

## Ran He

### Office Address:

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### Education:

CASIA, NLPR: Ph.D. (2009), majors in Pattern Recognition and Intelligent System  
Dalian University of Technology, B.S. (2001), S.M. (2004), majors in Computer Science.

### Professional Appointments:

2016- Professor, NLPR, Institute of Automation, Chinese Academy of Sciences.  
2015- Professor, CAS Center for Excellence in Brain Science and Intelligence Technology.  
2015- Professor, University of Chinese Academy of Sciences.  
2014- Project Professor, NLPR, Institute of Automation, Chinese Academy of Sciences.  
2011- Associate Professor, NLPR, Institute of Automation, Chinese Academy of Sciences.  
2010–2011 Assistant Professor, NLPR, Institute of Automation, Chinese Academy of Sciences.  
2009–2010 Assistant Professor, Department of Computer Science, Dalian University of Technology.  
2004-2005 Software Engineer, Institute of Software, Chinese Academy of Sciences.

### Research Interests

My research is the area of information theoretic learning, computer vision, image processing, pattern recognition, and machine learning.

### Book

**Ran He**, Baogang Hu, Xiaotong Yuan, and Liang Wang. Robust Recognition via Information Theoretic Learning. SpringerBriefs in Computer Science, 2014.

### Selected Journal Publications:

- [1] **Ran He**, Xiang Wu, Zhenan Sun, Tieniu Tan. Wasserstein CNN: Learning Invariant Features for NIR-VIS Face Recognition. IEEE Trans. Pattern Analysis and Machine Intelligence, 2019, 41(7): 1761-1773.
- [2] **Ran He**, Tieniu Tan, Larry Davis, Zhenan Sun. Learning Structured Ordinal Measures for Video based Face Recognition, Elsevier Pattern Recognition, 2018, 75:4-14.
- [3] **Ran He**, Liang Wang, Zhenan Sun, Yingya Zhang, Bo Li. Information Theoretic Subspace Clustering. IEEE Transactions on Neural Network and Learning System, 2016, 27(12): 2643-2655.
- [4] **Ran He**, Man Zhang, Liang Wang, Ye Ji, Qiyue Yin. Cross-Modal Subspace Learning via Pairwise Constraints. IEEE Transactions on Image Processing, 2015, 24(12): 5543-5556.
- [5] **Ran He**, Yingya Zhang, Zhenan Sun, Qiyue Yin. Robust Subspace Clustering with Complex Noise. IEEE Transactions on Image Processing, 2015, 24(11): 4001-4013.
- [6] **Ran He**, Yinghao Cai, Tieniu Tan, Larry Davis. Learning Predictable Binary Codes for Face Indexing. Elsevier Pattern Recognition, 2015, 48(10): 3160-3168.
- [7] **Ran He**, Tieniu Tan, Liang Wang. Recovery of Corrupted Low-rank Matrix by Implicit Regularizers. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36(4): 770-783.
- [8] **Ran He**, Wei-Shi Zheng, Tieniu Tan, Zhenan Sun. Half-quadratic based Iterative Minimization for Robust Sparse Representation. IEEE Trans. Pattern Analysis and Machine Intelligence, 2014, 36(2): 261-275.
- [9] **Ran He**, Wei-Shi Zheng, Bao-Gang Hu, Xiangwei Kong. Two-stage Nonnegative Sparse Representation for Large-scale Face Recognition. IEEE Transactions on Neural Network and Learning System, 2013, 24(1): 35-46.
- [10] **Ran He**, Wei-Shi Zheng, Bao-Gang Hu. Maximum Correntropy Criterion for Robust Face Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33(8): 1561-1576.

### Selected Conference Papers:

- [11] **Ran He**, Xiang Wu, Zhenan Sun, Tieniu Tan. Learning invariant deep representation for NIR-VIS face

recognition. In Proc. AAAI Conference on Artificial Intelligence, 2017:2000-2006.

