Ruiping Wang

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	No. 6, Kexueyuan South Road	Email: wangruiping@ict.ac.cn
	Institute of Computing Technology	Homepage:
	Chinese Academy of Sciences	http://vipl.ict.ac.cn/homepage/rpwang/index.htm
	Beijing 100190, P. R. China	

EDUCATION

Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China　　**Sep. 2003 - Jul. 2010**

- Ph.D., Computer Science and Technology
- Dissertation: Manifold Learning and Its Application to Face Recognition
- Advisor: Prof. Wen Gao

Beijing Jiaotong University, Beijing, China　　**Sep. 1999 - Jul. 2003**

- B.S., Applied Mathematics

RESEARCH INTERESTS

Machine Learning: Manifold Learning, Kernel Learning, Distance Metric Learning, Hash Learning, Deep Learning, etc.

Computer Vision: Video-based Face Recognition/Retrieval, Facial Expression Recognition, Image Set Classification, Image Retrieval, Object Detection/Recognition, etc.

RESEARCH EXPERIENCE

Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China

Professor　　**Oct. 2017 - Present**

Associate Professor　　**Sep. 2012 - Sep. 2017**

Assistant Professor　　**Jul. 2012 - Sep. 2012**

- *Face video analysis*. Video-based face recognition, video face retrieval, dynamic facial expression recognition.
- *Large scale visual recognition*. Image retrieval, object detection/recognition, attribute learning, scene understanding.

University of Maryland, College Park, MD, USA

Research Associate　　**Nov. 2010 - Oct. 2011**

- *Face recognition from still images and from video*. Focusing on face recognition in the maritime domain, our research mainly addresses illumination normalization, sensing, face recognition from video, and efficient systems for face recognition.

Tsinghua University, Beijing, China

Postdoctoral Researcher　　**Jul. 2010 - Jun. 2012**

- *Machine learning in light field*. Utilizing machine learning to perform theoretical analysis of the light field applications, and finally aiming at better multi-view stereo performance.

Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China

Research Assistant　　**Jul. 2004 - Jun. 2010**

- *Face detection.* Applied manifold learning (such as ISOMAP, LLE) and kernel methods (such as SVM) to optimize the training set for robust face detection system.

- *Dimensionality reduction.* Proposed a simple but effective manifold learning algorithm, called Maximal Linear Embedding (MLE). MLE learns a parametric mapping to recover a single global low-dimensional space and yields an isometric embedding for the manifold.

- *Image set classification.* Representing the image set as manifold and formulating the problem of set classification as the computation of Manifold-Manifold Distance (MMD). MMD provides a general multi-level framework to reformulate the distances among three different pattern levels, i.e., point, subspace and manifold.

- *Multi-manifold learning.* Proposed a novel discriminative learning method, called Manifold Discriminant Analysis (MDA), to address the task of classification-oriented multi-manifold learning. MDA learns an embedding space, where manifolds with different class labels are better separated, and local data compactness within each manifold is enhanced.

HONORS & AWARDS	Best Paper Award, IEEE CVPR 2021 Workshop on CLVISION
	Winner Award (team leader) in CLVISION Challenge ("NI" Track), IEEE CVPR 2020
	Outstanding Reviewers, ECCV 2020
	Outstanding Reviewers, IEEE ICCV 2019
	Outstanding Reviewers (with special mention), IEEE CVPR 2019
	Outstanding Reviewer Award, IEEE FG 2019
	State Natural Science Award of China (Second Class), 2015
	CCF-Intel Young Faculty Researcher Program, 2015
	First Position Winner Award (team leader) in EmotiW Challenge, ACM ICMI 2014
	Youth Innovation Promotion Association, Chinese Academy of Sciences, 2014
	MSRA Visiting Young Faculty Program, 2014
	Second Runner-Up Award (team leader) in EmotiW Challenge, ACM ICMI 2013
	Best Reviewer Award, ACCV 2012
	100-Stars Academic Program, Institute of Computing Technology, 2012
	Excellent Doctoral Dissertation, Chinese Academy of Sciences, 2011
	Outstanding Graduates, Chinese Academy of Sciences, 2010
	ZhuLiYueHua Outstanding PhD Scholarship, Chinese Academy of Sciences, 2010
	Outstanding Students, Chinese Academy of Sciences, 2007-2009
	Academic Excellence Scholarship, Institute of Computing Technology, 2008
	Outstanding Students, Digital Media Research Center, 2006, 2008
	Best Student Poster Award Runner-up, IEEE CVPR 2008
	First Runner Up (leading team member) in Task 2, ACM KDD Cup 2006
	First Position (major team member), IAPR FVC 2006

