lpeng25@jhu.edu March 2, 2022

LIANGZU PENG

www.liangzu.org

EDUCATION

Johns Hopkins Univerisity, Baltimore, USA — Sep. 2021 - Now
Ph.D. in Electrical and Computer Engineering (advisor: Professor René Vidal)

Thesis: TBD

ShanghaiTech Univerisity, Shanghai, China — Sep. 2017 - Jun. 2021
M.S. in Computer Science (advisor: Professor 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

Journal Papers.

1. **L. Peng** and M. C. Tsakiris, "Homomorphic sensing of subspace arrangements", Applied and Computational Harmonic Analysis, vol. 55, pp. 466-485, 2021.
2. **L. Peng** and M. C. Tsakiris, "Linear regression without correspondences via concave minimization", in IEEE Signal Processing Letters, vol. 27, pp. 1580-1584, 2020.
3. 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**, M. C. Tsakiris, and R. Vidal, "ARCS: Accurate rotation and correspondence search", IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
2. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unlabeled principal component analysis", Neural Information Processing Systems (NeurIPS), 2021.
3. **L. Peng**, B. Wang, and M. C. Tsakiris, "Homomorphic sensing: sparsity and noise", International Conference on Machine Learning (ICML), 2021.
4. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unsigned matrix completion", IEEE International Symposium on Information Theory (ISIT), 2021.
5. M. C. Tsakiris and **L. Peng**, "Homomorphic sensing", International Conference on Machine Learning (ICML), 2019.
6. **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 - May 2021
Algorithms — lead the recitation sessions, design homework, grade assignments

Intern - New York University, Shanghai — Feb. 2020 - Jun. 2020
Discrete Mathematics — grade assginments and lead the recitation sessions

Algorithms — write solutions and grade assginments

AWARDS

MINDS Fellow - Johns Hopkins University — Spring 2022
Proposal: Prove *iteratively reweighted least-squares* converges globally & linearly for various problems

Professional Service

Reviewer:

European Conference on Computer Vision (2022)

Computer Vision and Pattern Recognition (2022)

International Conference on Learning Representations (2022)

Neural Information Processing Systems (2021)

International Conference on Machine Learning (2021, 2022)

zbMATH Open (2021 - Now)

IEEE Transactions on Pattern Analysis and Machine Intelligence (1)

IEEE Transactions on Signal Processing (1)

Teaching

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

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[1]	Spring 2018, ShanghaiTech

[1] Lecture notes available: `http://www.liangzu.org/en/ag-notes.html`