Annika Heike Stechemesser

✉ stechemesser@pik-potsdam.de
🖱 https://www.pik-potsdam.de/members/stecheme

International and Professional Experience

2023 - present
Postdoctoral Researcher. Potsdam Institute for Climate Impact Research.
Position as a Postdoctoral Researcher in the Future Lab Ceres with Prof. Dr. Ottmar Edenhofer and Dr. Nicolas Koch. Focus on climate policy evaluation with econometrics and machine learning approaches.

2019 - 2023
Doctoral Researcher. Potsdam Institute for Climate Impact Research.
Funded position as a Doctoral Researcher in the research domain Complexity Sciences with Prof. Dr. Anders Levermann and Dr. Leonie Wenz. Focus on understanding societal and economic impacts of climate change with econometrics, nonlinear data analysis and machine learning approaches.

Autumn 2022
Research stay. UC Berkeley, USA.
Three month research stay (August 22 to November 22) in the department of agricultural and resource economics with Prof. Maximilian Auffhammer working on economic impacts of climate change.

2021
COP26. Glasgow, UK.
Organization of the event "Rethinking our Future - Young Visions on Sustainability" in the German Pavilion. Panelist. NGO observer, participation in bilateral meetings.

2019
Government Operations Research Service. Department of Education, UK.
Three month Data Science and Consultancy Internship in the UK Government.

2018
German Bundestag. MP Kerstin Griese.
One month internship with the parliamentary state secretary for employment and social affairs, Kerstin Griese in the German Bundestag.

2015
Harvard Summer School: Graph Theory (Grade A). Harvard University, USA.
Four week intense summer school programme at Harvard University with focus on graph theory. Graduated with the highest grade possible.

Education

2019 - present
PhD Candidate. Potsdam Institute for Climate Impact Research.
➢ Thesis titled: Human behaviour in a warming world - Empirical evidence from social media and mobility data (submitted)

2017 - 2018
MSc in Mathematics for Real-World Systems. University of Warwick, UK.
➢ Grade: Distinction (first class honors)

➤ Funded position by EPSRC
➤ MSc Thesis: Improving Cell Type Identification of Single Cell Data by Iterative Graph Based Noise Filtering
➤ Group Research Project: Machine Learning in Julia
➤ Further Projects: Algorithmic Fairness (Complexity in the Social Sciences)

2013 - 2016   **BSc in Mathematics.** University Duisburg Essen, Germany.
➤ Grade: 1.5/A
➤ Minor in Economics
➤ BSc Thesis: Iwasawa Algebras

2013   **Abitur.** Gymnasium Luisenschule, Mülheim an der Ruhr, Germany.
➤ Grade: 1.0/A+
➤ Prize for graduating as one of the best students in North Rhine-Westphalia

Academic Publications

Journal Publications

A. Stechemesser, L. Wenz, Inequality in behavioural heat adaptation: an empirical study with mobility data from the transport system in New York City, NY, USA. The Lancet Planetary Health, 2023, https://doi.org/k3wm
 Key words: Climate change, inequality, heat stress, mobility, econometrics

A. Stechemesser, M. Kotz, M. Auffhammer, L .Wenz, Prolonged exposure weakens risk perception and behavioral mobility response: Empirical evidence from Covdi-19. Transportation Research Interdisciplinary Perspectives, 2023. https://doi.org/k3wn
 Key words: Covid-19, Google trends, mobility, behavior, risk

A. Stechemesser, A. Levermann, L. Wenz, Temperature impacts on hate speech online: evidence from 4 billion geolocated tweets from the USA, The Lancet Planetary Health, 2022, https://doi.org/jd6j
 Key words: Twitter, climate change, hate speech, machine learning, econometrics

A. Stechemesser, L. Wenz, M. Kotz, A. Levermann, Strong increase of racist tweets outside of climate comfort zone in Europe, Envir. Research Letters, 2021, https://doi.org/hf7n Key words: Twitter, climate change, conflict, Europe, machine learning, econometrics

M. Kotz, L. Wenz, A. Stechemesser, M. Kalkuhl, A. Levermann, Day-to-day temperature variability reduces economic growth, Nature Climate Change, 2021, https://doi.org/fvdf
Key words: Economic growth, climate change, temperature variability, econometrics

A. Stechemesser, L. Wenz, A. Levermann, Corona crisis fuels racially profiled hate in social media networks, The Lancet - EClinicalMedicine, 2020, https://doi.org/gmwrmq
Key words: Covid-19, Twitter, cyber racism, machine learning

Charlotte Rich-Griffin and Annika Stechemesser et al., Single-Cell Transcriptomics: A High-Resolution Avenue for Plant Functional Genomics, Trends in Plant Science, 2020,

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Scholarships and Awards

2023 - present   **Zia – Visible Women in Science Fellowship**
Fellowship from the ZEIT Verlag for young, talented, female scientists. Year-long program with focus on skill building, networking, outreach and personal development.

2022 - present   **AGU Voices for Science Fellowship - Science-Policy Track**
Yearlong competitive science communication fellowship by the American Geosciences Union. Provides specialized training and a strong network to conduct regular outreach activities with policy makers.

2018 - 2021   **Model United Nations**
➢ Senior Advisor to the be.boosted delegation. Harvard World MUN (2021)
➢ Director of the World Social Forum. London International MUN (2020)
➢ Diplomacy Award. Harvard World MUN (2019)
➢ Diplomacy Award. London International MUN (2018)

2018 - present   **Be.boosted Fellowship**
Leadership programme with focus on developing soft skills. Intense coaching with peers and experts, participation in large scale Model United Nations conferences. Fellow in 2018 and 2019, trainer in 2020, senior trainer since 2021.

