



JURJEN DE JONG

Astronomer | Data scientist

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Leiden, the Netherlands

LANGUAGES

Dutch ★★★★★★
English ★★★★★★
German ★★☆☆☆☆
Swedish ★☆☆☆☆
French ★☆☆☆☆

TECH STACK

Operating systems:
Linux, Windows

Programming languages:
Python, Bash, R, Julia, SQL, Rust

Database management:
MySQL, MongoDB

Workflow/cluster management:
HPC, Slurm, CWL

Machine learning:
scikit-learn, Keras, Tensorflow, PyTorch

DevOps tools:
Singularity, Docker, version control (Git)

Project management experience:
Scrum, Jira, Trello

Other:
Tableau, SolidWorks, LaTeX

Data scientist, research software engineer, and astronomer with a background in various fields and industries. Obtained international experience by studying, working, and living in different countries. Eager to delve into, analyse, and tackle challenges. Professional experience varies from developing data-driven tools and software for commercial companies to smashing around terabytes of data on high-performance supercomputers to learn something about the universe.

Experience

- 2017–2017
Mechanical Engineer
EPPM (Tunisia)
 - Calculated stresses of lifting lugs
 - Studied pressure on oil tanks
- 2017–2020
Science writer
Scientias
Wrote about science and technology in Dutch. All articles are still available on their [website](#).
- 2018–2019
Astronomer
European Space Agency
As part of an internship, I studied the distances between stars in the (at that time) latest data release of Gaia.
- 2019–2021
Data scientist
Matrixian Group
 - Developed an address validation checker for postal companies
 - Developed a prepayment model for banks
 - Developed a house price prediction machine learning driven model
- 2021–2025
Radio astronomer
Leiden Observatory
 - Developing the LOFAR VLBI calibration and imaging pipeline
 - Study radio galaxies and clusters at the lowest frequencies
 - Teaching Radio Astronomy for master students
 - Organizing group meetings
 - Supervising 5 bachelor students

Education

- 2012–2015
Mathematics (bachelor)
Utrecht University
Minor: History/philosophy of science
Thesis: Study of ancient Indian astronomy
Supervisor: Steven Wepster
- 2013–2015
Physics (bachelor)
Utrecht University
Thesis: Study of ancient Indian astronomy
Supervisor: Steven Wepster
- 2015–2017
Mathematics (master)
Ghent University
Thesis: Study of the Nuker Model with the Fox-H function
Supervisor: Maarten Baes
- 2017–2018
Space Studies (master)
Leuven University
Thesis: Benford's law in Gaia DR2
Supervisors: Joris De Ridder, Jos de Bruijne
- 2021–2025
Astronomy (PhD)
Leiden Observatory
Thesis: Automating the LOFAR VLBI pipeline to study radio galaxies at the highest resolutions at 150MHz
Supervisors: Huub Rottgering, Reinout van Weeren, Raymond Oonk

PUBLICATIONS

de Jong et al. in prep.

Automated LOFAR VLBI data reduction

de Jong et al. in prep.

Sidereal visibility averaging

de Jong et al. 2024, accepted in A&A

Into the Depths: Unveiling deepest ELAIS-N1

Pignataro et al. 2024, A&A, Volume 685, id.L10, 7 pp.

Abell 399-401 radio bridge spectral index

Groeneveld et al., Nature Astronomy, vol 8

Characterization of the decametre sky at sub-arcsec resolution

Ye et al., submitted to A&A

1-arcsecond imaging strategy for the LoTSS survey using the ILT

de Jong et al. 2024, A&A, Vol. 683, 17 pp.

Cosmic evolution of FRI and FRII to $z=2.5$

de Jong et al. 2022, A&A, Vol. 668, 19 pp.

Deep study of A399-401

de Jong et al. 2020, A&A, Vol. 642, 16 pp.

Benford's law in the Gaia Universe

CONFERENCES

Talk at LOFAR Fam. meeting 2024 (Leiden)

Unveiling ELAIS-N1 with LOFAR's deepest subarcsec wide-field images

Talk at URSI 2024 (Gran Canaria)

Unveiling ELAIS-N1 with LOFAR's deepest subarcsec wide-field images

Talk at SPARCS 2024 (Bologna)

Unveiling ELAIS-N1 with LOFAR's deepest subarcsec wide-field images

Talk at SALF 2023 (Amsterdam)

Deep sub-arcs. calibr. and imag. of ELAIS-N1

Poster at LOFAR Fam. Meeting 2023 (Olztyn)

ELAIS-N1 at sub-arcseconds

Talk at Deep Field Symposium 2023 (Online)

ELAIS-N1 at 1"-towards sub-arcs. resolution

Talk at SPARCS 2022 (Johannesburg)

A deep study of A399-401

Talk at IAU 2022 (Busan)

A deep study of A399-401

Achievements/Awards

- Awarded with a scholarship from Leids Kerkhoven-Bosscha Fonds (LKBF) for supporting my visit to the IAU in Busan (2022)
- Awarded with a scholarship by Flanders Trainee Programme for an internship at the European Space Agency (2018)
- Awarded with a scholarship by the University of Leuven to study Chinese language and culture in Taiwan (2018)
- Awarded with a scholarship by the University of Ghent for an internship at a company in Tunisia (2017)
- Awarded with a scholarship by Erasmus+ to study in Uppsala (2016)
- 1st place at the first round of the Mathematical Olympiad at secondary school (2011)
- 2 times player of the year award local hockey club (2009-2010)
- Chess champion at a competition between 3 local primary schools (2002-2003)

Additional courses

- Programming in Rust (2023, Aalto University)
- Science communication (2021, University Leiden)
- Earth observation (2019, MOOC by Copernicus Accelerator)
- Chinese language and culture (2018, National Cheng Kung University in Tainan)
- Data Camp courses about Machine Learning, Neural Networks, Data Science, and Data Engineering (2017-2020)

Additional activities

- Co-founder of Stamily (organization for people who stutter)
 - As first chair, I contributed to writing statutes and bylaws, recruit first members, set up committees, and organize in-person and online events.
 - As vice-chair and advisory board member, I contributed to the front-end and back-end of our website and organizing events to engage with our members.
- Co-founder Asbronomers (astronomy blogs/vlogs)
 - Together with a friend, we wrote about astronomy on our own website.
- Member of the committee of education from VIDUIUS
 - With the aim to improve student life in Utrecht.
- Organizing running events for the association Demosthenes
- Giving talks at several speech-related conferences
 - As part of my work for Stamily, I have attended several (stuttering-related) conferences, where I spoke about Stamily and equity, diversity, and inclusion (EDI) for people who stutter.
- Co-organizer scientific conference (LOFAR Family meeting) in Leiden in 2024.
- Writer for Towards Data Science. Articles can be found [here](#).