PUBLICATIONS *Peer-reviewed journals and conferences*

1. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "What is a Tabby? Interpretable Model Decisions by Learning Attribute-Based Classification Criteria," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 43, no. 5, pp. 1791-1807, May 2021.

2. Shishi Qiao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Deep Video Code for Efficient Face Video Retrieval," *Pattern Recognition*, vol. 113, pp. 1-11, May 2021.

3. Difei Gao, **Ruiping Wang**, Ziyi Bai, Xilin Chen, "Env-QA: A Video Question Answering

Benchmark for Comprehensive Understanding of Dynamic Environments," *18th IEEE International Conference on Computer Vision (ICCV 2021)*, pp. **, Montreal, Canada, Oct. 11-17, 2021.

4. Wenbin Wang, **Ruiping Wang**, Xilin Chen, "Topic Scene Graph Generation by Attention Distillation from Caption," *18th IEEE International Conference on Computer Vision (ICCV 2021)*, pp. **, Montreal, Canada, Oct. 11-17, 2021.

5. Jiwei Xiao, **Ruiping Wang**, Xilin Chen, "Holistic Pose Graph: Modeling Geometric Structure among Objects in a Scene using Graph Inference for 3D Object Prediction," *18th IEEE International Conference on Computer Vision (ICCV 2021)*, pp. **, Montreal, Canada, Oct. 11-17, 2021. (*Oral*)

6. Ziyi Bai, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Local Feature Enhancement Network for Set-based Face Recognition," *16th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2021)*, pp. **, Jodhpur, India, Dec. 15-18, 2021.

7. Sijin Wang, Ziwei Yao, **Ruiping Wang**, Zhongqin Wu, Xilin Chen, "FAIEr: Fidelity and Adequacy Ensured Image Caption Evaluation," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2021)*, pp. 14050–14059, June 19-25, 2021.

8. Chen He, **Ruiping Wang**, Xilin Chen, "A Tale of Two CILs: The Connections Between Class Incremental Learning and Class Imbalanced Learning, and Beyond," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2021) Workshop on Continual Learning in Computer Vision (CLVision)*, pp. 3559–3569, June 19-25, 2021. (**Best Paper Award**)

9. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning Multifunctional Binary Codes for Personalized Image Retrieval," *International Journal of Computer Vision*, vol. 128, no. 8, pp. 2223-2242, Sep. 2020.

10. Difei Gao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning to Recognize Visual Concepts for Visual Question Answering with Structural Label Space," *IEEE Journal of Selected Topics in Signal Processing*, vol. 14, no. 3, pp. 494-505, Mar. 2020.

11. Shishi Qiao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Deep Heterogeneous Hashing for Face Video Retrieval," *IEEE Transactions on Image Processing*, vol. 29, no. 1, pp. 1299-1312, Dec. 2020.

12. Ruikui Wang, Shishi Qiao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Hybrid Video and Image Hashing for Robust Face Retrieval," *15th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2020)*, pp. 168-175, Buenos Aires, Argentina, Nov. 16-20, 2020.

13. Wenbin Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Sketching Image Gist: Human-Mimetic Hierarchical Scene Graph Generation," *16th European Conference on Computer Vision (ECCV 2020)*, LNCS 12358, pp. 222-239, Aug. 23-28, 2020.

14. Difei Gao, Ke Li, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Multi-Modal Graph Neural Network for Joint Reasoning on Vision and Scene Text," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2020)*, pp. 12746-12756, Seattle, WA, June 14-19, 2020.

