

Curriculum Vitae

Astrid Krenz

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Academic Positions

Professor of Economics (W2), Ruhr University Bochum (Germany) (10/2022 -)

Research Fellow (Postdoctoral Researcher), University of Sussex (United Kingdom), Research Centre “Digital Futures at Work” (Digit) (05/2020 – 09/2022)

Alfried-Krupp Junior Research Fellow, University of Greifswald (Germany) (10/2020 - 03/2021)

Postdoctoral Researcher, University of Göttingen (Germany) (04/2020 – 09/2021)

Akademische Rätin (Postdoctoral Researcher), University of Göttingen (Germany), Chair of International and Monetary Economics (04/2012 - 03/2020; on sabbatical leave 10/2017 - 09/2019)

Marie Curie Junior Research Fellow, Durham University (United Kingdom) (10/2017 - 09/2019)

Research Associate, University of Göttingen (Germany), Chair of International and Monetary Economics (12/2007 - 03/2012)

Professional Affiliations

Affiliate, Data Science Institute (DSI), London School of Economics and Political Science (10/2024 -)

Miguel Dols Research Fellow, London School of Economics and Political Science, Canada Blanch Centre (04/2024 – 09/2025)

Ruhr Graduate School of Economics Faculty Member (RGS Econ) (02/2023 -)

Member of the Center for Entrepreneurship, Innovation, and Transformation (CEIT), Ruhr University Bochum (10/2022 -)

Member of the Competence Field “Empirical Economic Research” UA Ruhr (10/2022 -)

Associate Fellow, University of Sussex, Research Centre “Digital Futures at Work” (10/2022 -)

Education

Dr. rer. pol. (PhD in Economics) (summa cum laude), University of Göttingen (Germany), Thesis Title: Industrial and Services Sectors’ Agglomeration in the European Union, 2012

Diploma in Economics (with distinction), University of Bielefeld (Germany), Thesis Title: Econometric Analyses on the returns to education in the German economy, 2007

Further Qualifications

Visiting Researcher

- Monash University (Australia), 09/2014-12/2014, invited by Laura Puzzello
- Université de Fribourg (Switzerland), 10/2013-11/2013, invited by Volker Grossmann
- College of William and Mary (USA), 03/2013-04/2013, invited by Admasu Shiferaw

Summer Schools und Classes

- Master Class on EU Cohesion Policy, European Week of Regions and Cities, Brussels, October 2017
- Summer School on Economic Growth, Warwick University, July 2014
- Summer School on Economic Growth, University Naples Parthenope, June 2014

Study abroad programme

- Purdue University (USA), 08/2005-05/2006, funded by the German Academic Exchange Service (DAAD), participation in PhD courses in Economics and Statistics

Interdisciplinary study programme “Europa Intensiv”

- University of Bielefeld, 10/2004-07/2005, courses in Linguistics, Sociology, Political Science, Law

Abitur

- A-levels certificate

Research Grants

- Project title: “**Digital infrastructure and regional disparities in comparison between eastern and western Germany**”, Principal Investigator, 2020-2021, ~20K, Alfried-Krupp Junior Research Fellowship.
- Project title: “**Firm-level analyses of Agglomeration Externalities, Knowledge Spillovers, and Productivity Growth**”, Principal Investigator, 2017-2019, ~100K, Durham International Junior Research Fellowship, Marie Curie Cofund.
- Project title: “**European market integration and determinants of German firm localization**”, Principal Investigator, 2014-2017, 3K, Lindemann Foundation.

