

Key interests

Themes	Opinion formation, Social Simulation, Complex systems, Climate crisis, Science communication
Methods	Mathematical modelling, Agent-based simulation, Data analysis, Visualisation
Current key questions	How can mathematical models adequately represent the opinions of people? How do people react to social influence, and what factors or cognitive biases affect their perceptions of others? What are the conditions under which pro-environmental attitudes disseminate in society (despite or perhaps because of peoples' cognitive biases)?

Academic background

Ph.D. started Jun 2020	at Leibniz Centre for Tropical Marine Research (ZMT) Bremen and Constructor University project: seatrac research area: the role of cognitive biases in the formation of public opinion patterns supervisor: Agostino Merico main collaborators: Deyshawn Moser , Achim Schlüter , Paul E. Smaldino
Master (M.Sc.) Jun 2020	at TU Berlin , KTH Stockholm (double-degree) and ZMT Bremen in Computer Simulations in Science and Engineering (COSSE) final grade: 1.1 ('very good') thesis in socio-economic modelling titled 'A spatially explicit agent-based model of human-resource interaction on Easter Island' supervisor: Agostino Merico
Master (M.Sc.) Oct 2018	at University of Potsdam and Potsdam Institute for Climate Impact Research (PIK) in Physics final grade: 1.1 ('very good') with distinction thesis in climate modelling titled 'Estimating global warming from anthropogenic heat emissions – conceptual and numerical modelling approaches' supervisors: Georg Feulner and Maria A. Martin
Bachelor (B.Sc.) Dec 2016	at FAU Erlangen-Nuremberg in Physics final grade: 1.2 ('very good') with distinction thesis on simulating the detection of astro-particles supervisor: Uli Katz

Scientific work

Publications	P. Steiglechner, M.A. Keijzer, P.E. Smaldino, D. Moser, and A. Merico (in preparation). "Noise and opinion dynamics: How ambiguity promotes pro-majority consensus in the presence of confirmation bias." P. Steiglechner, P.E. Smaldino, D. Moser, and A. Merico (submitted). " Social identity bias and communication network clustering interact to shape patterns of opinion dynamics ". P. Steiglechner and A. Merico (2022). "Spatio-Temporal Patterns of Deforestation, Settlement, and Land Use on Easter Island Prior to European Arrivals". In: <i>The Prehistory of Rapa Nui (Easter Island): Towards an Integrative Interdisciplinary Framework</i> . Ed. by V. Rull and C. Stevenson. Cham: Springer International Publishing, pp. 401–426. ISBN: 978-3-030-91127-0. DOI: 10.1007/978-3-030-91127-0_16
Scientific conferences	contributed talk at ODCD 2023 in Bremen, Germany

contributed talk at CCS 2022 in Palma, Spain
 contributed talk at SSC 2022 in Milan, Italy
 poster at EGU General Assembly 2019 in Vienna, Austria
 poster at DPG Frühjahrstagung 2019 (Environmental Physics Section) in Munich, Germany

Teaching (at university level) _____

Co-supervisor	for a master thesis at ZMT on modelling individual decision-making in social contexts (ongoing) for a master thesis at ZMT on modelling the coral-algae symbiosis under stress (2021)
Teaching assistant	for the course ‘Modelling and analysis of complex systems’ by Agostino Merico at Jacobs University (2020, 2022) including the preparation and presentation of a lecture on an ‘Agent-based model of the Covid-19 pandemic’ at a winter school on ‘Mathematical modelling of ecological and socioeconomic systems’ at the African Institute of Mathematical Sciences (AIMS) in Senegal (2020, 2022) for the course ‘Theoretical physics 2’ by Florian Marquardt at FAU (2015 – 2016)

Further research experience and education _____

Research internships	at UC Merced in cognitive sciences and at Santa Fe Institute (2023, three months) at Imperial College London and Grantham Institute (2016, three months) publication of a policy briefing paper: ‘Novel policy tools to assess the environmental impacts of air pollutants’ supervisors: Apostolos Voulgarakis and Alyssa Gilbert
Science communication	‘Book-a-scientist’ – speed-dating with scientists organised by the Leibniz Association (2020, 2021, 2022)
Summer schools	BIGSSS-CSS Summer School on social cohesion at University of Groningen (2022) ‘PIP Summer school on machine learning’ at University of Bremen (2018)
University exchange	Erasmus exchange at Imperial College London (2014 –2015) thesis project on simulating material properties of solar cells supervisor: N.J. Ekins-Daukes

Relevant skills _____

Languages	German (native), English (Level C1, fluent), Swedish, Arabic (all beginner)
Programming	Python (advanced), R, NetLogo, Julia (all beginner)

Voluntary work in university policy institutions _____

Political and administrative groups	‘Fridays for Future’ university group at TU Berlin (2019) green university group (‘GHG’) at FAU (2012 – 2017) student association in physics (‘FSI’) at FAU (2012 – 2017)
Committee work	speaker of ‘Campusgrün Bayern’, parent organisation of green university groups (2013 – 2014) student council on faculty level (‘FSV’) at FAU (2013 – 2014) student council on university level (‘Konvent’) at FAU (2013 – 2014)