



# Prof. Melanie Krause, Ph.D.

*Curriculum Vitae, May 2024*

## Personal Information

Contact Leipzig University, Grimmaische Straße 12, 04109 Leipzig, Germany  
Phone: +49 341 97 33796  
Email: melanie.krause@uni-leipzig.de  
Website: <http://www.melanie-krause.de>  
ORCID: 0000-0001-9299-2366  
Nationality: German  
Year of Birth: 1984  
Family: Partner, 1 Daughter (\*2012)

## Current Position

02/2023 – **University Professor of Sustainable Real Estate and Urban Development,**  
today *Leipzig University*

## Previous Positions

04/2022 – **Visiting Professor ('Vertretungsprofessorin') of Sustainable Real Estate and**  
01/2023 **Urban Development,** *Leipzig University*  
09/2015 – **Junior Professor of Macroeconomics,** *Hamburg University*  
01/2023 Positive Midterm Evaluation ('Zwischenevaluation') in 08/2018  
08/2009– **Research Assistant,** *Johann-Wolfgang-Goethe Universität Frankfurt*  
07/2015 At the Chair of International Macroeconomics & Macroeconometrics (Prof. Michael Binder, Ph.D.)

## Education

09/2008– **Ph.D. in Economics (Summa Cum Laude),** *Johann-Wolfgang-Goethe Universität*  
12/2014 *Frankfurt*  
Structured Ph.D. Program with Fields: Econometrics, Macroeconomics  
Ph.D. Thesis: *Econometric Advances in the Analysis of Income Inequality Within and Between Countries*

- 09/2005– **Master of Science in Management (Distinction) and Diplôme de Grande**  
 09/2008 **Ecole (Félicitations du Jury)**, *ESCP-EAP European School of Management, London-Madrid-Paris*  
 Multinational program with double degree: 3 countries, 3 languages  
 Master's Thesis: *How Higher Moments Affect Portfolio Choice under Prospect Theory*
- 10/2003– **Vordiplom (Undergraduate Studies) in Economics with mark 1,4 ('excellent')**,  
 02/2005 *Rheinische-Friedrich-Wilhelms-Universität Bonn*
- 08/1994– **Abitur (equivalent to A-Level) with mark 1,0 ('excellent')**, *Städtisches Gym-*  
 06/2003 *nasium Rheinbach*

## Research

### Research Fields

- Urban and regional economics
- Economic development
- Income inequality

### Research Methods

- Data-driven empirical analysis
- Machine learning
  - Geo-spatial data

### Research Grants

- 09/2024– **German Research Foundation (DFG) Research Training Group ECO-N: The**  
 08/2029 **Economics of Connected Natural Commons - Atmosphere and Biodiversity**  
 Principal investigator, jointly with Bartosz Bartkowski, Thomas Bruckner, Nico Eisenhauer, Johannes Quaas, Martin Quaas, Nadja Rüger, Sebastian Sippel, Thomas Steger, Bernd Süßmuth, Ina Tegen, Daniela Thrän, Gregor Weiß, Christian Wirth.  
 Individual share: approx. 500,000 Euro, total funding volume: approx. 7,000,000 Euro
- 05/2023– **SMWK (Saxon Ministry for Research) Grant to Support High Profile Struc-**  
 12/2024 **tural Units Breathing Nature**  
 Principal investigator, jointly with Johannes Quaas et al.  
 Individual share: 156,038 Euro, total funding volume: 1,789,213 Euro
- 09/2017– **German Research Foundation (DFG) Grant for Shining (New) Light on**  
 08/2020 **Regional Inequality, Convergence and Development**  
 Principal investigator, jointly with Richard Bluhm and Christian Lessmann. Individual share: 185,200 Euro, total funding volume: 569,000 Euro