Research

Publications

- **Male Excess Mortality during the Epidemiological Transition: Theory and Evidence from India** (2025), with H. Strulik, *Journal of Population Economics*, 38, 67, <https://doi.org/10.1007/s00148-025-01124-0>.
- **Automation and the Fall and Rise of the Servant Economy** (2025), with H. Strulik, *European Economic Review*, 172, 104926, <https://doi.org/10.1016/j.euroecorev.2024.104926>.
- **Does Gender matter for Export Behavior? Evidence for German Companies** (2025), *International Journal of Gender and Entrepreneurship*, <https://doi.org/10.1108/IJGE-05-2024-0179>.
- **What makes German manufacturing plants move locations?** (2024), *Annals of Regional Science*, <https://doi.org/10.1007/s00168-023-01238-x>.
- **Physiological Aging in India: The Role of the Epidemiological Transition** (2023), with H. Strulik, *PLOS ONE*, 18,7, <https://doi.org/10.1371/journal.pone.0287259>.
- **Unsupervised Document Classification integrating Web Scraping, One-Class SVM and LDA Topic Modelling** (2023), with B. Saefken, A. Thielmann, C.J. Weisser, *Journal of Applied Statistics*, 50, 3, 574-591, <https://doi.org/10.1080/02664763.2021.1919063>.
- **Robots, Reshoring, and the Lot of Low-Skilled Workers** (2021), with K. Prettner and H. Strulik, *European Economic Review*, 136, 103744, <https://doi.org/10.1016/j.euroecorev.2021.103744>.
- **The Impact of Menstruation Hygiene Management on Work Absenteeism of Women in Burkina Faso** (2021), with H. Strulik, *Economics and Human Biology*, 43, 101067, <https://doi.org/10.1016/j.ehb.2021.101067>.
- **Quantifying Reshoring at the Macroeconomic Level – Measurement and Applications** (2021), with H. Strulik, *Growth and Change*, 52, 3, 1200-1229.
- **The Benefits of Remoteness – Digital Mobility Data, Regional Road Infrastructure, and Covid-19 Infections** (2021), with H. Strulik, *German Economic Review*, 22, 3, 257-287.
- **One-Class Support Vector Machine and LDA Topic Model Integration- Evidence from AI patents** (2021), with A. Thielmann and C.J. Weisser, *Studies in Computational Intelligence*, 981, Soft Computing: Biomedical and Related Applications, Editors N.H. Phuong, V. Kreinovich, Springer.
- **The Effects of Absorptive Capacity on Innovation Performance – A Cross-Country Perspective** (2020), with R. Harris and J. Moffat, *Journal of Common Market Studies*, 59, 3, 589-607.
- **Knowledge and Earnings – A Regional Economic Analysis for the German Economy** (2015), *Conference Proceedings of the Regional Studies Association*, 106-108.
- **European market integration, R&D agglomeration economies, and the location choice of firms in Poland** (2015), with A. Gehringer, *Eastern European Economics*, 53, 491-513.
- **Adjustment Dynamics of Countries' Specialization Patterns in the European Union** (2014), *Applied Economics Letters*, 21, 671-674.
- **Services sectors' concentration and countries' specialization patterns in services in the European Union: A comparative analysis with a special focus on France, Germany, Greece, and the UK** (2014), *Regional and Sectoral Economic Studies*, 14, 23-32.
- **Services Sectors' Concentration: the European Union and the New Economic Geography** (2013), *Applied Econometrics and International Development*, 13, 29-44.
- **Industrial and Services Sectors' Agglomeration in the European Union** (2012), University of Göttingen, e-dissertation.
- **Econometric analyses on the returns to education of young people from low-class families in Germany** (in German) (2008), Saarbrücken/Bielefeld, diploma thesis.

Working papers

- **Digital infrastructure, Regional Disparities, and Firm Location Decisions in the German Economy**, 2025.
- **Comparing New Measures of Tech Talent: Global AI, Digital Infrastructure, and Innovation**, 2024, with R. Dickens and J. O'Reilly.
- **What drives the location choice of new manufacturing plants in Germany?**, 2024.
- **Firm heterogeneity, productivity, and the extensive margins of trade - Differences between manufacturing firms in East and West Germany**, 2024.

Work in progress

- **Detecting Industrial Clusters in Artificial Intelligence, Data Science, and Sustainability in Germany**, with J. Laaguidi and X. Zhang
- **Industrial policies, subsidies, and the effects on firm performance**, with S. Henkel and D. Gyetvai
- **Energy Costs and Location Choices of European Firms**
- **Scale effects and innovative activities – Big Data analyses and evidence for AI patents**, with H. Strulik
- **Digital Infrastructure, Innovation, and Economic Growth**, with H. Strulik
- **The Impact of Regional Infrastructure for Firm-Level Trade and Productivity – Evidence from a Regression Discontinuity Framework**
- **Regional Drivers of Firm-Level Productivity for German Upper Mittelstand Firms and Hidden Champions**

Teaching (WT=winter term, ST=summer term)

