Touqeer Ahmad

CURRICULUM VITAE

Contact Information

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Current Position

Post Doctoral Research Fellow
May 2023 – To date
ENSAI École Nationale de la Statistique et de l'Analyse de l'Information, Bruz, France.
Project title: Dimension reduction for extreme value analysis
Collaborators: Prof. François Portier & Prof. Gilles Stupfler

Research interests

- Distributional regression modeling and Bayesian modeling of extreme events
- Extreme value risk modeling for financial data
- Spatio-temporal modeling of environmental and agricultural data
- Dimension reduction via machine learning in extremes

Education

December 2019 – June 2023
PhD in Statistical Sciences
University of Padova, Italy, Department of Statistical Sciences
Title of dissertation: "On the modeling of discrete extreme values "
Supervisor: Prof. Carlo Gaetan
Co-supervisor: Dr. Philippe Naveau

Septemeber 2015 – August 2017
MS Statistics
International Islamic University, Islamabad, Pakistan, Faculty of Basic and Applied Sciences
Title of dissertation: "Rainfall Frequency Analysis in Pakistan using Bayesian Approach "
Supervisor: Prof. Ishfaq Ahmad
Final mark: CGPA 3.85/4.00 (Gold medal+ distinction)

Septemeber 2013 – August 2015
Masters of Science in Statistics .
International Islamic University, Islamabad, Pakistan, Faculty of Basic and Applied Sciences
Final mark: CGPA 3.77/4.00

Visiting periods

March 2022 – July 2022
Le Laboratoire des Sciences du Climat et de l'Environnement (LSCE),Paris, France.
Université de Versailles Saint-Quentin-en-Yvelines - UVSQ, Paris, France.
Supervisors: Prof. Philippe Naveau and Prof. Julien Worms

December 2022 – February 2023
Research center for statistics, University of Geneva, Switzerland.
Supervisor: Prof. Sebastian Engelke

Work experience

February 2018 – November 2019
Govt. of Punjab Higher Education Department, Pakistan.
Lecturer Statistics.

July 2016 – March 2018
Department of Statistics, AIOU, Islamabad, Pakistan.
Teaching Assistant.

Awards and Scholarship

December 2019 – January 2023
Won a fully funded scholarship grant from "Fondazione Cassa di Risparmio di Padua e Rovigo (CARIPARO)" for PhD in Statistical Sciences at the University of Padua, Italy.

March 2019
Received Gold Medal by standing at top in MS Statistics degree.

August 2015
Received Laptop from Prime Minister laptop scheme by standing at the top in Masters of Science in Statistics degree.

Computer skills

- R language, Python
- C++
- SPSS, Minitab, Eviews
- Latex, MS Office

Language skills

Urdu, Punjabi: native;
English: Advance (written/spoken)
Italian: basic (spoken);

Publications

Journals articles

Ahmad, T., Ahmad, I., Arshad, I. A., & Almanjahie, I. M. (2022). An efficient Bayesian modelling of extreme winds in the favor of energy generation. *Energy Reports* **9(1)**, 2980–2992. https://doi.org/10.1016/j.egyr.2023.01.093

Ahmad, T., Ahmad, I., Arshad, I. A., & Bianco, N. (2021). A comprehensive study on the Bayesian modelling of extreme rainfall: a case study from Pakistan. *International Journal of Climatology* **42(1)**, 208–224. https://doi.org/10.1002/joc.7240

Noor, F., Masood, S., Sabar, Y., Shah, S. B. H., **Ahmad, T.**, Abdollahi, A., & Sajid, A. (2021). Bayesian analysis of cancer data using a 4-component exponential mixture model. *Computational and Mathematical Methods in Medicine* **2021** , https://doi.org/10.1155/2021/6289337/.

Cheema, A. R., Firdous, S., **Ahmad, T.**, & Imran, M. (2021). Family planning and fertility reduction in Pakistan. *Ilkogretim Online*, **20(5)**, 3617–3627. https://www.ilkogretim-online.org/fulltext/218-1616651153.pdf

Ahmad, I., **Ahmad, T.**, & Almanjahie, I. M. (2019). Modelling of extreme rainfall in Punjab, Pakistan using Bayesian and frequentist approach. *Applied Ecology and Environmental Research* **17(6)**, 13729-13748. https://doi.org/10.15666/aeer/1706_1372913748.

Articles submitted to Journals

Ahmad, I., **Ahmad, T**., Almanjahie, I. M., & Athar M. A., (2023). An estimation of regional and at-site quantiles of extreme winds under flood index procedure. *Heliyon: Mathematics* (Under review).

Ahmad, T., Gaetan, C., & Naveau P., (2023). A regression model for count data with extreme observations. *Statistical Modelling: An International Journal* (Under review)

Working papers

Ahmad, T., Gaetan, C., (2023). Bivariate dependent modelling of discrete avalanches extremes.

Ahmad, T., Gaetan, C., (2023). A latent process model for discrete temporal extremes. *Ready for submission.*

Ahmad, I., **Ahmad, T**., Shafiq, U.R. (2023). A detailed study on quantification and modelling of drought characteristics using different copula families. *Ready for submission.*

Ahmad, T., Shafiq, U.R. (2023). Modeling of heavy floods through robust distributional regression.

Ahmad, T., Portier, F and Stupfler, G (2023). Dimension reduction for extreme value analysis.

Ahmad, T (2023). Modeling the entire range of extreme observations.

Presentations

Ahmad, T., & Gaetan, C., (2023). A latent process model for discrete extremes. 13th International Conference of Extreme Value Analysis 2023 (EVA2023), Bocconi University, Milan, Italy. Date 26-30 June 2023.

Ahmad, T., Gaetan, C., & Naveau P., (2022). Modelling of discrete extremes through extended versions of discrete generalized Pareto distribution. 15th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (CMStatistics) King's College London, UK. Date 17-19 December 2022.

Ahmad, T., (2022). Modelling the entire range of discrete extreme data. *International Conference on Recent Trends in Statistics & Data Analytics*, National University of Science and Technology, Islamabad. Date, 23 September 2022.

Ahmad, T., (2022). Some new versions of discrete extreme models. (Invited speaker) *Laboratoire de Mathématiques de Versailles*, Versailles, France. Date, 19 April 2022.

Ahmad, T., (2022). Some new versions of discrete extreme models. (Yearly) *Department of statistical science University of Padova, Italy.* Date, 17 February 2022.

References

Prof. Carlo Gaetan
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Dr. Philippe Naveau
Institution: Laboratoire des Sciences du Climat et l'Environnement (LSCE), Paris, France
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