

David Kraus

Personal information

born 31 October 1979
citizenship Czech Republic
address Ecole Polytechnique Fédérale de Lausanne
Institute of Mathematics, Chair of Mathematical Statistics
EPFL SB MATHAA SMAT, Station 8
CH-1015 Lausanne
Switzerland
email david.kraus@epfl.ch
web people.epfl.ch/david.kraus

Education

2003–2008 Ph.D., Statistics, Charles University in Prague
(advisor: Petr Volf, thesis title: Neyman's smooth tests in survival analysis)
1998–2003 Mgr. (M.Sc. equivalent), Statistics, Charles University in Prague

Experience

Since 2008 Ecole Polytechnique Fédérale de Lausanne, Institute of Mathematics
Postdoctoral Researcher
(supervisor: Victor Panaretos)
2005–2008 Institute of Information Theory and Automation, Prague
Research Assistant
2004–2008 Charles University in Prague, Department of Statistics
Research Assistant, Teaching Assistant

Qualifications and skills

Research

General orientation: statistics and probability
(statistical theory, methods, modelling, computing and simulation, probability theory, stochastic processes)

Research interests: statistical modelling and inference for stochastic processes, functional and multivariate data analysis, survival and event history analysis, point processes, complex and high dimensional data, non- and semi-parametric procedures, quantile methods, goodness-of-fit inference, robust analysis, applications to natural science (molecular biology, geophysics, . . .)

Background in other fields of mathematics (numerical analysis, optimisation, . . .)

Computer skills

Mathematical and statistical software: R, Maple

Programming languages: C, FORTRAN

Software development: development of packages for R software

Computing: computing in supercomputer grids

Languages

English, Czech, French

Teaching

Served as a teaching assistant for introductory and advanced courses in statistics (for students of mathematics and other disciplines)

Supervised student projects and theses

Academic service

Reviewer for *Biometrika*, *Computational Statistics*, *Journal of Statistical Planning and Inference*, *Kybernetika*, *Mathematical Reviews*, *Scandinavian Journal of Statistics*, *Statistical Modelling*, *Statistics*, *Statistics and Decisions*

Publications and presentations

Publications

D. Kraus and V. M. Panaretos. Statistical inference on the second-order structure of functional data in the presence of influential observations. Submitted, 2011.

V. M. Panaretos, D. Kraus, and J. H. Maddocks. Second-order comparison of Gaussian random functions and the geometry of DNA minicircles. *J. Amer. Statist. Assoc.*, 105:670–682, 2010.

D. Kraus. Adaptive Neyman's smooth tests of homogeneity of two samples of survival data. *J. Statist. Plann. Inference*, 139:3559–3569, 2009.

D. Kraus. Checking proportional rates in the two-sample transformation model. *Kybernetika*, 45:261–278, 2009.

D. Kraus. Identifying nonproportional covariates in the Cox model. *Comm. Statist. Theory Methods*, 37:617–625, 2008.

D. Kraus. Data-driven smooth tests of the proportional hazards assumption. *Lifetime Data Anal.*, 13:1–16, 2007.

D. Kraus. Goodness-of-fit inference for the Cox–Aalen additive–multiplicative regression model. *Statist. Probab. Lett.*, 70:285–298, 2004.

Invited conference presentations

Nonparametrics and Geometry 2011, Prague, Czech Republic, 2011

International Workshop on Functional and Operatorial Statistics, Santander, Spain, 2011

International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management, Beer-Sheva, Israel, 2010

ROBUST 2010, 16th Winter School of the Union of Czech Mathematicians and Physicists, Králíky, Czech Republic, 2010

Invited seminar presentations

Université Libre de Bruxelles, Belgium, 2011; Universität Wien, Austria, 2011; Politecnico di Milano, Italy, 2011; Université de Toulouse, France, 2010; Ecole Polytechnique Fédérale de Lausanne, Switzerland, 2008; Universität Magdeburg, Germany, 2007