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01 Location and Schedule
Location: E1, COEX Convention Center
Date & Time: Sun 27 Oct Full day

SCHEDULE
08:30 — 09:00 Welcome and Opening Remarks
09:00 — 10:00 Invited Keynote: Real-Time Visual Tracking by Convolutional Neural Networks: A History and The Future
   Keynote Speaker: Bohyung Han
10:00 — 10:30 Coffee Break
10:30 — 11:30 Invited Keynote: Learning to Track and Segment Objects in Videos
   Keynote Speaker: Ming-Hsuan Yang
11:30 — 12:00 Awarding Ceremony
13:30 — 14:00 Winner Talk: Drone Pyramid Networks with adaptive context for Object Detection
14:00 — 14:30 Winner Talk: Accurate Target State Estimation for Drone Tracking via Enhanced Data
14:30 — 15:00 Winner Talk: Delving into High Quality Detection And Tracking
15:00 — 17:00 Poster Session
Title: Learning to track and segment objects in videos

Abstract:
In this talk, I will present our recent results on visual tracking and video object segmentation. The tracking–by–detection framework typically consists of two stages, i.e., drawing samples around the target object in the first stage and classifying each sample as the target object or as background in the second stage. The performance of existing trackers using deep classification networks is limited by two aspects. First, the positive samples in each frame are highly spatially overlapped, and they fail to capture rich appearance variations. Second, there exists extreme class imbalance between positive and negative samples.

Biography: Bohyung Han is currently an Associate Professor in the Department of Electrical and Computer Engineering at Seoul National University, Korea. Prior to the current position, he was an Associate Professor in the Department of Computer Science and Engineering at POSTECH and a visiting research scientist in Machine Intelligence Group at Google, Venice, CA, USA. He received the B.S. and M.S. degrees from the Department of Computer Engineering at Seoul National University, Korea, in 1997 and 2000, respectively, and the Ph.D. degree from the Department of Computer Science at the University of Maryland, College Park, MD, USA, in 2005. He served or will be serving as an Area Chair or Senior Program Committee member of numerous major conferences in computer vision and machine learning, a Tutorial Chair in ICCV 2019, and a Demo Chair in ECCV 2022. He is also serving as an Associate Editor in TPAMI and MVA, and an Area Editor in CVIU. He is interested in various problems in computer vision and machine learning with an emphasis on deep learning. His research group won the Visual Object Tracking (VOT) Challenge in 2015 and 2016.
comparing them to the visual information in the first frame. Our method performs favorably against state-of-the-art algorithms in terms of accuracy on the DAVIS benchmark dataset, while achieving much faster runtime performance.

Biography: Ming-Hsuan Yang is a research scientist at Google and a professor in Electrical Engineering and Computer Science at University of California, Merced. He received the PhD degree in Computer Science from the University of Illinois at Urbana–Champaign in 2000. He serves as an area chair for several conferences including IEEE Conference on Computer Vision and Pattern Recognition, IEEE International Conference on Computer Vision, European Conference on Computer Vision, Asian Conference on Computer, and AAAI National Conference on Artificial Intelligence. He serves as a program co-chair for IEEE International Conference on Computer Vision in 2019 as well as Asian Conference on Computer Vision in 2014, and general co-chair for Asian Conference on Computer Vision in 2016. He serves as an associate editor of the IEEE Transactions on Pattern Analysis and Machine Intelligence (2007 to 2011), International Journal of Computer Vision, Computer Vision and Image Understanding, Image and Vision Computing, and Journal of Artificial Intelligence Research. Yang received the Google faculty award in 2009, and the Distinguished Early Career Research Award from the UC Merced senate in 2011, the Faculty Early Career Development (CAREER) award from the National Science Foundation in 2012, and the Distinguished Research Award from UC Merced Senate in 2015. He is an IEEE Fellow.

