

Paul Wolfram

Yale Center for Industrial Ecology, 380 Edwards St., New Haven, CT 06511, USA · [E-Mail](#) · [Web](#) · [Google Scholar](#) · [LinkedIn](#)

Education

Yale University, Center for Industrial Ecology	New Haven, CT
Since 8/2016	PhD and teaching fellow · Topic: Vehicle production and use within decarbonization scenarios
Technical University Berlin	Berlin, Germany
10/2012–5/2015	M.Sc. Environmental Planning, in combination with Climate-KIC Master Label · Thesis: “Carbon footprint scenarios of renewable electricity in Australia” · Research exchange at University of New South Wales, Sustainability Assessment Program (10/2014–2/2015)
Technical University Dresden	Dresden, Germany
10/2007–9/2010	B.Sc. Transportation Economics · Thesis: “Spatial, ecological and economic effects of Low Emission Zones in German cities“
Julius-Ambrosius-Hülße-Gymnasium	Dresden, Germany
8/1997–6/2005	High school diploma

Professional experience

International Council on Clean Transportation (ICCT)	Berlin, Germany
9/2015–7/2016	Research Associate · Main tasks: Researching electric vehicle costs and emissions · Promoted from research intern (9/2015–2/2016) and research fellow (3/2016)
Potsdam Institute for Climate Impact Research (PIK)	Potsdam, Germany
8–11/2015	Scientific Assistant, Adaptive Networks of Socio-metabolic Flows group · Tasks: Researching a method to calculate material footprints of renewable energy
9/2012–8/2014	Student Assistant, Executive Department · Main tasks: Organizational tasks and research assistance for the Director
Transport Club Germany (VCD)	Berlin, Germany
2–9/2012	Intern · Main tasks: Co-authoring a report on traffic safety, research assistance
State Ministry for Economy, Labor and Transportation	Dresden, Germany
4/2010	Intern · Main task: Research assistance on the federal transport plan 2020

Peer-reviewed journal papers

2020	Wolfram, P. , S. Weber, E. Hertwich, K. Gillingham. More for less: low-cost, deep decarbonization of the US light vehicle sector. In preparation.
2020	Makov, T., P. Wolfram , M. Chertow, V. Blass. Using market data to assess the distribution of environmental impacts across multiple product users. In preparation.
2020	Wolfram, P. , Q. Tu, N. Heeren, S. Pauliuk, E. Hertwich. Potentials and trade-offs of material efficiency strategies for passenger vehicles. In preparation for <i>J. Ind. Ecol.</i>
9/2019	Wu, Z., C. Wang, P. Wolfram , Y. Zhang, X. Sun, E. Hertwich. Assessing electric vehicle policy with region-specific carbon footprints . <i>Appl. Energy</i> , 256, 113923.
8/2019	Miller, T.R., P. Berrill, P. Wolfram , R. Wang, Y. Kim, X. Zheng, E. Hertwich. Method for endogenizing capital in the USEEIO . <i>J. Ind. Ecol.</i> , 1–15.
6/2019	Wolfram, P. , E. Hertwich. Representing vehicle-technological opportunities in integrated energy modeling . <i>Transp. Res. Part D: Transp. Environ.</i> , 73, 76–86.
3/2019	Hertwich, E., S. Ali, L. Ciacci, T. Fishman, N. Heeren, E. Masanet, F. Nojavan Asghari, E. Olivetti, S. Pauliuk, Q. Tu, P. Wolfram . Material efficiency strategies to reducing greenhouse gas emissions associated with buildings, vehicles and electronics – A review . <i>Environ. Res. Lett.</i> , 14, 043004.
8/2017	Wolfram, P. , T. Wiedmann. Electrifying Australian transport: Hybrid life cycle analysis of a transition to electric light-duty vehicles and renewable electricity . <i>Appl. Energy</i> , 206, 531–540.
2/2016	Wolfram, P. , T. Wiedmann, M. Diesendorf. Carbon footprint scenarios of renewable electricity in Australia . <i>J. Cleaner Prod.</i> , 124, 236–245.

