

CURRICULUM VITAE

Thomas Geert de Jong, Phd

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Profile:

Expertise in mathematical modelling with research level programming experience, predominantly in Python. Skilled in data science, statistics, analyzing dynamical systems and applying numerical methods. Currently, working on data science applications in social science and archeology. Creative problem solver, quick learner with high intellectual curiosity.

Work experience:

12/2019-present	Postdoctoral researcher , Xiamen University
10/2019-2/2020	Visiting Researcher , University of Groningen
1/2015-1/2019	Research assistant (AIO) , Eindhoven University of Technology
10/2012-1/2015	Research assistant (AIO) , VU Amsterdam
10/2008-7/2012	Teaching assistant , University of Groningen

Education:

9/2012-1/2019	Phd. Mathematics - Eindhoven University of Technology and VU Amsterdam
9/2009-9/2012	Msc. Mathematics (Dynamical systems & Analysis) - Cum Laude University of Groningen.
10/2011-3/2012	Research Internship - Kyoto University
9/2006-9/2009	Bsc. Applied Mathematics - University of Groningen

Current research projects:

Deep learning and dynamical systems:

Classification of chaotic orbits using deep learning algorithms

Collaborators: Alessandro Corbetta (TU Eindhoven)

PDE stability for a diabetes cell encapsulation model:

Stability study of diffraction problem

Collaborators: Georg Prokert (TU Eindhoven), Alef Sterk (RU Groningen)

Data science for archeology:

Mapping evolution of spatial data

Collaborators: Stan van Zon (Universiteit Utrecht), Kathy MacDonald (Universiteit Leiden), Krist Vaesen (TU Eindhoven), Fulco Scherjon (Universiteit Leiden)

Industry research projects

1/2016	Tension control for a poultry processing line , 114 th Study group mathematics and industry, project by Marel and Stork <u>Achievement:</u> Deriving and simulating cases which negatively affect chain tension in an overhead poultry processing line.
9/2016	Modelling the production process of micro-cellular rubber , ESGI201, project by SAG d'Italia <u>Achievement:</u> Modelling shoe sole deformation after removal from mold

Applied coding projects

4/2022	Tinder data analysis , python project <u>Description:</u> Analyse user activity for dating app
12/2021	Interpolating archeological sites , python project <u>Description:</u> Kriging interpolation of positional geographical data
5/2021	Market charts for blockchain sub-chaintokens , python project <u>Description:</u> Price, volume, etc of crypto currency sub-chain tokens (Hive-engine)
3/2020	Auto-cycler for ExpressVPN , python project <u>Description:</u> Cycles between VPN locations until connection is established
10/2019	Scraper and analysis of Museummatch data , python project <u>Description:</u> scraps user data and bio-categorization using NLP
4/2014	Website manager NDNS+ Phd days 2014 , Html & Php <u>Description:</u> Create website, online form for conference registration

Selected publications:

- T. de Jong, G. Prokert, J. Hulshof. Modelling fungal hypha tip growth via viscous sheet approximation, Journal of Theoretical Biology (2020)
- T. de Jong, A. Sterk, H. Broer, Fungal tip growth arising through a codimension-1 global bifurcation, Int. Journal of Bifurcation and Chaos (2020)
- T. de Jong, A. Sterk, F. Guo. Numerical method to compute hypha tip growth for data driven validation, IEEE Access (2019)

Awards & Scholarships:

- Best poster at Equadiff (2015, Lyon)
- Best poster presentation at NDNS+Workshop (2015, Twente)
- Recipient of JASSO scholarship for research visit to Kanazawa University (2015): €2K
- Phd grant: VICI and NDNS+ (2012): €200K
- Recipient of ICI-Education Cooperation Program INTERFACES for research internship at Kyoto University (2011): €6K

Extracurricular activities:

9/2019-11/2019	Python tutor for long-term unemployed , Foundation Empower Yourself <u>Tasks:</u> Exercise class teacher.
12/2017-present	steem/hive blogger and coder , steem/hive-blockchain <u>Description:</u> Authoring scientific content and developing python scripts
8/2017	Workshop assistant 71st Vacation course for maths teachers , Eindhoven <u>Tasks:</u> Exercise class teacher.

Additional credentials:

Technical skills: Mathematica, Matlab, Latex, Mathematical modelling, Simulations, Python, SQL, Inkscape, Vector Graphics Design, Jekyll (Ruby)

Languages: Dutch(Native), English(Fluent), Chinese(Working proficiency), Japanese(Working proficiency), French(Basic), German(Basic)

Interests: Blockchain, Juggling, Mixology, Programming, Cats, Piano, Travelling, Cruiserboards