

Konstantin Stadler

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Personal Information

Date of birth: Feb. 8th1980

Nationality: Austria

Research Activities

since July, 2016 **Industrial Ecology Programme, NTNU Trondheim (Norway)**
Manager of the Industrial Ecology Digital Laboratory

- Consolidate available digital infrastructure
- Establish code and data exchange standards
- Develop novel analysis tools

2012 - 2016 **Industrial Ecology Programme, NTNU Trondheim (Norway)**
Researcher (PostDoc until 2014)

Developing global environmental extended multi regional input output models (EE MRIOs)

- Work package leader EU fp7 project DESIRE
 - Compiling a time series of EE MRIOs (EXIOBASE 3)
 - Data compilation and refining
- Work package leader EU fp7 project GLAMURS

Developing tools for data compilation and analysis

- Open source package for EE MRIO analysis
- Training students and colleagues in git and python

Investigating the global resource footprint of nations and products

- Comparing resource-efficiency among countries and supply chains
- Analysing environmental impacts embodied in trade

2007 - 2012 **PhD: Charité Universitätsmedizin Berlin,**
Institute of Cell Biology and Neurobiology

- Computational neurobiology and *in vitro* experiments
- Developing computational tools for real-time data acquisition
- Developing a morphologically realistic model of a firing neuron
- Analysing intrinsic currents and neuronal development

Education and Training

- 2012, June - Aug. **Summer job: NTNU, Programme for Industrial Ecology**
- Data gathering and refining for EE MRIOs
- 2007 - 2012 **PhD: Charité Universitätsmedizin Berlin, Institute of Cell Biology and Neurobiology**
- Thesis: „Ion channel modulation by interferon in layer V pyramidal neurons of the somatosensory cortex“
- 2000 - 2006 **M.Sc.: University of Vienna (Austria)**
- Population ecology and genetics, evolution and systematics
 - Thesis: „Genetic structure among and within *Gentianella aspera* populations“
- 1994 - 1999 **Higher Technical Institute - Vienna (Austria)**
- Telecommunication engineering, microelectronics
 - Thesis: „Design of a 2400MHz DSSSM (Direct Sequence Spread Spectrum Modulation) Digital Transmission System“

IT Skills

- Programming
- Python, MatLab, GAMS - extensive knowledge
 - NI LabVIEW (Certified NI LabVIEW Associate Developer)
 - NEURON - extensive knowledge
 - Julia, Java, C, C++ - working knowledge
 - JavaScript, Assembler - basic knowledge
- Statistics
- OriginPro, IGOR Pro - extensive knowledge
 - SPSS, StatView - working knowledge
- Other
- GIT and GitHub - extensive knowledge
 - Proficient in MS Windows and Unix-like (Linux, OpenBSD, OS X) operation systems
 - L^AT_EX- extensive knowledge
 - Population/phylogenetic analysis software (i. a. PAUP, Arlequin)

Languages

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|-----------|---------------------------------------|
| German | Mother tongue |
| English | Full professional proficiency |
| Norwegian | Norsk for fremmedspråkige trinn 1 & 2 |

Articles Under Review

- Pauliuk, S., Arvesen, A., **Stadler, Konstantin**, and Hertwich, E. (under review). Integrated Assessment Models from an Industrial Ecology Perspective. *Nature Climate Change*
- Marques, A., Martins, I., Kastner, T., Plutzer, C., Theurl, M., Eisenmenger, N., Huijbregts, M., Wood, R., **Stadler, Konstantin**, Bruckner, M., Canelas, J., Hilbers, J., Tukker, A., Erb, K., and Pereira, H. (under review). Global consumption of beef and wood impairs biodiversity and ecosystem services. *Nature*
- Veronesi, F., Moran, D., **Stadler, Konstantin**, Kanemoto, K., and Wood, R. (under review). Resource Footprint and their Ecosystem Consequences. *Scientific Reports*
- Simas, M., Pauliuk, S., Wood, R., Hertwich, E., and **Stadler, Konstantin** (under review). Global Decoupling? Environmental pressures of national economies vary but footprints are highly correlated. *Ecological Indicators*
- Ivanova, D., Gibran, V., Steen-Olsen, K., **Stadler, Konstantin**, Melo, P., Wood, R., and Hertwich, E. (under review). Mapping the carbon footprint of EU regions. *Environmental Research Letters*
- Wood, R., Moran, D., **Stadler, Konstantin**, Ivanova, D., Steen-Olsen, K., and Hertwich, E. (under review). Prioritizing consumption-based carbon policies based on the evaluation of mitigation potential using input-output methods. *Environmental Science and Technology*

