Jiri Kukacka

Assistant Professor at Charles University
Research Fellow at Czech Academy of Sciences

Prague, Czech Republic

jirikukacka
4SBYvf4AAAAJ
SSRN 2434439

+420-602 767 305

jiri.kukacka@fsv.cuni.cz
kukacka@utia.cas.cz

tinyurl.com/kukacka-jiri
utia.cas.cz/people/kukacka

0000-0001-8680-2896
J-1974-2014
jirikukacka

Profile

Jiri Kukacka is an economist based in Prague interested in financial econometrics, behavioral finance and macro, cryptoassets, and the development of simulation-based estimation methods. His work has been published in leading journals in the field, including JEBO, JEDC, and Business Ethics, and presented at around fifty international conferences and workshops.

Education

2011 – 2016/04 **Ph.D.** in Economics, **Charles University**
Financial Econometrics & Behavioral Finance, Thesis: *Estimation of Financial Agent-Based Models*
Supervisor: *J. Barunik*, Opponents: *E. Gerba* (LSE), *L. Vacha* (CAS), *R. Zwinkels* (VU Amsterdam)

2012 **PhDr.** in Economic, **Charles University**

2008 – 2011 Master's degree in Economics, **Charles University**

2008 – 2009/01 **University of Bath**, United Kingdom, Erasmus

2005 – 2008 Bachelor's degree in Economic Theories, **Charles University**

Academic Positions

2017/09 + **Assistant Professor, Charles University**
Faculty of Social Sciences, Institute of Economic Studies, Dept. of Macroeconomics and Econometrics
2016/05 – 2017/08 Postdoc
2013/10 – 2015/09 Member of the Center for Doctoral Studies

2023/12 + **Research Fellow, Czech Academy of Sciences**
Institute of Information Theory and Automation, Dept. of Econometrics
2021/12 – 2023/11 Research Associate
2016/05 – 2021/11 Postdoc
2013/03 – 2016/04 Ph.D. Candidate

2009/02 – 06 **Assistant** to *M. Mejstrik* in the National Economic Council (NERV)
Economic analyses of financial topics during the preparation of the *National Crisis Packet*

Research Visits

2023 Research Visit, **University of Florence, Italy**
Working with *L. Bargigli*

2023 **Invited** Research Visit, **Hamburg Institute of International Economics**, **Germany**
Invited by *M. Berlemann*, **seminar talk**, working with *S. Sacht*, *R. Franke*

2022 **Invited** Research Visit, **Sant'Anna School of Advanced Studies, Pisa, Italy**
Invited by *F. Lamperti*, **seminar talk**, Institute of Economicss

2016 – 2022 Research Visits (5×, 7 weeks in total), **University of Kiel, Germany**
Dept. of Economics, **seminar talk**, working with *S. Sacht*, *R. Franke*, *P. Zegadlo*

2016/07 – 10 **Postdoctoral** Research Visit, **University of California, Irvine, USA**
Dept. of Economics, working with *B. Branch*

Bibliometry

Google Scholar	Citations: 368	*h*-index: 10
Scopus	Citations: 169	*h*-index: 7
Web of Science	Citations: 143	*h*-index: 6

