Matúš Maciak

+420–608–487–722
matus.maciak@mff.cuni.cz
http://www.karlin.mff.cuni.cz/~maciak

Curriculum Vitae

(Update: April 2024)

Personal Details

Date of Birth	20th of June, 1982	Citizenship	Slovak Republic
Place of Birth	Poprad, Slovakia	Residentship	Czech Republic

Education History

2011 **RNDr. (Doctor of Natural Sciences) in Probability and Mathematical Statistics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

2006–2011 **Ph.D. in Probability and Mathematical Statistics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

2007–2008 **M.Sc. in Biostatistics**, *Centrum for Statistics*, Hasselt University, Belgium.

2001–2006 **Mgr. (master degree) in Probability, Mathematical Statistics and Econometrics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

Final Theses & Supervisors

PhD. Thesis **Flexibility, Robustness, and Discontinuity in Nonparametric Regression Approaches**
Supervisor Prof. RNDr. Marie Hušková, DrSc., Charles University (Defended: 2011)

Rigorous Thesis **Flexibility, Robustness, and Discontinuity in Nonparametric Regression Approaches**
Supervisor Prof. RNDr. Marie Hušková, DrSc., Charles University (Defended: 2011)

Master (MSc.) **Spline models with change-points applied to seroprevalence data**
Supervisor Prof. Dr. Marc Aerts & Prof. Dr. Niel Hens, University of Hasselt (Defended: 2008)

Master (Mgr.) **Additive Regression Models with Regression Splines**
Supervisor Doc. Petr Volf, CSc., UTIA, Czech Academy of Sciences (Defended: 2006)

Research Stays (long-term)

09/2012–12/2013 **Universtity of Alberta**, *Faculty of Sciences*, Edmonton, AB, Canada.
Post Doc Fellow (1.5 years)

09/2007–09/2008 **Universiteit Hasselt**, *Faculty of Sciences*, Hasselt, Belgium.
Erasmus master program in Biostatistics (1 year)

Research Stays (short-term)

07/2020–09/2020 **Technische Universität Dresden**, *School of Transportation*, Dresden, Germany.
Scientific collaboration with Prof. Ostap Okhrin (2 months)

08/2018–09/2018 **Universtity of Alberta**, *Faculty of Sciences*, Edmonton, Canada.
Scientific collaboration with Prof. Ivan Mizera & Prof. Linglong Kong (1 month)

05/2007–05/2007 **Universität Hamburg**, *Faculty of Mathematics*, Hamburg, Germany.
Scientific collaboration with Prof. Natalie Neymeyer (1 month)

Professional Experience

2023–present **Associate Professor**, *Charles University*, Faculty of Mathematics and Physics.
Department of Probability and Mathematical Statistics

2015–2023 **Assistant Professor**, *Charles University*, Faculty of Mathematics and Physics.
Department of Probability and Mathematical Statistics

2014–2015 **Research Assistant**, Czech University of Life Sciences Prague.
Department of Genetics and Breeding

2010–2013 **Data Analyst and Statistician**, *T.G. Masaryk Water Research Institute*, Prague.
Department of Applied Ecology

2007–2009 **Teaching Assistant**, *Charles University*, Faculty of Mathematics and Physics.
Department of Probability and Mathematical Statistics

Research Grants (principal investigator)

2021–2023 **Advanced Econometric Models for Option Pricing II – AdEMOP2**, *(3 years)*.
Grant number: GAČR 21-10768S | standard grant

2018–2020 **Advanced Econometric Models for Option Pricing – AdEMOP**, *(3 years)*.
Grant number: GAČR 18-00522Y | junior grant

2017–2018 **Change-point Estimation in Quantile Regression**, *(2 years)*.
Grant number: 7AMB17FR030, provided by MŠMT Czech Republic | mobility grant

2022 **Functional Changepoint Detection III**, *(1 year)*.
Centre for Strategic Partnership, Charles University/University of Cologne | mobility grant

2021 **Functional Changepoint Detection II**, *(1 year)*.
Centre for Strategic Partnership, Charles University/University of Cologne | mobility grant

Research Grants – team member (selection)

2023–2025 **Sparse solutions of underdetermined systems: retroactive applications, algorithms,. inference, and new perspectives**. Team member; Grant number: GAČR 21-13323S

2021–2023 **Micro Forecasting and Regime Switching in Econometrics – MiFReSE**.
Team member; Grant number: GAČR 21-13323S

2018–2020 **Dynamic and granular loss reserving with copulae – DaGLoRCo**.
Team member; Grant number: GAČR 18-01781Y

2010–2011 **Metodické řízení monitoringu a hodnocení stavu útvarů povrchových vod tekoucích**.
Team member; Grant provider: State Environmental Fund of the Czech Republic

Invited talks (selection)

