Zhen Peng

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EMPLOYMENT

Postdoc *Nov. 2023 - present*

- Academy of Mathematics and Systems Science, Chinese Academy of Sciences
- Advisor: Prof. *Bin Gao*

EDUCATION

Ph.D. in **Operations Research and Financial Engineering** *Nov. 2023*

- Beihang University, advised by Professor *Hongyi Li* and Professor *Di Zhao*

B.E. in **Information & Computing Science** *July 2017*

- Northwest A&F University

RESEARCH INTERESTS

Optimization on low-rank manifolds and their applications

PUBLICATIONS

Preprints

[P1] **Z. Peng**, H. Li, C. Pan, D. Zhao, "Local Linear Convergence Rate of Scaled Gradient Descent for Low-rank Matrix Estimation," 2023.

Journal articles

[J1] H. Li, **Z. Peng**, C. Pan, D. Zhao, "Fast gradient method for low-rank matrix estimation," *Journal of Scientific Computing*, vol. 96, no. 2, pp. 41, 2023.

[J2] **Z. Peng**, H. Li, , D. Zhao, C. Pan, "Reducing the Dimensionality of SPD Matrices with Neural Networks in BCI," *Mathematics*, vol. 11, no. 7, pp. 1570, 2023.

Conference papers

[C1] H. Li, Y. Yang, **Z. Peng**, D. Zhao, "Stacked autoencoder for wavelet-based the EMI signal analysis," In *Proc. - Int. Conf. Artif. Intell. Electromechanical Autom., (AIEA)*, 2021.

[C2] **Z. Peng**, H. Li, S. Chen, D. Zhao, "EMI signal encoding based on deep auto-encoder combined with wavelet transformation." In *Int. Workshop Comput. Sci. Eng., (WCSE)*, 2021.

PRESENTATIONS

1. Stacked autoencoder for wavelet-based the EMI signal analysis
   - Artif. Intell. Electromechanical Autom. *May 2021*

TEACHING

1. *Matrix Theory* by Professor D. Zhao, Fall 2020 $\sim$ Spring 2022, Teaching Assistant
2. *Linear Algebra* by Professor H. Li, Fall 2017 $\sim$ Spring 2021, Teaching Assistant

AWARDS AND HONORS

1. Outstanding Graduate, Beihang University *2023*
2. Outstanding Dissertation Award, Beihang University *2023*