2014 - 2018   **Academic Scholarship of the "Evangelisches Studienwerk Villigst"**
Competitive academic scholarship from one of the 12 large German scholarship organizations. Funding for Bachelor and Masters with additional studies abroad.

2013 - 2014   **Deutschlandstipendium, University Duisburg Essen**
Academic scholarship offered to students with outstanding grades.

Scientific Conferences, Workshops and Talks

Academic   **OECD WiP Seminar 2023.**
Talk: A global stocktake of climate policy interventions with major emission reductions

EAERE 2023. Limassol, Cyprus
Talk: Compounding heat risks: Evidence for inequality in behavioral heat adaptation from mobility in New York City.

Machine Learning in Economics Workshop. Hertie School, Berlin
Talk: Machine Learning for Reverse Causal Evaluation of Climate Policies

Tweeds 2022, Eugene, Oregon.
Short talk: Temperature impacts on hate speech online: Evidence from four billion

tweets

UC Berkeley Environment, Resource and Energy Economics Seminar
Talk: Temperature impacts on mobility in New York City: Evidence of unequal, compounding heat risks

EAERE 2022. Rimini, Italy
Talk: Temperature impacts on hate speech online: Evidence from four billion tweets

AGU Fall Meeting 2021. American Geosciences Union. Online.
Poster presentation: [Robust nonlinear effect of daily temperature on hate speech online](#)

Climate Exp0. COP26 Universities Network. Online.
Poster presentation: Strong increase of racist tweets outside of climate comfort zone in Europe

vEGU 2021. European Geosciences Union. Online.
Egg timer presentation: [The relationship between temperature and digital hate - strong increase of racist tweets outside of climate comfort zone in Europe](#)

Interdisciplinary Ph.D. Workshop in Sustainable Development. Columbia University. Online.
Talk: Strong increase of racist tweets outside of climate comfort zone in Europe

Selected Sci. Communication

Children's University Lichtenberg. Berlin.
Talks on climate change and society for school children (ongoing engagement)

[**Prometeruse Charity**](#). Berlin.
Scientific partner at a high school, workshop involving teenagers in climate action

[**Building Bridges for Climate Action**](#). Online.
Expert dialogue with participants: Climate Change - Impacts on the Agenda 2030

[**Public Science Talk**](#). University of Mainz.
Life with global warming - social and economic impacts of climate change

Media contributions (selected)

2023

Hessischer Rundfunk, ["Alle Wetter"](#) (minutes 8:19 - 12:30)
Deutschlandfunk, ["Studie: Ärmere Menschen müssen auch an Hitzetagen oft U-Bahn fahren"](#)
Ärzteblatt, [Ärmere Menschen bleiben bei Hitze auf U-Bahn angewiesen](#)

2022

The Guardian, ["Hateful tweets multiply in hateful temperatures, US analysis finds"](#)

Annika Heike Stechemesser

Bloomberg, ["Climate change is making people angrier online"](#)
Time, ["Online Hate Speech Increases During Extreme Hot and Cold Weather, Study Shows"](#)
Euronews, ["Hot and bothered: The climate getting warmer may be fuelling online hate speech, new study finds"](#)
The Washington Post, ["Hotter days bring out hotter tempers, research finds"](#)
ZDF Heute, ["Mehr Hatespeech durch Hitze : Klimawandel heizt Stimmung im Netz an"](#)
Spiegel Online, ["Die Temperaturen steigen – und der Hass nimmt zu"](#)

Teaching experience

2022	Dynamics of the Climate System (PIK / University of Potsdam) Teaching Assistant. Lecture by Anders Levermann.
2019	[Interdisciplinary Computer Modeling](#) (Warwick University) Teaching Assistant. Lecture by Christoph Ortner.
2019	[Combinatorial Optimisation](#) (Warwick University) Teaching Assistant. Lecture by Vadim Lozin.
2019	[Graph Theory](#) (Warwick University) Teaching Assistant. Lecture by Vadim Lozin.
2018/2019	[Introduction to Teaching for Postgraduates in the Sciences](#) (Warwick University) Participated in this in-depth course on academic teaching for postgraduates. Involved studying different learning theories, trying out teaching styles, assembling exemplary lesson plans, assessed teaching sessions and personal feedback.
2018	[Discrete Mathematics and its Applications 1](#) (Warwick University) Teaching Assistant. Lecture by Artur Czumaj
2018	[Algorithms](#) (Warwick University) Teaching Assistant. Lecture by Dmitry Chistikov.

Miscellaneous

Referee Service	NeuRIPS Climate, Climatic Change, IEEE Transactions on Computational Social Systems
Grant Activity	Co-authored the proposal for an [extension module relating to Covid-19](#) for the [ImpactEE](#) project (PI: Dr. Leonie Wenz, Prof. Dr. Anders Levermann)
Technical Skills	Day-to-day usage: R, Python, git, Latex Proficient: Julia, Matlab, Excel

Soft Skills	Experience with public speaking, leading teams, problem-solving, project management, preparing and delivering talks at different levels of complexity, intercultural communication, preparing written documents to a high quality.
Languages	German (native), English (C2), French (DELF Certificate B2)
Volunteering	Organizer of the "Greenathon", a youth project on Green Recovery Member of Klimadelegation e.V., a climate youth NGO. Policy project lead. Be.boosted senior trainer.