Universities & Institutions

Canada:	• McGill • University of British Columbia • University of Alberta
Germany:	• Universität zu Köln • University of Hamburg
Italy:	• European Commission Joint Research Centre in Ispra
Slovakia:	• Slovak Academy of Sciences • Matej Bel University
United Kingdom:	• SEPA – Scottish Environmental Protection Agency in Edinburgh
Czech Republic:	• Masaryk University • Palacký University Olomouc • Ernst & Young

Conferences & Workshops	2024: • SMSA Workshop on Stochastic models, Netherlands, HiTEc Workshop, Cyprus 2023: • Paris-Saclay Change-Point Workshop, France 2022: • CMStatistics, UK • Econometrics and Statistics (EcoSta), Japan 2021: • CMStatistics, UK • EcoSta, HongKong (virtual) 2020: • Statistics of Machine Learning (STAT-ML), Czech Republic 2019: • CMStatistics, UK • EcoSta, Taiwan • Greifswald Change Point Detection Workshop, Germany 2018: • CMStatistics, UK • EcoSta, HongKong 2016: • Robustness Theory and Methodology Workshop, Banff International Research Station, Canada 2013: • IMS New Researchers Conference, Montreal, Canada

Professional Collaboration (selection)

Econometrics & Insurance	**Profinit EU Ltd.**, **Boston Consulting Group**, **Generali Česká Pojišťovna**, **Ernst & Young**, Czech Republic; **ETP Slovakia**, Slovakia;
Medicine & Pharmacology	**Mayo Clinic**, Rochester, USA; **F.D. Roosevelt Hospital**, **Central Military Hospital**, **University Hospital Martin**, Slovakia; **Motol University Hospital**, Czech Republic;
Biology & Ecology	**European Commission Joint Research Centre**, Italy; **Scottish Environment Protection Agency**, Ireland; **Bundesministerium für Land- und Forstwirtschatf**, Austria;
Technology & Industry	**Škoda Auto**, Czech Republic; **České Dráhy Railway Company**, Czech Republic; **T. G. Masaryk Water Research Institute**, Czech Republic;

Scientific Activities (selection)

Elected member	Academic Senate of the Faculty of Mathematics and Physics (2017 – 2020, 2023 – 2026), European Regional Committee (ERC) of the Bernoulli Society in 2019 – 2020
Organizer	Invited session organizer for HiTEc Workshop 2024, CompStat 2023 – 2024, CMStatistics 2021 – 2024, and EcoSta 2019 – 2023; Organizing committee member for Probastat 2024, 2019, and 2015, EYSM 2015, SSC 2013, Prague Stochastics 2010, ICORS 2010
Reviewer	ASTIN Bulletin, Canadian Journal of Statistics, Economic Modelling Journal, Journal of Statistical Planning and Inference, Journal of Computational and Applied Mathematics, Kybernetika, Multivariate Statistics Journal, Scandinavian Journal of Statistics, Metrika, Biometrics, Statistical Papers, Tatra Mountains Journal, and many others
Editor	AMISTAT Springer Proceedings in Mathematics and Statistics 2019, AMISTAT Springer Proceedings in Mathematics and Statistics 2015

Research Keywords (selection)

big data, dependent structures, machine learning, statistical learning, atomic pursuit
nonparametric regression, regularities, instabilities, and structural breaks, robustness
sparsity, regularization, variable selection, lasso, weak dependence, bootstrap
empirical econometrics, derivative trading, volatility estimation, option pricing

Publication Activity

WoS	29 publications with 154 citations (without auto-citations | 190 in total)
Scopus	31 publications with 157 citations (without auto-citations | 196 in total)
h-index	8 (Web of Science)

Supervised Theses

Ph.D.	consultant of 2 students
Master/Bc.	6/16 defended, 3/3 in progress

Personal Skills

Programming	SAS, R, S-Plus, SPSS, Matlab, Mathematica, PHP, html, WealthLab, TEX, LATEX, etc.
Memberships	Bernoulli Society, Czech National Group of the International Society for Clinical Biostatistics, Czech Statistical Society, Alpine Club of Canada, National Geographic Society
Interests	Wedding and coverage photography, mountaineering and sport various activities, literature and blog publications, online SME newspaper administrator

Awards

Top 10 Elite Publication	Maciak, M., Okhrin, O., and Pešta, M. Infinitely stochastic micro reserving. *Insurance: Mathematics and Economics*, 100(2021), 30–58. *Awarded by the Council of the project Cooperatio – Mathematics, 2021*

Languages

fluent	English (spoken & written), Czech (spoken & written), Slovak (mother tongue)
fair	German (spoken and written)
in progress	Spanish (beginner)

Scientific Identifiers

ResearcherID	D-7836-2016
Scopus ID	55376734200
Orchid ID	0000-0002-9414-2151

Prague, April 2024