Peng Zhong

University of New South Wales (UNSW Sydney), School of Mathematics and Statistics
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EDUCATION

King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia, 2019-2022
PhD in Statistics,
Dissertation Title: Modeling and Simulation of Spatial Extremes Based on Max-Infinitely Divisible and Related Processes
Advisor: Prof. Raphaël Huser

King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia, 2017-2018
MSc in Statistics,
Advisor: Prof. Raphaël Huser

Southern University of Science and Technology (SUSTech), Shenzhen, China, 2013-2017
BEc in Financial Mathematics

HONORS

Dean's List, CEMSE, KAUST, 2022

PROFESSIONAL EXPERIENCE

Postdoctoral Fellow, UNSW Sydney, Feb 2023 – Present

CSMAR DATA TECHNOLOGY, Data Analyst, Summer 2016
Data analysis; Data scraping; Present and review literature in Finance.

TEACHING EXPERIENCE

Year 10 Work Experience – Data Visualization, November 2023, 2024
Teaching Assistant (STAT 250: Stochastic Processes), CEMSE, KAUST, Fall 2020
Teaching Assistant (Real Analysis), SUSTech, Spring 2017

TALKS & POSTERS

Invited Talk: Flexible max-stable processes for fast and efficient inference.
EcoSta Conference 2024 (Virtual), Beijing Normal University, China, 2024.

Invited Talk: Vecchia Likelihood Approximation for Accurate and Fast Inference in Intractable Spatial Max-Stable Models.
CRG Workshop (Virtual), KAUST, Saudi Arabia, 2024

Invited Talk: Spatial modeling and future projection of extreme precipitation extents.
CMStatistics Conference 2023 (Virtual), Berlin, Germany, December 2023

Talk: Spatial modeling and future projection of extreme precipitation extents.
Australian Statistical Conference 2023, University of Wollongong, December 2023.

Invited Talk: Are spatial precipitation extremes becoming more intense, wider, or both? An extreme-value statistics perspective.
Stat Seminar, UNSW Sydney, October 2023.

Talk: Modeling non-stationary temperature maxima based on extremal dependence changing with event magnitude.
Extreme Value Analysis 2021 (Virtual), University of Edinburgh, UK, June 2021.

Poster: Exact simulation of max-infinitely divisible processes.
13th International Workshop on Rare-Event Simulation (Virtual), Paris, France, May 2021.

Talk: Exact simulation of max-infinitely divisible processes.
Virtual workshop on "Statistical Estimation and Detection of Extreme Hot Spots, with Environmental and Ecological Applications", KAUST, Saudi Arabia, February 2021.

Talk: Modeling non-stationary temperature maxima based on extremal dependence changing with event magnitude.
Virtual workshop on "Statistical Estimation and Detection of Extreme Hot Spots, with Environmental and Ecological Applications", KAUST, Saudi Arabia, February 2021.

Talk: Modeling non-stationary temperature extremes with level-dependent extremal dependence.
Joint Statistical Meetings (Virtual), USA, August 2020.

Poster: Modeling spatial extremes with max-infinitely divisible models level-dependent extremal dependence.
Joint Statistical Meetings, Denver, Colorado, USA, July 2019.

SKILLS
Programming: R, Python, Pytorch, C++, Shell, Slurm, PBS.
Other: Latex, Markdown, and MS Office
Languages: English and Chinese

PROFESSIONAL SERVICES
Reviewer: Journal of Multivariate Analysis (1), Journal of Agricultural, Biological and Environmental Statistics (1), Spatial Statistics (1), Econometrics and Statistics (1).
Member: Statistical Society of Australia

PUBLICATIONS
Peer-Reviewed Papers:

[1] **Zhong P.**, Huser R., and Opitz T. (2022), Modeling non-stationary temperature maxima based on extremal dependence changing with event magnitude, Annals of Applied Statistics, 16 (1), 272-299.
[2] **Zhong P.**, Huser R., and Opitz T. (2022), Exact simulation of max-infinitely divisible processes, Econometrics and Statistics, 30, 96-109.
[3] Zhang Z., Krainski E., **Zhong P.,** Rue H., and Huser R. (2023), Joint modeling and prediction of massive spatio-temporal wildfire count and burnt area data with the INLA-SPDE approach, Extremes, 26 (2), 339-351.
[4] Huser R., Stein M., **Zhong P.** (2024), Vecchia Likelihood Approximation for Accurate and Fast Inference with Intractable Spatial Max-Stable Models (as part of my Ph.D. thesis), Journal of Computational and Graphical Statistics, 1-22.
[5] Gong Y., **Zhong P.**, Huser R., and Opitz T. (2024), Partial tail-correlation coefficient applied to extremal-network learning, Technometrics, 1-16.
[6] **Zhong P.**, Brunner M., Huser R., and Opitz T. (2024), Spatial modeling and future projection of extreme precipitation extents, Journal of the American Statistical Association, To appear.

Papers Submitted:

[1] **Zhong P.**, Beranger B., and Sisson S. (2024) Flexible max-stable processes for fast and efficient inference, Submitted.