15. Sijin Wang, **Ruiping Wang**, Ziwei Yao, Shiguang Shan, Xilin Chen, "Cross-modal Scene Graph Matching for Relationship-aware Image-Text Retrieval," *IEEE Winter Conference of*

Applications on Computer Vision (WACV 2020), pp. 1508-1517, Aspen, CO, Mar. 2-5, 2020.

16. Ruikui Wang, **Ruiping Wang**, Shishi Qiao, Shiguang Shan, Xilin Chen, "Deep Position-Aware Hashing for Semantic Continuous Image Retrieval," *IEEE Winter Conference of Applications on Computer Vision (WACV 2020)*, pp. 2493-2502, Aspen, CO, Mar. 2-5, 2020.

17. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Deep Supervised Hashing for Fast Image Retrieval," *International Journal of Computer Vision*, vol. 127, no. 9, pp. 1217–1234, Sep. 2019.

18. Huajie Jiang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Adaptive Metric Learning For Zero-Shot Recognition," *IEEE Signal Processing Letters*, vol. 26, no. 9, pp. 1270-1274, Sep. 2019.

19. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning to Hash with Discrete Optimization," *Chinese Journal of Computers* (In Chinese), vol. 42, no. 5, pp. 1149-1160, May 2019.

20. Huajie Jiang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Transferable Contrastive Network for Generalized Zero-Shot Learning," *17th IEEE International Conference on Computer Vision (ICCV 2019)*, pp. 9764-9773, Seoul, Korea, Oct. 27-Nov. 2, 2019.

21. Wenbin Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Exploring Context and Visual Pattern of Relationship for Scene Graph Generation," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2019)*, pp. 8180-8189, Long Beach, CA, June 16-20, 2019.

22. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Luc Van Gool, Xilin Chen, "Cross Euclidean-to-Riemannian Metric Learning with Application to Face Recognition from Video," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 40, no. 12, pp. 2827-2840, Dec. 2018.

23. Zhiwu Huang, **Ruiping Wang**, Xianqiu Li, Wenxian Liu, Shiguang Shan, Luc Van Gool, Xilin Chen, "Geometry-aware Similarity Learning on SPD Manifolds for Visual Recognition," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 28, no. 10, pp. 2513-2523, Oct. 2018.

24. Huajie Jiang, **Ruiping Wang**, Shiguang Shan, Yan Li, Haomiao Liu, Xilin Chen, "Attribute Annotation on Large Scale Image Database by Active Knowledge Transfer," *Image and Vision Computing*, vol. 78, pp. 1-13, Oct. 2018.

25. Yan Li, Shiguang Shan, **Ruiping Wang**, Zhen Cui, Xilin Chen, "Fusing Magnitude and Phase Features with Multiple Face Models for Robust Face Recognition," *Frontiers of Computer Science*, vol. 12, no. 6, pp. 1173-1191, 2018.

26. Wen Wang, **Ruiping Wang**, Zhiwu Huang, Shiguang Shan, Xilin Chen, "Discriminant Analysis on Riemannian Manifold of Gaussian Distributions for Face Recognition with Image Sets," *IEEE Transactions on Image Processing*, vol. 27, no. 1, pp. 151-163, Jan. 2018.

27. Yirong Mao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "COSONet: Compact Second-Order Network for Video Face Recognition," *14th Asian Conference on Computer Vision (ACCV 2018)*, LNCS 11363, pp. 51-67, Perth Western Australia, Dec. 2-6, 2018. (*Oral*)

28. Huajie Jiang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning Class Prototypes via Structure Alignment for Zero-Shot Recognition," *15th European Conference on Computer*

Vision (ECCV 2018), LNCS 11214, pp. 121–138, Munich, Germany, Sep. 8-14, 2018.

29. Chen He, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Exemplar-Supported Generative Reproduction for Class Incremental Learning," *29th British Machine Vision Conference (BMVC 2018)*, Newcastle upon Tyne, UK, Sep. 3-6, 2018.

30. Yong Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Structure Inference Net: Object Detection Using Scene-Level Context and Instance-Level Relationships," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018)*, pp. 6985-6994, Salt Lake City, UT, June 18-22, 2018.

