

GITHUB | JUPYTER NOTEBOOKS

Galactic chemical evolution tutorial

PUBLIC OUTREACH

OUTREACH TALKS

2020 | Public Talk library Bammental

2019 | Faszination Astronomie

2019 | Science night | "Sterne"

2018 | Science night | "Erde"

COLLOQUIUM & CONFERENCE VIDEOS

2013 - 2012 | Design and online archive

'HJAC' and 'Protostars & Planets VI'

ORGANIZING

SCHOOLS & CONFERENCES

2018 | CENAG Heidelberg

2014 | Student Days 2014

2014 | HGSFP Winterschool

2013 | 17th German Conference of Women in Physics

SKILLS

COMPUTING

Expert: Python • \LaTeX • Unix

Familiar: HPC • C++ • JAVA • git/svn

PYTHON PACKAGES

Expert: numpy • scipy • astropy • healpy

Familiar: multiprocessing • emcee •

matplotlib • subprocess • dustmaps

ASTRONOMY TOOLS

topcat • Virtual Observatory • galaxia

VISUALISATIONS

Gaia G magnitude distribution

Gaia radial velocity selection function

STATISTICAL EXPERTISE

Bayesian inference • forward modelling

• supervised learning • neural networks

LANGUAGES

Proficient: German • English

Basic: Ukrainian • Chinese