

Fan Cheng

Curriculum Vitae
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Education and qualifications

2019–	Ph.D. in Statistics	Monash University, Australia
	Supervisors:	Prof. Rob J Hyndman and A/Prof. Anastasios Panagiotelis
2016–2018	M. in Applied Statistics	Central University of Finance and Economics, China
2012–2016	B.Ec in Statistics	Central University of Finance and Economics, China

Working papers

Cheng, F., Hyndman, R. J., & Panagiotelis, A. (2021). Computationally Efficient Learning of Statistical Manifolds. arXiv preprint arXiv:2103.11773. (Under review)

Cheng, F., Hyndman, R. J., & Panagiotelis, A. (2022). Anomaly detection with kernel density estimation on manifolds.

Research experience

2018.07–2019.01 **Research Assistant**, National Natural Science Foundation of China

- Assisted in the Efficient Bayesian Flexible Density Methods with High Dimensional Financial Data Project.
- Completed the stochastic gradient descent application to the multivariate response surface.
- Completed the thesis titled *Volatility Analysis for Housing Prices with Bayesian Response Surface Optimization*.

2013.04–2014.04 **Main Participant**, National Undergraduate Innovation and Entrepreneurship Training Program

- Won the Excellent Prize upon the accomplishment of the research project.
- Completed the paper titled *Feasibility Analysis for Developing Commercial Insurance for Losing Only-child Problem*.

Teaching

2020.07– **Teaching Associate**, Department of Econometrics and Business Statistics, Monash University

- ETC5513 Collaborative and reproducible practices, 2021S1, 2022S2
- ETC5523 Communicating with data, 2021S2
- ETF3500/ETF5500 High Dimensional Data Analysis, 2020S2, 2021S2

2019.07– **Data Fluency Associate Instructor**, Library Research Division, Monash University Library

- Monash Data Fluency introductory and intermediate workshops on R, Python, Git, Unix, HPC, etc.

2020.07–2020.12 **Course Mentor**, Monash University Online Microcredential *Data Science: Data-Driven Decision Making*

Conference presentations

Contributed talk, Manifold learning with approximate nearest neighbors, Early Career and Student Statisticians Conference 2021, online, July 30, 2021.

Participants talk, Manifold learning with approximate nearest neighbors, Australian Mathematical Sciences Institute (AMSI) Winter School 2021, online, July 16, 2021.

Short interactive talk, Computationally efficient learning of statistical manifolds, Data Science, Statistics and Visualisation (DSSV) and European Conference on Data Analysis (ECDA), online, July 8, 2021.

Contributed talk, Manifold learning with approximate nearest neighbors, Australian Statistical Society and New Zealand Statistical Association Conference 2021, Melbourne (Hybrid), July 6, 2021.

Society memberships

Member Statistical Society of Australia

Member International Association for Statistical Computing

Member Australian Research Council Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS)

Internship experience

2016.09–2017.09 **Big Data Analyst**, Shanghai Power Xene Digital Technology Company, Beijing, China

2016.03–2016.04 **Research Assistant**, China Life Insurance Company Limited, Beijing, China

2015.01–2015.02 **Consultant Assistant**, Industrial and Commercial Bank of China (ICBC), Hubei, China

Honours and awards

- 2021 Runner-up for AMSI Winter School Participants Talk, Australian Mathematical Sciences Institute
- 2021 ACEMS Business Analytics Prize(\$3000) for 2021, ARC Centre of Excellence for Mathematical & Statistical Frontiers
- 2019 Monash Graduate Scholarship, Monash University, yearly from 2019 to 2022
- 2019 Monash International Tuition Scholarship, Monash University, yearly from 2019 to 2022
- 2018 Outstanding Postgraduate Student, Central University of Finance and Economics (CUFE)
- 2017 First Prize Academic Scholarship for Graduate Student, CUFE
- 2016 Outstanding Undergraduate Student, CUFE
- 2016 Scholarship for All-Round Development, CUFE, yearly from 2013 to 2016
- 2016 Scholarship for Excellent Academic Innovation, CUFE
- 2015 Excellent Prize in National Undergraduate Statistical Contest in Modeling, Statistical Education Society of China
- 2015 Second Prize in National Undergraduate Mathematical Contest in Modeling
- 2015 National Endeavor Scholarship, Ministry of Education of Beijing
- 2014 Scholarship for Excellent Student Cadre, CUFE
- 2013 Excellent Student Cadre, School of Statistics and Mathematics, CUFE