## Gang YU, Lead Researcher, Megvii Face<sup>++</sup>

Phone: +86 13621942896 Contact Room 316, Raycom Info Tech Tower A, Information No. 2 Kexueyuan South Road Email: iskicy@gmail.com, Haidian District, Beijing, 100190 PRC Homepage: https://skicy.github.io/ **EDUCATION** Nanyang Technological University, Singapore Aug 2010 to Jan 2014 Ph.D. in Information Engineering, Advisor: Professor Junsong Yuan Shanghai Jiao Tong University, China Sep 2007 to Mar 2010 M.S. in Computer Science, Advisor: Professor Hongtao Lu Shandong University, China Sep 2003 to Jun 2007 B.S. in Applied Mathematics, Professional Megvii (Face++), Beijing Dec 2014 to now EXPERIENCE Research Scientist Leader for the Detection team Nanyang Technological University, Singapore Feb 2014 to Nov 2014 Research Fellow Advisor: Professor Junsong Yuan Microsoft Research, Redmond, U.S. May 2013 to Aug 2013 Research Intern Advisor: Dr. Zicheng Liu Nanyang Technological University, Singapore May 2010 to Aug 2010 Project Officer Advisor: Professor Junsong Yuan Воок 1. Gang Yu, Junsong Yuan, and Zicheng Liu "Human Action Analysis with Randomized **PUBLICATIONS** Trees", Springer, 2015. Pre-prints 1. Jianfeng Wang, Ye Yuan, Gang Yu, Jian Sun, "SFace: An Efficient Network for Face Detection in Large Scale Variations." Arxiv, 2018. 2. Zeming Li, Chao Peng, Gang Yu, Xiangyu Zhang, Yangdong Deng, Jian Sun, "Light-Head R-CNN: In Defense of Two-Stage Object Detector." Arxiv, 2017. 3. Jianfeng Wang, Ye Yuan, Gang Yu, "Face Attention Network: An Effective Face Detector for the Occluded Faces." Arxiv, 2017. Conference 1. Shiyi Lan, Ruichi Yu, Gang Yu, Larry Davis, "Modeling Local Geometric Structure **Publications** of 3D Point Clouds using Geo-CNN." (CVPR), 2019. 2. Lin Song, Shiwei Zhang, Gang Yu, Hongbin Sun, "TACNet: Transition-Aware Context Network for Spatio-Temporal Action Detection." (CVPR), 2019.

3. Huanyu Liu, Chao Peng, Changqian Yu, Jingbo Wang, Xu Liu, Gang Yu, Wei Jiang, "An End-to-end Network for Panoptic Segmentation." (CVPR), 2019.

- Wenhai Wang, Xiang Li, Enze Xie, Wenbo Hou, Tong Lu, Gang Yu, Shuai Shao, "Shape Robust Text Detection with Progressive Scale Expansion Network." (CVPR), 2019.
- 5. Enze Xie, Yuhang Zang, Shuai Shao, **Gang Yu**, Cong Yao Guangyao Li, "Scene Text Detection with Supervised Pyramid Context Network." (**AAAI**), 2019.
- Tao Hu, Pengwan Yang, Chiliang Zhang, Gang Yu, Yadong Mu Cees Snoek, "Attention-based Multi-Context Guiding for Few-Shot Semantic Segmentation." (AAAI), 2019.
- 7. Zeming Li, Chao Peng, **Gang Yu**, Xiangyu Zhang, Yangdong Deng, Jian Sun, "DetNet: A Backbone network for Object Detection." (**ECCV**), 2018.
- 8. Changqian Yu, Jingbo Wang, Chao Peng, Changxin Gao, **Gang Yu**, Nong Sang, "BiSeNet: Bilateral Segmentation Network for Real-time Semantic Segmentation." (**ECCV**), 2018.
- 9. Ruochen Fan, Qibin Hou, Ming-ming Chen, **Gang Yu**, Ralph R. Martin, Shi-min Hu, "Associating Inter-Image Salient Instances for Weakly Supervised Semantic Segmentation." (**ECCV**), 2018.
- Chao Peng, Tete Xiao, Zeming Li, Yuning Jiang, Xiangyu Zhang, Kai Jia, Gang Yu, Jian Sun, "MegDet: A Large Mini-Batch Object Detector." (CVPR), spotlight, 2018. COCO2017 Detection Challenge winner
- 11. Yilun Chen, Zhicheng Wang, Yuxiang Peng, Zhiqiang Zhang, **Gang Yu**, Jian Sun, "Cascaded Pyramid Network for Multi-Person Pose Estimation." (**CVPR**), 2018. **COCO2017 Keypoint Challenge winner**
- 12. Changqian Yu, Jingbo Wang, Chao Peng, Changxin Gao, **Gang Yu**, Nong Sang, "Learning a Discriminative Feature Network for Semantic Segmentation." (**CVPR**), 2018.
- 13. Zeming Li, Yilun Chen, **Gang Yu**, Xiangyu Zhang, Jian Sun , "R-FCN++: Towards Accurate Region-based Fully Convolutional Networks for Object Detection." Association for the Advancement of Artificial Intelligence (**AAAI**), 2018.
- Chao Peng, Xiangyu Zhang, Gang Yu, Guiming Luo, Jian Sun, "Large Kernel Matters – Improve Semantic Segmentation by Global Convolutional Network." IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.
- 15. Gang Yu, Junsong Yuan, "Fast Action Proposals for Human Action Detection and Search." *IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2015.
- Gang Yu, Zicheng Liu, Junsong Yuan, "Discriminative Orderlet Mining For Realtime Recognition of Human-Object Interaction." Asian Conference on Computer Vision (ACCV), 2014.
- 17. Gang Yu, Junsong Yuan, "Scalable Forest Hashing for Fast Similarity Search." International Conference on Multimedia and Expo (ICME), 2014.
- 18. **Gang Yu**, Junsong Yuan, and Zicheng Liu, "Propagative Hough Voting for Human Activity Recognition." *IEEE Conference on European Conference on Computer Vision* (ECCV), 2012.
- 19. Yuning Jiang, **Gang Yu**, Junsong Yuan, "Randomized Spatial Partition for Scene Recognition." *IEEE Conference on European Conference on Computer Vision* (ECCV), 2012.

