

Fanghui Liu

Education

- 2014 - **Ph.D. Pattern Recognition and Intelligent System**, *Institute of Image Processing Pattern Recognition*, Shanghai Jiao Tong University, China.
advisor: Prof. Jie Yang and Nanji Zhu
- 2010 - 2014 **B.E. Control Science and Engineering**, *School of Astronautics*, Harbin Institute of Technology, China.
advisor: Prof. Hui Zhao

Research Interests

Kernel Learning, Visual Tracking, and Bayesian Learning

Selected Publications

Journal Papers

- 2018 **F. Liu**, X. Huang, C. Gong, J. Yang, J. A.K. Suykens: *Indefinite Kernel Logistic Regression with Concave-inexact-convex Procedure* IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), 2018. ([conditional accepted](#))
- 2018 **F. Liu**, C. Gong, X. Huang, T. Zhou, J. Yang, and D. Tao: *Robust Visual Tracking Revisited: From Correlation Filter to Template Matching*. IEEE Transactions on Image Processing (**IEEE TIP**), 2018.
- 2017 **F. Liu**, C. Gong, T. Zhou, K. Fu, X. He, and J. Yang: *Robust visual tracking via nonnegative multiple linear coding*. IEEE Transactions on Multimedia (**IEEE TMM**), 2017.
- 2017 **F. Liu**, T. Zhou, C. Gong, K. Fu, L. Bai and J. Yang: *Incremental inverse nonnegative local coordinate factorization for visual tracking*. IEEE Transactions on Circuits and Systems for Video Technology (**IEEE TCSVT**), 2017.
- 2017 **F. Liu**, T. Zhou, K. Fu and J. Yang: *Kernelized temporal locality learning for real-time visual tracking*. Pattern Recognition Letters (**PRL**), 2017.
- 2017 T. Zhou, **F. Liu**, H. Bhaskar and J. Yang: *Robust visual tracking via online discriminative and low-rank dictionary learning*. IEEE Transactions on Cybernetics (**IEEE TCYB**), 2017.
- 2017 T. Zhou, **F. Liu**, H. Bhaskar, J. Yang, H. Zhang and P. Cai: *Online Discriminative Dictionary Learning for Robust Object Tracking*. Neurocomputing, 2017.
- 2017 T. Zhou, H. Bhaskar, **F. Liu**, J. Yang and P. Cai: *Online learning and joint optimization of combined spatial-temporal models for robust visual tracking*. Neurocomputing, 2017.
- 2016 **F. Liu**, T. Zhou, K. Fu and J. Yang: *Robust visual tracking via constrained correlation filter coding*. Pattern Recognition Letters (**PRL**), 2016.

- 2016 **F. Liu**, T. Zhou, K. Fu and J. Yang: *Geometric affine transformation estimation via correlation filter for visual tracking*. Neurocomputing, 2016.
- 2016 T. Zhou, H. Bhaskar, **F. Liu** and J. Yang: *Graph regularized and locality-constrained coding for robust visual tracking*. IEEE Transactions on Circuits and Systems for Video Technology (**IEEE TCSVT**), 2016.
- 2016 C. Ge, K. Fu, **F. Liu**, L. Bai and J. Yang: *Co-saliency detection via inter and intra saliency propagation*. Signal Processing: Image Communication (SPIC), 2016.

Conference Papers

- 2018 **F. Liu**, X. Huang, C. Gong, J. Yang, and L. Li: *Nonlinear Pairwise Layer and Its Training for Kernel Learning*. The Thirty-Second AAAI Conference on Artificial Intelligence (**AAAI**), 2018. (student travel grant)
- 2017 **F. Liu**, X. Huang and J. Yang: *Indefinite kernel logistic regression*. ACM Multimedia (**ACM MM**), 2017. (regular paper)
- 2017 **F. Liu**, X. Huang, C. Peng, J. Yang and N. Kasabov: *Robust kernel approximation for classification*. International Conference on Neural Information Processing (**ICONIP**), 2017.
- 2017 C. Peng, **F. Liu**, H. Yang, J. Yang and N. Kasabov: *Correlation filters with adaptive memories and fusion for visual tracking*. International Conference on Neural Information Processing (**ICONIP**), 2017.
- 2017 T. Zhou, **F. Liu**, H. Bhaskar, J. Yang and P. Cai: *Visual tracking via structural patch-based dictionary pair learning*. IEEE International Conference on Image Processing (**ICIP**), 2017.
- 2016 **F. Liu**, M. Liu, T. Zhou, Y. Qiao and J. Yang: *Incremental robust nonnegative matrix factorization for object tracking*. International Conference on Neural Information Processing (**ICONIP**), 2016.
- 2016 K. Gu, T. Zhou, **F. Liu**, J. Yang and Y. Qiao: *Correlation filter tracking via bootstrap learning*. IEEE International Conference on Image Processing (**ICIP**), 2016.
- 2016 **F. Liu**, T. Zhou, K. Fu, I. Gu, and J. Yang: *Robust visual tracking via inverse nonnegative matrix factorization*. IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2016.
- 2015 **F. Liu**, T. Zhou, I. Gu and J. Yang: *Visual tracking via nonnegative regularization multiple locality coding*. IEEE International Conference on Computer Vision Workshops (**ICCVW**), 2015.

Selected Honors, Awards and Fellowships

2018 the Nurturing Foundation of "Excellent Doctorial Dissertation", awarded by Shanghai Jiao Tong University

2017 National Scholarship, awarded by Ministry of Education of the P.R.C

2016 National Scholarship, awarded by Ministry of Education of the P.R.C

2013 Meritorious Winner of American Mathematical Contest in Modeling (MCM)

2012 The First Prize of the Northeast China Mathematical Contest in Modeling

2011-2014 Several Outstanding Student Scholarship (Grade 1,2), awarded by Harbin Institute of Technology

Selected Talks

- 2018.2 **AAAI-18**, New Orleans, USA.
- 2017.10 ACM Multimedia (**ACM MM'17**), Mountain view, USA.

Professional Services

- TIP Reviewer (18) of *IEEE Transactions on Image Processing*
- TCSVT Reviewer (16,17) of *IEEE Transactions on Circuits and Systems for Video Technology*
- PR Reviewer (17,18) of *Pattern Recognition*
- ICDM Reviewer (17) of *IEEE International Conference on Data Mining*