PUBLICATIONS

Impact Factor Journals

14. **Franke, R., Kukacka, J., Sacht, S. (2024)**. Is the Hamilton Regression Filter Really Superior to Hodrick–Prescott Detrending? *Macroeconomic Dynamics*, forthcoming, . 2022: IF=0.9, AIS=0.473.
13. **Proano, C. R., Kukacka, J., Makarewicz, T. (2024)**. Belief-driven dynamics in a behavioral SEIRD macroeconomic model with sceptics. *Journal of Economic Behavior & Organization*, 217, pp. 312-333, . 2022: IF=2.2, AIS=1.216 (Q2).
12. **Zila, E., Kukacka, J. (2023)**. Moment set selection for the SMM using simple machine learning. *Journal of Economic Behavior & Organization*, 212, pp. 366-391, , . 2022: IF=2.2, AIS=1.216 (Q2).
11. **Kukacka, J., Kristoufek, L. (2023)**. Fundamental and speculative components of the cryptocurrency pricing dynamics. *Financial Innovation*, 9 (61), pp. 1-23, , . 2022: IF=8.4 (**D1 Business, Finance: 3/111**), AIS=0.965 (Q2).
10. **Kukacka, J., Sacht, S. (2023)**. Estimation of heuristic switching in behavioral macroeconomic models. *Journal of Economic Dynamics and Control*, 146, 104585, , . 2022: IF=1.9, AIS=0.994 (Q2).
9. **Havlinova, A., Kukacka, J. (2023)**. Corporate social responsibility and stock prices after the financial crisis: The role of strategic CSR activities. *Journal of Business Ethics*, 182, pp. 223-242, . Published 2021: IF=6.331 (**D1 Ethics: 2/56**, Q2 Business), AIS=1.578 (Q2).
8. **Kukacka, J., Kristoufek, L. (2021)**. Does parameterization affect complexity of agent-based models? *Journal of Economic Behavior & Organization*, 192, pp. 324-356, , . IF=2, AIS=1.28 (Q2).
7. **Vainer, J., Kukacka, J. (2021)**. Nash Q-learning agents in Hotelling's model: Reestablishing equilibrium. *Communications in Nonlinear Science and Numerical Simulation*, 99, 105805, . IF=4.186 (**D1 Mathematics**, Applied; Interdiscipl.), AIS=0.853 (Q2).
6. **Kukacka, J., Kristoufek, L. (2020)**. Do 'complex' financial models really lead to complex dynamics? Agent-based models and multifractality. *Journal of Economic Dynamics and Control*, 113, 103855, , . IF=1.588, AIS=1.062 (Q2).
5. **Polach, J., Kukacka, J. (2019)**. Prospect Theory in the heterogeneous agent model, *Journal of Economic Interaction and Coordination*, 14 (1), pp. 147-174, . IF=1.565 (Q2), AIS=0.403.
4. **Stanek, F., Kukacka, J. (2018)**. The impact of the Tobin tax in a heterogeneous agent model of the foreign exchange market, *Computational Economics*, 51 (4), pp. 865-892, . IF=1.185, AIS=0.305.
3. **Kukacka, J., Barunik, J. (2017)**. Estimation of financial agent-based models with simulated maximum likelihood, *Journal of Economic Dynamics and Control*, 85, pp. 21-45, . IF=1.579 (Q2), AIS=1.133 (Q2).
2. **Barunik, J., Kukacka, J. (2015)**. Realizing stock market crashes: Stochastic cusp catastrophe model of returns under the time-varying volatility. *Quantitative Finance*, 15 (6), pp. 959-973, . IF=0.794, AIS=0.633 (Q2).
1. **Kukacka, J., Barunik, J. (2013)**. Behavioural breaks in the heterogeneous agent model: The impact of herding, overconfidence, and market sentiment. *Physica A: Statistical Mechanics and its Applications*, 392 (23), pp. 5920-5938, . IF=1.722, AIS=0.473.

Chapter in a Book

1. **Kukacka, J. (2019)**. Simulated maximum likelihood estimation of agent-based models in economics and finance. Springer, *Network Theory and Agent-Based Modeling in Economics and Finance*, .

Working Papers

3. **Franke R., Kukacka, J. (2020)**. Notes on the Neglected Premisses of the Hodrick-Prescott Detrending and the Hamilton Regression Filter. *SSRN Working Paper*, .
2. **Brakatsoulas, P., Kukacka, J. (2020)**. Credit Rating Downgrade Risk on Equity Returns. *IES Working Papers*, .
1. **Kukacka, J., Jang, T.-S., Sacht, S. (2018)**. On the Estimation of Behavioral Macroeconomic Models via Simulated Maximum Likelihood, *Kiel University Economics Working Paper* No 2018-11, .