03 Poster
Accepted Paper

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**VisDrone-MOT2019: The Vision Meets Drone Multiple Object Tracking Challenge Results**

- Longyin Wen, Pengfei Zhu, Dawei Du, Xiao Bian, Haibin Ling, Qinghua Hu, Jiayu Zheng, Tao Peng, Xinyao Wang, Yue Zhang, Liefeng Bo, Hailing Shi, Rui Zhu, Aijit Jadhav, Bing Dong, Brejesh Lall, Chang Liu, Chunhui Zhang, Dong Wang, Feng Ni, Filiz Bunyak, Gacang Wang, Guizhong Liu, Guna Seetharaman, Guorong Li, Hakan Ardo, Haojian Zhang, Hongyang Yu, Huchuan Lu, Jeng-Neng Hwang, Jiatong Mu, Jinrong Hu, Kannappan Palaniappan, Long Chen, Lu Ding, Martin Lauer, Mikael Nilsson, Noor M. Al-Shakarji, Praeena Mukherjee, Qingming Huang, Robert Laganiére, Shuhao Chen, Siyang Pan, Vinay Kaushik, Wei Shi, Wei Tian, Weiqiang Li, Xin Chen, Xinyu Zhang, Yanting Zhang, Yanyun Zhao, Yong Wang, Yuduo Song, Yuehan Yao, Zhaotang Chen, Zhenyu Xu, Zhibin Xiao, Zhihang Tong, Zhipeng Luo, Zhuojin Sun

**VisDrone-SOT2019: The Vision Meets Drone Single-Object Tracking Challenge Results**

- Dawei Du, Pengfei Zhu, Longyin Wen, Xiao Bian, Haibin Ling, Qinghua Hu, Jiayu Zheng, Tao Peng, Xinyao Wang, Yue Zhang, Liefeng Bo, Hailing Shi, Rui Zhu, Bo Han, Chunhui Zhang, Guizhong Liu, Han Wu, Hao Wen, Haoran Wang, Jiaqing Fan, Jie Chen, Jie Gao, Jie Jin, Jinshaou Zhou, Jinliu Zhou, Jiwang Wang, Juqing Wan, Josef Kittler, Kailu Zhao, Kaisong Huang, Kang Yang, Kangkai Zhang, Lianghui Huang, Lijun Zhou, Lingting Shi, Lu Ding, Ning Wang, Peng Wang, Qintao Hu, Robert Laganiére, Ruiyan Ma, Ruohean Zhang, Sharmonng Zou, Shengwei Zhao, Shengyang Li, Shengyi Zhu, Shikun Li, Shiheng Ge, Shiyu Xuan, Tianyang Xu, Ting He, Wei Shi, Wei Song, Weiming Hu, Wenhua Zhang, Wenjun Zhu, Xi Yu, Xianjun Wang, Xiaojun Wu, Xiaotong Li, Xiaoxue Li, Xiaoye Yin, Xin Zhang, Xin Zhao, Xinhe Xue, Xu Lei, Xueyuan Yang, Yanjie Gao, Yanyun Zhao, Yindu Xu, Ying Li, Yong Wang, Yong Yang, Yuting Yang, Yuexin Li, Zeyu Wang, Zhenhua Feng, Zhipeng Zhang, Zhiyong Yu, Zhizhao Duan, Zhuojin Sun

**VisDrone-DET2019: The Vision Meets Drone Object Detection in Image Challenge Results**


**VisDrone-VID2019: The Vision Meets Drone Object Detection in Video Challenge Results**

- Pengfei Zhu, Dawei Du, Longyin Wen, Xiao Bian, Haibin Ling, Qinghua Hu, Tao Peng, Jiayu Zheng, Xinyao Wang, Yue Zhang, Liefeng Bo, Hailing Shi, Rui Zhu, Bing Dong, Dheeraj Reddy Pailla, Feng Ni, Guangyu Gao, Guizhong Liu, Haitao Xiong, Jing Ge, Jingkai Zhou, Jinrong Hu, Lin Sun, Long Chen, Martin Lauer, Qiong Liu, Sai Saketh Chennamsetty, Sung Jin, Tong Wu, Varghese Alex Kollerathu, Wei Tian, Weida Qin, Xier Chen, Xingjie Zhao, Yanchao Lin, Yinan Wu, Ying Li, Yingping Li, Yilin Wang, Yuduo Song, Yuehan Yao, Yurong Zhang, Zhaoliang Pi, Zhaotang Chen, Zhenyu Xu, Zhibin Xiao, Zhipeng Luo, Ziming Liu
04 Awards