### Publications in Peer-Reviewed Journals

- 2023 The Emperor's Geography - City Locations, Nature and Institutional Optimization (with Christian Düben), *Economic Journal* 133, pp.1067-1105
- 2022 Top Lights - Bright Cities and Their Contribution to Economic Development (with Richard Bluhm), *Journal of Development Economics* 157, 2022, article 102880
- 2021 Air Pollution in an Urban World: A Global View on Density, Cities, and Emissions (with David Castells-Quintana and Elisa Dienesch), *Ecological Economics* 189, 2021, article 107153
- 2021 The Urbanising Force of Global Warming: The Role of Climate Change in the Spatial Distribution of Population (with David Castells-Quintana und Tom McDermott), *Journal of Economic Geography* 21(4), 2021, pp.531-556
- 2021 Population, Light, and the Size Distribution of Cities (with Christian Düben), *Journal of Regional Science* 61(1), 2021, pp.189-211
- 2020 Rising Mean Incomes for Whom? (with Liang Frank Shao), *PlosOne* 15(12), 2020, e0242803
- 2019 Convergence vs. The Middle Income Trap: The Case of Global Soccer (with Stefan Szymanski), *Applied Economics* 51(27), 2019, pp.2980-2999
- 2017 The Millennium Peak in Club Convergence - A New Look at Distributional Changes in the Wealth of Nations, *Journal of Applied Econometrics* 32(3), 2017, pp.621-642
- 2014 Parametric Lorenz Curves and the Modality of the Income Density Function, *Review of Income and Wealth* 60(4), 2014, pp.905-929

### Working Papers

Regional Dependencies and Spillovers: Insights from Commuter Flows (with Sebastian Kripfganz), *University of Exeter Economics Department Discussion Paper 22/01*,  
Revise & Resubmit at *Journal of Regional Science*

Unlocking Neighborhood Density (with André Seidel), Revise & Resubmit at *Journal of Urban Economics*

### Work in Progress

Headwind in Sight? - Quantifying Residents' Reaction to Visible Wind Turbines (with Vincent Stegmaier)

Unraveling a Vicious Cycle: The Interplay Between Extreme Weather Events, Urban Expansion, and Deforestation (with Leonie Ratzke and Sebastian Sippel)

Zeroing in on the Zero Waste City (with Jane Torbert)

Bright and Green? A Global View of the Evolution and Distribution of Population, Economic Activity and Urban Greenness for over 1000 Cities Worldwide (with Konstantin Reisner and David Castells-Quintana)

## Smaller Notes and Contributions

A Belowground Perspective on the Nexus between Biodiversity Change, Climate Change, and Human Well-Being (with Nico Eisenhauer, Karin Frank, Alexandra Weigelt, Rémy Beugnon, Katja Liebal, Miguel Mahecha, Martin Quaas, Johannes Quaas & 38 further co-authors, *Journal of Sustainable Agriculture and Environment* Forthcoming

Corrigendum to "Elliptical Lorenz Curves" [J. Econom. 40 (1989) 327 - 338], *Journal of Econometrics* 174, 2013, p.44

---

## Presentations

### Conference Presentations

- 09/2023 **Jahrestagung des Vereins für Socialpolitik**, Regensburg, Germany
- 09/2019 **1st FDZ Ruhr Regional Disparity Workshop**, Essen, Germany
- 08/2019 **59th European Regional Science Congress**, Lyon, France
- 06/2019 **Urban Economics Conference**, Amsterdam, Netherlands
- 11/2018 **12th CESifo Workshop on Political Economy**, Dresden, Germany
- 09/2018 **Jahrestagung des Vereins für Socialpolitik**, Freiburg, Germany
- 08/2018 **58th European Regional Science Congress**, Cork, Ireland
- 05/2018 **Workshop on GeoData and Economics**, Braunschweig, Germany
- 05/2018 **Urban Economics Conference**, Düsseldorf, Germany
- 03/2018 **Royal Economic Society Conference**, University of Sussex, Brighton, UK
- 07/2017 **7th ECINEQ Meeting**, New York City, US
- 09/2016 **Jahrestagung des Vereins für Socialpolitik**, Augsburg, Germany
- 08/2016 **IARIW Conference**, Dresden, Germany
- 08/2016 **EEA-ESEM Congress**, Geneva, Switzerland
- 09/2015 **Jahrestagung des Vereins für Socialpolitik**, Münster, Germany
- 05/2015 **Spring Meeting of Young Economists**, Ghent, Belgium
- 06/2014 **1st Conference of the International Association of Applied Econometrics**, London, UK
- 04/2014 **Spring Meeting of Young Economists**, Vienna, Austria
- 12/2013 **24th (EC)<sup>2</sup> Conference - Econometric Analysis of Mixed Frequency Data**, Nicosia, Cyprus
- 09/2012 **Jahrestagung des Vereins für Socialpolitik**, Göttingen, Germany
- 03/2012 **International Atlantic Economic Society Conference**, Istanbul, Turkey
- 02/2012 **RGS Doctoral Conference in Economics**, Duisburg, Germany

### Seminar Presentations

- 04/2024 **University of Hohenheim**, Germany, Research Seminar in Economics
- 04/2023 **Technical University Dresden**, Germany, Economics Research Colloquium
- 01/2023 **Free University Berlin**, Germany, Economics Research Seminar