- [12] **Ran He**, Tieniu Tan, Liang Wang, Wei-Shi Zheng. L21 Regularized Correntropy for Robust Feature Selection. In Proc. IEEE Computer Vision and Pattern Recognition, 2012: 2504-2511.
- [13] **Ran He**, Zhenan Sun, Tieniu Tan, Wei-Shi Zheng. Recovery of Corrupted Low-Rank Matrices via Half-Quadratic based Non-convex Minimization. In Proc. IEEE Computer Vision and Pattern Recognition, 2011: 2889-2896.
- [14] **Ran He**, Wei-Shi Zheng, Bao-Gang Hu, Xiangwei Kong. Nonnegative Sparse Coding for Discriminative Semi-supervised Learning. In Proc. IEEE Computer Vision and Pattern Recognition, 2011: 2849-2856.
- [15] **Ran He**, B.-G. Hu, W.-S. Zheng, Y.-Q. Guo. Two-stage Sparse Representation for Robust Recognition on Large-scale Database. In Proc. AAAI Conference on Artificial Intelligence, 2010: 475-480.

### **Tutorials and talks**

1. Sino-European Workshop on Information Science and Technology: Information theoretic foundation for robust pattern recognition, Beijing, Sep., 2016
2. International Forum on Advanced Visual Computing: Robust pattern recognition via information theory. Hangzhou, July, 2016.
3. Summer school on Pattern Recognition and Human Centered Robotics: Robust pattern recognition via information theory. Beijing, June, 2015.
4. ICCV Tutorial: Sparsity Estimation and Robust Learning: A Half-quadratic Minimization View, Sydney, Australia, Dec., 2013.
5. ACCV Tutorial: Half-quadratic (HQ) Optimization for Computer Vision, Taejon, Korea, Nov., 2012.
6. ICPR Tutorial: HQ Optimization for Sparsity Estimation and Robust Learning, Tsukuba, Japan, Nov., 2012.
7. Canon Information Technology Tutorial: Compressed Sensing via HQ minimization, China, June, 2012.
8. Princeton University. Sparsity Estimation and Robust Learning, Princeton, USA, Nov., 2013.
9. Rensselaer Polytechnic Institute. Sparsity Estimation and Robust Learning, Troy, NY, USA, Sep., 2013.
10. The University of Maryland. Sparsity Estimation and Robust Learning, College Park, MD, USA, Sep., 2013.
11. Asian Biometrics Consortium: Recent Progress of Biometrics Research at CASIA, Jeju, Korea, Nov., 2012.

### **Professional Services and Societies:**

Leading guest editor, special issue on ubiquitous biometrics, **Pattern Recognition**, 2017.

Editorial board member, IET Image Processing, 2013-

Editorial board member, Neurocomputing, 2012-

Program Committee Chair, Chinese Conference on Biometric Recognition, 2019.

Publication/Area Chair, International Conference on Pattern Recognition, 2018.

Program Committee Chair, Conference on Application of Image and Graphics Technology, 2016/2017/2018.

Publication Chair, International Conference on Digital Signal Processing, 2016.

Area Chair, International Conference on Pattern Recognition, 2012.

Publication Chair, the 7th Chinese Conference on Biometric Recognition, 2012.

Session Chair, International Conference on Pattern Recognition, 2012.

Local Arrangement Chair, IEEE Advanced Video and Signal-Based Surveillance, 2012.

Organizing Committee Chair, the 6th Chinese Conference on Biometric Recognition, 2011.

Publication Chair, IEEE Int. Conf. on Computational Science and Engineering, 2010.

Session Chair, IEEE Youth Conf. on Information, Computing and Telecommunications, 2010.

### **Awards**

IAPR/IEEE ICB Honorable Mention Paper Award, ScleraSegNet: An Improved U-Net Model with Attention for Accurate Sclera Segmentation, 2019

The Beijing Science Fund for Distinguished Young Scholars, 2018

NSFC for Excellent Young Scientist Programme, 2016

IEEE ISM Best Paper Candidate, Discrete Cross-Modal Hashing for Efficient Multimedia Retrieval, 2016

Second Prize of Wu Wenjun Artificial Intelligence Science and Technology Innovation Award, 2015  
 First Prize of Beijing Outstanding Youth Paper Award, 2015  
 ACM Beijing Rising Star Award, 2015.  
 Microsoft Research Asia Star Track Visiting Young Faculty Programme, 2015.  
 The Member of CAS Youth Innovation Promotion Association, 2015  
 GUCAS Lu Jiaxi Young Talent Award, 2014.  
 ACPR Best Poster Award. Robust Low-Rank Representation via Correntropy, 2013.  
 Second Prize of DaLian Best Paper Award of Science, 2010.

