Dr. Daniel Huppmann

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Research Profile

Working on integrated assessment scenarios of climate-change mitigation in the context of the Sustainable Development Goals (SDGs).
Dedicated to open-source scientific software. #freethemodels for open science!

Highlights

Senior Research Scholar at the International Institute for Applied Systems Analysis (IIASA) in the "Energy, Climate, & Environment" program since October 2015, Coordinator of the Research Theme Scenario Services & Scientific Software;

Co-Chair of the Second Austrian Assessment Report (AAR2) by the *Austrian Panel on Climate Change (APCC)*, to be published in June 2025;

Author & Chapter Scientist of the Special Report on Global Warming of 1.5 °C (SR15) by the *Intergovernmental Panel on Climate Change (IPCC)*, published in October 2018;

Lecturer at TU Wien for the course *Open Source Energy System Modelling*.

Academic Leadership

Work package leader in the Horizon 2020 projects *openENTRANCE* (openentrance.eu) and *European Climate & Energy Modelling Forum (ECEMF)* (ecemf.eu);

Board Member of the Climate Change Center Austria (CCCA);

Member of the *Fachkollegium* of the Austrian Section of the Scientists For Future;

Coordinator for the scenario ensemble compilation underpinning the quantitative assessment in the IPCC SR15, published as the *IAMC 1.5°C Scenario Explorer hosted by IIASA* (data.ece.iiasa.ac.at/iamc-1.5c-explorer). i

Previous Experience

Positions at the Whiting School of Engineering, The Johns Hopkins University, Baltimore, and the think-tank Resources for the Future, Washington, DC, spring 2015;

Research Associate at the German Institute for Economic Research (DIW Berlin) in the department "Energy, Transportation, Environment", October 2012–September 2015;

Energie-Control Austria (Vienna, March–April 2012), the Austrian energy regulator, Department for Competition and Regulation.

Publications (selected)

J. Rogelj, D. Huppmann, et al. A new scenario logic for the Paris Agreement long-term temperature goal. *Nature* 573(7774):357-363, 2019 doi: 10.1038/s41586-019-1541-4

D. Huppmann et al. The MESSAGEix Integrated Assessment Model & the ix modeling platform *Environmental Modelling & Software*, 112:143-156, 2019
doi: 10.1016/j.envsoft.2018.11.012

D. Huppmann et al. A new scenario resource for integrated 1.5 °C research. *Nature Climate Change*, 8:1027-1030, 2018 doi: 10.1038/s41558-018-0317-4

Honorary Activities

Member of IAESTE, an international traineeship exchange program for students of engineering and natural sciences to gain practical experience abroad;

Participant and member of the Austrian organizing committee of the Model European Parliament, a forum for young students interested in politics and the European Union.

Curriculum Vitae – Dr. Daniel Huppmann

Current	Senior Research Scholar at the International Institute for Applied Systems Analysis (IIASA) in the "Energy, Climate, & Environment" program since October 2015, Coordinator of the Research Theme Scenario Services & Scientific Software.
Previous Positions	Research Associate at the German Institute for Economic Research (DIW Berlin) in the department "Energy, Transportation, Environment", October 2012–September 2015; Postdoctoral Fellow at the Whiting School of Engineering, The Johns Hopkins University, Baltimore, January–June 2015; Visiting Fellow at Resources for the Future, Washington, DC, in spring 2015.
Education	Doctoral dissertation defended in June 2014 at Berlin University of Technology for the academic degree *Dr.rer.oec.* (equiv. PhD in Economics, grade: *Summa cum laude*), written within the DIW Berlin Graduate Center of Economic and Social Research; Graduated as *Diplom-Ingenieur* (Dipl.-Ing., equiv. MSc, 5-year degree) in Mathematics from Vienna University of Technology in November 2010; Austrian high school final exam (*Matura*) passed with distinction at the Theresianische Akademie Wien in June 2003.
Professional Experience	Energie-Control Austria (Vienna, March–April 2012), the Austrian energy regulator, Department for Competition and Regulation; tasked with implementing a short-term electricity spot price forecast model; ACTED (Tajikistan, July–August 2006), a development cooperation agency; in charge of two projects on microfinance and market surveying; Deloitte (Paris, July–October 2005), an international financial services and audit firm; working in the EMEA Learning and Development department in Paris; responsible for preparation and logistics of training seminars; Government Accountability Project (Washington, DC, June–July 2004), an NGO and law firm focused on freedom of speech and whistleblower protection.
Academic Leadership	Work package leader in the Horizon 2020 projects *openENTRANCE* (openentrance.eu) and *European Climate & Energy Modelling Forum* (ecemf.eu); Board Member of the Climate Change Center Austria (CCCA); Member of the *Fachkollegium* of the Austrian Section of the Scientists For Future; Advisory board member of the "Energy Gateway" of the *F1000Research* Open Research publishing platform (f1000research.com/energy); Topical editor for "Integrated assessment modeling" of the EGU journal *Geoscientific Model Development* (gmd.copernicus.org); Author of the Summary for Policymakers and Chapters 2, 4 & 5 of the Special Report on Global Warming of 1.5 °C (SR15) by the *Intergovernmental Panel on Climate Change (IPCC)*, published in October 2018; Project lead for the scenario ensemble compilation underpinning the quantitative assessment in the IPCC SR15, published as the *IAMC 1.5°C Scenario Explorer hosted by IIASA* (data.ece.iiasa.ac.at/iamc-1.5c-explorer/); Presentation at the UN *Climate Change Conference COP24*, Katowice, Poland, in December 2018 as part of the PCCB Capacity-Building Hub; Officer for Communication & Outreach of the INFORMS Section "Energy, Natural Resources, and the Environment" (ENRE) from 2016 until 2018; Conference Vice-Chair of the *10th Trans-Atlantic Infraday Conference*, held at the Federal Energy Regulatory Commission (FERC), Washington, D.C., November 2016.

