Xuesong Niu (牛雪松)

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Contact Information

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Education Background

Institute of Computing Technology, Chinese Academy of Sciences　　　2016.09 - present
Ph.D. candidate in Computer Applied Technology　　　　　　　　　　　　　Beijing, China
Advisor: Prof. Shiguang Shan

Nankai University　　　　　　　　　　　　　　　　　　　　　　　　2012.09 - 2016.07

Artificial Science and Technology　　　　　　　　　　　　　　　　　　　Tianjin, China
Bachelor of Engineering

Research Interests

Machine Learning and Computer Vision with applications in Affective Computing (e.g., remote heart rate estimation, and facial action units detection).

Publications

1. **Xuesong Niu**, Shiguang Shan, Hu Han, Xilin Chen. "RhythmNet: End-to-end Heart Rate Estimation from Face via Spatial-temporal Representation." IEEE Transactions on Image Processing (TIP), 2019. (CCF-A)
2. **Xuesong Niu**, Hu Han, Shiguang Shan, Xilin Chen. "Multi-label Co-regularization for Semi-supervised Facial Action Unit Recognition." Advances in Neural Information Processing Systems (NeurIPS), Vancouver, Canada, 2019. (CCF-A)
3. **Xuesong Niu**, Hu Han, Songfan Yang, Yan Huang, Shiguang Shan. "Local Relationship Learning with Person-specific Shape Regularization for Facial Action Unit Detection." IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Long Beach, CA, USA, 2019. (CCF-A)
4. **Xuesong Niu***, Xingyuan Zhao*, Hu Han, Abhijit Das, Antitza Dantcheva, Shiguang Shan, Xilin Chen. "Robust Remote Heart Rate Estimation from Face Utilizing Spatial-temporal Attention." IEEE International Conference on Automatic Face and Gesture Recognition (FG), Lille, France, 2019. *(Best Poster Presentation Award)*

5. **Xuesong Niu**, Hu Han, Shiguang Shan, Xilin Chen. "VIPL-HR: A Multi-modal Database for Pulse Estimation from Less-constrained Face Video." Asian Conference on Computer Vision (ACCV), Perth Western Australia, 2018.
6. **Xuesong Niu**, Hu Han, Jiabei Zeng, Xuran Sun, Shiguang Shan, Yan Huang, Songfan Yang, Xilin Chen. "Automatic Engagement Prediction with GAP Feature." ACM International Conference on Multimodal Interaction (ICMI), Boulder, CO, USA, 2018.
7. **Xuesong Niu**, Hu Han, Shiguang Shan, Xilin Chen. "SynRhythm: Learning a Deep Heart Rate Estimator from General to Specific." International Conference on Pattern Recognition (ICPR), Beijing, China, 2018.
8. **Xuesong Niu**, Hu Han, Shiguang Shan, Xilin Chen. "Continuous Heart Rate Measurement from Face:A Robust rPPG Approach with Distribution Learning." International Joint Conference on Biometrics(IJCB), 2017.

Awards & Honors

1. Best Poster Presentation Award in IEEE FG, 2019
2. Second Runner-up Award in EmotiW Student Engagement Prediction Challenge, 2018
3. Travel Grant in IEEE FG Doctoral Consortium, 2018
4. Excellence Scholarship of ICT, ICT, 2018
5. Zhou Enlai Scholarship (Highest award in Nankai University), Nankai University, 2016
6. Baogang Scholarship, 2016
7. China National Scholarship, Nankai University, 2014