Tilman Graff

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EDUCATION

- **University of Oxford** — Oxford, UK
  Master of Philosophy in Economics; with distinction — *October 2016 – June 2018*
    - **Master's Thesis**: *"Spatial Inefficiencies in Africa's Trade Network"* – conducted a large-scale network optimisation exercise to construct a novel dataset on suboptimal trade routes for the entire African continent. Showed econometrically how infrastructure investments from colonial times lead to persistent spatial network inefficiencies. Supervised by Prof. Ferdinand Rauch. Awarded distinction.
    - **Core Coursework**: Macroeconomics, Microeconomics, Econometrics, Mathematical Methods
    - **Electives**: Machine Learning, Big Data Econometrics, Advanced Macroeconomics, Development Economics, Urban Spatial Economics, Micro-finance, Advanced Econometric Theory
    - **Grades**: Distinction overall, distinction on thesis, upper 15% in written exams.
- **Ludwig Maximilians University Munich** — Munich, Germany
  Bachelor of Science in Economics; final grade: very good (1.18) — *April 2014 – July 2016*
- **Toulouse School of Economics** — Toulouse, France
  Exchange semester — *August 2015 – December 2015*
- **Technical University Munich** — Munich, Germany
  Bachelor of Science in Management and Technology; with distinction (1.40) — *October 2012 – July 2015*

WORK EXPERIENCE

- **Princeton University & Busara Center** — Nairobi, Kenya and Princeton, NJ
  Research Specialist, Research Assistant — *Since August 2018*
    - **Research Management**: As research specialist to Professor Johannes Haushofer (Princeton), overseeing entire research process of multiple large-scale academic studies, from field logistics, to advanced data analysis, and paper writing.
    - **Data Analysis**: Employing numerous advanced econometric methods to rigorously investigate patterns in large experimental datasets. Making use of GMM, spatial randomisation inference, and bootstrap techniques to trace out macroeconomic quantities from microeconomic data.
    - **Research Administration**: Managing all administrative parts of the research process, including grant proposal writing, budgeting, and ethics compliance.
- **Vivid Economics** — London, UK
  Intern — *Summer 2018*
- **ifo Institute for Economic Research** — Munich, Germany
  Research Intern — *Summer 2016*
- **German Bundestag** — Berlin, Germany
  Intern — *Spring 2016*

WORKING PAPERS AND WORKS IN PROGRESS

- **Graff (2019)**. *"Spatial Inefficiencies in Africa's Trade Network"*, NBER Working Paper #25951.
  How would the social planner design the perfect trade network for every country in Africa?

- **Graff & Haushofer (2019)**. *"Psychological well-being is much more strongly related to income than to inequality"*.
  What are causal and correlational relationships between income inequality and happiness?

- **Egger & Graff (2019)**. iv_spatial_HAC.
  Stata package to compute Conley standard errors in IV-settings

INVITED CONFERENCES AND PRESENTATIONS

- **2019**: National Bureau of Economic Research (Boston), Center for the Study of African Economies (Oxford), Busara Center for Behavioral Economics (Nairobi)

- **2018**: Oxford trade seminar, London School of Economics urbanisation seminar

IT Proficiency

- **R**: full research proficiency
  - **Econometric Analysis**: Multiple years of extensive research experience. Implemented all most-common econometric estimation methods. Also conducted large-scale optimization routines, advanced spatial analysis, Monte-Carlo simulations, constructed non-standard covariance-estimators, and wrote own function to examine confounding power of selection on observables.
  - **Big Data**: Implemented machine learning tasks recognizing linguistic patterns in central bank reports and political speeches. Built large-scale dataset by extracting travel information from online routing service.
  - **Various**: Simulated off-equilibrium dynamics in game-theoretical setting. Summarised findings in concise scientific graphs and maps.
- **STATA**: full research proficiency
  - **Advanced inference methods**: Wrote non-trivial scripts implementing GMM and randomisation inference techniques to aggregate experimental data to macroeconomic quantities in complex multidimensional datasets.
  - **Authorship**: Co-authored Stata package using *Mata* to implement Conley-type standard errors in IV two-stage-least-square settings.
- **Matlab**: advanced proficiency
  - **Large-scale Optimization**: Conducted research on optimal flows through calibrated trade-networks and implemented a computationally-friendly strategy to optimise over the space of possible networks in order to detect inefficiencies. Produced multidimensional network graphs to visualise findings.
  - **Simulation**: Solved and simulated macroeconomic DSGE environments as well as structural models in a development economics context.
- **Other**: GIS (basic), Python (basic), Git (basic), zTree, SurveyCTO, Latex

Stipends and Awards

- **German National Academic Foundation**: Fellow   *2012 – 2018*
- **German Academic Exchange Service**: Scholarship for Graduate Studies   *2017 – 2018*
- **Europaeum**: Jenkins Memorial Scholar 2017 at the University of Oxford   *2016 – 2017*
- **LMU Munich**: Research Prize for student project on reciprocity in the laboratory   *2016*
- **TU Munich Economics Department**: Prize for one of the best undergraduate theses   *2015*
- **TU Munich Economics Department**: Acceptance to the Dean's List   *2015*

Other Relevant Experience

- **Oxford University Strategic Studies Group**: *Student Society focusing on International Affairs*   *2017 – 2018*
  - **Committee Member**: Helped organizing weekly events on current issues in national security and international relations. Recent speakers include Hala Gorani (CNN), Sir Richard Dearlove (MI6), and Lynne Owens (NCA).
  - **Treasurer**: Responsible for overseeing the society's finances and implementing an online tool to more efficiently administer membership data. Also wrote multiple successful applications for external funding.
- **St. Antony's College Boat Club, Oxford**: *Collegiate Rowing Club*   *2017 – 2018*
  - **Men's Captain**: Responsible for administering day to day operations, including scheduling training plans, recruiting rowers, and hiring professional coaches. Oversaw the introduction of an optional gender neutral rowing track into the organisation.
  - **Social Media Officer**: Streamlined the club's online profiles on various social media platforms.
- **Oxford University**: Research Assistant to Oxford academics Agnes Kovacs and Patrick Moran   *Summer 2017*
- **Munich Kammerspiele Theatre**: Moderator of 7 month interdisciplinary seminar "Reading Piketty"   *2016*
- **German National Academic Foundation**: Organiser of 10 day study trip to Moscow, Russia.   *2016*
- **TSEconomist Student Newspaper**: Assistant Editor   *2015*

Skills

- **Languages**: German (native), English (fluent), French (advanced, B1), Russian (basic, A1)
- **GRE**: Quant: 168, Verbal: 163, Writing: 5.5

References

Prof. Johannes Haushofer	**Prof. Edward Miguel**	**Prof. Ferdinand Rauch**
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