

# Gong Wenwu

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## RESEARCH INTERESTS

- **Tucker-based Low-rank Model, Machine Learning, Scientific Computing**
- Spatial-temporal Data Modeling, Image Processing

## BIOGRAPH

I am planning to do a visiting postgraduate internship (MATH) at HKUST in Oct. 2023. In Summer 2024, I will finish my PhD from Southern University of Science and Technology (SUSTech), where my research focuses on tensor learning, spatiotemporal data modeling, and image inpainting.

## EDUCATION

- **Southern University of Science and Technology: PhD** in Department of Statistics and Data Science, *Mathematics* **Sep 2020 - Present**  
Thesis: Tucker-based Low Rank Tensor Learning Methods, Algorithms and Applications
- **Harbin Institute of Technology : Master** in School of Mathematics, *Probability and Statistics* **Sep 2018 - Jul 2020**
- **NanChang University: Bachelor** in School of Mathematics and Computer Sciences, *Applied Mathematics* **Sep 2014 - Jul 2018**

## RESEARCH EXPERIENCE

- **COVID-19 Intervention Analysis (2020-2021), Innovative practice project in SUSTech [Principal Investigator]**  
Meng F, **Gong W**, Liang J, Li X, Zeng Y, Yang L. (2021) Impact of different control policies for COVID-19 outbreak on the air transportation industry: A comparison between China, the U.S. and Singapore. PLOS ONE. **Invited Talk**
- **Dynamic Risk Assessment of Compound Hazards (MSc: 2018-2020), National Natural Science Foundation of China [Participants]**  
**Gong, W.**, Jiang, J., and Yang, L. (2022): Dynamic Risk Assessment of Compound Hazards Based on VFS-IEM-IDM: A Case Study of Typhoon-Rainstorm Hazards in Shenzhen, China. Natural Hazards and Earth System Sciences.  
Huggins, T.J.; E, F.; Chen, K.; **Gong, W.**; Yang, L. (2020) Infrastructural Aspects of Rain-Related Cascading Disasters: A Systematic Literature Review. International Journal of Environmental Research and Public Health.  
**Gong, W.**, Chen, K., Huggins, T. and Yang, L. (2020) Risk Evaluation Based on Variable Fuzzy Sets and Information Diffusion Method. Journal of Applied Mathematics and Physics. **Invited Talk**

## HONORS & AWARDS

- Dec 2020: National Postgraduate Statistical Modeling Competition (second prize)
- Sep 2014 - Jul 2018: First-class and second-class scholarship of NanChang university, third prize in mathematics contest, third prize in modeling contest

## PUBLICATIONS (Ph.D.: 2020-2024)

- **Journal Papers**
  1. **Wenwu Gong**, Zhejun Huang, Lili Yang (2023): 'Accurate Regularized Tucker Decomposition for Image Restoration', Applied Mathematical Modeling.
- **Preprint and Submitted Papers**
  3. **Wenwu Gong**, Zhejun Huang, Lili Yang (2023): 'Manifold Regularized Tucker Decomposition Approach for Spatiotemporal Traffic Data Imputation', arXiv preprint arXiv:2305.06563.
  2. **Wenwu Gong**, Zhejun Huang, Lili Yang (2023): 'LSPTD: Low-rank and spatiotemporal priors enhanced Tucker decomposition for internet traffic data imputation', ITSC, under review.
  1. **Wenwu Gong**, Zhejun Huang, Rongping Huang, Lili Yang (2023): 'Enhanced low-rank and sparse Tucker decomposition for image inpainting', BMVC, under review.

## OTHERS

- **Expertise:** Python/Matlab/R/HTML
- **Language:** Chinese (native) & English
- **Hobbies:** Football & Tennis