31. Wen Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Prototype Discriminative Learning for Image Set Classification," *IEEE Signal Processing Letters*, vol. 24, no. 9, pp. 1318-1322, Sep. 2017.

32. Huajie Jiang, **Ruiping Wang**, Shiguang Shan, Yi Yang, Xilin Chen, "Learning Discriminative Latent Attributes for Zero-Shot Classification," *16th IEEE International Conference on Computer Vision (ICCV 2017)*, pp. 4223-4232, Venice, Italy, Oct. 22-29, 2017.

33. Difei Gao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Visual Textbook Network: Watch Carefully before Answering Visual Questions," *28th British Machine Vision Conference (BMVC 2017)*, London, UK, Sep. 4-7, 2017.

34. Wen Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Discriminative Covariance Oriented Representation Learning for Face Recognition with Image Sets," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017)*, pp. 5749-5758, Honolulu, HI, July 21-26, 2017.

35. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning Multifunctional Binary Codes for Both Category and Attribute Oriented Retrieval Tasks," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017)*, pp. 6259-6268, Honolulu, HI, July 21-26, 2017.

36. Wen Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Prototype Discriminative Learning for Face Image Set Classification," *13th Asian Conference on Computer Vision (ACCV 2016)*, Part III, LNCS 10113, pp. 344-360, Nov. 20-24, 2016.

37. Shishi Qiao, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Deep Video Code for Efficient Face Video Retrieval," *13th Asian Conference on Computer Vision (ACCV 2016)*, Part III, LNCS 10113, pp. 296-312, Nov. 20-24, 2016.

38. Yuheng Lu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Multiple-shot Person Re-identication via Riemannian Discriminative Learning," *13th Asian Conference on Computer Vision (ACCV 2016) Workshop on Benchmark and Evaluation of Surveillance Task (BEST)*, ACCV Workshops (3), LNCS 10118, pp. 408-425, Nov. 20-24, 2016.

39. Yan Li, **Ruiping Wang**, Zhen Cui, Shiguang Shan, Xilin Chen, "Spatial Pyramid Covariance based Compact Video Code for Robust Face Retrieval in TV-series," *IEEE Transactions on Image Processing*, vol. 25, no. 12, pp. 5905-5919, Dec. 2016.

40. Mengyi Liu, Shiguang Shan, **Ruiping Wang**, Xilin Chen, "Learning Expressionlets via Universal Manifold Model for Dynamic Facial Expression Recognition," *IEEE Transactions on Image Processing*, vol. 25, no. 12, pp. 5920-5932, Dec. 2016.

41. Yue Deng, Feng Bao, Xuesong Deng, **Ruiping Wang**, Youyong Kong, Qionghai Dai, "Deep and Structured Robust Information Theoretic Learning for Image Analysis," *IEEE*

Transactions on Image Processing, vol. 25, no. 9, pp. 4209-4221, Sep. 2016.

42. Mengyi Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning Prototypes and Similes on Grassmann Manifold for Spontaneous Expression Recognition," *Computer Vision and Image Understanding*, vol. 147, pp. 95-101, Jun. 2016.

43. Mengyi Liu, **Ruiping Wang**, Shaoxin Li, Zhiwu Huang, Shiguang Shan, Xilin Chen, "Video Modeling and Learning on Riemannian Manifold for Emotion Recognition in the Wild," *Journal on Multimodal User Interfaces*, vol. 10, no. 2, pp. 113-124, Jun. 2016.

44. Haomiao Liu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Deep Supervised Hashing for Fast Image Retrieval," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2016)*, pp. 2064-2072, Las Vegas, NV, June 26-July 1, 2016.

45. Zhiwu Huang, Shiguang Shan, **Ruiping Wang**, Haihong Zhang, Shihong Lao, Alifu Kuerban, Xilin Chen, "A Benchmark and Comparative Study of Video-based Face Recognition on COX Face Database," *IEEE Transactions on Image Processing*, vol. 24, no. 12, pp. 5967-5981, Dec. 2015.

46. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Face Recognition on Large-scale Video in the Wild with Hybrid Euclidean-and-Riemannian Metric Learning," *Pattern Recognition*, vol. 48, no. 10, pp. 3113-3124, Oct. 2015.