**Other Refereed Journal Publications:**

- [1] Qiaozhe Li, Xin Zhao, Ran He, Kaiqi Huang. Recurrent Prediction with Spatio-temporal Attention for Crowd Attribute Recognition. *IEEE Transactions on Circuits and Systems for Video Technology*, 2019.
- [2] Peipei Li, Yibo Hu, Ran He, Zhenan Sun. Global and Local Consistent Wavelet-domain Age Synthesis. *IEEE Transactions on Information Forensics and Security*, 2019, 14(11): 2943-2957.
- [3] Huaibo Huang, Ran He, Zhenan Sun, Tieniu Tan. Wavelet Domain Generative Adversarial Network for Multi-scale Face Hallucination. *International Journal of Computer Vision*, 2019, 127(6-7): 763-784.
- [4] Jie Cao, Yibo Hu, Bing Yu, Ran He, Zhenan Sun. 3D Aided Duet GANs for Multi-view Face Image Synthesis. *IEEE Transactions on Information Forensics and Security*, 2019, 14(8): 2028-2042.
- [5] Jian Liang, Ran He, Zhenan Sun, Tieniu Tan. Aggregating Randomized Clustering-Promoting Invariant Projections for Domain Adaptation. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2019, 41(5): 1027-1042.
- [6] Yi Li, Lingxiao Song, Xiang Wu, Ran He, Tieniu Tan. Learning a bi-level adversarial network with global and local perception for makeup-invariant face verification. *Pattern Recognition*, 2019, 90:99-108.
- [7] Xiang Wu, Ran He, Zhenan Sun, Tieniu Tan. A Light CNN for Deep Face Representation with Noisy Labels. *IEEE Transactions on Information Forensics and Security*, 2018, 13(11): 2884-2896.
- [8] Shu Zhang, Ran He, Zhenan Sun, Tieniu Tan. DeMeshNet: Blind Face Inpainting for Deep MeshFace Verification. *IEEE Transactions on Information Forensics and Security*, 2018,13(3): 637-647.
- [9] Dong Wang, Ran He, Liang Wang, Tieniu Tan. Robust Linear Representation via Exploiting Structure Prior. *Pattern Recognition*, 2018, 76: 560-568.
- [10] Yueying Kao, Ran He, Kaiqi Huang. Deep Aesthetic Quality Assessment with Semantic Information. *IEEE Transactions on Image Processing*, 2017, 26(3): 1482-1495.
- [11] Yi Li, Yanqing Guo, Yueying Kao, Ran He. Image Piece Learning for Weakly Supervised Semantic Segmentation. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2017, 47(4): 648-659.
- [12] Dekui Ma, Jian Liang, Ran He, Xiangwei Kong. Nonlinear Discrete Cross-Modal Hashing for Visual-Textual Data. *IEEE MultiMedia*, 2017, 24(2): 56-65.
- [13] Kaiye Wang, Ran He, Liang Wang, Wei Wang, Tieniu Tan. Joint Feature Selection and Subspace Learning for Cross-modal Retrieval. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2016, 38(10): 2010-2023.
- [14] Qi Li, Zhenan Sun, Zhouchen Lin, Ran He, Tieniu Tan. Transformation Invariant Subspace Clustering. *Pattern Recognition*, 2016, 59: 142-155.
- [15] Shu Zhang, Jian Liang, Ran He, Zhenan Sun. Code Consistent Hashing based on Information-theoretic Criterion. *IEEE Transactions on Big Data*, 2015, 1(3): 84-94.
- [16] Qiyue Yin, Shu Wu, Ran He, Liang Wang. Multi-view Clustering via Pairwise Sparse Subspace Representation. *Neurocomputing*, 2015.
- [17] Zhenhua Chai, Zhenan Sun, Heydi Mendez Vazquez, Ran He, Tieniu Tan: Gabor Ordinal Measures for Face Recognition. *IEEE Transactions on Information Forensics and Security*, 2014, 9(1): 14-26.
- [18] Zhenhua Chai, Heydi Mendez-Vazquez, Ran He, Zhenan Sun and Tieniu Tan. Explore Semantic Pixel Sets based Local Patterns with Information Entropy for Face Recognition. *EURASIP Journal on Image and Video Processing*, 2014, 26.
- [19] Ran He, Xiaotong Yuan and Weishi Zheng. A Fast Convex Conjugated Algorithm for Sparse Recovery. *Neurocomputing*, 2013, 115: 178-185.
- [20] Yanqing Guo, Ran He, Weishi Zheng, Xiangwei Kong, Zhaofeng He. Robust Spectral Regression for Face Recognition. *Neurocomputing*, 2013, 118: 33-40.