Advisory Positions

Member of the Advisory Board of the reFUEL project funded by an *ERC Starting Grant* (Prof. Johannes Schmidt) at the University of Applied Life Sciences, Vienna (BOKU).

Honors & Awards

Winner of the *2016 Young Researcher Prize* (with Sauleh Siddiqui), awarded by the INFORMS Section "Energy, Natural Resources, and the Environment" (ENRE);

Conference Presentation Award for Young Researchers (*Vortragsprämie*) for a talk given at the INFORMS Annual Conference 2013 in Minneapolis, endowed by the German Bundesbank and awarded by the Verein für Socialpolitik, in December 2013;

Funding grant for a 10-week research assistant position for a BSc student from the United States within the *RISE program* (Research Internships in Science and Engineering) by the German Academic Exchange Service (DAAD), in June–August 2013;

Research grant and dissertation sponsorship awarded by Energie-Control Austria within the special series "10 years of e-control", in May 2011;

"Wirtschaft-Ethik-Religion" award (*business-ethics-religion*) by the Federation of Austrian Industry for a study on corporate social responsibility (CSR) for multinational enterprises written as part of the Matura examinations, awarded in October 2003.

Teaching Experience

Lecturer at TU Wien since 2019 for the course *Open Source Energy System Modelling* (link to TISS);

Lecturer/Adjunct Faculty at Webster Vienna Private University, for the course *International Affairs: Power & Technology*, in the fall semester 2017;

Lecturer at the Oppdal PhD Winter School on *Stochastic programming in energy*, organized by NTNU Trondheim, Department of Industrial Economics & Technology Management (IØT), in March 2016;

Lecturer at the InfraTrain Autumn School on *One- and two-level energy modelling*, organized by the Workgroup on Infrastructure Policy, TU Berlin, in October 2014; Teaching Assistant at the InfraTrain from 2009–2012, for various courses on stochastic dynamic optimization and equilibrium modelling;

Lecturer at the Oppdal PhD Winter School on *Managing uncertainty in energy infrastructure investments*, organized by NTNU Trondheim, IØT, in March 2011.

Student Supervision

Katharina Gruber, PhD at the University of Applied Life Sciences (BOKU), Vienna, co-supervisor & member of the advisory committee;

Sebastian Zwickl-Bernhard, PhD candidate at the Technische Universität Wien, supervision & mentoring in the *2021 Young Scientist Summer Program* (YSSP) at IIASA;

Maarten Brinkering, PhD candidate at the University College Cork, supervision & mentoring in the *2021 Young Scientist Summer Program* (YSSP) at IIASA;

Ryan Hanna, PhD candidate at the University of California, San Diego (UCSD), supervision & mentoring in the *2017 Young Scientist Summer Program* (YSSP) at IIASA;

Clara Orthofer, PhD candidate at the Technical University Munich (TUM), supervision & mentoring in the 2016 YSSP at IIASA; winner of IIASA's *2016 Peccei Award*;

Alex Koberle, PhD candidate at the Energy Planning Program, COPPE/ UFRJ, Brazil, co-supervision & mentoring in the 2016 YSSP at IIASA;

Lissy Langer, co-supervision of MSc thesis submitted at TU Berlin in September 2015, written at Johns Hopkins University with financial support by the PROMOS program;

Simon Donges, co-supervision of MSc thesis submitted at TU Berlin in June 2015;

Benjamin Boldt, co-supervision of MSc thesis submitted at TU Berlin in July 2014;

Lukas Wuttke, co-supervision of BSc thesis submitted at TU Berlin in October 2013;

Shayna Rose, at the time undergrad student at Johns Hopkins University, supervision during an internship at DIW Berlin funded by the DAAD RISE program, summer 2013.

Reviewer	Nature Energy, Nature Climate Change, Energy Economics, Energy Policy, The Energy Journal, European Journal of Operational Research (EJOR), Climatic Change, Networks & Spatial Economics (NETS), Mathematical Methods of Operations Research (MMOR), IEEE Transactions on Power Systems (IEEE TPS), Technological Forecasting & Social Change, Optimization & Engineering
Honorary Activities	Member of IAESTE, an international traineeship exchange program for students of engineering and natural sciences to gain practical experience abroad; – *National Secretary* of IAESTE Austria in 2007, head of the exchange program and representative of the National Committee on the international level; – *Board Member* of IAESTE A.s.b.l. (IAESTE International) in 2010; Participation in the Model European Parliament, a forum for young students interested in politics and the European Union; President of the General Assembly and head of the organising committee in several national and international sessions; Facilitator and workgroup leader at the *Waves of Democracy* in Brandbjerg, Denmark, in September 2006, an EU-funded project bringing together students to discuss participatory democracy & citizens' rights.
Languages	German (native); English (CAE, "A"-grade); French (Berlitz, "1"-grade).
Computer Literacy	Office (MS Office); Math & programming (GAMS, Python, R, LaTeX); Graphics (Adobe CS); Collaborative tools (Git, SVN); Web & Database (Java, ORACLE, SQL, HTML 5).