

Konstantin Stadler

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Programming Python, MatLab, GAMS, Rust, LabVIEW, C/C++, JAVA, IgorPRO, LaTeX
Management Continuous Integration and Development, Confluence, Git, Data Management
Languages German, English, Norwegian

Experience

Norwegian University of Science and Technology (NTNU)

Trondheim, Norway

MANAGER AND LEAD RESEARCHER OF THE INDUSTRIAL ECOLOGY DIGITAL LABORATORY

2016 - present

- Consolidate and develop digital infrastructure and data management
- Establish code and data exchange standards
- Develop novel analysis tools for sustainability research

Norwegian University of Science and Technology (NTNU)

Trondheim, Norway

RESEARCHER

2014 - 2016

- Developing global environmental extended multi regional input output models (EE MRIOs)
- Data compilation, management and tool development
- Work package leader in EU fp7 projects DESIRE and GLAMURS

Norwegian University of Science and Technology (NTNU)

Trondheim, Norway

PostDoc

2012 - 2014

- Analysing resource-efficiency in global supply chains
- Develop EE-MRIO analysis software
- Data gathering for EE-MRIO compilation

Education

Charite Berlin - Institute of Cell- and Neurobiology

Berlin, Germany

PHD

2007 - 2012

- Thesis: Ion channel modulation by interferon in layer V pyramidal neurons of the somatosensory cortex
- Computational neurobiology and *in vitro* experiments
- Developing a morphologically realistic model of a firing neuron
- Interactions between the neuronal and immune system

University of Vienna - Department of Botany and Biodiversity Research

Vienna, Austria

M.Sc.

2000 - 2006

- Population ecology and genetics, evolution and systematics
- Thesis: Genetic structure among and within *Gentianella aspera* populations

Higher Technical Education Institute TGM Wien

Vienna, Austria

DIPL. ING.

1994 - 1999

- Telecommunication engineering, microelectronics
- Thesis: Design of a 2.4GHz Direct Sequence Spread Spectrum Modulation Transmission System

Projects

HiTEA: High Throughput Environmental Assessment Pipeline

RCN - IKTPLUSS

PROJECT MANAGER (DESIGNATED)

Oct 2020 - Sept 2024 (ongoing)

- Build a user friendly tool for sensitivity and uncertainty analysis towards reaching the Sustainable Development Goals (SDGs)
- Combines emerging digital container technologies, in memory column storage and interactive notebooks
- Uses multiple e-infrastructure systems: multi-core servers, HPC at NTNU and Sigma2, commercial cloud providers (Azure, AWS)
- Planned integration into the EOSCHub

SisAl Pilot: Innovative pilot for Silicon production with low environmental impact using secondary Aluminium and silicon raw materials

EU-H2020

DATA MANAGER

May 2020 - April 2024 (ongoing)

- <https://www.sisal-pilot.eu/>
- Demonstrate a patented novel industrial process to produce silicon
- Aims for a strong contribution to a circular economy through industrial symbiosis

DESIRE: Development of a System of Indicators for a Resource Efficient Europe

EU-FP7

WORK PACKAGE LEADER: MRIO DEVELOPMENT FOR EXIOBASE 3

Sept 2012 - Feb 2016

- <https://cordis.europa.eu/project/id/613420>
- Developed the data pipeline for the EXIOBASE 3 EE MRIO time series compilation

GLAMURS: Green Lifestyles, Alternative Models and Upscaling Regional Sustainability

EU-FP7

WORK PACKAGE LEADER: SUSTAINABILITY ASSESSMENT

Jan 2014 - Dec 2016

- <https://cordis.europa.eu/project/id/613420>
- Identify the main obstacles for transitions to sustainable lifestyles and a green economy in Europe
- Establish models of lifestyle change and provided assessments of these models in terms of economic and environmental effects

CREEA: Compiling and Refining Environmental and Economic Accounts

EU-FP7

CONTRIBUTOR: REST OF THE WORLD REGIONS FOR EXIOBASE 2

April 2011 - March 2014

- <https://cordis.europa.eu/project/id/265134/reporting>
- Refine and elaborate economic and environmental accounting principles
- Developed EXIOBASE 2

Presentation

Selected presentations:

IT Kontakforum NTNU

Trondheim, Norway

THE INDECOL DIGILAB: EXPERIENCES FROM SETTING UP A RESEARCH SOFTWARE ENGINEERING GROUP

Nov 2018

- Video: <https://www.youtube.com/watch?v=jk85EsRz6d4>

Digital Infrastructures for Research (DI4R)