- [21] Wei-Shi Zheng Jian-Huang Lai, Shengcai Liao, and Ran He. Extracting Non-negative Basis Images Using Pixel Dispersion Penalty. *Pattern Recognition (PR)*, 2012, 45(8): 2912-2926.
- [22] Xiaotong Yuan, Baogang Hu and Ran He. Agglomerative Mean-Shift Clustering. *IEEE Transactions on Knowledge and Data Engineering*, 2012, 24(2): 209 - 219.
- [23] Nanhai Yang, Ran He, Wei-Shi Zheng, and Xiukun Wang. Robust Large Margin Discriminant Tangent Analysis for Face Recognition. *Neural Computing and Applications*, 2012, 21(2): 269–279.
- [24] **Ran He**, Wei-Shi Zheng, and Bao-Gang Hu, Xiangwei Kong. A Regularized Correntropy Framework for Robust Pattern Recognition. *MIT Neural Computation*, 2011, 23(8): 2074-2100.
- [25] **Ran He**, Bao-Gang Hu, Wei-Shi Zheng, Xiangwei Kong. Robust Principal Component Analysis Based on Maximum Correntropy Criterion. *IEEE Transactions on Image Processing*, 2011, 20(6): 1485-1494.
- [26] **Ran He**, Baogang Hu, XiaoTong Yuan, WeiShi Zheng. Principal Component Analysis Based on Nonparametric Maximum Entropy. *Neurocomputing*, 2010, 73:1840-1952.
- [27] Bao-Gang Hu, Ran He, Xiaotong Yuan. Information-Theoretic Measures for Objective Evaluation of Classifications. *Chinese Acta Automatica Sinica*, 2012, 38(7): 1169-1182.
- [28] Nan-Hai Yang, Mingming Huang, Ran He, and Xiu-Kun Wang. Robust Semi-supervised Learning Algorithm based on Maximum Correntropy Criterion. *Chinese Journal of Software*, 2012, 23(2):279-288.
- [29] Nanhai Yang, Yuanyuan Sang, Ran He, and Xiukun Wang. Nonnegative Sparse Representation for Label Propagation Algorithm. *Chinese Journal of Dalian University of Technology*, 2011, 52(2): 264-271.
- [30] **Ran He**, Yong-Ji Wang, Qing Wang, Jin-Hui Zhou. An Improved Particle Swarm Optimization Based on Self-Adaptive Escape Velocity. *Chinese Journal of Software*, 16(12), 2005: 2036-2044.
- [31] **Ran He**, Xiu-kun Wang, Yi-ou Wang, Zhi Zeng. Integrity constraints of distributed database in massive data collection. *Chinese Journal of Dalian University of Technology*, 2003, 43 (z1), 190-192.
- [32] Xiu-kun Wang, Ran He, Xiao-feng Zhang. Improvement of Genetic Algorithm with Best Elitist Preserved Method, *Mini-Micro Systems (Chinese)*, 2005, 26(5):833-835
- [33] Qiang Li, Xiu-kun Wang, Ran He, Fan-Hui Meng, Yi-Yuan Tang. A New Aggregation Query Algorithm for Distributed Data Warehouse, *Computer Engineering (Chinese)*, 2006, 32(4):91-93
- [34] Fan-Hui Meng, Xiu-kun Wang, Ran He, Yi-Yuan Tang. An Improved Dissipative Particle Swarm Optimization. *Computer Engineering and Applications (Chinese)*, 2005, 41(12), 34-36
- [35] Yi-ou Wang, Xiu-kun Wang, Ran He, Fan-Hui Meng. An Improved Aggregation Algorithm for Online Analytical Processing. *Computer Engineering (Chinese)*, 2005, 31(2), 77-79

