

Jiri Kukacka

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

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#### **PROFILE**

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

2013/10 – 2017/08 Postdoc, Member of CDS (Ph.D. Candidate)

2023/12+ Research Fellow, Czech Academy of Sciences

Institute of Information Theory and Automation, Dept. of Econometrics

2021/12 – 2023/11 Research Associate 2013/03 – 2021/11 Postdoc, Ph.D. Candidate

2009/02 – 06 **Assistant** to *M. Mejstrik*, National Economic Council (NERV)

Economic analyses of financial topics during the preparation of the National Crisis Packet

## RESEARCH VISITS

2023 University of Florence, Italy

Working with L. Bargigli, Dept. of Economics and Business Sciences, workshop talk

2023 Hamburg Institute of International Economics, Germany

**Invited** by *M. Berlemann*, **seminar talk**, working with *S. Sacht*, *R. Franke* 

2022 Sant'Anna School of Advanced Studies, Pisa, Italy

**Invited** by F. Lamperti, Institute of Economics, **seminar talk** 

2016 – 2022 **University of Kiel, Germany** ( $5 \times$ , 7 weeks in total, **invited** visit in 2016)

Dept. of Economics, seminar talk, working with S. Sacht, R. Franke, P. Zegadlo

2016/07 – 10 University of California, Irvine, USA

Postdoctoral Research Stay, Dept. of Economics, working with B. Branch

#### **BIBLIOMETRY**

<b>T</b> Google Scholar	Outputs: 24	Citations: 457	<i>h</i> -index: 10
Scopus	Outputs: 16	Citations: 224	<i>h</i> -index: 8
R Web of Science	Outputs: 15	Citations: 193	<i>h-</i> index: 7

### **Impact Factor Journals**

- 16. **Franke, R., Kukacka, J., Sacht, S. (2025)**. Is the Hamilton regression filter really superior to Hodrick–Prescott detrending? *Macroeconomic Dynamics*, 29, e14, pp. 1-14, . 2023: IF=0.7, AIS=0.344.
- 15. **Petrasek, L., Kukacka, J. (2024)**. US equity announcement risk premia. Forthcoming in *Review of Quantitative Finance and Accounting*, **.** 2023: IF=1.9, AIS=0.371.
- 14. **Sila, J., Kocenda, E., Kristoufek, L., Kukacka, J. (2024)**. Good vs. bad volatility in major cryptocurrencies: The dichotomy and drivers of connectedness. *Journal of International Financial Markets, Institutions and Money*, 96, 102062, . 2023: IF=5.4 (**D1 Business, Finance**), AIS=0.954 (**Q1**).
- 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, 2023: IF=2.3 (Q2), AIS=1.085 (Q1).
- 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, . TF=2.3 (Q2), AIS=1.085 (Q1).
- 11. **Kukacka, J., Kristoufek, L. (2023)**. Fundamental and speculative components of the cryptocurrency pricing dynamics. *Financial Innovation*, 9 (61), pp. 1-23, , TiF=6.9 (**D1 Business, Finance: 9/231**), AIS=1.003 (Q2).
- 10. **Kukacka, J., Sacht, S. (2023)**. Estimation of heuristic switching in behavioral macroeconomic models. *Journal of Economic Dynamics and Control*, 146, 104585, , T. IF=1.9 (Q2), AIS=1.202 (Q1).
- 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, . IF=5.9 (D1 Ethics: 3/77; Q1 Business), AIS=1.926 (D1 Ethics: 5/77; Q1 Business).
- 8. **Kukacka, J., Kristoufek, L. (2021)**. Does parameterization affect complexity of agent-based models? *Journal of Economic Behavior & Organization*, 192, pp. 324-356, , T. IF=2.0, AIS=1.280 (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, , T. IF=4.186 (D1 Mathematics, Applied: 9/267; Q1 Mathematics, Interdisciplinary), 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, , T. 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 (Q2 Physics, Multidisciplinary), AIS=0.473 (Q2).

## **Chapters in Books**

1. **Kukacka, J. (2019)**. Simulated maximum likelihood estimation of agent-based models in economics and finance. In: Chakrabarti, A., Pichl, L., Kaizoji, T. (eds). Network theory and agent-based modeling in economics and finance. *Springer, Singapore*, .

## **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 3747794*, .
- 2. **Brakatsoulas, P., Kukacka, J. (2020)**. Credit rating downgrade risk on equity returns. *IES CUNI Working Papers*, 12/2000, .
- 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

- 4. Sila, J., Kocenda, E., Kristoufek, L., Kukacka, J. (2024). Determinants of wash trading in major cryptoexchanges. SSRN Working Paper 4971590, . Under review in International Review of Financial Analysis.
- 3. **Zila, E., Kukacka, J. (2024)**. Wealth, cost, and misperception: Empirical estimation of three interaction channels in a financial-macroeconomic agent-based model. *IES CUNI Working Papers*, 22/2024, , Under review in *Journal of the European Economic Association*.
- 2. **Bargigli, L., Kukacka, J. (2024)**. Investor sentiment in high-frequency financial data. Presented at WEHIA 2023.
- 1. Franke, R., Kukacka, J., Sacht, S. (2023). Reconsidering Hodrick-Prescott detrending and its smoothing parameter: Extended version. *SSRN Working Paper 4147280*, . 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**

OMITTI OC	11041
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, FP7 EU 612955.SSH-2013.1.3-2: FinMaP (Team Member)
	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 (Team Member)
	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**

