

# LIANGZU PENG

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## PUBLICATIONS

(Co-)First Author Papers.

1. ICL-TSVD: Bridging Theory and Practice in Continual Learning with Pre-trained Models  
LP, Juan Elenter, Joshua Agterberg, Alejandro Ribeiro, René Vidal  
[\[arXiv\]](#)
2. Block Acceleration Without Momentum: On Optimal Stepsizes of Block Gradient Descent for Least-Squares  
[Spotlight Presentation, 335/9473≈3.5% Acceptance Rate](#)  
LP and Wotao Yin  
[\[ICML 2024\]](#)
3. Scalable 3D Registration via Truncated Entry-wise Absolute Residuals  
 Tianyu Huang\*, LP\*, René Vidal, and Yun-Hui Liu [\*: Equal Contribution]  
[\[CVPR 2024\]](#) [\[arXiv\]](#)
4. HARD: Hyperplane ARangement Descent  
 Tianjiao Ding\*, LP\*, and René Vidal [\*: Equal Contribution]  
[\[CPAL 2024\]](#), [Oral Presentation](#)
5. Block Coordinate Descent on Smooth Manifolds: Convergence Theory and Twenty-One Examples  
LP and René Vidal  
[\[arXiv\]](#)
6. The Ideal Continual Learner: An Agent That Never Forgets  
LP, Paris V. Giampouras, and René Vidal  
[\[ICML 2023\]](#) [\[OpenReview\]](#) [\[CLVision Workshop 2023\]](#) [\[arXiv\]](#) [\[poster\]](#)
7. On the Convergence of IRLS and Its Variants in Outlier-Robust Estimation  
[Highlight, 235/9155≈2.5% Acceptance Rate](#)  
LP, Christian Kümmeler, and René Vidal  
[\[CVPR 2023\]](#) [\[pdf\]](#) [\[talk video\]](#) [\[slides\]](#) [\[poster\]](#)
8. Global Linear and Local Superlinear Convergence of IRLS for Non-Smooth Robust Regression  
LP, Christian Kümmeler, and René Vidal  
[\[NeurIPS 2022\]](#) [\[OpenReview\]](#) [\[arXiv\]](#) [\[code\]](#) [\[slides\]](#) [\[poster\]](#)
9. Semidefinite Relaxations of Truncated Least-Squares in Robust Rotation Search: Tight or Not  
[Oral Presentation, 158/5803≈2.7% Acceptance Rate](#)  
LP, Mahyar Fazlyab, and René Vidal  
[\[ECCV 2022\]](#) [\[arXiv\]](#) [\[slides\]](#) [\[talk video\]](#) [\[poster\]](#)
10. ARCS: Accurate Rotation and Correspondence Search  
[Oral Presentation, 342/8161≈4.2% Acceptance Rate](#)  
LP, Manolis C. Tsakiris, and René Vidal  
[\[CVPR 2022\]](#) [\[arXiv\]](#) [\[code\]](#) [\[slides\]](#) [\[talk video\]](#) [\[poster\]](#)
11. Homomorphic Sensing: Sparsity and Noise

**LP**, Boshi Wang, and Manolis C. Tsakiris  
[ICML 2021] [pdf] [talk video]

12. Homomorphic Sensing of Subspace Arrangements

[Applied and Computational Harmonic Analysis, 2021](#)

**LP** and Manolis C. Tsakiris

[arXiv]

13. Linear Regression Without Correspondences via Concave Minimization

IEEE Signal Processing Letters, 2020

**LP** and Manolis C. Tsakiris

[arXiv] [code]

14. Algebraically-Initialized Expectation Maximization for Header-Free Communication

**LP**, Xuming Song, Manolis C. Tsakiris, Hayoung Choi, Laurent Kneip, and Yuanming Shi

[ICASSP 2019] [pdf]

*Other Papers.*

1. Efficient and Robust Point Cloud Registration via Heuristics-based Parameter Search

Tianyu Huang, Haoang Li, **LP**, Yinlong Liu, and Yun-Hui Liu

[IEEE Transactions on Pattern Analysis and Machine Intelligence, 2024](#)

[arXiv]

2. Unlabeled Principal Component Analysis and Matrix Completion

Yunzhen Yao, **LP**, and Manolis C. Tsakiris

[Journal of Machine Learning Research, 2024](#)

[JMLR Site] [arXiv]

3. Accelerating Globally Optimal Consensus Maximization in Geometric Vision

Xinyue Zhang, **LP**, Wanting Xu, and Laurent Kneip

[IEEE Transactions on Pattern Analysis and Machine Intelligence, 2024](#)

[arXiv]

4. Unlabeled Principal Component Analysis

Yunzhen Yao, **LP**, and Manolis C. Tsakiris

[NeurIPS 2021] [OpenReview] [arXiv] [code]

5. Unsigned Matrix Completion

Yunzhen Yao, **LP**, and Manolis C. Tsakiris

[ISIT 2021] [pdf]

6. An Algebraic-Geometric Approach to Linear Regression Without Correspondences

[IEEE Transactions on Information Theory, 2020](#)

Manolis C. Tsakiris, **LP**, Aldo Conca, Laurent Kneip, Yuanming Shi, and Hayoung Choi

[arXiv] [code]

7. Homomorphic Sensing

Manolis C. Tsakiris and **LP**

[ICML 2019] [arXiv] [code]