Books

10/2015	Wolfram, P. Carbon footprint scenarios of renewable electricity: A greenhouse gas emission assessment for
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Peer-reviewed book chapters

- 2020 Chertow, M., K. Kanaoka, R. Miller, P. Berrill, **P. Wolfram**, N. Heeren, T. Fishman. The systems science of Industrial Ecology: Tools and strategies toward meeting the SDGs. In: "Science, technology and innovation for meeting the Sustainable Development Goals". Oxford University Press. Accepted.
- 8/2017 **Wolfram, P.**, T. Wiedmann. Potentials to decarbonize electricity consumption in Australia. In: Ó. Dejuán, M. Lenzen, M.Á. Cadarso (eds.) "[Environmental and economic impacts of decarbonization. Input-output studies on the consequences of the 2015 Paris agreements](#)". Routledge Publishing.

Working papers, reports and articles

- 12/2019 Pauliuk, S., N. Heeren, Q. Tu, E. Hertwich, P. Berrill, T. Fishman, K. Kanaoka, E. Masanet, E. Olivetti, **P. Wolfram**. Emission savings from material efficiency in homes and cars - An Industrial Ecology assessment. Report prepared for the United Nations. In preparation.
- 10/2016 **Wolfram, P.**, J. German, U. Tietge, P. Mock. [Deployment of passenger car technology in Europe and the United States](#). Working Paper, International Council on Clean Transportation (ICCT).
- 7/2016 **Wolfram, P.**, N. Lutsey. [Electric Vehicles: Literature review of technology costs and carbon emissions](#). Working Paper, International Council on Clean Transportation (ICCT).
- 12/2013 Hänel, A., C. Rostock, B. Sluka, **P. Wolfram**, A. Ahrens. [VCD Tempo 30 Soforthilfe-Papier](#) (in German). Transport Club Germany (VCD), Berlin, Germany.
- 6/2012 Hänel, A., C. Rostock, **P. Wolfram**, J. Schneider. [VCD Städtecheck 2012: Verkehrssicherheit Kinder und Jugendliche](#) (in German). Transport Club Germany (VCD), Berlin, Germany.

Select conference presentations (presenter underlined)

- 9/2019 Makov, T., **P. Wolfram**, V. Blass. What is my share? Assessing the environmental impacts of secondary consumption. Abstract accepted, 3rd PLATE Conference, Berlin, Germany.
- Wu, Z., C. Wang, **P. Wolfram**, X. Sun, E. Hertwich. Regional variability and future trends in carbon footprints of electric vehicles in China based on THEMIS model. 16th CEST Conference, Rhodes, Greece.
- 7/2019 **Wolfram, P.**, E. Hertwich, Q. Tu. More for less: Deeper and more affordable decarbonization of the US light-duty vehicle sector is possible. Oral presentation;
- Hertwich, E., A. Saleem, P. Berrill, L. Ciacci, T. Fishman, N. Heeren, A. Iyer, S. Klose, R. Lifset, E. Masanet, E. Olivetti, S. Pauliuk, Q. Tu, **P. Wolfram**. Resource efficiency for climate change mitigation in housing buildings and light-duty vehicles. Oral presentation;
- Miller, T.R., E. Hertwich, P. Berrill, Y. Kondo, **P. Wolfram**. Impact of capital on the American carbon, energy, and material footprint. Oral presentation;
- Makov, T., V. Blass, **P. Wolfram**. What is my share? Assessing the environmental impacts of secondary consumption. Oral presentation, 10th ISIE Conference, Beijing, China.
- 3/2019 **Wolfram, P.**, E. Hertwich. Representing vehicle-technological opportunities in integrated energy modeling. Poster presentation, Scenarios Forum, Denver, CO, USA.
- 9/2018 Wu, Z., **P. Wolfram**, E. Hertwich, C. Wang. Investigating segment-wise carbon footprints of passenger vehicles in China based on hybrid LCA. Poster presentation, 6th ISIE-AP Conference, Qingdao, China.
- 5/2018 **Wolfram, P.**, E. Hertwich. "[Merging two worlds](#)" for prospective assessment of the US vehicle fleet. Poster presentation, Gordon Research Conference, Les Diablerets, Switzerland.
- 10/2017 **Wolfram, P.**, T.R. Miller, P. Berrill, Y. Kim, R. Wang, X. Zheng, E. Hertwich. [Capturing capital consumption in IO-LCA: The case of US light-duty vehicles](#). Oral presentation;
- Wolfram, P.**, E. Hertwich. Life cycle assessment of prospective electricity systems. Oral presentation, ACLCA XVII Conference, Portsmouth, NH, USA.
- 6/2017 **Wolfram, P.**, T. Wiedmann. Electrifying Australian transport: Carbon footprint of a transition to electric vehicles and renewable electricity. Oral presentation, ISIE/ISSST Joint Conference, Chicago, IL, USA.
- 7/2015 **Wolfram, P.**, T. Wiedmann. Carbon footprint scenarios of renewable electricity generation in Australia. Oral presentation, ISIE Conference, Surrey, UK.
- 6/2015 Wiedmann, T., **P. Wolfram**. [Carbon footprint scenarios of renewable electricity generation in Australia](#). Oral