47. Zhen Cui, Shiguang Shan, **Ruiping Wang**, Lei Zhang, Xilin Chen, "Sparsely Encoded Local Descriptor for Face Verification," *NEUROCOMPUTING*, vol. 147, pp. 403-411, Jan. 2015.

48. Yan Li, **Ruiping Wang**, Haomiao Liu, Huajie Jiang, Shiguang Shan, Xilin Chen, "Two Birds, One Stone: Jointly Learning Binary Code for Large-scale Face Image Retrieval and Attributes Prediction," *15th IEEE International Conference on Computer Vision (ICCV 2015)*, pp. 3819-3827, Santiago, Chile, Dec. 11-18, 2015.

49. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Xianqiu Li, Xilin Chen, "Log-Euclidean Metric Learning on Symmetric Positive Definite Manifold with Application to Image Set Classification," *The 32nd International Conference on Machine Learning (ICML 2015)*, pp. 720-729, Lille, France, July 6-11, 2015.

50. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Projection Metric Learning on Grassmann Manifold with Application to Video based Face Recognition," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015)*, pp. 140-149, Boston, MA, June 7-12, 2015.

51. Yan Li, **Ruiping Wang**, Zhiwu Huang, Shiguang Shan, Xilin Chen, "Face Video Retrieval with Image Query via Hashing across Euclidean Space and Riemannian Manifold," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015)*, pp. 4758-4767, Boston, MA, June 7-12, 2015.

52. Wen Wang, **Ruiping Wang**, Zhiwu Huang, Shiguang Shan, Xilin Chen, "Discriminant Analysis on Riemannian Manifold of Gaussian Distributions for Face Recognition with Image Sets," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015)*, pp. 2048-2057, Boston, MA, June 7-12, 2015.

53. Yan Li, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Hierarchical Hybrid Statistic based Video Binary Code and Its Application to Face Retrieval in TV-Series," *11th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2015)*, Ljubljana, Slovenia, May 4-8, 2015. (*Oral*)

54. Wen Wang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Probabilistic Nearest Neighbor

Search for Robust Classification of Face Image Sets," *11th IEEE International Conference on Automatic Face and Gesture Recognition* (*FG 2015*), Ljubljana, Slovenia, May 4-8, 2015.

55. J. Ross Beveridge, Hao Zhang, Bruce A. Draper, Patrick J. Flynn, Zhenhua Feng, Patrik Huber, Josef Kittler, Zhiwu Huang, Shaoxin Li, Yan Li, Meina Kan, **Ruiping Wang**, Shiguang Shan, Xilin Chen, Haoxiang Li, Gang Hua, Vitomir Struc, Janez Krizaj, Changxing Ding, Dacheng Tao, P. Jonathon Phillips, "Report on the FG 2015 Video Person Recognition Evaluation," *11th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2015)*, Ljubljana, Slovenia, May 4-8, 2015. (**First Position Winner in FG2015 PaSC Challenge**)

56. Yangang Wang, **Ruiping Wang**, Qionghai Dai, "A Parametric Model for Describing the Correlation between Single Color Images and Depth Maps," *IEEE Signal Processing Letters*, vol. 21, no. 7, pp. 800-803, July 2014.

57. Kai Li, Qionghai Dai, **Ruiping Wang**, Yebin Liu, Feng Xu, Jue Wang, "A Data-driven Approach for Facial Expression Retargeting in Video," *IEEE Transactions on Multimedia*, vol. 16, no. 2, pp. 299-310, Feb. 2014.

58. Mengyi Liu, **Ruiping Wang**, Shaoxin Li, Shiguang Shan, Zhiwu Huang, Xilin Chen, "Combining Multiple Kernel Methods on Riemannian Manifold for Emotion Recognition in the Wild," *16th ACM International Conference on Multimodal Interaction* (*ICMI 2014*), pp. 494-501, Istanbul, Turkey, Nov. 12-16, 2014. (**First Position Winner Award in EmotiW2014 Challenge**)

59. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Hybrid Euclidean-and-Riemannian Metric Learning for Image Set Classification," *12th Asian Conference on Computer Vision* (*ACCV 2014*), Singapore, Nov. 1-5, 2014.