Published Peer Reviewed Articles

1. Tukker, A., Bulavskaya, T., Giljum, S., de Koning, A., Lutter, S., Simas, M., **Stadler, Konstantin**, and Wood, R. (2016). Environmental and Resource Footprints in a Global Context: Europe's Structural Deficit in Resource Endowments. *Global Environmental Change* 40: 171–181
2. Giljum, S., Wieland, H., Lutter, S., Bruckner, M., Wood, R., Tukker, A., and **Stadler, Konstantin** (2016). Identifying Priority Areas for European Resource Policies: A MRIO-Based Material Footprint Assessment. *Journal of Economic Structures* 5(1)
3. Cherubini, F., Huijbregts, M., Kindermann, G., Van Zelm, R., Van Der Velde, M., **Stadler, Konstantin**, and Strømman, A. H. (2016). Global Spatially Explicit CO₂ Emission Metrics for Forest Bioenergy. *Scientific Reports* 6
4. Pauliuk, S., Majeau-Bettez, G., Mutel, C. L., Steubing, B., and **Stadler, Konstantin** (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
5. Ivanova, D., **Stadler, Konstantin**, Steen-Olsen, K., Wood, R., Vita, G., Tukker, A., and Hertwich, E. G. (2015). Environmental Impact Assessment of Household Consumption. *Journal of Industrial Ecology*: 526–536

6. **Stadler, Konstantin**, Lonka, R., Moran, D., Pallas, G., and Wood, R. (2015). The Environmental Footprints Explorer - a database for global sustainable accounting. *University of Copenhagen*. Ed. by Johannsen, V. K. and Jensen, S. ISBN 978-87-7903-712-0. University of Copenhagen: 1–6
7. **Stadler, Konstantin** (2015). Pymrio - a Python module for automating input output calculations and generating reports. *University of Copenhagen*. Ed. by Johannsen, V. K. and Jensen, S. ISBN 978-87-7903-712-0. University of Copenhagen: 235–235
8. de Koning, A., Bruckner, M., Lutter, S., Wood, R., **Stadler, Konstantin**, and Tukker, A. (2015). Effect of Aggregation and Disaggregation on Embodied Material Use of Products in Input–output Analysis. *Ecological Economics* 116: 289–299
9. **Stadler, Konstantin**, Steen-Olsen, K., and Wood, R. (2014). The ‘rest of the World’ – Estimating the Economic Structure of Missing Regions in Global Multi-Regional Input-Output Tables. *Economic Systems Research* 26(3): 303–326
10. **Stadler, Konstantin**, Bierwirth, C., Stoenica, L., Battefeld, A., Reetz, O., Mix, E., Schuchmann, S., Velmans, T., Rosenberger, K., Bräuer, A. U., Lehnardt, S., Nitsch, R., Budt, M., Wolff, T., Kole, M. H. P., and Strauss, U. (2014). Elevation in Type I Interferons Inhibits HCN1 and Slows Cortical Neuronal Oscillations. *Cerebral Cortex* 24(1): 199–210
11. Wood, R., **Stadler, Konstantin**, Bulavskaya, T., Lutter, S., Giljum, S., de Koning, A., Kuenen, J., Schütz, H., Acosta-Fernández, J., Usubiaga, A., Simas, M., Ivanova, O., Weinzettel, J., Schmidt, J. H., Merciai, S., and Tukker, A. (2014). Global Sustainability Accounting—Developing EXIOBASE for Multi-Regional Footprint Analysis. *Sustainability* 7(1): 138–163
12. Reetz, O., **Stadler, Konstantin**, and Strauss, U. (2014). Protein Kinase C Activation Mediates Interferon–Induced Neuronal Excitability Changes in Neocortical Pyramidal Neurons. *Journal of Neuroinflammation* 11: 185
13. Stoenica, L., Wilkars, W., Battefeld, A., **Stadler, Konstantin**, Bender, R., and Strauss, U. (2013). HCN1 Subunits Contribute to the Kinetics of Ih in Neonatal Cortical Plate Neurons. *Developmental Neurobiology* 73(10): 785–797
14. Battefeld, A., Rocha, N., **Stadler, Konstantin**, Bräuer, A. U., and Strauss, U. (2012). Distinct Perinatal Features of the Hyperpolarization-Activated Non-Selective Cation Current I_H in the Rat Cortical Plate. *Neural Development* 7(1): 1–17
15. **Stadler, Konstantin**, Koch, M., Bernhardt, K.-G., and Greimler, J. (2010). Spatial Arrangement and Genetic Structure in *Gentianella Aspera* in a Regional, Local, and Temporal Context. *Plant Systematics and Evolution* 286 (1-2): 7
16. Beyer, S., Raether, G., **Stadler, K.**, Hoffrogge, R., Scharf, C., Rolfs, A., Mix, E., and Strauss, U. (2009). Interferon-Beta Modulates Protein Synthesis in the Central Nervous System. *Journal of neuroimmunology* 213(1): 31–38