Lecturer, Ruhr University Bochum, 10/2022 –

- Lecture + Exercise Lecture on **Data Analytics and Programming in Python for Economists** (Bachelor level), ST 2026
- Lecture + Exercise Lecture on **Machine Learning and Programming in Python** (Master & PhD level), WT 2023/24, ST 2024, ST 2025, ST 2026
- Lecture + Exercise Lectures + Tutorials on **Introduction to Data Science and Big Data** (Bachelor level), ST 2023, WT 2023/24, WT 2024/25, ST 2026
- **Seminar on Data Science in Economics: Topics in Labour Economics** (Master & PhD level), ST 2026
- **Seminar on Data Science in Economics: Digital Transformation and Economic Development** (Bachelor level), ST 23, WT 2023/24, ST 2024, WT 2024/2025, WT 2025/26, ST 2026
- **Seminar on Data Science in Economics: Growth, Sustainability, and Transformation** (Master & PhD level), WT 2024/25
- **Seminar on Data Science in Economics: Growth, Sustainability, and Transformation** (Bachelor level), WT 2023/24, ST 2024, WT 2024/25, WT 2025/26, ST 2026
- **Master Seminar on Data Science in Economics** (Master level), WT 2022/23, ST 23
- **Bachelor Seminar on Data Science in Economics** (Bachelor level), WT 2022/23, ST 23, WT 2023/24, ST 2024, ST 2025

Lecturer, University of Göttingen, 04/2012 – 09/2021

- Lecture on **Regional and Urban Economics** (BA level), ST 13, WT 14/15
- Lecture on **Geographical Economics** (MSc level), WT 12/13, WT 13/14
- Lecture on **Economics of European Integration and European Monetary Policy** (MSc level), ST 17
- Exercise Lecture in **Macroeconomics II** + supervision of tutors (BA level), ST20
- Several Seminars in **Regional and Urban Economics, Economic Geography, Migration and Economic Development, Economics of the European Union**, WT 2016/17, ST16, WT 14/15, ST 2016, WT 16/17, WT 19/20, ST 21

Teaching Assistant, University of Göttingen, 12/2007-03/2012

- Exercise Lecture (in German *Übung*) in **International Trade** (MSc level), WT 08/09
- Exercise Lecture in **Monetary Theory and European Monetary Policy** (MSc level), ST 08 and 09
- Exercise Lecture in **Monetary Theory and Monetary Policy** (BA level), ST 10, 11 and 12
- Exercise Lecture in **Foundations of International Economic Relations** (BA level), WT 09/10, 10/11 and 11/12

- **Firms and Markets** (BA level), WT 07/08
- Several Seminars in **Monetary Theory and Monetary Policy, Monetary Theory and European Monetary Policy, Advances in International Trade, Advances in Monetary Policy**, ST 10, 12 and WT 10/11, 11/12, WT 08/09 and 09/10 , WT 07/08, 08/09 and 09/10, ST 08, 09, 11 and 13, WT 12/13, ST13

Teaching Assistant, University of Bielefeld, 10/2004-03/2005

- Tutorials to **Introduction to Economics** (BA level)

Supervision of research assistants, doctoral students & post-docs

Research assistants: Xenia Zhang (PwC), Jammila Laaguidi, Jonathan Spohn (ESCP Business School, Deutsche Bank), Frauke Schneider, Kim-Michelle Wirth, Nhat Hunyh, Nhi Ta, Marco Mortazavi; Sören Henkel, PhD student, started in July 2025; Daniel Gyetvai, PostDoc, started in August 2025

