

Key interests

Themes Computational social science, Complex systems, Climate crisis, Science communication

Methods Mathematical modelling, Agent-based simulation, Data science, Visualisation

Academic carrer

Postdoc
2024 – at [Complexity Science Hub](#)
project: [Collective Adaptation](#)
main collaborators: [Mirta Galesic](#), [Henrik Olsson](#)

Ph.D.
2024 in **(Computational) Sociology**
at [Leibniz Centre for Tropical Marine Research \(ZMT\)](#) Bremen and [Constructor University](#)
on ‘[The complex effects of distorted social perceptions on opinions about climate change](#)’
supervisor: [Agostino Merico](#);
main collaborators: [Paul E. Smaldino](#), [Marijn A. Keijzer](#), [Deyshawn Moser](#)

Master (M.Sc.)
2020 in **Computer Simulations in Science and Engineering (COSSE)**
at [TU Berlin](#) and [KTH Stockholm](#) (double-degree)
final grade: 1.1 (‘very good’)
thesis in socio-economic modelling: ‘[A spatially explicit agent-based model of human-resource interaction on Easter Island](#)’ at [ZMT Bremen](#) (supervisor: [Agostino Merico](#))

Master (M.Sc.)
2018 in **(Climate) Physics**
at [University of Potsdam](#) and [Potsdam Institute for Climate Impact Research \(PIK\)](#)
final grade: 1.1 (‘very good’) with distinction
thesis in climate modelling: ‘[Estimating global warming from anthropogenic heat emissions – conceptual and numerical modelling approaches](#)’ (supervisors: [Georg Feulner](#) & [Maria A. Martin](#))

Bachelor (B.Sc.)
2016 in **Physics**
at [FAU Erlangen-Nuremberg](#)
final grade: 1.2 (‘very good’) with distinction
thesis on simulating the detection of astro-particles (supervisor: [Uli Katz](#))

Scientific contributions

Selected publica-
tions **Steiglechner P**, Keijzer MA, Smaldino PE, Moser D, & Merico A (2024). Noise and opinion dynamics: How ambiguity promotes pro-majority consensus in the presence of confirmation bias. *Royal Society Open Science*, 11 (4), 231071. <https://doi.org/10.1098/rsos.231071>

Steiglechner P, Smaldino PE, Moser D, & Merico A (2023). Social identity bias and communication network clustering interact to shape patterns of opinion dynamics. *Journal of The Royal Society Interface*, 20 (209), 20230372. <https://doi.org/10.1098/rsif.2023.0372>

Steiglechner P & Merico A (2022). Spatio-temporal patterns of deforestation, settlement, and land use on easter island prior to European arrivals. In: Rull V & Stevenson C (eds) The prehistory of Rapa Nui (Easter Island): Towards an integrative interdisciplinary framework. *Developments in Paleoenvironmental Research*, vol 22. Springer, Cham. https://doi.org/10.1007/978-3-030-91127-0_16

Conferences contributed talk at SSC 2024 in Krakow, Poland
[poster](#) at SSC 2023 in Glasgow, UK
[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 on modelling individual decision-making in social contexts at ZMT Bremen (2023) for a master thesis on modelling the coral-algae symbiosis under stress at ZMT Bremen (2021)
Lecturer	designing lectures, exercises, and student projects for the course ‘Data Science Tools in python’ at Constructor University in collaboration with Jan Lorenz (2023)
Guest lecturer	on an ‘Agent-based model of the Covid-19 pandemic’ as part of ‘Modelling and analysis of complex systems’ lead by Agostino Merico at Constructor University (2020, 2022, 2023)
Teaching assistant	in ‘Modelling and analysis of complex systems’ lead by Agostino Merico at Constructor University (2020, 2022) 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: Electrodynamics’ by Florian Marquardt at FAU (2015 – 2016)

Further research experience and education _____

Research stays	at UC Merced in the cognitive science department (2023, three months), including a visit to the Santa Fe Institute at Imperial College London and Grantham Institute (2016, three months) including the preparation of a policy briefing paper on ‘ Novel policy tools to assess the environmental impacts of air pollutants ’ (supervisors: Apostolos Voulgarakis and Alyssa Gilbert)
Science communication	interview on the effect of ambiguity in social influences on consensus formation (2024) radio interview on global warming through anthropogenic heat emissions (2024) ‘ Wissenschaft persönlich ’—interview (2023) ‘ Science goes PUBLIC ’—a series of talks by scientists for the general public in pubs in Bremen (2023) ‘ Book-a-scientist ’—speed-dating with scientists organised by the Leibniz Association (2020–2022)
Summer schools	‘BIGSSS-CSS Summer School on democratic debate’ at Constructor University (2023) ‘BIGSSS-CSS Summer School on social cohesion’ at University of Groningen (2022) ‘PIP Summer school on machine learning’ at University of Bremen (2018)
Studying abroad	Erasmus exchange at Imperial College London (2014–2015) thesis project on simulating material properties of solar cells (supervisor: N.J. Ekins-Daukes)

Other relevant skills and interests _____

Languages	German (native), English (fluent), Swedish, Arabic (all beginner)
Programming	Python (advanced), R, NetLogo, Julia (all beginner)
Politics and student organisations	voluntary work in university institutions, including the organisation of political events and information campaigns with the ‘Fridays for Future’ student group (2019), the green university group (‘GHG Erlangen’, 2012–2017), or the physics student association (‘FSI’, 2012–2017) member of the student councils on faculty and university level (2013–2014)
Teaching at high-school level	conducting one-week intensive courses to prepare high-school students for their mathematics A-level exams (‘abiturma’, 2018–2024)

References

[Agostino Merico](#)

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affiliations: (1) Leibniz Centre for Tropical Marine Research (ZMT), Bremen, Germany; (2) Constructor University Bremen

[Paul E. Smaldino](#)

email: psmaldino@ucmerced.edu

affiliations: (1) Department of Cognitive and Information Sciences, University of California Merced, Merced, CA, USA; (2) Santa Fe Institute

[Marijn A. Keijzer](#)

email: marijn.keijzer@iast.fr

affiliation: Institute for Advanced Study in Toulouse, Toulouse School of Economics, Toulouse, France