- 11/2022 **Universidad Autónoma de Barcelona**, Spain, Economics Research Seminar
- 04/2021 **Ifo Institute Munich**, Germany, Digital Transformation and Innovation Seminar (online format)
- 09/2020 **German Institute for Global and Area Studies (GIGA) Hamburg**, Germany, Seminar in Socio-Economics (online format)
- 02/2020 **Rijksuniversiteit Groningen**, Netherlands, Research Seminar
- 11/2019 **Ruhr Universität Bochum**, Germany, Regional Economics Seminar
- 02/2019 **Helmut-Schmidt-University Hamburg**, Germany, Empirical Research Seminar
- 06/2018 **University of Cologne**, Germany, Econometrics Seminar
- 11/2017 **University of Hannover**, Germany, Brown Bag Seminar
- 08/2017 **Monash University Melbourne**, Australia, Development Economics Seminar
- 08/2017 **University of Queensland**, Brisbane, Australia, Economics Seminar
- 08/2017 **Griffith University Gold Coast**, Australia, Economics Seminar
- 06/2017 **WU Vienna**, Austria, Macroeconomics Seminar
- 03/2017 **University of Umeå**, Sweden, Economics Seminar
- 05/2016 **University of Kiel**, Germany, Econometrics Seminar
- 10/2015 **University of Hamburg**, Germany, Labour Economics Seminar
- 07/2014 **Goethe University Frankfurt**, Germany, Money and Macro Brown Bag Seminar
- 11/2013 **Goethe University Frankfurt**, Germany, Money and Macro Brown Bag Seminar
- 10/2011 **Goethe University Frankfurt**, Germany, Money and Macro Brown Bag Seminar

## Summer/ Winter Schools

- 01/2014 **9th Winter School on Inequality and Social Welfare Theory**, Alba di Canazei (Dolomites), organized by University of Verona, Italy
- 08/2013 **New Developments in Panel Methods Summer School** with lectures by Jeffrey M. Wooldridge, Mainz, Germany
- 06/2011 **The Jerusalem Summer School in Economic Growth**, Jerusalem, Israel

## Conference Organization

- 05/2019 **Workshop on Geo Data in Economics, Hamburg, Germany**  
Local organizer of the two-day conference with keynote speakers David Weil (Brown University) and Maxim Pinkovskiy (Federal Reserve Bank New York)

## Seminar Organization

### Leipzig University

- 04/2023 - **Economics Research Seminar**  
today Co-Hosting of the Seminar

### Hamburg University

- 10/2015- **Research Seminar in Quantitative Economics**  
03/2022 Co-Hosting of the Seminar

04/2016- **Doctoral Seminar in Economics**  
03/2022 Hosting of the Seminar

## Teaching

### Leipzig University

#### **Big Data and Smart Cities (Master's level)**

Summer Semester 2024, 2023, 2022

#### **Introduction to Urban Economics (Undergraduate level)**

Summer Semester 2024, 2023, 2022

#### **Socio-Economic Issues of Urban Development (Master's level)**

Winter Semester 2023/24, 2022/23

#### **Economic Growth, Income Distribution, Sustainability (Undergraduate level)**

Winter Semester 2023/24, 2022/23

### Hamburg University

#### **Topics in Urban Economics (Master's level, seminar)**

Winter Semester 2021/22 (online format), Summer Semester 2020 (online format)

#### **Machine Learning Methods in Economics (Master's level)**

Winter Semester 2020/21 (online format)