60. Mengyi Liu, Shaoxin Li, Shiguang Shan, **Ruiping Wang**, Xilin Chen, "Deeply Learning Deformable Facial Action Parts Model for Dynamic Expression Analysis," *12th Asian Conference on Computer Vision* (*ACCV 2014*), Singapore, Nov. 1-5, 2014.

61. Yan Li, **Ruiping Wang**, Zhen Cui, Shiguang Shan, Xilin Chen, "Compact Video Code and Its Application to Robust Face Retrieval in TV-Series," *25th British Machine Vision Conference* (*BMVC 2014*), Nottingham, UK, Sep. 1-5, 2014.

62. Ronghang Hu, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Robust Head-shoulder Detection Using a Two-Stage Cascade Framework," *22nd International Conference on Pattern Recognition* (*ICPR 2014*), pp. 2796-2801, Stockholm, Sweden, August 24-28, 2014. (*Oral*)

63. Zhiwu Huang, **Ruiping Wang**, Shiguang Shan, Xilin Chen, "Learning Euclidean-to-Riemannian Metric for Point-to-Set Classification," *IEEE Conference on Computer Vision and Pattern Recognition* (*CVPR 2014*), pp. 1677-1684, Columbus, Ohio, June 23-28, 2014. (*Oral*)

64. Mengyi Liu, Shiguang Shan, **Ruiping Wang**, Xilin Chen, "Learning Expressionlets on Spatio-Temporal Manifold for Dynamic Facial Expression Recognition," *IEEE Conference on Computer Vision and Pattern Recognition* (*CVPR 2014*), pp. 1749-1756, Columbus, Ohio, June 23-28, 2014.

65. Mengyi Liu, **Ruiping Wang**, Zhiwu Huang, Shiguang Shan, Xilin Chen, "Partial Least Squares Regression on Grassmannian Manifold for Emotion Recognition," *15th ACM*

International Conference on Multimodal Interaction (*ICMI 2013*), pp. 525-530, Sydney, Australia, Dec. 9-13, 2013. (**Second Runner-Up Award in EmotiW2013 Challenge**)

66. Zhiwu Huang, Xiaowei Zhao, Shiguang Shan, **Ruiping Wang**, Xilin Chen, "Coupling Alignments with Recognition for Still-to-Video Face Recognition," *14th IEEE International Conference on Computer Vision* (*ICCV 2013*), pp. 3296-3303, Sydney, Australia, Dec. 3-6, 2013.

67. Hui Jin, **Ruiping Wang**, "Robust Image Set Classification Using Partial Least Squares," *4th International Conference on Intelligence Science and Big Data Engineering* (*IScIDE 2013*), pp. 200-207, Beijing, China, Jul. 31-Aug. 2, 2013.

68. **Ruiping Wang**, Shiguang Shan, Xilin Chen, Qionghai Dai, Wen Gao, "Manifold-Manifold Distance and Its Application to Face Recognition with Image Sets," *IEEE Transactions on Image Processing*, vol. 21, no. 10, pp. 4466-4479, Oct. 2012.

69. **Ruiping Wang**, Huimin Guo, Larry S. Davis, Qionghai Dai, "Covariance Discriminative Learning: A Natural and Efficient Approach to Image Set Classification," *IEEE Conference on Computer Vision and Pattern Recognition* (*CVPR 2012*), pp. 2496-2503, Providence, Rhode Island, June 16-21, 2012.

70. Huimin Guo, **Ruiping Wang**, Jonghyun Choi, Larry S. Davis, "Face Verification Using Sparse Representations," *IEEE Computer Society Workshop on Biometrics* (*BIOM 2012*, in conjunction with CVPR), pp. 37-44, 2012.

71. Yue Deng, Qionghai Dai, **Ruiping Wang**, Zengke Zhang, "Commute Time Guided Transformation for Feature Extraction," *Computer Vision and Image Understanding*, vol. 116, no. 4, pp. 473-483, 2012.

72. **Ruiping Wang**, Shiguang Shan, Xilin Chen, Jie Chen, Wen Gao, "Maximal Linear Embedding for Dimensionality Reduction," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 33, no. 9, pp. 1776-1792, Sept. 2011.

