Doc. RNDr. Kateřina Helisová, Ph.D. - Curriculum Vitae

Personal

Date and place of birth:	12th February 1981, Vsetín, Czech Republic
Affiliation:	Czech Technical University in Prague, Faculty of Electrical Engineering, Deparment of Mathematics
Address:	Technická 2, 166 27 Prague 6, Czech Republic
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Qualification

1999 - 2005	Master study at Charles University, Faculty of Mathematics and Physics; study branch: Financial and Insurance Mathematics
June 3, 2005	Defence of MSc thesis "Metody analýzy úvěrového rizika individuálních klientů" [In Czech]; supervisor: RNDr. Jitka Zichová, Dr.
2005 - 2009	PhD study at Charles University, Faculty of Mathematics and Physics; study branch: Probability and Mathematical Statistics
September 11, 2009	Defence of PhD thesis "Models for Random Union of Interacting Discs"; supervisor: Prof. RNDr. Viktor Beneš, DrSc.
November 8, 2017	Habilitation in Applied mathematics at Czech Technical University in Prague, Faculty of Electrical Engineering

Employment history

March 2008 - November 2017	Assistant professor at Czech Technical University in Prague, Faculty of Electrical Engineering, Department of Mathematics
since December 2017	Associate professor at Czech Technical University in Prague, Faculty of Electrical Engineering, Department of Mathematics

Abroad research stays (longer than 1 month)

September - November 2006	PhD research stay at Aalborg University (Denmark)
March - September 2015	Post-doctoral research stay at University of Split (Croatia)

Research

- 20 publications and 112 citations (62 without self-citation) in WoS, h-index 5

- Grants (solver or co-solver):

    - Klebanov L., Helisová K., Mrkvička T.: New approaches to modeling and statistics of random sets; project of the Czech Science Foundation (GA ČR) No. 19-04412S, 2019 - 2021

    - Helisová K.: Stochastic modelling and statistical analysis of random sets; project of the Czech Science Foundation (GA ČR) No. 13-05466P, 2013 - 2015

- International collaboration:

    - prof. Jesper Møller, University of Aalborg (Denmark)

    - prof. David Dereudre, University of Lille (France),

    - prof. Johan Debayle, Institute MINES Saint-Etienne (France),

    - associate prof. Frederic Lavancier, University of Nantes (France),

    - Dr. Ivo Ugrina, University of Split / University of Zagreb (Croatia),

    - Dr. Vesna Gotovac Đogaš, University of Split (Croatia)

- Current research interest: stochastic geometry and spatial statistics with focus on planar random sets

Activities in the last three years

Publications

- Gotovac Đogaš V., Helisová K., Klebanov L.B., Staněk J., and Volchenkova I.V. (2023+): A new definition of random set. *Glasnik matematički*, under review.

- Minaříková M., Fík Z., Štorm J., Helisová K., Ferrová K., and Mahelková G. (2022): Tear matrix metalloproteinase-9 levels may help to follow a ocular surface injury in lagophthalmic eyes. *Plos One* **17**, article number: e0274173, DOI: 10.1371/journal.pone.0274173.

- Debayle J., Gotovac Đogaš V., Helisová K., and Staněk J. (2021): Methods for assessing similarity of random sets. *Proceedings of ISIVC'2020: The 10th International Symposium on Signal, Image, Video and Communications*, $1-6$, DOI: 10.1109/ISIVC49222.2021.9487547.

- Debayle J., Gotovac Đogaš V., Helisová K., Staněk J., and Zikmundová M. (2021): Assessing similarity of random sets via skeletons. *Methodology and Computing in Applied Probability* **23**, $471-490$.

- Gotovac Đogaš V. and Helisová K. (2021): Testing equality of distributions of random convex compact sets via theory of N-distances. *Methodology and Computing in Applied Probability*, **23**, $503-526$.

- Gotovac Đogaš V., Helisová K., Radović B., Staněk J., Zikmundová M., and Brejchová K. (2021): Two-step method for assessing similarity of random sets. *Image Analysis and Stereology* **40**, $127-140$.

- Helisová K., and Staněk J. (2020): Rozlišování realizací náhodných množin. *Informační Bulletin České statistické společnosti* **31**, $3-23$. [In Czech]

Other service to community

- Organiser of the international workshop "Stochastika 2021" (Kohútka, February 5 - 10, 2022)

- Member of the executive committee of The Czech Mathematical Society (2018 - 2022)

- Member of the executive committee of The Czech Statistical Society (2021 - present)

- Member of the board of the doctoral program "Measurement and Signal Processing in Chemistry" at The University of Chemistry and Technology, Prague (2020 - present)