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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

Submitted.

1. **L. Peng**, M. C. Tsakiris, and R. Vidal, "ARCS: Accurate rotation and correspondence search", 2021.

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. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unlabeled principal component analysis", Neural Information Processing Systems (NeurIPS), 2021.
2. **L. Peng**, B. Wang, and M. C. Tsakiris, "Homomorphic sensing: sparsity and noise", International Conference on Machine Learning (ICML), 2021.
3. Y. Yao, **L. Peng**, and M. C. Tsakiris, "Unsigned matrix completion", IEEE International Symposium on Information Theory (ISIT), 2021.
4. M. C. Tsakiris and **L. Peng**, "Homomorphic sensing", International Conference on Machine Learning (ICML), 2019.
5. **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:

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`