Rafal Urbaniak

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Education and experience

2022	Bednarowski Trust Fellow, University of Edinburgh
2021	Kosciuszko Foundation Fellow, Northeastern University, Boston
2017-2021	Principal Investigator in a National Science Center project on legal probabilism, University of Gdansk
2012-2019	Postdoctoral Fellow of Research Foundation Flanders
2012	Trinity College Long Room Hub Visiting Fellow, Trinity College Dublin
2011-2012	Visiting Fellow, Benares Hindu University, Varanasi
2009	British Academy Visiting Fellow, Bristol University
2008-	Associate Professor, University of Gdansk (with academic leaves)
2008	PhD in Logic & Philosophy of Mathematics, University of Calgary
2005-2008	TA, research assistant, instructor of record, University of Calgary

Selected data science projects

- **Legal Probabilism bayesian networks in R**
  R implementation of bayesian network methods for criminal evidence evaluation, based on our work with Marcello Di Bello on the *Legal Probabilism* entry in the Stanford Encyclopedia of Philosophy

- **Short-term impact of personal attacks on Reddit user activity**
  In cooperation with Samurai Labs, we tracked 148,317 users and identified personal attacks among 182,528 posts and comments using their high precision software. I analyzed the data from three perspectives: (i) classical statistical methods, (ii) Bayesian estimation, and (iii) model-theoretic analysis. They agree: personal attacks decrease the victims' activity.

Key skills

R tasks and tools

- Bayesian statistics
  STAN, JAGS, BUGS, rethinking, rjags, runjags, BESTmcmc
- Bayesian networks
  bnlearn, gRain
- Discrete data models
  countreg, vcd, vcdExtra, car, MASS
- Time series, dynamic regression, algotrading
  xts, quantmod, tidyquant, TTR, fpp3
- Data wrangling and visualization
  tidyverse, ggplot2, ggpubr

other

- Python
- SQL
- Reproducible research
  R markdown, LaTeX, beamer, Shiny
- Datacamp: 24 courses completed
  130,102xp, 1,536 exercises aced

Academic activities

- **Multiple university courses** related to probability, statistics and inference
  e.g.: statistical methods in criminology; probability & philosophy of juridical evidence evaluation; Uncertainty and R programming; interpretations of probability; decisions, games, and social choice theory; cognitive failures; meta-arithmetic; formal theories of truth; ontology of mathematics, logic I, logic II

- **3 books and ca. 30 research papers** in top academic journals
  e.g.: Stanford Encyclopedia of Philosophy; Aggressive Behavior; Review of Symbolic Logic; Law, Probability & Risk; The International Journal of Evidence & Proof, Journal of Applied Logics, Artificial Intelligence and Law

- **30 invited lectures**
  e.g.: University of Oxford, Arizona State University, Bristol University, Paris I Panthéon-Sorbonne, Munich Center for Mathematical Philosophy, University of Edinburgh, University of Quebec, Kyoto University, Keio University, Nagoya University, University of Groningen, University of Gothenburg, Canterbury University, University of Turin

- **13 major research grants and awards**, 15 international conferences organized, referee for 18 journals

- Coordination of LoPSE research group (4-7 researchers) since 2013