#### **Other Refereed Conference Papers:**

- [36] Yi Li, Huaibo Huang, Junchi Yu, Ran He, Tieniu Tan. Cosmetic-Aware Makeup Cleanser. *IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS)*, 2019.
- [37] Jianze Wei, Yunlong Wang, Xiang Wu, Zhaofeng He, Ran He, Zhenan Sun. Cross-sensor iris recognition using adversarial strategy and sensor-specific information. *IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS)*, 2019.
- [38] Weikuo Guo, Huaibo Huang, Xiangwei Kong, Ran He. Learning Disentangled Representation for Cross-Modal Retrieval with Deep Mutual Information Estimation. In *ACM International Conference on Multimedia*, 2019.
- [39] Jian Liang, Ran He, Zhenan Sun, Tieniu Tan. Distant Supervised Centroid Shift: A Simple and Efficient Approach to Visual Domain Adaptation. In *Proc. IEEE Computer Vision and Pattern Recognition*, 2019.
- [40] Chaoyou Fu, Liangchen Song, Xiang Wu, Guoli Wang, Ran He. Neurons Merging Layer: Towards Progressive Redundancy Reduction for Deep Supervised Hashing. In *Proc. International Joint Conference on Artificial Intelligence*, 2019.
- [41] Qiaozhe Li, Xin Zhao, Ran He, Kaiqi Huang. Pedestrian Attribute Recognition by Joint Visual-semantic Reasoning and Knowledge Distillation. In *Proc. International Joint Conference on Artificial Intelligence*, 2019.
- [42] Junchi Yu, Jie Cao, Yi Li, Xiaofei Jia, Ran He. Pose-preserving Cross Spectral Face Hallucination. In *Proc. International Joint Conference on Artificial Intelligence*, 2019.
- [43] Xiang Wu, Huaibo Huang, Vishal Patel, Ran He, Zhenan Sun. Disentangled Variational Representation for Heterogeneous Face Recognition. In *Proc. AAAI Conference on Artificial Intelligence*, 2019.
- [44] Linsen Song, Jie Cao, Lingxiao Song, Yibo Hu, Ran He. Geometry-Aware Face Completion and Editing. In *Proc. AAAI Conference on Artificial Intelligence*, 2019.