Lisbon, Portugal

THE INDUSTRIAL ECOLOGY OPEN SCIENCE PROJECT

Oct 2018

- Poster <https://doi.org/10.5281/zenodo.1455750>

Environmental Informatics - EnviroInfo2017

Luxembourg, Luxembourg

THE INDUSTRIAL ECOLOGY DIGITAL LAB

Sept. 2017

- Slides and Paper: <https://doi.org/10.5281/zenodo.997904>

24. International Input-Output Conference

Seoul, South Korea

EXIOBASE 3 - COMPILATION AND ANALYSIS OF AN EE MRIO TIME-SERIES IN CURRENT AND CONSTANT PRICES

July 2016

- Slides: <https://doi.org/10.5281/zenodo.1040821>
- Article: <https://doi.org/10.1111/jiec.12715>

Seventh European Conference on Python in Science (EuroScipy 2014)

Cambridge, UK

PYMRIO - MULTI REGIONAL INPUT OUTPUT ANALYSIS IN PYTHON

July 2016

- Poster: <https://doi.org/10.5281/zenodo.997892>
- Software: <https://github.com/konstantinstadler/pymrio>

22. International Input-Output Conference

Lisbon, Portugal

EXPLORING RESOURCE EFFICIENCY THROUGH INDIVIDUAL SUPPLY CHAINS

July 2014

- Slides: <https://doi.org/10.5281/zenodo.1137670>

Open Source Software

Pymrio: Multi-Regional Input-Output Analysis in Python.

<https://git.io/JTrHP>

MAINTAINER AND MAIN DEVELOPER

2014 - present (ongoing)

- A high-level abstraction layer for global EE MRIO databases in order to simplify common EE MRIO data tasks
- 49 GitHub stars (24 forks)
- Over 20k downloads (<https://pepy.tech/project/pymrio>)

CoCo: Country Converter

<https://git.io/JTrHM>

MAINTAINER AND MAIN DEVELOPER

2017 - present (ongoing)

- A Python package for converting country names between different classification schemes.
- 52 GitHub stars (23 forks)
- Over 400k downloads (<https://pepy.tech/project/country-converter>)

Teaching and Supervision

PhD- and Master-student Co-supervision

NTNU

2 PHD ONGOING/2 PHD FINISHED

2014 - ongoing

- 2 PhD students connected to MRIO development and analysis (ongoing)
- 2 PhD students connected to green lifestyles and sustainability research (completed)
- Several Master students connected to MRIO and sustainability analysis

Professional supervision

NTNU

MANAGEMENT OF THE INDUSTRIAL ECOLOGY DIGITAL LABORATORY

2016 - ongoing

- One software developer

Publications

Overview

FULL LIST AVAILABLE AT: [HTTPS://KONSTANTINSTADLER.SITE/PUBLICATIONS](https://konstantinstadler.site/publications)

- 63 (35 peer reviewed articles/27 datasets) entries in Orcid (<http://orcid.org/0000-0002-1548-201X>).
- H-Index of 21 (Google Scholar)/19 (Scopus - id: 34972125100).
- Uptake in wikipedia articles (see <https://profiles.impactstory.org/u/0000-0002-1548-201X>).

Software/Data/IT infrastructure

SELECTED PEER REVIEWED ARTICLES

- Stadler, K., Wood, R., Bulavskaya, T., Södersten, C.-J., Simas, M., Schmidt, S., Usubiaga, A., Acosta-Fernández, J., Kuenen, J., Bruckner, M., Giljum, S., Lutter, S., Merciai, S., Schmidt, J. H., Theurl, M. C., Plutzar, C., Kastner, T., Eisenmenger, N., Erb, K.-H., ... Tukker, A. (2018). EXIOBASE 3: Developing a Time Series of Detailed Environmentally Extended Multi-Regional Input-Output Tables. *Journal of Industrial Ecology*, 22(3), 502–515. <https://doi.org/10.1111/jiec.12715>
- Stadler, K. (2017). The country converter coco - a Python package for converting country names between different classification schemes. *The Journal of Open Source Software*, 2(16). <https://doi.org/10.21105/joss.00332>
- Hertwich, E., Heeren, N., Kuczenski, B., Majeau-Bettez, G., Myers, R. J., Pauliuk, S., Stadler, K., & Lifset, R. (2018). Nullius in Verba 1: Advancing Data Transparency in Industrial Ecology. *Journal of Industrial Ecology*, 22(1), 6–17. <https://doi.org/10.1111/jiec.12738>
- Pauliuk, S., Majeau-Bettez, G., Mutel, C. L., Steubing, B., & Stadler, K. (2015). Lifting Industrial Ecology Modeling to a New Level of Quality and Transparency: A Call for More Transparent Publications and a Collaborative Open Source Software Framework. *Journal of Industrial Ecology*, 19(6), 937–949. <https://doi.org/10.1111/jiec.12316>