Supervision of Bachelor- and Master theses

First or second supervisor, among others: “Growth of Cities: Theoretical Aspects and Empirical Analyses”, „Hedonic Founded Cleaning of the estimated Property Value in the Micro Survey Panel on Household Finances by Linear Stochastic Imputation“, „A theory-based Analysis of the Effects of Regional and Structural Policy in the EU“, „Agglomeration and Growth – A Comparative Analysis for the European Union“, „The Sovereign Debt Crisis in the EU - a theory-based Analysis of the Causes and Institutional Actions“, „The impact of the NAFTA on regional wage differentials in Mexico“, „A theory-based Analysis of Macroeconomic Imbalances during the euro crisis - Institutional Actions in regard to Monetary and Fiscal Policy“, „Internal Migration and Regional Inequality in China“, „An Analysis of the Causes and Economic Consequences of the Brexit in the Light of the Relations between the European Union and the United Kingdom“, „The problem of unbalanced and unlabelled data sets: unsupervised document classification with out-of-domain training data, one-class SVM and LDA Topic Modelling“, „A theory-based analysis of emission-pricing instruments“, „A Comparative Analysis of Socio-Economic Factors Influencing Contraceptive Use: Evidence from the PMA2020 Dataset“, „Satellite Data in Machine Learning – New Methods for Measuring Economic Development“, „The Digital Transformation in the German Healthcare System – Opportunities and Challenges of Blockchain Technology“, The Application of Machine Learning Methods in Predicting Stock Prices – A Comparative Analysis“, „The application of Natural Language Processing methods in Economics – Empirical Labour Market analyses with job postings on AI and Sustainability“, „A comparative analysis of machine learning algorithms for modeling the relationship between poverty and socioeconomic factors“, „The classification of text documents in Economics – A critical discussion of Machine Learning algorithms“, „The Application of Machine Learning methods in Recommender Systems – An Economic Analysis“

In the Media

- LSE Business Review: **The return of domestic servants – thanks to AI and automation**, 2025
- Royal Economic Society Blog: **Regional Road Infrastructure and Location Choices of Plants: Evidence from Germany**, 2021
- Ostsee-Zeitung: **MV hinkt bei der Digitalisierung hinterher**, 2021
- ForeignBrief TwentyTwenty Podcast: **Automation Acceleration**, 2020
- The Daily Telegraph: **Women fare better than men when it comes to beating the rise of the robots**, 2019
- LSE Business Review: **Industrial robots are bringing jobs back home, but not for low-skilled workers**, 2019
- World Economic Forum: **Industrial robots are bringing jobs back home, but not for low-skilled workers**, 2019
- Royal Economic Society Blog: **Industrial robots are bringing jobs back home, but not for low-skilled workers**, 2019
- Harvard Business Manager: **Reshoring: Von Fachkräften und Robotern**, 2019
- Business Day: **Trump's job plan would benefit robots**, 2019
- Global Economic Dynamics Blog, Bertelsmann Stiftung: **What is the Impact of Reshoring? Will Digitalization bring jobs back to developed countries?**, 2019
- Der Spiegel: **Einmal China und zurück**, 2018

Honours, Grants, and Scholarships

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| • Miguel Dols Research Fellow, London School of Economics and Political Science, Canada Blanch Centre | 2024-2025 |
| • Alfried-Krupp Junior Research Fellow, University of Greifswald | 2020-2021 |
| • Conference grant, "Nachwuchsprämie", <i>Verein für Socialpolitik</i> | 2019 |
| • Durham International Junior Research Fellow, Marie Curie Cofund | 2017-2019 |
| • Research travel grant, Unibund University of Göttingen | 2013, 2014, 2015 |
| • Faculty travel grant, University of Göttingen | 2014 |
| • Conference travel grant, Econometric Society | 2009 |
| • Travel grant, Excellence-Initiative, University of Göttingen | 2009 |
| • Slesinger Fellowship, for the most promising new graduate student, University of Pittsburgh (declined the offer) | 2007 |
| • PhD position at Pennsylvania State University (declined the offer) | 2007 |
| • Best Diploma of the Department of Economics, University of Bielefeld | 2007 |
| • DAAD Scholarship (German Academic Exchange Service) | 2005-2006 |
| • Participation in the study programme "Europa Intensiv", University of Bielefeld | 2004-2005 |

Refereeing Requests

American Economic Journal-Applied Economics; American Journal of Agricultural Economics; Annals of Regional Science; BMC Womens' Health; Cambridge Journal of Regions, Economy, and Society; Canadian Journal of Economics; Economics of Innovation and New Technology; Economics Letters; Economic Modeling; Economic Systems Research; European Economic Review; International Economics and Economic Policy; International Journal of Gender and Entrepreneurship; International Review of Applied Economics; Journal of Economic Growth; Journal of the European Economic Association; LABOUR, Review of Labour Economics and Industrial Relations; Metroeconomica; Nature, Humanities and Social Sciences Communications; PLOS ONE; Regional Studies; Review of Development Economics; Review of International Economics; Review of World Economics; Services Industries Journal; Social Indicators Research; Technological Forecasting and Social Change; Telecommunications Policy

