Decheng Liu, Ph.D. Candidate

CONTACT INFORMATION

VIPS Lab
State Key Laboratory of ISN
School of Electronic Engineering
Xidian University, No. 2 South Taibai Road
Xi'an, China, 710071

Email: dcliu.xidian@gmail.com
Homepage:
https://leoliu37.github.io/

RESEARCH INTERESTS

Machine learning, computer vision, image processing, and pattern recognition with applications to **heterogeneous face recognition** (e.g. matching viewed/composite/forensic sketches to face photos, matching near-infrared images to visible light face images and matching low resolution card images to high resolution face images) and **heterogeneous image transformation** (e.g. face sketch-photo synthesis and cross-spectral face images transformation).

EDUCATION EXPERIENCES

Sep. 2016 - Present
Ph.D. Candidate in Intelligent Information Processing
School of Electronic Engineering
Xidian University, Xi'an, China
Adviser: Xinbo Gao

Sep. 2012 - July 2016
Bachelor in Electronic Information Engineering
School of Electronic Engineering
Xidian University, Xi'an, China
Undergraduate thesis: "Composite components-based face sketch recognition"
(*Outstanding undergraduate thesis*)

PUBLICATIONS

[1] **Decheng Liu**, Xinbo Gao, Nannan Wang, Jie Li and Chunlei Peng, "Coupled Attribute Learning for Heterogeneous Face Recognition," *IEEE Transactions on Neural Networks and Learning Systems (**IEEE TNNLS**)*, Accepted, 2019. (IF: 11.683)

[2] **Decheng Liu**, Jie Li, Nannan Wang, Chunlei Peng and Xinbo Gao, "Composite components-based face sketch recognition," *Neurocomputing*, vol. 302, no. 9, pp. 46-54, 2018. (IF: 4.072)

[3] **Decheng Liu**, Nannan Wang, Chunlei Peng, Jie Li, and Xinbo Gao, "Deep Attribute Guided Representation for Heterogeneous Face Recognition," *International Joint Conference on Artificial Intelligence (**IJCAI**)*, 2018, pp. 835-841.

[4] **Decheng Liu**, Chunlei Peng, Nannan Wang, Jie Li, and Xinbo Gao, "Composite Face Sketch Recognition based on Components," *International Conference on Wireless Communications and Signal Processing (**WCSP**)*, 2016, pp. 1-5.

[5] **Decheng Liu**, Nannan Wang, Chunlei Peng, Jie Li, Zhifeng Li and Xinbo Gao, "Heterogeneous Face Interpretable Representation for Joint Face Recognition and Synthesis," *IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**)*, 2020, Under Review.

[6] **Decheng Liu**, Jie Li, Chunlei Peng, Nannan Wang and Xinbo Gao, "Cross Modality Disentangled Representation for Heterogeneous Face Analysis,"

*IEEE Transactions on Image Processing (**IEEE TIP**)*, Under Review, 2019. (IF: 6.790)

[7] **Decheng Liu**, Xinbo Gao, Nannan Wang, Chunlei Peng and Jie Li, "Iterative Local Re-ranking for Face Sketch Recognition," *Pattern Recognition (**PR**)*, Under Review, 2019. (IF: 5.898)

SKILLS   Proficient in Python, Matlab, Latex; Familiar with Pytorch, MXNet, Caffe, Sklearn, OpenCV, C.

AWARDS

Second-Class Graduate Scholarship, Xidian University	2019
National Scholarship from Ministry of Education	2018
Outstanding Graduate Student, Xidian University	2017
National Scholarship from Ministry of Education	2017
First-Class Graduate Scholarship, Xidian University	2016
Outstanding Undergraduate Thesis, Xidian University	2016

PATENTS

[1] Xinbo Gao, Nannan Wang, **Decheng Liu**, et al., "Facial attribute based face sketch recognition," *Chinese Patent Pending*, No. 201810615517.X, 2018.

[2] Xinbo Gao, Nannan Wang, Zhuoqi Ma, Jie Li, Yi Hao, Bing Cao, Mingrui Zhu, **Decheng Liu**, et al., "A Novel Method for Image Style Transfer," *Chinese Patent Pending*, No. 201810615516.5, 2018.

[3] Xinbo Gao, Bing Cao, Nannan Wang, Jie Li, Chunlei Peng, Mingrui Zhu, Zhuoqi Ma, Yuqian Zhang, Yi Hao, **Decheng Liu**, et al., "Asymmetric Joint Learning for Face Sketch Recognition," *Chinese Patent Pending*, No. 201810023591.2, 2018.

[4] Nannan Wang, Mingrui Zhu, Jie Li, Xinbo Gao, Wenjin Zha, Yuqian Zhang, Yi Hao, Zhuoqi Ma, Bing Cao, **Decheng Liu**, et al., "Deep graphical feature learning for face sketch synthesis," *Chinese Patent Pending*, No. 201710602696.9, 2017.

RESEARCH EXPERIENCES

- **Heterogeneous Face Image Recognition and Synthesis**, supported by the Fundamental Research Funds for the Central Universities and the Innovation Fund of Xidian University, leader, 2018.05-2019.05

PROFESSIONAL ACTIVITY

Review for **18th IEEE International Conference on Machine Learning and Applications (ICMLA)**, Boca Raton, Florida, USA, December, 2019.

Review for **31th International Conference on Tools with Artificial Intelligence (ICTAI)**, Portland, Oregon, USA, November, 2019.

Review for **Second Chinese Conference on Pattern Recognition and Computer Vision (PRCV)**, Xi'an, China, November, 2019.

Review for **19th National Conference on Image and Graphics (NCIG)**, Yangzhou, China, May, 2018.