Peng Zhong

University of New South Wales (UNSW Sydney)
Data Science Hub, and 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

Teaching Assistant (STAT 250: Stochastic Processes), CEMSE (KAUST), Fall 2020

Teaching Assistant (Real Analysis), Mathematics (SUSTech), Spring 2017

TALKS & POSTERS

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

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.

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.** (2023), Vecchia Likelihood Approximation for Accurate and Fast Inference with Intractable Spatial Max-Stable Models, Journal of Computational and Graphical Statistics, 1-22.
[5] Gong Y., **Zhong P.**, Huser R., and Opitz T. (2023), Partial tail-correlation coefficient applied to extremal-network learning, Technometrics, 1-16.

Papers Under Review:
[1] **Zhong P.**, Brunner M., Huser R., and Opitz T. (2024), Spatial modeling and future projection of extreme precipitation extents, Revision Submitted.

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