- [45] Qiaozhe Li, Xin Zhao, Ran He, Kaiqi Huang. Visual-semantic Graph Reasoning for Pedestrian Attribute Recognition. In Proc. AAAI Conference on Artificial Intelligence, 2019.
- [46] Caiyong Wang, Yong He, Yunfan Liu, Zhaofeng He, Ran He, Zhenan Sun. ScleraSegNet: An Improved U-Net Model with Attention for Accurate Sclera Segmentation. International Conference on Biometrics, 2019.
- [47] Weikuo Guo, Jian Liang, Xiangwei Kong, Lingxiao Song, and Ran He. X-GACMN: An X-Shaped Generative Adversarial Cross-Modal Network with Hypersphere Embedding. In Proc. Asian Conference on Computer Vision (ACCV), 2018.
- [48] Huaibo Huang, Zhihang Li, Ran He, Zhenan Sun, Tieniu Tan. IntroVAE: Introspective Variational Autoencoders for Photographic Image Synthesis. In Proc. Conference on Neural Information Processing Systems (NIPS), 2018.
- [49] Jie Cao, Yibo Hu, Hongwen Zhang, Ran He, Zhenan Sun. Learning a High Fidelity Pose Invariant Model for High-resolution Face Frontalization. In Proc. Conference on Neural Information Processing Systems (NIPS), 2018.
- [50] Lingxiao Song, Zhihe Lu, Ran He, Zhenan Sun, Tieniu Tan. Geometry Guided Adversarial Facial Expression Synthesis. In ACM International Conference on Multimedia, 2018.
- [51] Zhihe Lu, Tanhao Hu, Lingxiao Song, Zhao-xiang Zhang, Ran He. Conditional Expression Synthesis with Face Parsing Transformation. In ACM International Conference on Multimedia, 2018.
- [52] Yueying Kao, Weiming Li, Zairan Wang, Dongqing Zou, Ran He, Qiang Wang, Minsu Ahn, Sunghoon Hong. An Appearance-and-Structure Fusion Network for Object Viewpoint Estimation. In Proc. International Joint Conference on Artificial Intelligence, 2018.
- [53] Yibo Hu, Xiang Wu, Bing Yu, Ran He, Zhenan Sun. Pose-Guided Photorealistic Face Rotation. In Proc. IEEE Computer Vision and Pattern Recognition, 2018.
- [54] Yi Li, Lingxiao Song, Xiang Wu, Ran He, Tieniu Tan. Anti-Makeup: Learning a Bi-Level Adversarial Network for Makeup-Invariant Face Verification. In AAAI Conference on Artificial Intelligence, 2018.
- [55] Xiang Wu, Lingxiao Song, Ran He, Tieniu Tan. Coupled Deep Learning for Heterogeneous Face Recognition. In Proc. AAAI Conference on Artificial Intelligence, 2018.
- [56] Lingxiao Song, Man Zhang, Xiang Wu, Ran He. Adversarial Discriminative Heterogeneous Face Recognition. In Proc. AAAI Conference on Artificial Intelligence, 2018.
- [57] Wei Wang, Hao Wang, Zhiyong Ran, Ran He. Information-Theoretic Domain Adaptation under Severe Noise Conditions. In Proc. AAAI Conference on Artificial Intelligence, 2018.
- [58] Yibo Hu, Lingxiao Song, Bing Yu, Ran He, Zhenan Sun. Adversarial Embedding and Variational Aggregation for Video Face Recognition. In Proc. International Conference on Biometrics: Theory, Applications, and Systems, 2018.
- [59] Yujia Chen, Lingxiao Song, Yibo Hu, Ran He. Adversarial Occlusion-aware Face Detection. In Proc. International Conference on Biometrics: Theory, Applications, and Systems, 2018.
- [60] Peipei Li, Yibo Hu, Qi Li, Ran He, Zhenan Sun. Global and Local Consistent Age Generative Adversarial Networks. In Proc. International Conference on Pattern Recognition, 2018.
- [61] Zhihang Li, Yibo Hu, Man Zhang, Min Xu, Ran He. Protecting Your Faces: MeshFaces Generation and Removal via High-order Relation-preserving CycleGAN. In Proc. IAPR International Conference on Biometrics, 2018.
- [62] Jianze Wei, Jian Liang, Ran He, Jinfeng Yang. Learning Discriminative Geodesic Flow Kernel for Unsupervised Domain Adaptation. IEEE International Conference on Multimedia and Expo, 2018.
- [63] Qi Li, Zhenan Sun, Ran He, Tieniu Tan. Deep Supervised Discrete Hashing. In Proc. Conference on Neural Information Processing Systems (NIPS), 2017.
- [64] Huaibo Huang, Ran He, Zhenan Sun, Tieniu Tan. Wavelet-SRNet: A Wavelet-based CNN for Multi-scale Face Super Resolution. In Proc. International Conference on Computer Vision (ICCV), 2017.
- [65] Rui Huang, Shu Zhang, Tianyu Li, Ran He. Beyond Face Rotation: Global and Local Perception GAN for Photorealistic and Identity Preserving Frontal View Synthesis. In Proc. International Conference on Computer Vision (ICCV), 2017.
- [66] Yanbo Fan, Ran He, Jian Liang, Baogang Hu. Self-Paced Learning: An Implicit Regularization Perspective. In Proc. AAAI Conference on Artificial Intelligence, 2017:1877-1883.
- [67] Yueying Kao, Ran He, Kaiqi Huang. Automatic Image Cropping with Aesthetic Map and Gradient Energy Map. In Proc. IEEE International Conference on Acoustics, Speech and Signal Processing, 2017.
- [68] Jun Guo, Yanqing Guo, Xiangwei Kong, Ran He. Unsupervised Feature Selection with Ordinal Locality.

