

# Pratik Nag

RESEARCH FELLOW · NIASRA@UOW

King Abdullah University of Science and Technology, Thuwal-23955-6900, Saudi Arabia

✉ pnag@uow.edu.au | 🌐 <https://github.com/pratiknag> | 🌐 [www.linkedin.com/in/pratik-nag-stats](http://www.linkedin.com/in/pratik-nag-stats) |

<https://scholar.google.com/citations?user=rMB6VwYAAAAJhl=enoi=ao>

## Education

---

### King Abdullah University of Science and Technology

Saudi Arabia

PHD STATISTICS

2020 - 2024

- Advisor: Dr. Ying Sun

### Indian Statistical Institute

India

MS QUALITY MANAGEMENT SCIENCE

2017 - 2019

### University of Calcutta

India

BS STATISTICS

2014 - 2017

## Professional Experience

---

2024 - now **Research Fellow**, Computational Statistics, University of Wollongong, Australia

2022 - 2024 **Graduate Teaching Assistant**, Statistics, King Abdullah University of Science and Technology

2019-2020 **Data Science Specialist**, General Electric Healthcare

## Publications

---

### PUBLISHED

**Pratik Nag**, Sameh Abdulah, Yiping Hong, Ghulam Qadir, Ying Sun, Marc G. Genton. *Efficient Large-scale Nonstationary Spatial Covariance function estimation using Convolutional Neural Networks*, Journal of Computational and Graphical Statistics (JCGS) (Sep, 2024), 1-22, <https://doi.org/10.1080/10618600.2024.2402277>.

Arnab Hazra, **Pratik Nag**, Rishikesh Yadav, Ying Sun. *Exploring the Efficacy of Statistical and Deep Learning Methods for Large Spatial Datasets: A Case Study*, JABES (2024). <https://doi.org/10.1007/s13253-024-00602-4>(Joint first authorship)

**Pratik Nag**, Ying Sun, Brian J Reich. *Spatio-temporal DeepKriging for interpolation and probabilistic forecasting*, Spatial Statistics (Oct, 2023), volume. 57, 100773, DOI 10.1016/j.spasta.2023.100773.

Sameh Abdulah, Faten Alamri, **Pratik Nag**, Ying Sun, Hatem Ltaief, David E. Keyes, Marc G. Genton. *The Second Competition on Spatial Statistics for Large Datasets*, J. data sci. 20(2022), no. 4, 439-460, DOI 10.6339/22-JDS1076.

Qinglei Cao, Sameh Abdulah, Rabab Alomairy, Yu Pei, **Pratik Nag**, George Bosilca, Jack Dongarra et al. *Reshaping geostatistical modeling and prediction for extreme-scale environmental applications*. In 2022 SC22: International Conference for High Performance Computing, Networking, Storage and Analysis (SC), pp. 13-24. IEEE Computer Society, 2022. (Finalist for GORDON BELL PRIZE)

### IN REVIEW

**Pratik Nag**, Ying Sun, Brian J Reich. *Bivariate DeepKriging for Computationally Efficient Spatial Interpolation of Large-scale Wind Fields*, Arxiv : <https://arxiv.org/abs/2307.08038>.(In Revision at Technometrics)

### IN PREP

**Pratik Nag**, Andrew Zammit Mangion, Ying Sun. *Spatial Normalizing flows*.

**Pratik Nag**, Huixia Judy Wang, Ying Sun. *Indicator DeepKriging for probabilistic prediction of Spatial processes*.

## Awards, Fellowships, & Grants

---

2023	<b>CEMSE Dean's List Award</b> , King Abdullah University of Science and Technology	\$ 2,500
2023	<b>2023 KAUST Competition on Spatial Statistics for Large Datasets</b> , King Abdullah University of Science and Technology	Winner sub-competition 1b and 2a
2022	<b>CEMSE Dean's List Award</b> , King Abdullah University of Science and Technology	\$ 2,500
2022	<b>2022 KAUST Competition on Spatial Statistics for Large Datasets</b> , King Abdullah University of Science and Technology	Winner sub-competition 2a and 2b
2020-present	<b>Graduate Research Fellowship</b> , King Abdullah University of Science and Technology	\$ 30,000

## Presentations

---

### CONTRIBUTED AND INVITED PRESENTATIONS

**Pratik Nag**, Ying Sun, Brian J Reich. August 2023. Spatio-temporal DeepKriging for interpolation and probabilistic forecasting. JSM 2023: Toronto, Ontario. Canada

**Pratik Nag**, Sameh Abdulah, Yiping Hong, Ghulam Qadir, Ying Sun, Marc G. Genton. August 2022. Efficient Large-scale Nonstationary Spatial Covariance function estimation using Convolutional Neural Networks. JSM 2022: Washington, DC. USA

**Pratik Nag**, Ying Sun, Brian J Reich. Dec 2021. Bivariate DeepKriging for Large-scale Spatial Interpolation of Wind Fields. CMStatistics 2021: King's College, London, United Kingdom.

## Teaching Experience

---

- Fall 2023 **STAT 210/MOI: Statistics and Machine learning with Python**, Recitation and teaching assistantship to Ministry of interior students
- Fall 2022 **STAT 210: Statistics and data analysis with R**, Teaching Assistant

## Outreach & Professional Development

---

### SERVICE AND OUTREACH

- 2023 **KAUST ASA student chapter**, Strategic advisor
- 2022 **KAUST ASA student chapter**, Web master

### DEVELOPMENT

**KAUST Statistics workshop 2022**, <https://cemse.kaust.edu.sa/stochproc/events/event/kaust-2022-workshop-statistics>.

### PROFESSIONAL MEMBERSHIPS

Member of American Statistical Association