

# LIANGZU PENG

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## EDUCATION

- ShanghaiTech Univerisity*, Shanghai, China Sep. 2017 - Jun. 2021 (expected)  
 M.S. in Computer Science (advisor: Manolis C. Tsakiris)  
 Thesis: From Linear Regression Without Correspondences to Homomorphic Sensing
- Zhejiang University*, Hangzhou, China Sep. 2013 - Jun. 2017  
 B.Eng. in Measurement Control Technology and Instruments  
 Thesis: Image Measurement Software for Visual Detection

## PUBLICATION

### Submitted.

1. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unlabeled principal component analysis", *arXiv:2101.09446v1 [cs.LG]*, 2021.
2. **L. Peng** and M. C. Tsakiris, "Homomorphic sensing of subspace arrangements", *arXiv:2006.05158v2 [cs.LG]*, 2020.

### Journal Papers.

1. **L. Peng** and M. C. Tsakiris, "Linear regression without correspondences via concave minimization", in *IEEE Signal Processing Letters*, vol. 27, pp. 1580-1584, 2020.
2. M. C. Tsakiris, **L. Peng**, A. Conca, L. Kneip, Y. Shi, and H. Choi, "An algebraic-geometric approach to linear regression without correspondences", in *IEEE Transactions on Information Theory*, vol. 66, no. 8, pp. 5130-5144, 2020.

### Conference Papers.

1. **L. Peng**, B. Wang, and M. C. Tsakiris, "Homomorphic sensing: sparsity and noise", *International Conference on Machine Learning (ICML)*, 2021.
2. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unsigned matrix completion", *IEEE International Symposium on Information Theory (ISIT)*, 2021.
3. M. C. Tsakiris and **L. Peng**, "Homomorphic sensing", *International Conference on Machine Learning (ICML)*, 2019.
4. **L. Peng**, X. Song, M. C. Tsakiris, H. Choi, L. Kneip, and Y. Shi, "Algebraically-initialized expectation maximization for header-free communication", *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2019.

## WORK EXPERIENCE

- Teaching Associate - New York University, Shanghai* Sep. 2020 - Now  
 Algorithms — lead the recitation sessions, design homework, grade assignments
- Intern - New York University, Shanghai* Feb. 2020 - Jun. 2020  
 Discrete Mathematics — grade assignments and lead the recitation sessions  
 Algorithms — write solutions and grade assignments

## PROFESSIONAL SERVICE

### Reviewed several papers submitted to:

- International Conference on Machine Learning (reviewer 2021)
- Neural Information Processing Systems (reviewer 2021)
- International Symposium on Information Theory
- International Conference on Acoustics, Speech, and Signal Processing
- IEEE Transactions on Image Processing
- IEEE Transactions on Signal Processing (invited)

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## TEACHING

### *As Recitation Instructor:*

CSCI-SHU 220, Algorithms

Spring 2021, NYU-Shanghai

CSCI-SHU 220, Algorithms

Fall 2020, NYU-Shanghai

CSCI-SHU 2314, Discrete Mathematics

Spring 2020, NYU-Shanghai

### *As Teaching Assistant:*

SI 232, Subspace Learning

Fall 2020, ShanghaiTech

CSCI-SHU 220, Algorithms

Spring 2020, NYU-Shanghai

MATH 2111, Topological Data Analysis

Spring 2020, ShanghaiTech

SI 232, Subspace Learning

Fall 2019, ShanghaiTech

CS 133, Advanced C++ Programming

Spring 2019, ShanghaiTech

SI 192, Applied Algebraic Geometry

Spring 2019, ShanghaiTech

SI 112, Advanced Geometry<sup>1</sup>

Spring 2018, ShanghaiTech

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<sup>1</sup>lecture notes available: <http://www.liangzu.org/en/ag-notes.html>