

Yueqi Cao

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EDUCATION

Oct 2021 – Present PhD Candidate in Statistics, Supervisor: Anthea Monod
Sep 2018 – Jun 2021 Master of Science in Mathematics, Supervisor: Huafei Sun GPA: 93.28/100
Sep 2014 – Jun 2018 Bachelor of Science in Mathematics and Applied Mathematics GPA: 93.58/100

PUBLICATIONS

2021

- † Y.Cao, D.Li, H.Sun, A.H.Assadi, S.Zhang, Efficient Weingarten Map and Curvature Estimation on Manifolds. *Machine Learning Journal*. [[url](#)]
- † F.Sun, Y.Cao, S.Zhang, H.Sun, The Bayesian Inference of Pareto Models Based on Information Geometry. *Entropy*. [[url](#)]
- † Y.Luo, S.Zhang, Y.Cao, H.Sun, Geometric Characteristics of the Wasserstein Metric on SPD(n) and Its Applications on Data Processing. *Entropy*. [[url](#)]

2020

- † J.Jin, S.Zhang, Y.Cao, E.Zhang, H.Sun, Rigid Shape Registration Based on Extended Hamiltonian Learning, *Entropy*. [[url](#)]
- † Y.Wang, H.Sun, Y.Cao, S.Zhang, Torsion Discriminance for Stability of Linear Time-Invariant Systems, *Mathematics*. [[url](#)]
- † N.W.Aung, Y.Cao, S.Zhang, H.Sun, The Geometric Approach of Riccati Equations, *Transactions of Beijing Institute of Technology (in Chinese)*. [[url](#)]

2018

- † Y.Wang, H.Sun, Y.Song, Y.Cao, S.Zhang, Description of Stability for Two and Three-Dimensional Linear Time-Invariant Systems Based on Curvature and Torsion. [[url](#)]

CONFERENCES

2019

- † Y.Cao, S.Zhang, F.Yan, W.Li, F.Sun, H.Sun, Unsupervised Environmental Sound Classification Based On Topological Persistence, *IEEE International Conference on Signal, Information and Data Processing 2019*. [[url](#)]
- † S.Zhang, Y.Cao, W.Li, F.Yan, Y.Luo, H.Sun, A New Riemannian Structure in SPD(n), *IEEE International Conference on Signal, Information and Data Processing 2019*. [[url](#)]

2018

- † Y.Cao, Data Science from a Topological Viewpoint, *The Second International Conference on Mathematical Characterization, Analysis and Applications of Complex Information*, Beijing, China. [[slides](#)]

2017

- † A.Xiong, A.H.Assadi, Y.Cao, Calculating Persistence Homology of Attractors in High-Dimensional Chaotic Systems. *2017 International Conference on Computational Science and Computational Intelligence*. [[url](#)]

PROFESSIONAL EXPERIENCES

- † **Beijing Key Laboratory on Mathematical Characterization, Analysis, and Applications of Complex Information (MCAACI)**
May 2015 – Present Research Assistant Director: Huafei Sun
- † **National Natural Science Foundation of China (NSFC) No. 61179031**
Oct 2014 – Dec 2015 Research Assistant Director: Huafei Sun
- † **National Natural Science Foundation of China (NSFC) No. 11971056**
Jan 2020 – Dec 2023 Research Assistant Director: Yuxing Deng
- † **Beijing Institute of Technology**
Aug 2019 – Jan 2020 Teaching Assistant Course: Mathematical Analysis
Aug 2018 – Jun 2019 Teaching Assistant Course: Linear Algebra

HONORS AND AWARDS

- † **2021** President's PhD Scholarship, *Imperial College London*
- † **2020** Second Prize of CASC Scholarship, *China Aerospace Science and Technology Corporation*
- † **2020** Excellent Graduate Student Cadre, *Beijing Institute of Technology*
- † **2020** Grand Prize of Academic Scholarship for Graduate Students, *Beijing Institute of Technology*
- † **2019** National Scholarship for Graduate Students, *Ministry of Education of the People's Republic of China*
- † **2019** Excellent Graduate Student, *Beijing Institute of Technology*
- † **2019** First Prize of Academic Scholarship for Graduate Students, *Beijing Institute of Technology*
- † **2017** Second Prize of Innovation Scholarship of Industry and Information Technology of People's Republic of China, *Ministry of Industry and Information Technology of the People's Republic of China* [[website](#)]
- † **2017** Winning Prize of Geometry and Topology in 8th S.T.Yau College Student Mathematics Contests, *S.T.Yau College Student Mathematics Contests* [[website](#)]
- † **2017** Winning Prize of Team in 8th S.T.Yau College Student Mathematics Contests, *S.T.Yau College Student Mathematics Contests* [[website](#)]
- † **2017** Third Prize of CASC Scholarship, *China Aerospace Science and Technology Corporation*
- † **2016** Grand Prize in 1st Excellence 9 College Student Mathematics Contest, *Excellence 9 College Student Mathematics Contest* [[website](#)]
- † **2016** Second Prize in CUMCM-2016 (Contemporary Undergraduate Mathematical Contest in Modeling), *China Society for Industrial and Applied Mathematics (CSIAM)* [[website](#)]
- † **2016** Second Prize of Innovation Scholarship of Industry and Information Technology of People's Republic of China, *Ministry of Industry and Information Technology of the People's Republic of China* [[website](#)]
- † **2016 & 2015** Dwen Scholarship, *Beijing Dwin Technology Co.,Ltd.*
- † **2016 & 2015** Third Prize of Mathematics Competition of Chinese College Students, *The Chinese Mathematics Competitions (CMC)*
- † **2015** Third Prize of APMCM (Asia-Pacific Mathematical Contest in Modeling), *Multi-universities Mathematical Modeling Association* [[website](#)]
- † **2014–2018** First Prize of Undergraduate Student Scholarship, five times; Second Prize of Undergraduate Student Scholarship, three times, *Beijing Institute of Technology*