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Gerrit Bauch

game theorist, economist, mathematician

👤 personal information

born on September 17, 1993, in Oberkirch, Germany

📁 professional profile

I am a mathematical economist with a passion for game and decision theory under uncertainty. In my dissertation, I have used my mathematical background to analyze conflict resolution under Knightian uncertainty and study the impact of noise on the grammar of languages.

🏢 research positions & work experience

Bielefeld University, Germany **2019–actual**
graduate researcher (2019-2024) & postdoctoral researcher (since February 2024)
Center for Mathematical Economics and the Center for Uncertainty Studies at Bielefeld University.

Bielefeld University, Germany **2020–2023**
IT support at the Center for Mathematical Economics. Tasks included general user assistance, website building (XML based CMS Roxen 5 & 17) and administration, AD & GPO management and hardware and software provisioning (ivanti landesk, citrix workspace).

Heidelberg University, Germany **2014**
undergraduate research assistant
Chair of Labor Economics of Prof. Dr. Christina Gathmann, Alfred-Weber institute

🎓 education

Bielefeld University, Germany **2019–2024**
Dr. rer. pol (Ph.D. in economics), passed with distinction (*summa cum laude*).
“From words of approach to words of departure: Essays on noisy communication and partnership dissolution under uncertainty”
Supervisors: Prof. Dr. Riedel, Bielefeld University and Prof. Andreas Blume, PhD, University of Arizona.

Heidelberg University, Germany **2015–2019**
M.Sc. in mathematics with economics as field of application. Overall grade: 1,1.
“Über eine Vermutung aus der Theorie Siegelscher Modulformen im Spezialfall $g = 2$ und $k = 5/2$ ”.
Supervised by Prof. Dr. Rainer Weissauer, Heidelberg University.

Heidelberg University, Germany **2012–2015**
B.Sc. in mathematics with economics as field of application. Overall grade: 1,4.
“Algebraisch-Geometrische Codes”.
Supervised by Prof. Dr. Kay Wingberg, Heidelberg University.

📌 scientific output

publications

Gerrit Bauch and Frank Riedel. “The Texas Shoot-Out under Knightian uncertainty”. In: *Games and Economic Behavior* 146 (2024), pp. 35–50. ISSN: 0899-8256. DOI: <https://doi.org/10.1016/j.geb.2024.04.009>. URL: <https://www.sciencedirect.com/science/article/pii/S0899825624000605>.

working papers

Gerrit Bauch. “Effects of Noise on the Grammar of Languages”. In: *Center for Mathematical Economics Working Papers* (2021). Available at <https://pub.uni-bielefeld.de/record/2957927>.

Gerrit Bauch. “Underreaction and dynamic inconsistency in communication games under noise”. In: *arXiv* (2023). Available at <https://arxiv.org/abs/2311.12496>. arXiv: 2311.12496 [econ.TH].

dissertation

Gerrit Bauch. “From words of approach to words of departure: Essays on noisy communication and partnership dissolution under uncertainty”. In: *Bielefeld University library* (2024). Dissertation available at <https://pub.uni-bielefeld.de/record/2988256>.

teaching

Bielefeld University

- teaching assistant for Microeconomics 1 winter 2024
- *instructor* for an exercise course on Risk and Insurance (undergraduate) including preparing exercise sheets and oral examinations summer 2023 & 2024
- *instructor* for a reading group on “Recent developments in game theory and general equilibrium theory” (graduates, PhD candidates, postdocs) winter 2022
- *teaching assistant* in mathematics for economists 2 winter 2021
- *teaching assistant* in microeconomics 2 (graduate) summer 2020
- *tutor* for game theory (undergraduate) winter 2019

Heidelberg University

- *teaching assistant* in complex analysis 1 (undergraduate) including preparing exercise sheets and written examinations summer 2018
- *eaching assistant* in complex analysis 2 (undergraduate) including preparing exercise sheets and oral examinations winter 2016
- *tutor* for real analysis, algebra, complex analysis (undergraduate) 2015–2019

talks

past talks

- *Strategic communication of narratives* 2024
Talk at the LEMMA séminaire in Paris Panthéon-Assas, France, October 8, 2024.
- *The Texas Shoot-Out under Knightian Uncertainty* 2024
Talk at the Conference on Mechanism and Institution Design in Budapest, Hungary, July, 2024.
- *The Texas Shoot-Out under Knightian Uncertainty* 2024
Talk at the ESEM 2024 in Rotterdam, Netherlands, August, 2024.
- *Effects of noise on the grammar of languages* 2024
Talk at the 2nd Paris Workshop on Games, Decisions, and Language in Paris, France, on June 13, 2024.
- *Ambiguity aversion and the direction of dynamic inconsistency in sender-receiver games of common interest* 2023
Talk at the SAET 2023 in Paris, France, on July 17, 2023).

- *The Texas Shoot-Out under Knightian Uncertainty* **2023**
Talk at the Summer School on Risk and Uncertainty in Economics, Insurance and Finance 2023 in Bielefeld, Germany, on July 7, 2023.
- *The Texas Shoot-Out under Knightian Uncertainty* **2023**
Talk at the RUFE 2023 conference in Johannesburg, South Africa, on April 4, 2023.
- *The Texas Shoot-Out under Knightian Uncertainty* **2022**
Talk at the Stony Brook International Conference on Game Theory in Stony Brook, Long Island, on July 21, 2022.
- *The Texas Shoot-Out under Knightian Uncertainty* **2022**
Online talk at the SAET 2022 at the ANU on July 21, 2022)
- *The Texas Shoot Out under Knightian Uncertainty* **2022**
Talk at the economics seminar at the Eller College of Management at the University of Arizona, Tuscon on March 23, 2022.
- *What did you say? Introducing a Metric-Dependent Stochastic Noise to Voronoi Languages* **2022**
IBE/Brown bag seminar at the Eller College of Management at the University of Arizona, Tuscon on February 10, 2022.
- *Effects of noise on the grammar of Voronoi languages* **2021**
Online talk the advanced seminar on general linguistics at the University of Tübingen on May 4, 2021.

research stays

University of Basel, Switzerland **2024**
Guest researcher at Basel University, March 18–22, 2024. Invited by Georg Nöldeke and Lorenz Hartmann.

University of Arizona, USA **2022**
Research stay from January to May 2022 at the Eller College of Management, University of Arizona. Financial support through a DAAD scholarship and a BGTS mobility grant.
Invited by Prof. Andreas Blume, PhD.

referee activities

Economic Theory, Games and Economic Behavior, International Journal of Game Theory, Journal of Economic Behavior & Organization

scholarships

- DAAD doctoral scholarship **2022**
- BGTS mobility grant **2022**

technical skills

sagemath, maple, mathematica, L^AT_EX, python, html, haskell, C++, desktop management with ivanti landesk (citrix), Roxen 17 (CMS)




languages

German (native), English (business competence), Swedish (fluent), French (upper intermediate, B2), Chinese (intermediate, HSK 4)

Extracurricular Activities

- Doctoral Representative of the Bielefeld Graduate School of Economics and Management from May 2021 to October 2023. **2021–2023**
- Member of the German-Swedish Society, Heidelberg e.V. **2019–actual**

hobbies

-  hiking, table tennis, apnea diving, climbing, wave surfing
-  learning new languages
-  admirer of the poems by Wallace Stevens

references

For reference you may contact:

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Prof. Dr. Yves Breitmoser
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