

Chen Gao

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Education

- 2018–Present **Ph.D.**, *Virginia Tech.*
Computer Engineering, Vision and Learning Lab
Advisor: Jia-Bin Huang
- 2015–2017 **Masters of Science**, *University of Michigan, Ann Arbor.*
Electrical and Computer Engineering
Advisor: Raj Rao Nadakuditi
- 2013–2015 **Bachelor of Science**, *Oregon State University.*
Electrical and Computer Engineering
Minor in Computer Science
Advisor: Raviv Raich

Work Experience

- Summer 2019 **Facebook Research Seattle.**
Research Intern with Dr. Johannes Kopf
Developed an algorithm for video completion

Publications

- NeurIPS 2019 **Reducing Scene Bias of Convolutional Neural Networks for Human Action Understanding** [\[Paper\]](#) [\[Project page\]](#)
Jinwoo Choi, Chen Gao, Joseph Messou, Jia-Bin Huang
In Proceedings of Neural Information Processing Systems (NeurIPS), 2019.
- BMVC 2018 **iCAN: Instance-Centric Attention Network for Human-Object Interaction Detection** [\[Paper\]](#) [\[Project page\]](#)
Chen Gao, Yuliang Zou, and Jia-Bin Huang
In Proceedings of the 29th British Machine Vision Conference (BMVC), 2018.
- Global SIP 2017 **Augmented Robust PCA for Foreground-background Separation on Noisy, Moving Camera Video** [\[Paper\]](#) [\[Project page\]](#)
Chen Gao, Brian E. Moore, Raj Rao Nadakuditi
In Proceedings of the 5th IEEE Global Conference on Signal and Information Processing
- IEEE TCI **Panoramic Robust PCA for Foreground-Background Separation on Noisy, Free-Motion Camera Video** [\[Paper\]](#) [\[Project page\]](#)
Chen Gao*, Brian E. Moore*, Raj Rao Nadakuditi
IEEE Transactions on Computational Imaging (TCI), 2019

Research Experience

- 2017–Present **Detecting Migrating Birds at Night**, *Virginia Tech*.
Improved a vision-based system for detecting migrating birds in flight at night, which took stereo videos of the night sky as inputs, detected multiple flying birds and estimated their orientations, speeds, and altitudes
- 2017–Present **Human-Object Interaction Detection**, *Virginia Tech*.
Proposed an instance-centric module that dynamically complements instance feature
- 2016–2018 **Foreground/Background Separation**, *University of Michigan, Ann Arbor*.
Proposed a panoramic RPCA algorithm with total variation regularization for decoupling the foreground from noise, sparse corruptions and background
- 2016-2017 **Parallel Computing**, *University of Michigan, Ann Arbor*.
Implemented a parallelized moving objects detection algorithm via dual-mode SGM on CUDA
- 2014-2015 **Machine Learning & Bioacoustics**, *Oregon State University*.
Developed a Multi-Instance Multi-Label Learning algorithm which automatically identifies birds species in audio recording

Awards

- 2017 Rackham International Travel Grant, College of Engineering, Umich
- 2014-2015 College Scholarship (top 10 %), OSU
- 2014 Tau Beta Pi Membership, OSU

Teaching

- 2018 Teaching Assistant, ECE5554/4554 (Computer Vision)

Skills

- Programming Languages: C, C++, Python, Matlab, Assembly Language
- Libraries: TensorFlow, PyTorch, Caffe, OpenCV, CUDA