

PERSONAL INFORMATION **Dr. (Eng.) Sebastian Rauner (PhD)**

📍 Johann-Georgstr. 2, 10709 Berlin (Germany)

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✉ rauner@pik-potsdam.de

Date of birth 31/05/1989 | Nationality German

WORK EXPERIENCE

01/10/2020–present

**Post-doc**

Potsdam Institute for Climate Impact Research (PIK)  
Telegrafenberg, 14473 Potsdam (Germany)

Transformation Pathways

01/03/2017–01/10/2020

**PhD student**

Potsdam Institute for Climate Impact Research (PIK)  
Telegrafenberg, 14473 Potsdam (Germany)

Transformation Pathways

PhD thesis: Environmental impact assessment in energy-economy-climate models

01/04/2016–01/11/2016

**Affiliate**

University of California, Berkeley and the Lawrence Berkeley National Laboratory

Electricity Markets and Policy Group

01/02/2015–01/03/2017

**PhD student**

Helmholtz Centre for Environmental Research  
Torgauerstr. 116, 04347 Leipzig (Germany)

Group of Renewable Energy

01/09/2014–31/12/2015

**Research Assistant**

Fraunhofer Institute for Solar Energy Systems  
Heidenhofstr. 2, 79110 Freiburg (Germany)

Renewable Energy Innovation Policy department

01/03/2014–31/08/2014

**Master student, 1.3 (A)**

Fraunhofer Institute for Solar Energy Systems ISE  
Heidenhofstr. 2, 79110 Freiburg (Germany)

Master thesis:

Analysis of explorative development paths for the German energy system -

Design of an unit commitment optimization model with a high share of renewable energy until 2050

01/12/2009–30/09/2012

**Cooperate Student of Business Administration and Engineering**

EnBW Vertrieb GmbH  
Charlottenstr. 47, 88212 Ravensburg (Germany)

Bachelor thesis: Development of a new model to measure energy efficiency of energy intensive companies

Business or sector Energy supply

## EDUCATION AND TRAINING

- 01/02/2015–01/10/2020 **Dr. Engineering, PhD, magna cum laude**  
Technical University Berlin (Germany)
- 01/09/2012–01/09/2014 **Master of Science in Business Administration and Engineering of Energy and Resources, GPA 1.5 (A-)**  
Beuth University of Applied Sciences Berlin in cooperation with the Berlin School of Economics and Law, Berlin (Germany)
- 01/09/2013–28/02/2014 **Research semester at the Renewable Energy Institute of Taiwan**  
National Taiwan University, Taipei (Taiwan)  
Funded through a scholarship of the German Academic Exchange Service
- 01/10/2011–26/12/2011 **Semester abroad**  
Shanghai University, Shanghai (Peoples Republic of China) - Funded through a scholarship of the German Academic Exchange Service
- 01/08/2011–30/09/2011 **Scholarship of the National Science Council Taiwan**  
Taiwan Summer Institute, Tainan, National Cheng Kung University (Taiwan)  
Development of a model for the future energy supply of Taiwan
- 01/09/2009–01/09/2012 **Bachelor of Engineering in Business Administration and Engineering, GPA 1.7 (A-)**  
Cooperative State University Karlsruhe Baden-Württemberg, Karlsruhe (Germany)  
Cooperative course in cooperation with the third largest energy supplier in Germany
- 01/09/2005–18/06/2008 **Abitur, GPA 1.4 (A)**  
Technical-Gymnasium-Heilbronn, Heilbronn (Germany)  
German, Mathematics, Mechanical Engineering

## PERSONAL SKILLS

Mother tongue(s) German

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C1	C1	C1	C1
French	A2	B1	B1	A2	B1
Hebrew	A2	A2	A2	A1	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user  
[Common European Framework of Reference for Languages](#)

## Curriculum Vitae

**Programming skills**    Advanced optimization skills in GAMS  
Advanced programming skills in Python and ArcGIS  
Advanced statistical programming skills in R  
Basic programming skills in html and java  
Advanced modelling skills in Matlab

## PUBLICATIONS

**Submitted**    Dirnaichner, **S. Rauner**, et al., “Life-cycle impacts from different decarbonization pathways for the European car fleet,” *Environ. Res. Lett.*

**Published:**    B. Soergel, E. Kriegler, I. Weindl, **S. Rauner**, et al., A sustainable development pathway for climate action within the UN 2030 Agenda, *Nature Climate Change*, 11, 656–664 (2021). doi: 10.1038/s41558-021-01098-3 available at [rdcu.be/csoFt](http://rdcu.be/csoFt)

T. Vandyck, **S. Rauner**, et al., “Integrate health into decision-making to foster climate action,” *Environ. Res. Lett.*, vol. 16, no. 4, p. 041005, Apr. 2021. doi: 10.1088/1748-9326/abef8d

**S. Rauner**, N. Bauer, A. Dirnaichner, R. Van Dingenen, C. Mutel, and G. Luderer, “Coal-exit health and environmental damage reductions outweigh economic impacts,” *Nature Climate Change*, vol. 10, no. 4, pp. 308–312, Apr. 2020. doi: 10.1038/s41558-020-0728-x, available at [rdcu.be/b3bMk](http://rdcu.be/b3bMk).

**S. Rauner**, J. Hilaire, D. Klein, J. Strefler, and G. Luderer, “Air quality co-benefits of ratcheting up the NDCs,” *Climatic Change*, Apr. 2020. doi: 10.1007/s10584-020-02699-1, available at [rdcu.be/b3EgP](http://rdcu.be/b3EgP).

J. Thakur, **S. Rauner**, N. R. Darghouth, and B. Chakraborty, “Exploring the impact of increased solar deployment levels on residential electricity bills in India,” *Renewable Energy*, vol. 120, pp. 512–523, May 2018. doi: 10.1016/j.renene.2017.12.101.

**S. Rauner** and M. Budzinski, “Holistic energy system modeling combining multi-objective optimization and life cycle assessment,” *Environmental Research Letters*, vol. 12, no. 12, p. 124005, Dec. 2017. doi: 10.1088/1748-9326/aa914d, available at [iopscience.iop.org/article/10.1088/1748-9326/aa914d](http://iopscience.iop.org/article/10.1088/1748-9326/aa914d).

**S. Rauner**, M. Eichhorn, and D. Thrän, “The spatial dimension of the power system: Investigating hot spots of Smart Renewable Power Provision,” *Applied Energy*, vol. 184, pp. 1038–1050, Dec. 2016. available at [https://www.researchgate.net/publication/305578523\\_The\\_spatial\\_dimension\\_of\\_the\\_power\\_system\\_Investigating\\_hot\\_spots\\_of\\_Smart\\_Renewable\\_Power\\_Provision](https://www.researchgate.net/publication/305578523_The_spatial_dimension_of_the_power_system_Investigating_hot_spots_of_Smart_Renewable_Power_Provision).