Submissions/In Preparation

5. **Bargigli, L., Kukacka, J. (2024)**. Investor Sentiment in High-Frequency Financial Data. Presented at WEHIA 2023.
4. **Zila, E., Kukacka, J. (2024)**. Wealth, cost, and misperception: Empirical estimation of three interaction channels in a financial-macroeconomic agent-based model. *SSRN Working Paper*, doi, .
3. **Petrasek, L., Kukacka, J. (2024)**. US Equity Announcement Risk Premia. Revise&Resubmit in *Review of Quantitative Finance and Accounting*.
2. **Sila, J., Kocenda, E., Kristoufek, L., Kukacka, J. (2024)**. Good vs. bad volatility in major cryptocurrencies: The dichotomy and drivers of connectedness. *SSRN Working Paper*, doi. Under Review in *Journal of International Financial Markets, Institutions & Money*.
1. **Franke, R., Kukacka, J., Sacht, S. (2023)**. Reconsidering Hodrick-Prescott Detrending and Its Smoothing Parameter. *SSRN Working Paper*, doi. Revision for *Metroeconomica*.

International Collaborations

S. Sacht (Hamburg Institute of International Economics & University of Kiel, Germany)

C. R. Proano and *T. Makarewicz* (University of Bamberg, Germany)

R. Franke (University of Kiel, Germany)

L. Bargigli (University of Florence, Italy)

B. Branch (University of California, Irvine, USA)

Grant Support

2024 – 2026	**Czech Science Foundation (GAČR)**, 24-11558S (Team Member) Hedging uncertainty in commodity markets
2024 +	**Charles University**, UNCE 24/SSH/020 (Participant) Center for Advanced Economic Studies II
2023 – 2025	**Czech Science Foundation (GAČR)**, 23-06606S (Team Member) Deep dive into decentralized finance: Market microstructure, and behavioral and psychological patterns
2020 – 2022	**Czech Science Foundation (GAČR)**, 20-14817S (**Principal Investigator**) Linking financial and economic agent-based models: An econometric approach
2020 – 2022	**Czech Science Foundation (GAČR)**, 20-17295S (Team Member) Cryptoassets: Pricing, interconnectedness, mining, and their interactions
2019 – 2021	**Charles University**, PRIMUS/19/HUM/017 (Team Member) Behavioral finance and macroeconomics: New insights for the mainstream
2018 – 2023	**Charles University**, UNCE/HUM/035 (Participant) Center for Advanced Economic Studies
2016 – 2017	**Charles University**, UNCE 204005/2012 (Participant) Center for Advanced Economic Studies
2017 – 2019	**Czech Science Foundation (GAČR)**, 17-12386Y (Team Member) Multifractality analysis in finance: Extreme events, portfolio and risk management, and market complexity
2014 – 2016	**European Commission**, Collaborative EU Project FinMaP, FP7-SSH- 612955 (Participant) Financial distortions and macroeconomic performance: Expectations, constraints and interaction of agents
2015	**Grant Agency of the Charles University (GAUK)**, G192215 (**Principal Investigator**) Simulated ML estimation of financial agent-based models
2013 – 2018	**Czech Science Foundation (GAČR)**, P402/12/G097 DYME (Participant) Dynamic Models in Economics (Excellence project)
2012 – 2014	**Grant Agency of the Charles University (GAUK)**, 588912 (**Principal Investigator**) Empirical validation of heterogeneous agent models