presentation, 1st Industrial Ecology Virtual Laboratory Conference, Sydney, Australia.

Scholarships

4/2019	Conference travel award, Yale Graduate Student Assembly	750 USD
3/2019	Open access publishing funding, Yale University	2,050 USD
3/2018	Gordon travel grant, US National Science Foundation	850 USD
4/2017	Student Chapter scholarship to the 2017 ISIE-ISSST Conference	1,127 USD
2017–2019	Doctoral Student Travel Fund, Yale School of Forestry & Environmental Studies	1,500 USD
12/2016	Doctoral Dissertation Improvement Grant, Yale Institute of Biospheric Studies	4,950 USD
2016–2021	Dissertation Scholarship, Yale School of Forestry & Environmental Studies	350,000 USD
10/2014–2/2015	PROMOS, German Academic Exchange Service (DAAD)	1,500 Eur
	Climate-KIC Mobility, European Institute of Innovation and Technology	2,500 Eur

Teaching assistance

Spring 2019, Fall '17	Carbon Footprints – Modeling and Analysis, Yale, Instructor: Prof. Dr. Edgar Hertwich. Presented lecture: LCA of Personal Transport and Vehicles · Instructed labs: Input-output basics; Matrix-based LCA; Multi-regional input-output analysis.
Spring 2018	Energy Systems Analysis, Yale, Instructor: Prof. Dr. Edgar Hertwich.
Spring 2017	Life Cycle Assessment Practicum, Yale, Instructor: Thomas Swarr. Presented lecture: Transport LCA.

Volunteering and memberships

Since 3/2017	Member, International Society of Industrial Ecology
4/2014–5/2017	Fellow, Climate CoLab, Massachusetts Institute for Technology · Task: Evaluation of transport-related climate change mitigation and adaptation solutions · Promoted from Catalyst (4/2014–4/2016)
8/2012–7/2013	Member, Transport Club Germany (VCD)

Further qualifications

Languages	<i>Mother tongue:</i> German · <i>Proficient:</i> English, CEFR C1 · <i>Basic:</i> French, CEFR B1/B2
Software	<i>Advanced:</i> LaTeX, Office · <i>Intermediate:</i> Matlab, FASTSim, SimaPro · <i>Basic:</i> GREET, GaBi, Python, R, Fortran, Access

Review service

Environmental Science & Technology · Journal of Industrial Ecology · Research in Transportation Economics · Resources, Conservation & Recycling · Science of the Total Environment · Sustainability · World Electric Vehicle Journal

References

Dr. Edgar Hertwich	Yale University · Director Center for Industrial Ecology, Prof. (+1) 203 432 5475 · edgar.hertwich@yale.edu
Dr. Peter Mock	International Council on Clean Transportation · Europe Managing Director / EU Lead (+49) 30 847 129 102 · peter@theicct.org
Dr. Thomas Wiedmann	University of New South Wales · A./Prof. School of Civil and Environmental Engineering (+61) 2 9385 0142 · t.wiedmann@unsw.edu.au



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11th October, 2019