2024	7th Cryptocurrency Research Conference	Dubai
	International Conference on Economic Policy in Complex Environments	Milan
	6th Behavioral Macroeconomics Workshop	Heidelberg
	8th Workshop in Financial Markets and Nonlinear Dynamics	Paris
2023	2nd DISEI Workshop on Heterogeneity, Evolution and Networks	Florence
	Conference on Computational Statistics	London
	7th 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
	6th 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
2010	Annual Conference of the Eastern Economic Association	Boston
2019	Conference on Computational and Financial Econometrics	London
	International CSR, Ethics and Sustainable Business Annual EAEPE Conference 2019	Braga
		Warsaw
	Computing in Economics and Finance (session chair)	Ottawa
	Workshop on Economic Science with Heterogeneous Interacting Agents (session chair)	
2018	2nd Behavioral Macroeconomics Workshop Workshop on Economic Science with Heterogeneous Interacting Agents	Bamberg
2016	Workshop on Economic Science with Heterogeneous Interacting Agents Computing in Economics and Finance	Tokyo Milan
2017	Workshop on Economic Science with Heterogeneous Interacting Agents	Milan
2017	Computing in Economics and Finance	New York
2016	Workshop on Economic Science with Heterogeneous Interacting Agents	Castellon
2010	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

JOWINIER S	CHOOLS AND WORKSHOTS			
2020 Four	Foundation course on DSGE Modelling (6-day course)  University of Surre			
Beha	Behavioral Macro and Complexity (5-days course)  Timbergen Inst			
	orkshop on Validation Methods for Agent-Based Models Kent			
2016 WEI	WEHIA Doctoral Summer School Paris (2016), Reykjavik (2015), Tianjin (2014), Nice (2013), Castellon (2012)			
	aborative EU Project FinMaP General Assembly Meeting	Rome		
	First Ancona-Milano Summer School on Agent-Based Economics A			
	O14 CEF SCE Workshops on ABM and Complexity in Economics Tail			
	ference on Behavioral Aspects in Macroeconomics and Finance	Milan		
O	nt-Based Modeling teaching course	Leipzig		
	Bordeaux Workshop on Agent-Based Macroeconomic	Bordeaux		
4th S	Summer School of the European Social Simulation Association	Hamburg		
ACADEMIC	C MEMBERSHIPS			
2021 – 2023	Representative of FSV UK in <b>Rada vysokych skol</b> Member of the Economic Commissison			
2014 - 2023	Academic Senator FSV UK			
	Terms: 2014 – 2016, 2018 – 2021, 2022 – 2023, Chair of the Legislative Commission	n 2019 – 2021, 2022 – 2023		
2014+	Disciplinary Committee FSV UK			
2012+	Society for Economic Science with Heterogeneous Interacting Agents	S		
2012+	Society for Computational Economics			
2009 – 2011	Charles University International Club			
2007 – 2012	E-Klub, students' economic club, Charles University			
	AND SUPERVISION			
2022+		bachelor's level		
	Econometrics I, Course Leader (2023+) and Lecturer			
2017+	Introductory Econometrics, Course Supervisor and Lecturer	master's level		
2012+	Applied Econometrics, Lecturer (2024+) and Teaching Assistant	master's level		
2018 – 2023	Behavioral Economics and Finance, Lecturer	bachelor's level		
2015 – 2017	Advanced Econometrics, Teaching Assistant	master's level		
2011 – 2015	Econometrics II, Teaching Assistant	bachelor's level		
2013+	<b>Theses Supervision:</b> 3 doctoral, 13 master's, 24 bachelor's theses			
Awards				
2017	Lindau Nobel Laureate Meeting participation			
	Selected among thousands of young researchers from over 70 countries to repres			
	6th Lindau Nobel Laureate Meeting on Economic Sciences that hosted 18 Nobel La	aureates in Economics Sciences		
2024	Golden Course Faculty Teaching Award for Econometrics I			
	best bachelor's level economic course			
2023	Best Course Teaching Award for Econometrics I			
2019	IES FSV UK Alumni Chair			
2015	Best Course Teaching Award for Advanced Econometrics			
2014 – 2020	•			
2011 2020				
2012 – 2021				
	<b>Dean's Award</b> for an extraordinarily good master's diploma thesis			
2009 – 2011	RWE Scholarship for graduate students			
2008	<b>Dean's Award</b> for an excellent Final State Exam performance and for bachelor's diploma thesis	r an extraordinarily good		
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## **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 Dynamics and Control  $(3\times)$ , Journal of Economic Behavior & Organization  $(4\times)$ , International Review of Financial Analysis, Financial Innovation, Journal of International Financial Markets, Institutions & Money, Quantitative Finance  $(2\times)$ , Macroeconomic Dynamics  $(2\times)$ , Economic Modelling, Computational Economics  $(4\times)$ , Journal of Economic Interaction and Coordination  $(5\times)$ , 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  $(5\times)$ , Prague Economic Papers  $(3\times)$ , Czech National Bank Working Papers

#### SUCCESSES OF MY STUDENTS

2024	J. X. Ji: Deloitte Outstanding Thesis Award (bachelor's level), Goethe University Frankfurt
2023	K. Coufalova: University of Oxford
	T. Bielakova: Deloitte Outstanding Thesis Award (bachelor's level), ETH Zurich
2022	A. Macejovsky: Deloitte Outstanding Thesis Award (master's level)
2021	E. Zila: Deloitte Outstanding Thesis Award (bachelor's level), University of Amsterdam
2020	R. Wojnarova: Deloitte Outstanding Thesis Award (master's level)
	K. Havelkova: Deloitte Outstanding Thesis Award (master's level)
	S. Bolshakov: Deloitte Outstanding Thesis Award (bachelor's level)
2018	J. Vainer: Deloitte Outstanding Thesis Award (bachelor's 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 bachelor's 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)