Rafal Kulik

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EMPLOYMENT HISTORY and DEGREE:

July 1, 2016 – June 30, 2019: Chair, Department of Mathematics and Statistics, University of Ottawa
May 1, 2016: Full Professor, Department of Mathematics and Statistics, University of Ottawa
May 1, 2011 – April 30, 2016: Associate Professor, Department of Mathematics and Statistics, University of Ottawa
2008 – April 30, 2011: Assistant Professor, Department of Mathematics and Statistics, University of Ottawa
2006 – 2007: Lecturer, School of Mathematics and Statistics, University of Sydney, Australia
2006 – 2006: Postdoc, School of Mathematics and Statistics, Carleton University
2003 – 2005: Postdoc, Department of Mathematics and Statistics, University of Ottawa
2012: PhD, University of Wroclaw, Poland

PUBLICATIONS:

Books:
1) Beran, J., Ghosh, S., Feng, Y., **Kulik, R.** *Long Memory Processes: Probabilistic Properties and Statistical Methods* (2013), Springer.
2) **Kulik, R.,** Soulier, P. *Heavy Tailed Time Series* (2020), to appear, Springer.
Book edited:
Asymptotic Laws and Methods in Stochastics. *A Volume in Honour of Miklós Csörgő.* Editors: Dawson, D., **Kulik, R**., Ould Haye, M., Szyszkowicz, B., Zhao, Y. Springer, 2015.

Papers in refereed journals:
45 papers in total in such journals as: Advances in Applied Probability, Annals of Statistics, Applied and Computational Harmonic Analysis, Canadian Journal of Statistics, Electronic Journal of Statistics, Extremes, Journal of Time Series Analysis, Proceedings of the National Academy of Sciences, Stochastic Models, Stochastic Processes and their Applications.

SOME RECENT PAPERS

1. Cissokho, Y., **Kulik, R.** Estimation of cluster functionals for regularly varying time series: sliding blocks estimators. Annals of Statistics.
2. Jentsch, C., **Kulik, R.** Bootstrapping tail array sums. To appear in Bernoulli (2020).
3. Bilayi-Biakana, C., **Kulik, R.** and Soulier, P**.** Statistical inference for heavy tailed series with extremal independence. Extremes 23, 1-33 (2020).
4. Bilayi-Biakana, C., Ivanoff, G. and **Kulik, R.** The tail empirical process for long memory stochastic volatility models. Electronic Journal of Statistics 13, 3453-3484 (2019).
5. Betken, A. and **Kulik, R.**. Testing for change in stochastic volatility with long range dependence. Journal of Time Series Analysis 40, 707-738 (2019).
6. **Kulik, R**., Soulier, P., Wintenberger, O. The tail empirical process of regularly varying functions of geometrically ergodic Markov chains. Stochastic Processes and their Applications, 129, 4209-4238 (2019).

7. **Kulik, R.,** Tong, Z. Estimation for the expected shortfall given an extreme component under conditional extreme value model. Extremes, 22, 29-70 (2019).
8. Abdelrazeq, I, Ivanoff, G. and **Kulik, R**. Goodness-of-fit tests for Lévy-driven Ornstein-Uhlenbeck processes. Canadian Journal of Statistics, 46(2), 353-376 (2018).

EDITORIAL ACTIVITIES:

Associate Editor for
- Extremes
- Electronic Journal of Statistics
- Stochastic Processes and their Applications

HQP:

Completed:
1 PDF at UofO (co-supervised);
4 PhD at UofO (one supervised, three co-supervised);
9 MSc at UofO;
2 Masters II projects at the African Institute for Mathematical Sciences (AIMS-Senegal);
In progress:
3 PhD (1 co-supervised); 1 M.Sc.

GRANTS, OTHER FUNDING

NSERC research grant. ($140,000 over 5 years) 2018-2023.
NSERC research grant. ($95,000 over 5 years) 2013-2018.
NSERC research grant. ($80,000 over 5 years) 2008-2013.
MITACS Accelerate ($135,000 over 3 years; funding for a PhD student) 2020-2022.
MITACS Accelerate ($15,000; funding for a MSc student) 2019.
Fonds Canada-France ($10,000 per year) 2014-2016.
Several Research in Pairs (BIRS, CNRS Luminy, Oberwolfach)

OTHER EVIDENCE OF IMPACT:

- Workshop: *Heavy Tails, Long-Range Dependence and Random Structures***.** CIRM-Luminy, Marseille, France. Organizer, October 2020.
- Workshop: *Self-Similarity, Long Range Dependence and Extremes*. BIRS-CMO, Oaxaca, Mexico. Organizer, June 2018.
- Workshop: *Dependence, Stability and Extremes*, Toronto. Fields Institute Workshop. Organizer. May, 2016.
- Workshop on *Recent Advances and Trends in Time Series Analysis: Nonlinear Time Series, High Dimensional Inference and Beyond*, Banff, Alberta (27 April - 2 May 2014).
- Pierre Robillard Award (best PhD in statistics in Canada) Committee, 2012-2014.
- Treasurer, Statistical Society of Canada (Probability Section), 2011-2017.