Mengshi QI

Address: BC Building 303, EPFL CVLab, Lausanne, Switzerland
Email: mengshi.qi@epfl.ch / qidash@gmail.com

Education

Beihang University, Beijing, China (09/2014-06/2019)
Ph. D. in Computer Application Technology
Lab: Laboratory of intelligent recognition and image processing in School of CSE
Supervisor: Prof. Yunhong Wang

University of Rochester, Rochester, NY, USA (11/2017-12/2018)
Visiting Ph. D.
Lab: Visual Intelligence & Social Multimedia Analytic Research Group (VIStA)
Supervisor: Prof. Jiebo Luo

Beihang University, Beijing, China (09/2012-06/2014)
Master of Engineering in Computer Science
Lab: Sino-German Joint Software Institute in School of CSE
Supervisor: Prof. Zhongzhi Luan

Beijing University of Posts and Telecommunications, Beijing, China (09/2008-06/2012)
Bachelor of Engineering in Intelligence Science and Technology

Professional Experience

EPFL CVLab ***Lausanne, Switzerland, Nov. 2019-present***
Post-doc Researcher
Collaborators: Prof. Pascal Fua & Dr. Mathieu Salzmann

Baidu Research ***Beijing, China, Aug. 2019-Nov. 2019***
Visiting Researcher
Collaborator: Prof. Yi Yang

Beihang University ***Beijing, China, Sep. 2014-Jun. 2019***
Research Assistant
Supervisor: Prof. Yunhong Wang

Tencent Inc. ***Beijing, China, Jun. 2014-Sep. 2014***
Research Intern

International Game Technology (IGT) ***Beijing, China, Oct. 2011-Apr. 2012***
Software Development Intern

Research Interests

Computer Vision: scene understanding, visual reasoning, action/activity recognition
Multimedia: image/video retrieval, cross-modal hashing, sports video analysis
Machine Learning: generative models, zero/few-shot learning, self-supervised learning

Publications

Journal:

1. **Mengshi Qi,** Yunhong Wang, Annan Li, and Jiebo Luo, *"STC-GAN: Spatial-Temporally Coupled Generative Adversarial Networks for Predictive Scene Parsing"*, IEEE Transactions on Image Processing (TIP), 2020
2. **Mengshi Qi**, Yunhong Wang, Jie Qin, Annan Li, Jiebo Luo, and Luc Van Gool, *"stagNet: An Attentive Semantic RNN for Group Activity and Individual Action Recognition"*, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2019
3. **Mengshi Qi**, Yunhong Wang, Annan Li, and Jiebo Luo, *"Sports Video Captioning via Attentive Motion Representation and Group Relationship Modeling"*, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2019

Conference:

1. **Mengshi Qi**, Jie Qin, Yu Wu, and Yi Yang, *"Imitative Non-Autoregressive Modeling for Trajectory Forecasting and Imputation"*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR' 20), Seattle, USA, June 2020
2. **Mengshi Qi**, Jie Qin, Xiantong Zhen, Di Huang, Yi Yang and Jiebo Luo, *"Few-shot Ensemble Learning for Video Classification with SlowFast Memory Networks"*, ACM on Multimedia Conference (MM' 20), Seattle, USA, October 2020
3. **Mengshi Qi**, Weijian Li, Zhengyuan Yang, Yunhong Wang, and Jiebo Luo, *"Attentive Relational Networks for Mapping Images to Scene Graphs"*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR' 19), Long Beach, USA, June 2019
4. **Mengshi Qi**, Yunhong Wang, Jie Qin, and Annan Li, *"KE-GAN: Knowledge Embedded Generative Adversarial Networks for Semi-Supervised Scene Parsing"*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR' 19), Long Beach, USA, June 2019
5. **Mengshi Qi**, Jie Qin, Annan Li, Yunhong Wang, Jiebo Luo, and Luc Van Gool, *"stagNet: An Attentive Semantic RNN for Group Activity Recognition"*, European Conference on Computer Vision (ECCV' 18), Munich, Germany, September 2018
6. **Mengshi Qi**, Yunhong Wang, Annan Li, and Jiebo Luo, *"Sports Video Captioning by Attentive Motion Representation based Hierarchical Recurrent Neural Networks"*, The 1st International Workshop on Multimedia Content Analysis in Sports @ACM Multimedia (MMSports' 18), Seoul, Korea, October 2018 (oral presentation)
7. **Mengshi Qi**, Yunhong Wang, and Annan Li, *"Online Cross-modal Scene Retrieval by Binary Representation and Semantic Graph"*, ACM on Multimedia Conference (MM' 17), Mountainview, USA, October 2017
8. **Mengshi Qi**, Yunhong Wang, *"DEEP-CSSR: Scene Classification using Category-specific Salient Region with Deep Features"*, IEEE International Conference on Image Processing

