

# Chen Gao

+1 (541) 745 8525

✉ [chengao@vt.edu](mailto:chengao@vt.edu)

📄 [chengao.vision](http://chengao.vision)

## Education

- 2018–Present **Ph.D.**, *Virginia Tech.*  
Computer Engineering, Vision and Learning Lab  
Advisor: Jia-Bin Huang
- 2015–2017 **Master 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

- CVPR 2020 **Anonymous**  
[Chen Gao](#), Ayush Saraf, Jia-Bin Huang, Johannes Kopf
- CVPR 2020 **Anonymous**  
Yun-Chun Chen, [Chen Gao](#), Esther Robb, Jia-Bin Huang
- NeurIPS 2019 **Why Can't I Dance in the Mall? Learning to Mitigate Scene Bias in Action Recognition** [\[Paper\]](#) [\[Project page\]](#)  
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 (GlobalSIP), 2017

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

- 2019–Present **Video Completion**, *Facebook Research Seattle*.  
Proposed an flow-edge guided video completion algorithm
- 2017–Present **Human-Object Interaction Detection**, *Virginia Tech*.  
Proposed an instance-centric module that dynamically complements instance feature
- 2017–2019 **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
- 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

- 2019 NeurIPS Student Travel Award
- 2017 Rackham International Travel Grant, College of Engineering, Umich
- 2014–2015 College Scholarship (top 10 %), OSU
- 2014 Tau Beta Pi Membership, OSU

## Academic Services

Conference BMVC 2019, WACV 2020, CVPR 2020  
Reviewer:

## Teaching

- 2018 Teaching Assistant, ECE5554/4554 (Computer Vision)
- 2019 Teaching Assistant, ECE5424/5824 (Advanced Machine Learning)

## Skills

Programming Languages: C, C++, Python, Matlab, Assembly Language

Libraries: TensorFlow, PyTorch, Caffe, OpenCV, CUDA