

Qi LIU



Biography

Qi Liu received the B. E. degree in Measuring & Control Technology and Instrumentations and M. Sc. degree in Control Science and Engineering from College of Automation, Harbin Engineering University, Harbin, China, in 2013 and 2016, respectively. Currently, he is working towards the Ph.D. degree in the Department of Electronic Engineering under the guidance of **Prof. H.C. So**, at City University of Hong Kong, Hong Kong, SAR.

Qualifications/Experiences

PhD student, City University of Hong Kong

M.Sc., Harbin Engineering University

B.E., Harbin Engineering University

Research Interests/Areas

Statistical Signal Processing;

Robust Compressed Sensing;

Image denoising;

Optimization and its applications to DOA estimation and MIMO radar.

Research outputs

Community Channel-Net: Efficient channel-wise interactions via community graph topology

Feng, F., Liu, Q., Peng, Z., Zhang, R. & Chan, R. H. M., Sep 2023, In: Pattern Recognition. 141, 109536.

Low-Rank and Row-Sparse Decomposition for Joint DOA Estimation and Distorted Sensor Detection

Huang, H., Liu, Q., So, H. C. & Zoubir, A. M., 3 Feb 2023, (Online published) In: IEEE Transactions on Aerospace and Electronic Systems. 10 p.

Fast Robust Matrix Completion via Entry-Wise ℓ_0 -Norm Minimization

Li, X. P., Shi, Z., Liu, Q. & So, H. C., 6 Dec 2022, (Online published) In: IEEE Transactions on Cybernetics. 14 p.

Efficient Low-Rank Matrix Factorization based on $\ell_{1,\epsilon}$ -norm for Online Background Subtraction

Liu, Q. & Li, X., Jul 2022, In: IEEE Transactions on Circuits and Systems for Video Technology. 32, 7, p. 4900-4904 5 p. Scopus citations: 4

From Simulated to Visual Data: A Robust Low-Rank Tensor Completion Approach using ℓ_p -Regression for Outlier Resistance

Liu, Q., Li, X., Cao, H. & Wu, Y., Jun 2022, In: IEEE Transactions on Circuits and Systems for Video Technology. 32, 6, p. 3462-3474 13 p. Scopus citations: 5

Optimum Codesign for Image Denoising between Type-2 Fuzzy Identifier and Matrix Completion Denoiser

Liu, Q., Li, X. & Yang, J., Jan 2022, In: IEEE Transactions on Fuzzy Systems. 30, 1, p. 287-292 Scopus citations: 6

Two-Dimensional Localization: Low-Rank Matrix Completion With Random Sampling in Massive MIMO System

Liu, Q., Li, X. & Cao, H., Sep 2021, In: IEEE Systems Journal. 15, 3, p. 3628-3631 4 p.

Target Localization With Jammer Removal Using Frequency Diverse Array

Liu, Q., Xu, J., Ding, Z. & So, H. C., Oct 2020, In: IEEE Transactions on Vehicular Technology. 69, 10, p. 11685-11696 9169831.Scopus citations: 36

Rank-One Matrix Approximation With ℓ_p -Norm for Image Inpainting

Li, X. P., Liu, Q. & So, H. C., 2020, In: IEEE Signal Processing Letters. 27, p. 680-684Scopus citations: 12

Accurate DOA Estimation Based on Real-Valued Singular Value Decomposition

Cao, H. & Liu, Q., Dec 2019, *ICSIDP 2019 - IEEE International Conference on Signal, Information and Data Processing 2019*. Institute of Electrical and Electronics Engineers Inc., 9172819. (ICSIDP - IEEE International Conference on Signal, Information and Data Processing).

An Efficient Super-Resolution DOA Estimator Based on Grid Learning

Wei, Z., Li, X., Wang, B., Wang, W. & Liu, Q., Dec 2019, In: Radioengineering. 28, 4, p. 785-792Scopus citations: 7

DOA Estimation in Impulsive Noise via Low-Rank Matrix Approximation and Weakly Convex Optimization

LIU, Q., GU, Y. & SO, H. C., Dec 2019, In: IEEE Transactions on Aerospace and Electronic Systems. 55, 6, p. 3603-3616 8684295.Scopus citations: 33

Smoothed sparse recovery via locally competitive algorithm and forward Euler discretization method

Liu, Q., Gu, Y. & So, H. C., Apr 2019, In: Signal Processing. 157, p. 97-102Scopus citations: 5

Multidimensional Single-Tone Frequency Estimation Based on QR Decomposition

CAO, H., HUANG, L., WU, Y. & LIU, Q., 2019, In: IEEE Access. 7, p. 68153-68159 8719905.Scopus citations: 1

Robust sparse recovery via weakly convex optimization in impulsive noise

Liu, Q., Yang, C., Gu, Y. & So, H. C., Nov 2018, In: Signal Processing. 152, p. 84-89Scopus citations: 18

Off-grid DOA estimation with nonconvex regularization via joint sparse representation

Liu, Q., So, H. C. & Gu, Y., Nov 2017, In: Signal Processing. 140, p. 171-176Scopus citations: 48

Prizes/Honours

Institutional Research Tuition Scholarship, 2017;

Outstanding Academic Performance Award, 2017.

Teaching

EE4213 Human Computer Interaction (TA)

EE5410 Signal Processing (Demonstrator);

EE3210 Signal and Systems (TA);

EE5410 Signal Processing (TA).