73. Kun Xu, Xiangyang Ji, **Ruiping Wang**, Qionghai Dai, "Parallel Implementation of Depth-Image-Based Rendering," *International Conference on 3D Imaging* (*IC3D 2011*).

74. Jie Chen, Xilin Chen, Jie Yang, Shiguang Shan, **Ruiping Wang**, Wen Gao, "Optimization of a Training Set For More Robust Face Detection," *Pattern Recognition*, vol. 42, pp. 2828-2840, 2009.

75. **Ruiping Wang**, Xilin Chen, "Manifold Discriminant Analysis," *IEEE Conference on Computer Vision and Pattern Recognition* (*CVPR 2009*), pp. 429-436, Miami Beach, Florida, June 20-25, 2009.

76. **Ruiping Wang**, Shiguang Shan, Xilin Chen, Wen Gao, "Manifold-Manifold Distance with Application to Face Recognition based on Image Set," *IEEE Conference on Computer Vision and Pattern Recognition* (*CVPR 2008*), pp. 2940-2947, Anchorage, Alaska, June 24-26, 2008. (**Best Student Poster Award Runner-up**)

77. **Ruiping Wang**, Jie Chen, Shiguang Shan, Xilin Chen, Wen Gao, "Enhancing Training Set for Face Detection Based on SVM," *Journal of Software* (In Chinese), vol. 19, no. 11, pp. 2921-2931, 2008.

78. Jie Chen, **Ruiping Wang**, Shengye Yan, Shiguang Shan, Xilin Chen, Wen Gao, "Enhancing Human Face Detection by Resampling Examples Through Manifolds," *IEEE Transactions on Systems, Man, and Cybernetics-Part A*, vol. 37, no. 6, pp. 1017-1028, 2007.

79. **Ruiping Wang**, Jie Chen, Shiguang Shan, Xilin Chen, Wen Gao, "Enhancing Training Set for Face Detection," *Proceeding of International Conference on Pattern Recognition* (*ICPR 2006*). vol. 3, pp. 477-480, Hong Kong, 2006.8.

80. Jie Chen, **Ruiping Wang**, Shiguang Shan, Xilin Chen, Wen Gao, "ISOMAP Based on the Image Euclidean Distance," *Proceeding of International Conference on Pattern Recognition* (*ICPR 2006*). vol. 2, pp. 1110-1113, Hong Kong, 2006.8.

81. **Ruiping Wang**, Jie Chen, Shengye Yan, Wen Gao, "Face Detection based on the Manifold," *Audio- and Video-based Biometric Person Authentication* (*AVBPA 2005*), LNCS 3546, pp. 208-218, Springer-Verlag.

82. Jie Chen, **Ruiping Wang**, Shengye Yan, Shiguang Shan, Xilin Chen, Wen Gao, "How to Train a Classifier Based on the Huge Face Database," *IEEE International Workshop on Analysis and Modeling of Faces and Gestures* (*AMFG 2005*), LNCS 3723, pp. 84-95, 2005.

PROFESSIONAL ACTIVITIES

Journal Editor

Associate Editor, Pattern Recognition (Elsevier), Sep. 2019 -
Associate Editor, Neurocomputing (Elsevier), Jan. 2019 -
Associate Editor, The Visual Computer (Springer), Jan. 2019 -
Associate Editor, IEEE Biometrics Compendium, Jan. 2019 - Jan. 2020
Guest Editor, Pattern Recognition, SI: Distance Metric Learning for PR, Apr. 2016 – Nov. 2017