Evangelisches Studienwerk Villigst; Alexander-von-Humboldt Stiftung

Memberships

American Economic Association, European Economic Association, Econometric Society, Regional Studies Association, *Verein für Socialpolitik* (German Economic Association), *Gesellschaft für Regionalforschung*, *Deutscher Hochschulverband*, Financial Geography Network

Accepted Talks at Conferences (selection)

- AEA/ASSA: 2021 (Chicago) as Discussant
- Econometric Society: 2009 (Canberra), 2009 (Tokyo), 2014 (Taipeh), 2019 (Manchester), 2020 (Bocconi)
- EEA: 2019 (Manchester), 2024 (Rotterdam)
- Royal Economic Society: 2018 (Brighton), 2019 (Warwick University), 2021 (Belfast), 2023 (Glasgow)
- EARIE: 2017 (Maastricht)
- EALE: 2019 (Uppsala), 2022 (Padua)
- IAAE: 2025 (Turin)
- PhD Meeting Royal Economic Society: 2011 (London)
- Verein für Socialpolitik: 2012 (Göttingen), 2016 (Augsburg), 2019 (Leipzig), 2020 (Köln), 2022 (Basel)
- ETSG: 2009, 2010, 2011, 2014, 2015, 2019
- Regional Studies Association: 2013, 2015, 2016, 2017, 2018, 2019, 2025
- SASE Annual Conference: 2022 (Amsterdam)
- ENEF: 2018 (Brighton)
- Tasks V: Robotics, Artificial Intelligence and the Future of Work conference, 2019 (Bonn)
- Deep Roots of Economic Growth Conference- The Role of Geography, History and Institutions: 2017 (Naples)
- World Congress on Comparative Economics: 2015 (Rome)
- Regional Economics Workshop in Vienna (Geoffrey Hewings): 2014, 2016, 2019

Invited Seminars and Talks

2025: Imperial College London, Canada Blanch Centre, LSE Demography Research Group, Kiel Institute, University of Reading

2024: Durham University, LSE Data Science Institute

2022: University of Bremen

2021: Ruhr University Bochum

2020: University of Manchester, ETUI Brussels, University of Bath

2019: EU Social Situation Monitor Brussels

2018: Universitat Rovira i Virgili (Reus)

2017: Statistical Office IT.NRW (Düsseldorf); University of Augsburg

2015: University College Dublin

2014: Economics Seminar (Monash); Econometrics Seminar (Monash)

2013: College of William and Mary (Williamsburg); Trade Group Seminar (Göttingen); Université de Fribourg

2012: University of Kiel

2011: Université de Genève

Organisation of Workshops

- Main local organizer of an annual conference in International Economics (“Göttinger Workshop Internationale Wirtschaftsbeziehungen”), University of Göttingen, 2012 – 2017
- GirlsDay, Ruhr University Bochum, 2024, 2025

Internships

- Internship at the “German Permanent Mission to the Office of the United Nations and the Other International Organisations”, WTO Department, Geneva (Switzerland), 06/2006-07/2006
- Internship Deutsche Bank AG, Lage (Germany), 01/2000

Professional Activities/ Committees

- Member of the Faculty Council (*Fakultätsrat*), Department of Management and Economics, Ruhr University Bochum
- Member of the Research Committee, Department of Management and Economics, Ruhr University Bochum
- Member of the Committee of Study Affairs, Department of Management and Economics, Ruhr University Bochum
- Member of the Managing Committee (*Vorstand*) of the Department of Economics, University of Göttingen
- Member of the Research Committee of the Department of Management and Economics, University of Göttingen
- Member of the search committees for a professorship in: International Economic Policy, Econometrics I, International Economics, Econometrics II, University of Göttingen
- Member of the search committees for students applying for the “*Niedersachsen-Stipendium*” and for the “*Deutschland-Stipendium*”, University of Göttingen
- Main local organizer of the regional group of the German Academic Exchange Service (DAAD *Freundeskreis*) in Göttingen

Software and Language Skills

- Software and programming knowledge: CSS, EViews, HTML, Latex, OxMetrics, Python, R, RunGEM/Gempack, SAS, STATA
- Languages: German (native), English (proficient), Spanish (intermediate), French (intermediate), Latin