#### **Applied Time Series and Panel Data Econometrics (Master's level)**

Winter Semester 2018/19, 2017/18, 2016/17

#### **Economic Growth and Income Distribution (Undergraduate level)**

Summer Semester 2019, 2018, Winter Semester 2016/17, 2015/16

#### **Long-Run Economic Development (Undergraduate level, seminar)**

Summer Semester 2020 (online format), 2016

#### **Applied Econometrics II (Undergraduate level)**

Summer Semester 2016

### Johann-Wolfgang-Goethe-Universität Frankfurt

#### **Discussion session instructor of Macroeconomics I (Undergraduate level)**

Winter Semester 2014/15, 2013/14, 2012/13, Summer Semester 2012

#### **Teaching assistant of tutorial groups in Macroeconomics I (Undergraduate level)**

Winter Semester 2011/12, Summer Semester 2011, 2009

#### **Teaching assistant of the macroeconometrics course International Money and Finance (Master's level)**

Winter Semester 2010/11

#### **Pre-Semester course instructor of Real Analysis (Ph.D. and Research Master level)**

Winter Semester 2010/11

## Thesis Supervision

### Ph.D. Thesis Supervision (Leipzig University)

Ongoing Vincent Stegmaier, Jane Torbert

### Ph.D. Thesis Supervision (Hamburg University)

Ongoing Christian Düben

### Master's Thesis Supervision (Leipzig University)

2024 Janne Bergmann, Anna Hanitzsch

2023 Nikol Kövesi, Kerstin Hoffmann

### Master's Thesis Supervision (Hamburg University)

2022 Svetlana Prokhorchik

2021 Narek Mirzoyan, Bohdan Kostiv, Alejandro Parra Cárdenas, Avery Wehner, Elena Storti, Oxana Iakovleva

2020 Oyinkansola Osunkoya, Anahit Kirakosyan

2019 Bora Lee, Mitchel Graves, Zhexin Zhang, Selcuk Kirbas

2018 Eva Cordts, Yagmur Kurtoglu

2017 Mengchao Zhang, Adeoye Oyekan, Yan Stegert, Claudia Hernández

2016 Logan Carlson

### Bachelor Thesis Supervision (Leipzig University)

2024 Friederike Werner

2023 Ngoc Anh Ha, Daniel Schöck

### Bachelor Thesis Supervision (Hamburg University)

2022 Gunay Abdinova, Ashwin Fernandes, Alina Westphal

2021 Fawad Ahmad Bajwa, Salome Last

2020 Felix Kintrup, Elisa Stumpf, Benedikt Kretzler, Felicitas Bichowski, Helena Blumen-schein, Louisa Kirsten, Kyari Yahaya, Robin Denker

2019 David Andjelkovic, Lennart Dühren, Phuong Duy Ha, Andrés Grabau, Jude-Ismael Ladouceur, Hoshang Hussainy, Jiayi Chen

2018 Clemens Lehner, Nina Morgenstern, Steven Schlicker, Cheng Huo, Malte Christop- phersen, Nadine Scherer

2017 Steven Ficht, Alexander Weis, Raphael Layer, Nadjim Sarwary, Arber Mehmeti, Christina Preuße, Niklas Pätzold, Frederik Moorkamp

2016 Tim Wunderlich, Eugen Bill, Tina-Marie Jung, Moritz Lamparter, Olesja Ischanow

## Refereeing

### Funding Institutions and Research Funds

*Deutsche Forschungsgemeinschaft, Sveriges Riksbankens Jubileumsfond, Mercator Research Center Ruhr*

### Academic Journals

*Economic Journal, American Economic Review: Insights, Review of Income and Wealth, Journal of Economic Inequality, World Development (2x), Oxford Bulletin of Economics and Statistics (2x), Canadian Journal of Economics, Journal of Comparative Economics, Remote Sensing, Journal of Urban Affairs, Review of International Organizations, Applied Economics, Finanzarchiv, Statistica Neerlandica, Economies, Sustainability*

## Awards

11/2018 **Nachhaltigkeits-Patin for the Sustainable Development Goal “Decreasing Inequalities” by Hamburg University**

Official recognition by the university president and 5000 euro funding for sustainability-related projects

08/2014 **Invitation to Participate in the 5th Lindau Nobel Laureate Meeting as a Young Economist**

12/2008 **Premier Prix du Mémoire de Recherche**

Prize for the best master's thesis of the year (2000 Euro), awarded by Fondation ESCP-EAP

## Machine Learning Course Certificates

02/2021 - **Natural Language Processing Specialization, DeepLearning.AI via Coursera**

06/2021 Course 4: Natural Language Processing with Attention Models

Course 3: Natural Language Processing with Sequence Models

Course 2: Natural Language Processing with Probabilistic Models

Course 1: Natural Language Processing with Classification and Vector Spaces

## IT Skills

Programming	Python, incl. SciPy, NumPy, Pandas, scikit-learn, TensorFlow	<i>Very good</i>
	STATA, inkl. Mata in STATA	<i>Very good</i>
	Matlab	<i>Advanced</i>
	R	<i>Basic</i>
Geo-Data	QGIS	<i>Good</i>
Tables	Excel	<i>Very good</i>
Editor	L <sup>A</sup> T <sub>E</sub> X	<i>Very good</i>



## Language Skills

German	<i>Mother Tongue</i>
English	<i>Fluent (written and spoken)</i>
Spanish	<i>Fluent (written and spoken)</i>
French	<i>Fluent (written and spoken)</i>
Norwegian	<i>Fluent (written and spoken)</i>