**Task1: object detection in images challenge**

**Winner**
Drone Pyramid Networks–ensemble (DPNet–ensemble)
HongLiang Li, Qishang Cheng, Heqian Qiu, Zichen Song, Xiaoyu Chen
University of Electronic Science and Technology of China, Chengdu, China

**Honourable Mention**
Re–RegressionNet (RRNet)
Changrui Chen, Yu Zhang, Qingquan Lv, Xiaorui Wang, Shuo Wei, Xin Sun
Ocean University of China, Qingdao, China
Active Chip Mining for Object Detection(ACM–OD)
Sungeun Hong, Sungil Kang, Donghyeon Cho
SKTBrain, Seoul, South Korea

**Task2: object detection in videos challenge**

**Winner**
DeepBlueAI–Detector (DBAI–Det)
Zhipeng Luo, Feng Ni, Yuehan Yao, Bing Dong, Zhenyu Xu
DeepBlue Technology (Shanghai), Beijing, China

**Honourable Mention**
Augmented Feature Selected RetinaNet (AFSRNet)
Ziming Liu1, Jing Ge1, Tong Wu2, Lin Sun2, Guangyu Gao1
Beijing Institute of Technology, Beijing, China
Samsung Inc., San Jose, CA, USA2

**Task3: single-object tracking challenge**

**Winner**
Accurate target state estimation for drone tracking (ED–ATOM)
Chunhui Zhang1, Shengwei Zhao1, Kangkai Zhang1, Shikun Li2, Hao Wen2, Shiming Ge2
Institute of Information Engineering, Chinese Academy of Sciences, Beijing, China
Cloudwalk Technology Co. Ltd., Guangzhou, China

**Honourable Mention**
Accurate Tracking by Overlap Maximization and Feature Recalibration(ATOMFR)
Weihua Zhang, Haoran Wang, Jinliu Zhou
Xidian university, Xi’an, China
Strategy and Motion Integrated Long–term Experts(SMILE)
Ruiyan Ma, Yanjie Gao, Yuting Yang, Wei Song, Yuxuan Li
Xidian university, Xi’an, China

**Task4: multi-object tracking challenge**

**Winner**
DeepBlueAI–Tracker (DBAI–Tracker)
Zhipeng Luo, Yuehan Yao, Zhenyu Xu, Feng Ni, Bing Dong
DeepBlue Technology (Shanghai), Beijing, China

**Honourable Mention**
Online multi–object tracking using joint domain information in traffic scenarios (TrackKITSY)
Wei Tian1, Jinnong Hu1, Yuddo Song1, Zhaotang Chen1, Long Chen1, Martin Lauer2
Karlsruhe Institute of Technology, Karlsruhe, Germany
Sun Yat–sen University, Guangzhou, P.R.China
VIPioneers (fruntu) Inc., Guangzhou, P.R.China
05 Organizer

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Computer Vision Scientist
JD Digits

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Computer Vision Scientist
University At Albany, SUNY

Xiao Bian
Senior Research Scientist
GE Global Research

Qinghua Hu
Professor
Tianjin University

Haibin Ling
Professor
Stony Brock University

06 Advisory Committee

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Liyi Dai (US Army Research Office)
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David Jacobs (Univ. Maryland College Park, USA)
Siwei Lyu (Univ. At Albany, SUNY, USA)
Stan Z. Li (Institute of Automation, Chinese Academy of Sciences, China)
Fuxin Li (Oregon State Univ., USA)
Anton Milan (Amazon Research and Development Center, Germany)
Haibin Shi (JD AI Research)
Siyu Tang (Max Planck Institute for Intelligent Systems, Germany)

07 Organization


08 Collaborator and Sponsor

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JD Digits

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