- Gang Yu, Junsong Yuan, and Zicheng Liu, "Predicting Human Activities using Spatio-Temporal Structure of Interest Points." ACM Multimedia Conference (ACM MM), 2012.
- Gang Yu, Junsong Yuan, and Zicheng Liu, "Unsupervised Random Forest Indexing for Fast Action Search." *IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2011.
- Gang Yu, Junsong Yuan, and Zicheng Liu, "Real-time Human Action Search using Random Forest based Hough Voting." ACM Multimedia Conference (ACM MM), 2011.
- 23. **Gang Yu**, Zhiwei Hu, and Hongtao Lu, "Robust Incremental Subspace Learning for Object Tracking." *International Conference on Neural Information Processing*, 2009.
- 24. **Gang Yu**, and Hongtao Lu, "Illumination Invariant Object Tracking with Incremental Subspace Learning." *IEEE International Conference on Image and Graphics*, 2009.

## JOURNAL PUBLICATIONS

- 1. **Gang Yu**, Junsong Yuan, and Zicheng Liu, "Propagative Hough Voting for Human Activity Detection and Recognition." *IEEE Trans. on Circuits and Systems for Video Technology* (T-CSVT), Vol.25, Issue 1, pp.87-98, 2014.
- 2. **Gang Yu**, Junsong Yuan, and Zicheng Liu, "Action Search by Example using Randomized Visual Vocabularies." *IEEE Trans. on Image Processing* (**T-IP**), Vol.22, Issue 1, pp. 377-390, 2013.
- 3. **Gang Yu**, Norberto A., Junsong Yuan, and Zicheng Liu, "Fast Action Detection via Discriminative Random Forest Voting and Top-K Subvolume Search." *IEEE Trans. on Multimedia* (**T-MM**), Vol.13, Issue 3, pp. 507-517, 2011.
- 4. **Gang Yu**, Zhiwei Hu, Hongtao Lu, and Wenbin Li, "Robust Object Tracking with Occlusion Handle." *Neural Computing and Applications*, Vol.20, Issue. 7, pp. 1027-1034, 2011
- Gang Yu, Xianpeng Wang, and Hongtao Lu, "Efficient Routing Strategy on Scale-free Networks." Modern Physics Letters B, Vol. 23, No. 11, pp. 1377-1389, 2009
- Xianpeng Wang, Gang Yu, and Hongtao Lu, "A Local Information-based Routing Strategy on the Scale-free Network." Modern Physics Letters B, Vol. 23, No. 10, pp. 1291-1301, 2009

## Honors and Awards

COCO 2018 Detection, Panoptic Segmentation, Keypoint Challenge Winner, 2018
Mapillary 2018 Panoptic Segmentation Challenge Winner, 2018
WAD Video Object Instance Segmentation Challenge Winner, 2018
ActivityNet AVA Spatial Temporal Localization Challenge Winner, 2018
COCO 2017 Detection, Keypoint Challenge Winner, 2017
Microsoft Research Asia Fellowship, 2011
Research Scholarship from Nanyang Technological University, 2010 to 2014
Outstanding Graduate student of Shanghai City, P.R.China, 2010
Samsung Scholarship, Shanghai Jiao Tong University, 2008
First Prize of learning scholarship from Shanghai Jiao Tong University, 2008

Presentations

Invited Talk at Beijing Institute of Technology, Beijing, May 2017 Title: Large Kernel for Image Segmentation and Object Detection

Tutorial at Pacific Rim Conference on Multimedia, Singapore, Dec 2012

Title: Human action analysis with 2D and 3D sensors, with Junsong Yuan, Zicheng Liu

Invited Talk at National University of Singapore, Singapore, Oct 2012 Title: Human Action Recognition and Localization by Randomized Trees

Speaker at Graduate Students Workshop in IEEE CAS Singapore Chapter, Sep 2011

Title: Unsupervised Random Forest Indexing for Fast Action Search

(Best speaker award)

TEACHING EXPERIENCE Nanyang Technological University, Singapore

Lab EE3072/EE2073/IM313 Game Programming, 2012-2013 Spring Semester

Tutorial EE4758 Computer Security, 2012-2013 Fall Semester Tutorial EE4791 Database Systems, 2011-2012 Spring Semester

Shanghai Jiao Tong University, China

Tutorial Data Structure and Algorithms, 2007-2008 Fall Semester

ACADEMIC SERVICE Journal Reviewer:

International Journal of Computer Vision IEEE Transactions on Image Processing

IEEE Transactions on Circuits and Systems for Video Technology

ACM Transactions on Multimedia Computing, Communications and Applications

Machine Vision and Applications, Springer

Multimedia System, Springer

Conference Reviewer:

European Conference on Computer Vision, 2018

International Conference on Computer Vision and Pattern Recognition, 2017, 2018

Automatic Face and Gesture Recognition, 2018

International Conference on Multimedia and Expo, 2016, 2017 International Conference on Multimedia and Expo, 2016, 2017

Asian Conference on Computer Vision, 2014 Computer Graphics International Conference, 2013

Volunteer:

Student Volunteer for ICML 2011

PROGRAMMING SKILLS C/C++, Matlab, C#, Python, SQL, OpenCV, .Net