In Proc. IEEE International Conference on Multimedia and Expo, 2017.

- [69] Chaoyou Fu, Xiang Wu, Jing Dong, Ran He. Global Perception Feedback Convolutional Neural Networks. In: Advances in Image and Graphics Technologies, 2017.
- [70] Qi Li, Ran He, Zhenan Sun, Tieniu Tan. Fast Multi-view Face Alignment via Multi-task Auto-encoders. In Proc. International Joint Conference on Biometrics, 2017.
- [71] Zhihe Lu, Zhihang Li, Jie Cao, Ran He and Zhenan Sun. Recent Progress of Face Image Synthesis. In Proc. Asian Conference on Pattern Recognition (ACPR), 2017.
- [72] Yibo Hu, Xiang Wu and Ran He. Attention-Set based Metric Learning for Video Face Recognition. In Proc. Asian Conference on Pattern Recognition (ACPR), 2017.
- [73] Jian Liang, Ran He, Zhenan Sun and Tieniu Tan. Group-Invariant Cross-Modal Subspace Learning. In Proc. International Joint Conference on Artificial Intelligence (IJCAI), 2016.
- [74] Jian Liang, Zhihang Li, Dong Cao, Ran He, Jingdong Wang. Self-Paced Cross-Modal Subspace Matching. In Proc. ACM conference on Special Interest Group on Information Retrieval (SIGIR), 2016.
- [75] Man Zhang, Ran He, Dong Cao, Zhenan Sun, Tieniu Tan. Simultaneous Feature and Sample Reduction for Image-set Classification. In Proc. AAAI Conference on Artificial Intelligence, 2016: 1401-1407.
- [76] Jun Guo, Yanqing Guo, Xiangwei Kong, Man Zhang and Ran He. Discriminative Analysis Dictionary Learning. In Proc. AAAI Conference on Artificial Intelligence, 2016: 1617-1623.
- [77] Dekui Ma, Jian Liang, Xiangwei Kong and Ran He. Frustratingly Easy Cross-Modal Hashing. In Proc. ACM Multimedia (ACMMM) Conference, 2016.
- [78] Dekui Ma, Jian Liang, Xiangwei Kong, Ran He. Discrete Cross-Modal Hashing for Efficient Multimedia Retrieval. IEEE International Symposium on Multimedia, 2016. [**Best Paper Candidate**]
- [79] Wenkai Dong, Shu Zhang, Ran He. Digital recognition from lip texture analysis. In Proc. International Conference on Digital Signal Processing (DSP), 2016.
- [80] Zhihe Lu, Xiang Wu, Ran He. Person Identification from Lip Texture Analysis. In Proc. International Conference on Digital Signal Processing (DSP), 2016.
- [81] Jie Cao, Haiqing Li, Zhenan Sun, Ran He. Accurate mouth state estimation via convolutional neural networks. In Proc. International Conference on Digital Signal Processing (DSP), 2016.
- [82] Kaihao Zhang, Yongzhen Huang, Ran He, Hong Wu and Liang Wang. Localize Heavily Occluded Human Faces via Deep Segmentation. In Proc. International Conference on Image Processing, 2016.
- [83] Shu Zhang, Ran He, Zhenan Sun, Tieniu Tan. Multi-task ConvNet for Blind Face Inpainting with Application to Face Verification. International Conference on Biometrics (ICB), 2016
- [84] Jun Guo, Yanqing Guo, Bo Wang, Xiangwei Kong and Ran He. Topology Preserving Dictionary Learning for Pattern Classification. In Proc. International Joint Conference on Neural Networks, 2016.
- [85] Linlin Cao, Ran He and Baogang Hu. Locally Imposing Function for Generalized Constraint Neural Networks - A Study on Equality Constraints. In Proc. International Joint Conference on Neural Networks (IJCNN), 2016.
- [86] Xiaoxiang Liu, Xiaobo Sun, Ran He, and Tieniu Tan. Recent Advances on Cross-Domain Face Recognition. In Proc. Chinese Conference on Biometric Recognition (CCBR), 2016.
- [87] Lingxiao Song, Man Zhang, Qi Li, Ran He, Zhenan Sun. Float Greedy-search-based Subspace Clustering. In Proc. Asian Conference on Pattern Recognition (ACPR), 2015.
- [88] Shu Zhang, Man Zhang, Qi Li, Tieniu Tan, Ran He. Supervised Topology Hashing. In Proc. Asian Conference on Pattern Recognition (ACPR), 2015.
- [89] Dong Wang, Ran He, Liang Wang, Tieniu Tan. Adaptive Multi-view Clustering via Cross Trace Lasso. In Proc. Asian Conference on Pattern Recognition (ACPR), 2015.
- [90] Yanbo Fan, Ran He, Baogang Hu. Global and Local Consistent Multi-view Subspace Clustering. In Proc. Asian Conference on Pattern Recognition (ACPR), 2015.
- [91] Dong Cao, Ran He, Zhenan Sun, Tieniu Tan. Joint Space Learning for Video-based Face Recognition. In Proc. Asian Conference on Pattern Recognition (ACPR), 2015.
- [92] Jian Liang, Dong Cao, Ran He, Zhenan Sun, Tieniu Tan. Principal Affinity based Cross-Modal Retrieval. Asian Conference on Pattern Recognition (ACPR), 2015.
- [93] Dong Wang, Qiyue Yin, Ran He, Liang Wang, Tieniu Tan. Multi-view clustering via structured low-rank representation. In Proc. International Conference on Information and Knowledge Management, 2015.
- [94] Kaiye Wang, Wei Wang, Liang Wang, Ran He. A Two-step Approach to Cross-modal Hashing. In Proc. ACM International Conference on Multimedia Retrieval (ICMR), 2015.

