

# Prof. Melanie Krause, Ph.D.

Curriculum Vitae, May 2022

## 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

04/2022 - Visiting Professor ('Vertretungsprofessorin') of Sustainable Real Estate and

today Urban Development, Leipzig University.

09/2015 - **Junior Professor of Macroeconomics**, *Hamburg University*.

today Positive Midterm Evaluation ('Zwischenevaluation') in 08/2018

### Education

08/2008- Ph.D. in Economics (Summa Cum Laude), Johann-Wolfgang-Goethe

12/2014 Universität 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 ('excel-

02/2005 **lent')**, Rheinische-Friedrich-Wilhelms-Universität Bonn.

08/1994- **Abitur (equivalent to A-Level) with mark 1,0 ('excellent')**, *Städtisches Gym-* 06/2003 *nasium Rheinbach*.

# Professional Experience

- 08/2009- Research Assistant, Johann-Wolfgang-Goethe Universität Frankfurt.
- 07/2015 Working on research projects and teaching tutorial groups at the Chair of International Macroeconomics & Macroeconometrics (Prof. Michael Binder, Ph.D.)
- 05/2008- Student Assistant, ESCP-EAP, Paris.
- 07/2008 Working on a research project at the Finance Chair (Prof. Dr. Emmanuel Jurczenko)
- 04/2007- Intern, Commerzbank España, Madrid.
- 07/2007 Working in Risk Management
- 05/2006- Intern, JPMorgan, London.
- 08/2006 Working in Investment Banking, Equity Derivatives
- 04/2005- Intern, PricewaterhouseCoopers, Düsseldorf.
- 06/2005 Working in Advisory Transactions

## Research

#### Research Fields

- Urban and regional economics
- Economic development
- o Income inequality

#### Research Methods

Data-driven empirical analysis

- Machine learning
- o Geo-spatial data

#### Research Grants

# 09/2017- German Research Foundation (DFG) Grant for Shining (New) Light on Re-08/2020 gional Inequality, Convergence and Development.

Principal investigator, jointly with Richard Bluhm and Christian Lessmann. Total project funding for 3 years (2017-2020): 569,000 Euro (individual share: 185,200 Euro)

## Publications in Peer-Reviewed Journals

- 2022 The Emperor's Geography City Locations, Nature and Institutional Optimization (with Christian Düben), Conditionally Accepted at *Economic Journal*
- 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

The Geographical Determinants of Within-City Heterogeneity in Urban Density (with André Seidel), CESifo Working Paper 8660

Regional Convergence at the County Level: The Role of Commuters (with Sebastian Kripfganz), *University of Exeter Economics Department Discussion Paper 22/01* 

#### **Smaller Notes**

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

### Presentations

#### Conference Presentations

1st FDZ Ruhr Regional Disparity Workshop, Essen, Germany 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 58th European Regional Science Congress, Cork, Ireland Workshop on GeoData and Economics, Braunschweig, Germany 05/2018 Workshop on GeoData and Economics, Braunschweig, Germany 05/2018 Urban Economics Conference, Düsseldorf, Germany Royal Economic Society Conference, University of Sussex, Brighton, UK 7/2017 7th ECINEQ Meeting, New York City, US Jahrestagung des Vereins für Socialpolitik, Augsburg, Germany 1ARIW Conference, Dresden, Germany 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
04/2021	<b>Ifo Institute Munich</b> , Germany, Digital Transformation and Innovation Seminar (online format)
09/2020	<b>German Institute for Global and Area Studies (GIGA) Hamburg</b> , 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
,	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	
10/2011	Goethe University Frankfurt, Germany, Money and Macro Brown Bag Seminar
	Summer/ Winter Schools
01/2014	,
,	<b>9th Winter School on Inequality and Social Welfare Theory</b> , Alba di Canazei (Dolomites), organized by University of Verona, Italy
08/2013	<b>New Developments in Panel Methods Summer School</b> 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)

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# Seminar Organization

## Hamburg University

#### Research Seminar in Quantitative Economics.

Co-Organization in the Winter Semester 2021/22 (hybrid format), Summer Semester 2021 (online format), Winter Semester 2020/21 (online format), Summer Semester 2020 (online format), Winter Semester 2019/20, Summer Semester 2019, Winter Semester 2018/19, Summer Semester 2018, Winter Semester 2017/18, Summer Semester 2017, Winter Semester 2016/17, Summer Semester 2016, Winter Semester 2015/16

#### **Doctoral Seminar in Economics.**

Organization in the Winter Semester 2021/22 (hybrid format), Summer Semester 2021 (online format), Winter Semester 2020/21 (online format), Summer Semester 2020 (online format), Winter Semester 2019/20, Summer Semester 2019, Winter Semester 2018/19, Summer Semester 2018, Winter Semester 2017/18, Summer Semester 2017. Co-Organization in the Winter Semester 2016/17, Summer Semester 2016

# **Teaching**

## Leipzig University

Lecturer of Big Data and Smart Cities (Master's level).

Summer Semester 2022

Lecturer of Introduction to Urban Economics (Undergraduate level).

Summer Semester 2022

### Hamburg University

Lecturer of Topics in Urban Economics (Master's level, seminar).

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

Lecturer of Machine Learning Methods in Economics (Master's level).

Winter Semester 2020/21 (online format)

Lecturer of Applied Time Series and Panel Data Econometrics (Master's level).

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

Lecturer of Economic Growth and Income Distribution (Undergraduate level).

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

Lecturer of Long-Run Economic Development (Undergraduate level, seminar).

Summer Semester 2020 (online format), 2016

Lecturer of 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

Rheinische-Friedrich-Wilhelms-Universität Bonn

Teaching Assistant of Production Theory (Undergraduate level).

Winter Semester 2004/05

# Thesis Supervision

Ph.D. Thesis Supervision (Leipzig University)

Ongoing Vincent Stegmaier

Ph.D. Thesis Supervision (Hamburg University)

Ongoing Christian Düben

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 (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 Blumenschein, Louisa Kirsten, Kyari Yahaya, Robin Denker
- 2019 David Andjelkovic, Lennart Dühren, Phuong Duy Ha, Andrés Grabau, Jude-Ismael Ladouceur, Hoshang Hussainy, Jiaxi Chen
- 2018 Clemens Lehner, Nina Morgenstern, Steven Schlicker, Cheng Huo, Malte Christophersen, 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

Research Funds and Funding Institutions

Sveriges Riksbankens Jubileumsfond, Mercator Research Center Ruhr

## Academic Journals

Economic Journal, American Economic Review: Insights, Review of Income and Wealth, Journal of Economic Inequality, Remote Sensing, Journal of Urban Affairs, World Development, Oxford Bulletin of Economics and Statistics, Canadian Journal of Economics, 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 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. Al 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, Trax Very good

STATA, inkl. Mata in STATA

Very good

Matlab

Advanced

R Basic

Geo-Data QGIS

Tables Excel

Good

Very good

Editor LATEX Very good

Data Bases SQL

Basic

# Language Skills

German Mother Tongue
English Fluent (written and spoken)

Spanish

Fluent (written and spoken)

French

Fluent (written and spoken)

Norwegian Fluent (written and spoken)