Michal Pešta

Curriculum Vitae

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Personal Details

Date of Birth	12th of November, 1982
Place of Birth	Liptovský Mikuláš, Slovakia
Citizenship	Czech Republic & Slovak Republic

Education

2020 **Doc. (Associate Professor) in Probability and Mathematical Statistics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

2011 **RNDr. (doctor of natural sciences) in Probability and Mathematical Statistics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

2006–2010 **Ph.D. in Probability and Mathematical Statistics**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

2006–2007 **M.Sc. in Biostatistics with distinction**, *Faculty of Sciences, Centrum for Statistics*, University of Hasselt, Belgium.

2001–2006 **Mgr. in Probability, Mathematical Statistics and Econometrics with distinction**, *Faculty of Mathematics and Physics*, Charles University, Czech Republic.

Doctoral Thesis

Title	*Modern Asymptotic Perspectives in Errors-in-Variables Modeling*
Supervisor	Prof. RNDr. Jaromír Antoch, CSc.
Description	Bootstrap methods for the Errors-in-Variables model with weakly dependent errors

Experience

2011–present **Research Assistant**, *Charles University*, Faculty of Mathematics and Physics.
Department of Probability and Mathematical Statistics

2010–2011 **Non-life Actuary**, *Generali PPF Holding B.V.*, Prague.
Actuary, non-life risk and valuation

2009–2010 **Head Statistician and Analyst**, *T. G. Masaryk Water Research Institute*, Prague.
Statistical analyses of bio-hydrological data

2007–2009 **Teaching Assistant**, *Charles University*, Faculty of Mathematics and Physics.
Junior Lecturer of probability and mathematical statistics for master students

2006 **Guest Resercher**, *SFB 649 "Economic Risks"*, Humboldt University, Berlin.
Program for young researchers

International Research Stays

Dec 2016–Feb 2017 **Technische Universität Dresden**, *School of Transportation*.
Cooperation with Prof. Ostap Okhrin

Mar 2013–Jun 2013 **Humboldt-Universität zu Berlin**, *School of Business and Economics*.
Cooperation with Prof. Wolfgang K. Härdle and Prof. Ostap Okhrin

Oct 2008–Nov 2008 **Universität Hamburg**, *Faculty of Mathematics, Informatics and Natural Sciences*, 1 month.
Cooperation with Prof. Natalie Neumeyer

Sep 2006–Sep 2007 **Universiteit Hasselt**, *Faculty of Sciences*.
Erasmus programme in biostatistics

Jul 2006–Aug 2006 **Humboldt-Universität zu Berlin**, *School of Business and Economics*.
Cooperation with Prof. Wolfgang K. Härdle and Dr. Zdeněk Hlávka

Awards

2018 Teaching evaluation award for the summer semester 2017/2018 (course Probability for Financial Mathematics); awarded by the Dean of the Faculty of Mathematics and Physics, Charles University

2016 Bernard Bolzano Foundation in Mathematics Award; awarded by Charles University, Faculty of Mathematics and Physics

2010 Best student talk, Conference on Resampling Methods and High Dimensional Data, College Station, Texas, USA; awarded by Texas A&M University

2008 ROBUST 2008 Student's best paper competition, Pribylina, Slovakia; awarded by The MathWorks, Inc.

2006 Student's master thesis competition, Charles University; awarded by McKinsey & Company, Inc.

2006 1st place in Student scientific competition "SVOČ", category: Probability, mathematical statistics, econometrics and financial mathematics; Bratislava, Slovakia

2001 Bronze olympic medal, 33rd International chemistry olympiad, Bombay, India

Languages

Slovak **fluent** *mother language*

English, Czech **advanced**

German **passive**

Computer Skills

Statistics SAS, R, S-Plus, SPSS

Mathematics Matlab, Mathematica

Programming TeX, C, PHP, html, UNIX

Grants

2018-2020 Junior grant GAČR 18-01781Y (principal researcher) of the Czech Science Foundation

2018-2020 Junior grant GAČR 18-00522Y (team member) of the Czech Science Foundation

2015-2017 Junior grant GAČR 15-04774Y (team member) of the Czech Science Foundation

2013-2015 Postdoc grant GAČR 13-12994P (principal researcher) of the Czech Science Foundation

2012-2017 IAP Research Network P7/06 (team member) of the Belgian State (Belgian Science Policy)

2011-2018 Excellence grant P402/12/G097 DYME (team member) of the Czech Science Foundation

2009-2010 Student grant GAUK 49809 (principal researcher) of the Grant Agency of Charles University

2007 Student grant GAUK 138707 (team member) of the Grant Agency of Charles University

Scientific Papers

WoS 28 publications
141 citations (without self-citations)

Scopus 25 publications
167 citations (without self-citations)

