

# MARIE-LOUISE ARLT

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## POSITIONS

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<b>Assistant Professor (TT) at University of Bayreuth, Bayreuth (Germany)</b> Information Systems Research, in particular on Connected Energy Storage Member of the Bavarian Center for Battery Technology (BayBatt)	<i>Since 06/2024</i>
<b>Research Associate at ifo Institute, Munich (Germany)</b>	<i>Since 06/2024</i>
<b>Junior Research Group Leader at ifo Institute, Munich (Germany)</b> Junior Research Group of Big Data (in particular in energy & climate)	<i>04/2023 - 05/2024</i>
<b>Postdoctoral Fellow at Ludwig Maximilian University, Munich (Germany)</b> Chair of Comparative Economics, Department of Economics	<i>11/2020 - 03/2023</i>
<b>Visiting Postdoctoral Fellow at ETH, Zurich</b> Climate, Finance, and Policy (CFP) group, Department of Humanities, Social and Political Sciences	<i>03/2022 - 05/2022</i>
<b>Visiting Student Researcher and Affiliate at Stanford University (US)</b>	<i>04/2018 - 10/2020</i>
<b>Affiliate and Visiting Scientist at SLAC, Menlo Park (US)</b>	<i>04/2018 - 10/2020</i>
<b>Visiting Scholar at Lawrence Berkeley National Lab (US)</b>	<i>01/2017 - 09/2018</i>
<b>Analyst at Ecofys GmbH, Berlin (Germany)</b> Group "Energy Systems and Markets": consultancy services for clients such as the German Ministry of Economics and Energy, EU Commission, Agora Energiewende, and grid operators	<i>10/2015 - 12/2016</i>

## EDUCATION

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<b>Ph.D. in Economics</b> Albert Ludwig University of Freiburg, Germany, and Stanford University (visiting from 02/2018 to 09/2020) <i>Advisors:</i> Professor Dr. Dirk Neumann (Head of Ph.D. committee), University of Freiburg, and Professor Ram Rajagopal, Ph.D., Stanford University	<i>11/2016 - 10/2020</i>
<b>Master of Science, Economics and Business Administration</b> FernUniversitaet Hagen, Germany	<i>10/2011 - 07/2015</i>
<b>Bachelor of Science, Engineering Science</b> Technical University of Munich, Germany	<i>10/2011 - 10/2014</i>
<b>Bachelor of Science, International Economics (European Studies)</b> Eberhard Karl University Tuebingen, Germany Studies abroad at Higher School of Economics (Moscow), Russia (09/2009 - 04/2010)	<i>10/2007 - 03/2011</i>

## RESEARCH INTERESTS

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Energy markets; electric load flexibility; economic policies for decarbonization; optimization including dynamic programming, reinforcement learning, and neural nets; empirical economic research.

## PUBLICATIONS AND CONFERENCE PROCEEDINGS

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- Online Demand Response Programs for Constrained Local Electricity Systems**  
ML Arlt, G Gust, and D Neumann, *Production and Operations Management*, 35(3), 1020-1037, 2025.
- Why Renewables Should be at the Center of Rebuilding the Ukrainian Electricity System**  
I Doronina, ML Arlt, M Galleguillos Torres, V Doronin, A Grêt-Regamey, T Schmidt, F Egli, *Joule*, vol. 8, issue 10, pp. 2715-2720, 2024.

## **Impact of Real-Time Pricing and Residential Load Automation on Distribution Systems**

ML Arlt, D Chassin, C Rivetta, and J Sweeney, *Energy Policy*, vol. 184, 113906, 2024.

## **Do Retailers Have Efficient Incentives to Invest in Public Charging Stations for Electric Vehicles?**

ML Arlt and N Astier, *Energy Economics*, vol.124, 106777, 2023.

## **Understanding Residential Solar Adoption Trajectories with Computer Vision and Technology Diffusion Models**

Zh Wang, ML Arlt, Ch Zanocco, R Rajagopal, and A Majumdar, *Joule*, vol. 6 (11), pp. 2611-2625, 2022.

## **The 3D-PV-Locator for the Large-Scale Detection of Rooftop-Mounted Photovoltaic Systems in 3D**

K Mayer, B Rausch, ML Arlt, Zh Wang, D Neumann, and R Rajagopal, *Applied Energy*, vol. 310, 118469, 2022.

