

# Peng Zhong

Postdoc at UNSW, Sydney, Australian Permanent Resident

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## PROFESSIONAL EXPERIENCE

Research Associate (Postdoc), UNSW Sydney, Feb 2023 – Now

CSMAR DATA TECHNOLOGY, Data Analyst, Summer 2016

Data analysis; Present and review literature in Finance.

## TEACHING EXPERIENCE

MATH2089, MATH5806, MATH2859 (tutor), UNSW, 2025, T2

MATH5925-Project (Reviewer), 2024, T1

Year 10 Work Experience (Instructor), UNSW, 2023, 2024

Stochastic Processes (tutor), KAUST, 2020

Real Analysis (tutor), SUSTech, 2017

## 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

### BEd in Financial Mathematics

## HONORS

Dean's List, CEMSE, KAUST, 2022

## SKILLS

**Programming:** R, Python, Pytorch, C++, Shell, Slurm, PBS.

**Other:** Latex, Markdown, and MS Office.

**Languages:** English and Chinese.

## PROFESSIONAL SERVICES

**Student Supervision:** Yiyi Ma (PhD), Haitao Gao (Master).

**Reviewer:** Journal of Multivariate Analysis (1), Journal of Agricultural, Biological and Environmental Statistics (1), Spatial Statistics (1), Econometrics and Statistics (1), Environmetrics (1).

## 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*.

- [2] **Zhong P.**, Huser R., and Opitz T. (2022), Exact simulation of max-infinitely divisible processes, *Econometrics and Statistics*.
- [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*.
- [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*.
- [5] Gong Y., **Zhong P.**, Huser R., and Opitz T. (2024), Partial tail-correlation coefficient applied to extremal-network learning, *Technometrics*.
- [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*.

#### **Others:**

- [1] **Zhong P.**, Sisson S., and Beranger B. (2025+) Fast and flexible inference for spatial extremes, *Submitted*.
- [2] **Zhong P.**, Sisson S., and Beranger B. (2025+) Graphical Learning and Clustering based on Hüsler-Reiss Graphical Models, *Under preparation*.

### **TALKS & POSTERS**

**Talk:** Structured Graphical Learning for Hüsler-Reiss Graphical Models  
International Conference on Extreme Value Analysis (EVA), UNC Chapel Hill, USA, July 2025.

**Invited Talk:** Flexible spatial extreme models for fast and efficient inference  
CFE-CMStatistics Conference 2024 (Virtual), King's College London, UK, December 2024.

**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.

## References

Prof. Scott Sisson

Professor of Statistics and Data Science

University of New South Wales

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Prof. Raphaël Huser

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