- [95] Lingxiao Song, Jian Liang, Man Zhang, Zhenan Sun, Ran He. Two-Step Greedy Subspace Clustering. In Proc. Pacific-Rim Conference on Multimedia (PCM), 2015
- [96] Dong Cao, Man Zhang, Ran He, Zenan Sun, Tieniu Tan. Real-World Gender Recognition Using Multi-order LBP and Localized Multi-Boost Learning. In Proc. IEEE International Conference on Identity, Security and Behavior Analysis (ISBA), 2015.
- [97] Guangxiao Zhang, Ran He, Larry Davis. Jointly Learning Dictionaries and Subspace Structure for Video-based Face Recognition. In Proc. Asian Conference on Computer Vision (ACCV), 2014.
- [98] Dong Wang, Qiyue Yin, Ran He, Liang Wang and Tieniu Tan. Semi-Supervised Subspace Segmentation. In Proc. International Conference on Image Processing (ICIP), 2014.
- [99] Shu Zhang, Man Zhang, Ran He and Zhenan Sun. Transform-Invariant Dictionary Learning For Face Recognition. In Proc. International Conference on Image Processing (ICIP), 2014.
- [100] Kaiye Wang, Ran He, Wei Wang, Liang Wang, Tieniu Tan. Learning Coupled Feature Spaces for Cross-modal Matching. In Proc. International Conference on Computer Vision (ICCV), 2013.
- [101] Yingya Zhang, Zhenan Sun, Ran He and Tieniu Tan. Robust Subspace Clustering via Half-Quadratic Minimization. In Proc. International Conference on Computer Vision (ICCV), 2013.
- [102] Yingya Zhang, Zhenan Sun, Ran He and Tieniu Tan. Robust Low-Rank Representation via Correntropy. In Proc. IAPR Asian Conference on Pattern Recognition (ACPR), 2013. **[Best Poster Award]**
- [103] Qi Li, Zhenan Sun, Ran He, Tieniu Tan. Joint Alignment and Clustering via Low-Rank Representation. In Proc. Asian Conference on Pattern Recognition (ACPR), 2013.
- [104] Lihu Xiao, Zhenan Sun, Ran He, Tieniu Tan. Margin Based Feature Selection for Cross-Sensor Iris Recognition via Linear Programming. In Proc. Asian Conference on Pattern Recognition (ACPR), 2013.
- [105] Kaiye Wang, Wei Wang, Ran He, Liang Wang, Tieniu Tan. Multi-modal Subspace Learning with Joint Graph Regularization for Cross-modal Retrieval. Asian Conference on Pattern Recognition, 2013.
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