CONFERENCE PRESENTATIONS

2023	2nd DISEI Workshop on Heterogeneity, Evolution and Networks	Florence
	Conference on Computational Statistics	London
	Workshop in Financial Markets and Nonlinear Dynamics	Paris
2022	Conference on Computational and Financial Econometrics	online
	Workshop on Data-Driven Economic Agent-Based Models	Pisa
	Workshop on Model Evaluation and Causal Search	Pisa
	Conference on Computational Statistics	Bologna
	Econophysics Colloquium	online
	4th Behavioral Macroeconomics Workshop	Bamberg
	Workshop on Computational and Experimental Economics	Barcelona
	Workshop in Financial Markets and Nonlinear Dynamics	Paris
2021	Econophysics Colloquium	Lyon
	Conference on New Trends in Econometrics and Finance	online
	1st DISEI Workshop on Heterogeneity, Evolution and Networks	Florence
	First International Workshop on Agentization	online
	Workshop on Economic Science with Heterogeneous Interacting Agents	online
	Conference on Econometrics and Statistics	online
2020	Conference on New Trends in Econometrics and Finance	online
	Econometric Research in Finance	online
	Annual EAEPE Conference	online
	Annual Conference of the Eastern Economic Association	Boston
2019	Conference on Computational and Financial Econometrics	London
	International CSR, Ethics and Sustainable Business	Braga
	Annual EAEPE Conference 2019	Warsaw
	Computing in Economics and Finance (session chair)	Ottawa
	Workshop on Economic Science with Heterogeneous Interacting Agents (session chair)	London
	2nd Behavioral Macroeconomics Workshop	Bamberg
2018	Workshop on Economic Science with Heterogeneous Interacting Agents	Tokyo
	Computing in Economics and Finance	Milan
	Computing in Economics and Finance (session chair)	NY
2023	Workshop on Economic Science with Heterogeneous Interacting Agents	Milan
	Workshop on Economic Science with Heterogeneous Interacting Agents	Castellon
	Computing in Economics and Finance	Bordeaux
	Collaborative EU Project FinMaP General Assembly Meeting	Leuven
2015	Conference on Computational and Financial Econometrics	London
	Econophysics Colloquium (session chair)	Prague
	Computing in Economics and Finance	Taipei
	First Bordeaux-Milano Joint Workshop on A-B Macro	Bordeaux
	Workshop on Economic Science with Heterogeneous Interacting Agents	Nice
2014	Conference on Computational and Financial Econometrics	Pisa
	Social Modeling and Simulations + Econophysics Colloquium	Kobe
	Workshop on Economic Science with Heterogeneous Interacting Agents	Tianjin
2013	Workshop on AB Approaches in Economic and Social Complex Systems	Tokyo
	Workshop on Economic Science with Heterogeneous Interacting Agents	Reykjavik
2012	Conference on Computational and Financial Econometrics	Oviedo
	Computing in Economics and Finance	Prague
	Latsis Symposium and Workshop	Zurich
	Workshop on Economic Science with Heterogeneous Interacting Agents	Paris

Summer Schools and Workshops

2020	Foundation course on DSGE Modelling (6-day course)	University of Surrey
	Behavioral Macro and Complexity (5-days course)	Timbergen Institute
2017	Workshop on Validation Methods for Agent-Based Models	Kent
2016	WEHIA Doctoral Summer School	Paris (2016), Reykjavik (2015), Tianjin (2014), Nice (2013), Castellon (2012)
	Collaborative EU Project FinMaP General Assembly Meeting	Rome
2015	First Ancona-Milano Summer School on Agent-Based Economics	Ancona
2014	CEF SCE Workshops on ABM and Complexity in Economics	Taipei
	Conference on Behavioral Aspects in Macroeconomics and Finance	Milan
	Agent-Based Modeling teaching course	Leipzig
2013	First Bordeaux Workshop on Agent-Based Macroeconomic	Bordeaux
	4th Summer School of the European Social Simulation Association	Hamburg

Academic Memberships

2021 – 2023 Representative of FSV UK in **Rada vysokych skol**
Member of the Economic Commissison

2014 – 2023 **Academic Senator FSV UK**
Terms: 2014 – 2016, 2018 – 2021, 2022 – 2023, Chair of the Legislative Commission 2019 – 2021, 2022 – 2023