## **An Enriched Automated PV Registry: Combining Image Recognition and 3D Building Data**

K Mayer, B Rausch, ML Arlt, Zh Wang, P Staudt, C Weinhardt, D Neumann, and R Rajagopal, *NeurIPS*, Workshop Tackling Climate Change with Machine Learning, 2020.

## **DeepSolar for Germany: A deep learning framework for PV system mapping from aerial imagery**

K Mayer, Zh Wang, ML Arlt, D Neumann, and R Rajagopal, *2020 IEEE Smart Energy Systems and Technologies (2020 IEEE SEST)*, Istanbul, Turkey, September 07 – 09, 2020.

## **Curtailment Contract Design for HVAC Systems and Benefits for Management of Uncertain Generation**

ML Arlt, D Neumann, and R Rajagopal, *IEEE PES General Meeting*, Atlanta, USA, August 4-8, 2019.

## **Curtailment Contract Design for HVAC Systems**

ML Arlt, D Neumann, and R Rajagopal, *2019 American Control Conference (ACC)*, Philadelphia, USA, July 10-12, 2019.

## **Hydrogen Storage Applications in Industrial Microgrids**

ML Arlt, G Cardoso, and D Weng, *2017 IEEE Green Energy and Smart Systems Conference (IGESSC 2017)*, Long Beach, USA, 2017.

## **PRESENTATIONS AT CONFERENCES**

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ACC, AWEEE, CESifo Energy & Climate, ECIS, IEEE PES GM, MCEE, MSOM, V&S, WITS

## **REFEREE ACTIVITIES**

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**Journals:** Nature Sustainability, Environmental and Resource Economics, Applied Energy, Journal of Climate Finance, Electronic Commerce Research and Applications, BISE

**Conferences:** ACC, ECIS, IEEE PES GM, YEEES, DACH Energy Informatics, eACM, eEnergy

**Technical Program Committee:** CESifo Junior Workshop in Big Data, DACH Energy Informatics, eACM, eEnergy

## **AWARDS & THIRD-PARTY FUNDING**

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‘Bridge Project’ on ‘Determinants of Individual Mobility Choices’ of ifo Institute (98,155 EUR)	04/2024 - 03/2025
LMU Postdoctoral Fellowship under the Marie Skłodowska-Curie Actions program of the European Union (own position + 22,400 EUR)	11/2020 - 03/2023
“Adolf Lampe” award of the Department of Economics at Albert Ludwig University, Freiburg	10/2021
LMU Economics Junior Development Research Funds (7,598 EUR)	07/2021
Visiting Student Research Fellowship by Stanford University	04/2018 - 03/2020
Ph.D. scholarship of German Academic Scholarship Foundation	02/2018 - 07/2020
Scholarship of the German Academic Exchange Service (DAAD)	07/2017 - 12/2017
Scholarship of German Academic Scholarship Foundation	09/2008 - 03/2015
Scholarship of the “Alfried Krupp von Bohlen und Halbach“-Foundation	09/2009 - 10/2010

## TEACHING

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Lecture “Economics of Power Markets” (University of Bayreuth; Ludwig Maximilian University of Munich)  
Seminar “Green Innovation” (Ludwig Maximilian University of Munich, Bachelor in Economics)  
Supervision of several seminar papers and Bachelor’s and Master’s theses (Ludwig Maximilian University of Munich, Stanford University, Albert Ludwig University of Freiburg)

## MEMBERSHIPS

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acatech ESYS, Verein für Socialpolitik, CESifo network, dialog e.V. - Wirtschaft. Nachwuchs. Wissenschaft, Alumni der Studienstiftung e.V., Verein der Altafraner e.V.

## OTHER SKILLS AND ACTIVITIES

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- Technical Skills: Python, MySQL, Webcrawling, GridLAB-D, Keras, GAMS, Latex, MS Office
- German (native), English (proficient), Russian (fluent), French (fluent), Latin (Latinum)
- Strong interest in international relations: served as Chairperson of dialog e.V. (05/2013 - 05/2016; 11/2022-) and organized excursions to and conferences to Eastern Europe