(ICIP' 16), Phoenix, Arizona, USA, September 2016 (oral presentation)

Research Projects

1) Key Technology for Thorough Perception of Individual Visual Big Data, The Major Research Plan of the Natural Science Foundation of China (Grant No.2016YFB1001002) (01/2016-06/2019)
   Supervisor: Prof. Yunhong Wang
2) Small-Scale Group Activity Analysis in Sports Videos, The Natural Science Foundation of China (Grant No.61573045) (01/2016-06/2019)
   Supervisor: Prof. Yunhong Wang
3) Multi-level Human-Being Centered Visual Understanding, The Hong Kong, Macao, and Taiwan Science and Technology Cooperation Program of China (Grant No.L2015TGA9004) (09/2015-09/2017)
   Supervisor: Prof. Yunhong Wang
4) Face Aging Simulation and Estimation Research based on Massive Internet Media Data, The Natural Science Foundation of China (Grant No.F030403) (09/2014-09/2016)
   Supervisor: Prof. Yunhong Wang & Dr. Di Huang
5) Hierarchical Computation Theory and Model of Media Cognition, The National Basic Research Program (Grant No.2010CB327902) ("973 program") (01/2010-01/2014)
   Supervisor: Prof. Yunhong Wang
6) Research and Implementation of Distributed Anomaly Detection System for Data Center (cooperation with Tencent Inc.), The National High-tech Research & Development Program ("863 program") (08/2013-08/2014)
   Supervisor: Prof. Depei Qian & Prof. Zhongzhi Luan
7) Research and Implementation of Graduate Employment Information Public Service Platform, The National Key Technology Research & Development Program (06/2012-06/2013)
   Supervisor: Prof. Depei Qian & Prof. Zhongzhi Luan
8) Development and Optimization of Chinese Search Engine (cooperation with Sogou.com), Undergraduate Graduation Project (06/2007-06/2008)
   Supervisor: Prof. Xiaojie Wang

Technology Competence

• Programming Skills: C & C++, Java, Shell, Python, and MATLAB
• Programming Environment & Tools: Vim, Eclipse, Visual Studio, and Sublime Text
• Operating Systems: Linux, Windows
• Open Sources: Pytorch, TensorFlow, OpenCV, Hadoop, and Storm

Honors & Awards

Academic Scholarships
National Scholarship for Graduate Students, Beihang University (2017)

Grant Scholarship of China Scholarship Council, CSC (2017-2018)
Two times recipient of First Prize Scholarship (Top 10%), Beihang University (2012-2014)
Two times recipient of First Prize Scholarship (Top 10%), Beijing University of Posts and Telecommunications (2010-2012)

Academic Awards

Outstanding Research Papers Award of Graduate Student, Beihang University (2020)
Outstanding Graduate Award of Beijing, Beihang University (2019)
Technological Innovation Award in School of Computer, Beijing University of Posts and Telecommunications (2010-2011)
Twice recipient of Outstanding Student Award, Beijing University of Posts and Telecommunications (2010-2012)

Professional Service

Conference Reviewer:

CVPR 2021/2020, ICCV 2019, ECCV 2020, ICLR 2021, NeurIPS 2020

Journal Reviewer:

IEEE Transactions on Image Processing (TIP)
IEEE Transactions on Multimedia (TMM)
IEEE Transactions on Circuits Systems for Video Technology (TCSVT)
Pattern Recognition (PR)
ACM Computing Surveys

PC Member:

AAAI 2021/2020, IJCAI 2021

IEEE Member and ACM Member