2014 + **Disciplinary Committee FSV UK**

2012 + Society for Economic Science with Heterogeneous Interacting Agents

2012 + Society for Computational Economics

2009 – 2011 Charles University International Club

2007 – 2012 E-Klub, students' economic club, Charles University

Teaching and Supervision

2022 +	**Econometrics I**, Course Leader and Lecturer	bachelor level
2017 +	**Introductory Econometrics**, Course Supervisor and Lecturer	master level
2012 +	**Applied Econometrics**, Lecturer and Teaching Assistant	master level
2018 – 2023	**Behavioral Economics and Finance**, Lecturer	bachelor level
2015 – 2017	**Advanced Econometrics**, Teaching Assistant	master level
2011 – 2015	**Econometrics II**, Teaching Assistant	bachelor level

2013 + **Theses Supervision:** 2 doctoral, 12 master, 21 bachelor theses

Awards

2017 **Lindau Nobel Laureate Meeting participation**
Selected among thousands of young researchers from over 70 countries to represent Czechia in the prestigious 6th Lindau Nobel Laureate Meeting on Economic Sciences that hosted 18 Nobel Laureates in Economics Sciences

2023 **Best Course Teaching Award** for Econometrics I

2023 **IES FSV UK Alumni Chair**

2015 **Best Course Teaching Award** for Advanced Econometrics

2014 – 2020 **Best Course Teaching Award** Applied Econometrics (in 2014, 17, 20)

2012 – 2021 **Golden Course Faculty Teaching Award** for Applied Econometrics (in 2012, 18, 19, 20, 21)

2011 **Dean's Award** for an extraordinarily good master diploma thesis

2009 – 2011 **RWE Scholarship** for graduate students

2008 **Dean's Award** for an excellent Final State Exam performance and for an extraordinarily good bachelor diploma thesis

PROFESSIONAL SERVICES

2023 + **Grant Agency of the Charles University (GAUK)**
Member of the Evaluation Panel for Economic Sciences

2021 + **Editorial Board**, Springer Nature Business & Economics

2018 + **Editorial Board**, Prague Economic Papers

Refereeing

Review of Economic Dynamics, Journal of Economic Behavior & Organization (4×), Journal of Economic Dynamics and Control (3×), International Review of Financial Analysis, Quantitative Finance (2×), Financial Innovation, Macroeconomic Dynamics, Economic Modelling, Computational Economics (4×), Journal of Economic Interaction and Coordination (5×), Springer Nature Business & Economics, Advances in Complex Systems, Physica A, Review of Behavioral Finance, Metroeconomica, Emerging Markets Finance and Trade, International Review of Economics and Finance, PLOS One, e-journal Economics, Scottish Journal of Political Economy, Czech Journal of Economics and Finance (5×), Prague Economic Papers (3×), Czech National Bank Working Papers

SUCCESSES OF MY STUDENTS

2023 *K. Coufalova*: admitted to the **University of Oxford**
T. Bielakova: Deloitte Outstanding Thesis Award (bachelor level), admitted to **ETH Zurich**
2022 *A. Macejovsky:* Deloitte Outstanding Thesis Award (master level)
2021 *E. Zila:* Deloitte Outstanding Thesis Award (bachelor level)
2020 *R. Wojnarova:* Deloitte Outstanding Thesis Award (master level)
K. Havelkova: Deloitte Outstanding Thesis Award (master level)
S. Bolshakov: Deloitte Outstanding Thesis Award (bachelor level)
2018 *J. Vainer:* Deloitte Outstanding Thesis Award (bachelor level)
2017 *A. Pintekova:* **Josef Vavrousek Award FSV UK**
2016 *J. Polach:* MSc in Finance at the **London School of Economics**
2014 *F. Stanek:* Dean's Award for an extraordinarily good bachelors thesis

SKILLS AND INTERESTS

Languages

English: Fluent, C1 Advance (CAE) certificate from 2009, work and study in the USA and UK
German: Intermediate passive
Czech: Mothertongue

Technical Skills

Julia, R, Matlab, Gretl, LaTeX, Jupyter, Git, parallel computing

Interests

Trips with our kids
Sports and outdoor pursuits (bikepacking, bivouacking, long-distance cycling, jogging)
Travelling (so far 54 countries visited, the most interesting: Tajikistan, Mountainous Karabakh, Japan)

updated April 13, 2024