Reviewer for Journals

ASTIN Bulletin, Communications in Statistics – Simulation and Computation, Communications in Statistics – Theory and Methods, Computational Statistics, Entropy, Insurance Mathematics and Economics, Journal of Computational and Applied Mathematics, Journal of Econometrics, Journal of Risk and Financial Management, Journal of Statistical Planning and Inference, Kybernetika, Mathematics, PLOS ONE, Risks, Scandinavian Journal of Statistics, Statistical Papers, Statistics, Statistics and Probability Letters

Invited Talks

- Apr 2020 Research seminar on Insurance Mathematics and Stochastic Finance, ETH Zurich, Switzerland; title: Infinitely Stochastic Micro Forecasting (online)
- Dec 2019 13th International Conference on Computational and Financial Econometrics (CFE 2019), London, UK; title: Micro forecasting
- Jul 2019 Workshop Change Point Detection: Limit Theorems, Algorithms, and Applications in Life Sciences, Greifswald, Germany; title: Nuisance parameters free changepoint detection in non-stationary series
- Jun 2019 3rd International Conference on Econometrics and Statistics (EcoSta 2019), Taichung, Taiwan; title: Nuisance parameters free changepoint detection in non-stationary series
- Aug 2018 Seminar of the Institute of Mathematics and Computer Science (University of Greifswald), Greifswald, Germany; title: Block bootstrap for abrupt change in mean avoiding variance estimation
- Dec 2017 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2017), London, UK; title: Change point analysis in panel data without boundary issue
- Nov 2016 Statistical Workshop of Palacky University Olomouc, Chrastice, Czech Republic; title: Change point estimation in panel data without boundary issue
- Nov 2015 Statistical Workshop of Palacky University Olomouc, Pusté Žibřidovice, Czech Republic; title: Testing structural changes in panel data with small fixed panel size and bootstrap
- Oct 2015 Workshop on Shape Constrained Inference, Leiden (Lorentz Center), The Netherlands; title: Isotonic regression in Sobolev spaces
- Apr 2013 Mathematical Statistics Seminar of Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany; title: Asymptotic consistency and inconsistency of the chain ladder
- May 2012 Statistical Methods for Financial Data III, Graz, Austria; title: Asymptotics versus bootstrapping in errors-in-variables models with dependent errors
- Apr 2009 Statistical Seminar of Comenius University in Bratislava, Bratislava, Slovakia; title: Total least squares and residual bootstrapping

Selected Contributed Talks

- Apr 2019 International Actuarial Association Colloquium 2019, Cape Town, South Africa; title: Dynamic and granular loss modeling embracing dependencies
- Jun 2018 International Congress of Actuaries, Berlin, Germany; title: Granular loss modeling with copulae
- Jun 2017 International Conference on Econometrics and Statistics, Hong Kong, China; title: Testing structural changes and change point estimation in panel data without boundary issue
- Aug 2016 International Conference on Computational Statistics, Oviedo, Spain; title: Shape constrained regression in Sobolev spaces and tests of isotonicity
- Aug 2015 ASTIN Colloquium, Sydney, Australia; title: Modeling dependencies in claims reserving with GEE
- Jul 2014 International Congress on Insurance: Mathematics and Economics, Shanghai, China; title: Conditional least squares and copulae in clains reserving for a single line of business
- Aug 2013 Joint Statistical Meeting, Montreal, Canada; title: Asymptotic consistency and inconsistency of the chain ladder

Jun 2012 International Workshop on Recent Advances in Time Series Analysis, Protaras, Cyprus; title: Asymptotics and bootstrapping in errors-in-variables model with dependent errors

Conference Committee Memberships

Sep 2019 Organization and Program Committee, Analytical Methods in Statistics – AMISTAT 2019, Liberec

Nov 2015 Organization and Program Committee, Analytical Methods in Statistics – AMISTAT 2015, Prague

Teaching Experiences

Since 2007 Lectures and exercises on probability, mathematical statistics, statistical software, financial and insurance mathematics

Supervised Theses

Rigorous 2 defended

Master 20 defended, 4 in progress

Bachelor 15 defended, 3 in progress

Society Memberships

Since 2014 Czech Society of Actuaries

Since 2006 Czech Statistical Society

Scientific Identifiers

ORCID 0000-0001-5311-0797

ResearcherID C-9467-2017

Scopus ID 55322148000

Google Scholar Michal Pesta

Research Interests

My first master thesis from statistics dealt with nonparametric regression techniques in Sobolev spaces. During my PhD studies, my interest shifted to stochastic errors-in-variables models with focus on the total least squares estimation, weak dependences, and bootstrap methods. The biostatistic knowledge obtained during my second master studies (in Belgium) was utilized in analyzing various kinds of bio-hydro-ecological data for a water research institute and cancer data for an institute of pathophysiology. Afterwards, I got in touch with actuarial issues in an insurance company. Finally, I have started to work as a research assistant at Charles University, where my area of research interests consists mainly of changepoint analysis, bootstrap methods, time series and panel data, actuarial risk valuation, stochastic claims reserving, random effects modeling, weak dependency, and measurement errors models.

Miscellany

Member of the Academic senate Charles University, Faculty of Mathematics and Physics, February 2017–January 2020

Prague, April 26, 2021