Conference Organizer

Area Chair, International Conference on Computer Vision (ICCV 2021)
Area Chair, Inter. Conference on Computer Vision and Pattern Recognition (CVPR 2021, 2022)
Area Chair, International Conference on Pattern Recognition (ICPR 2020)
Area Chair, IEEE Winter Conference on Applications of Computer Vision (WACV 2018-2020, 2022)
Area Chair, IEEE/IAPR International Joint Conference on Biometrics (IJCB 2020)
Area Chair, IEEE Conference on Automatic Face and Gesture Recognition (FG 2021)
Area Chair, IEEE International Conference on Multimedia and Expo (ICME 2019-2021)
Challenge Chair, IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS 2021)
Publication Chair, IEEE/IAPR International Joint Conference on Biometrics (IJCB 2020)
Publication Chair, IEEE Conference on Automatic Face And Gesture Recognition (FG 2018)
Publicity Chair, IAPR International Conference on Biometrics (ICB 2019)
Senior PC member, AAAI Conference on Artificial Intelligence (AAAI 2022)
Senior PC member, International Joint Conference on Artificial Intelligence (IJCAI 2019)

Tutorial Organizer

Second- and Higher-order Representations in Computer Vision, at ICCV 2019
Distance Metric Learning for Image and Video Understanding, at ICIP 2017
Distance Metric Learning for Computer Vision, at ECCV 2016
Distance Metric Learning for Visual Recognition, at CVPR 2015
Metric Learning for Visual Recognition, at ACCV 2014

Workshop Organizer

GigaVision: When Gigapixel Videography meets Computer Vision, at CVPR 2019
Human Identification for Surveillance (HIS): Methods & Applications, at ACCV 2016

Journal Reviewer

ACM Computing Surveys, Apr. 2016 -

IEEE Trans. Pattern Analysis and Machine Intelligence (T-PAMI), Feb. 2010 -

IEEE Trans. Image Processing (T-IP), Jan. 2012 -

IEEE Trans. Neural Networks (T-NN), Mar. 2009 -

IEEE Trans. Circuits and Systems for Video Technology (T-CSVT), Aug. 2013 -

IEEE Trans. Multimedia (T-MM), Sep. 2014 -

IEEE Trans. Parallel and Distributed Systems (T-PDS), Aug. 2014 -

IEEE Trans. Cybernetics (T-CYB), Aug. 2015 -

IEEE Trans. Systems, Man and Cybernetics: Systems (T-SMCA), Nov. 2015 -

IEEE Trans. Information Forensics and Security (T-IFS), Feb. 2019 -

IEEE Signal Processing Letters (SPL), Oct. 2012 -

IEEE MultiMedia (MM), Nov. 2015 -

International Journal of Computer Vision (IJCV), Dec. 2013 -

International Journal of Automation and Computing (IJAC), Feb. 2014 -

Machine Vision and Applications (MVA), Jul. 2014 -

The Visual Computer (TVCJ), Oct. 2014 -

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Image and Vision Computing (IVC), Mar. 2016 -

Neurocomputing, Jun. 2009 -

Journal of Computer Science and Technology (JCST), Jan. 2011 -

SPIE Journal of Electronic Imaging (JEI), Oct. 2014 -

IET Computer Vision, Nov. 2014 –

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Conference PC Member

International Conference on Computer Vision (ICCV), 2011, 2013, 2015, 2017, 2019

International Conference on Computer Vision and Pattern Recognition (CVPR), 2013-2020

European Conference on Computer Vision (ECCV), 2012, 2014, 2018, 2020

Neural Information Processing Systems (NeurIPS), 2020, 2021

International Conference on Machine Learning (ICML), 2020, 2021

International Conference on Learning Representations (ICLR), 2020

Asian Conference on Computer Vision (ACCV), 2012, 2014, 2016, 2018, 2020

British Machine Vision Conference (BMVC), 2017-2020

International Joint Conference on Artificial Intelligence (IJCAI), 2017

AAAI Conference on Artificial Intelligence (AAAI), 2019

IEEE Winter Conference on Applications of Computer Vision (WACV), 2015-2018

International Conference on Visual Communications and Image Processing (VCIP), 2015, 2016

International Conference on Automatic Face and Gesture Recognition (FG), 2013, 2017-2019

IAPR International Conference on Biometrics (ICB), 2019

International Conference on Pattern Recognition (ICPR), 2012, 2014, 2018
International Conference on Multimedia and Expo (ICME), 2014-2018
International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2014-2018
Inter. Conf. on Digital Image Computing: Techniques and Applications (DICTA), 2014-2019
Chinese Conference on Pattern Recognition(CCPR), 2012, 2016