Jingjing MENG

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EDUCATION

Nanyang Technological University — Singapore
Ph.D. Electrical and Electronic Engineering (EEE) — Feb. 2017
Advisor: Professor Yap-Peng Tan

Vanderbilt University — Nashville, TN, US
M.S. Computer Science — May 2006

Huazhong University of Science & Technology (HUST) — Wuhan, China
B.E. Electronics & Information Engineering — July 2003
The Advanced Class (60 selected from 4,000 freshmen)

APPOINTMENTS

Assistant Professor of Teaching and Research — 04/2018-
University at Buffalo, Computer Science and Engineering Department — Buffalo, NY

Research Fellow — 03/2017-03/2018
Nanyang Technological University, School of EEE — Singapore

Research Associate — 03/2011-02/2017
Nanyang Technological University, School of EEE — Singapore

Senior Staff Research Engineer — 01/2007-12/2010
Applied Research Center, Motorola — Schaumburg, IL

Research Intern — 06/2005-09/2005
Vanderbilt Medical Center, Institute of Imaging Science — Nashville, TN

Research Assistant — 09/2004-05/2006
Vanderbilt University, Computer Science Dept. — Nashville, TN

TEACHING EXPERIENCE

University at Buffalo, Computer Science and Engineering — Buffalo, NY

CSE 410/580 Intro to Computer Graphics	Fall 2019, 2021
CSE191 Discrete Structures	Spring 2019-2021
CSE611 MS Project Development	Fall 2018
CSE199 How the Internet Works	Fall 2018, 2019, 2021
CSE534 Multimedia Systems	Spring 2018- 2020

Vanderbilt University, Computer Science Dept. — Nashville, TN
Teaching Assistant — 09/2003-05/2006
CS 101: Programming & Problem Solving
CS 258: Computer Graphics
CS 231: Computer Organization

AWARDS AND HONORS

Shortlisted for ICME Rising Star Award	2021
Best Paper Award of IEEE Trans. on Multimedia (T-MM)	2016
Doctoral Consortium with Travel Award, Comp. Vision & Pattern Recog. (CVPR)	2016
Graduate Student Scholarship, Vanderbilt University	2003-2006
Outstanding Student, HUST (top 0.5%)	2000-2002
First-class Freshman Scholarship, HUST	1999

GRANTS

Co-PI: Real-time Object Retrieval in Large Scale Video Data, Infocomm Development Authority of Singapore (IDA), August 2013-Dec 2013, S$ 430,000
Co-PI: Abnormal Video Event Detection for Traffic Safety, NTU/NUS-JSPS Joint Research Project Grant, April 2012 - March 2014, S$ 76,000

JOURNAL ARTICLES

T. Yu, J. Meng, M. Yang, and J. Yuan, "3D object representation learning: a set-to-set matching perspective", IEEE Trans. on Image Processing (TIP), 2021.

T. Yu, J. Meng, C. Fang, H. Jin, and J. Yuan, "Product quantization network for fast visual search", International Journal of Computer Vision (IJCV), 2020.

M. Yan, J. Meng, C. Zhou, Z. Tu, YP Tan, and J.Yuan, "Detecting spatiotemporal irregularities in videos via a 3D convolutional autoencoder", Journal of Visual Commun. and Image Representation (JVCI), 2020.

W. Hong, X. Tang, J. Meng, and J. Yuan, "Asymmetric mapping quantization for nearest neighbor search", IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), 2020.

J. Zhang, Z. Wang, J. Meng, YP Tan, and J. Yuan, "Boosting positive and unlabeled learning for anomaly detection with multi-features", IEEE Transactions on Multimedia (T-MM), 2019.

J. Meng, S. Wang, H. Wang, J. Yuan, and YP Tan, "Video summarization via multi-view representative selection", IEEE Transactions on Image Processing (T-IP), 2018.

S. D. Bhattacharjee, J. Yuan, Y. Huang, J. Meng, and L. Duan, "Query adaptive multi-view object

instance search and localization using sketches", IEEE Trans. on Multimedia (T-MM), 2018.

J. Meng, J. Yuan, J. Yang, G. Wang, and YP Tan, "Object instance search in videos via spatio-temporal trajectory discovery", IEEE Transactions on Multimedia (T-MM), 2016.

Y. Jiang, J. Meng, J. Yuan, and J. Luo, "Randomized spatial context for object search", IEEE Transactions on Image Processing (T-IP), 2015.

Z. Ren, J. Yuan, J. Meng, and Z. Zhang, "Robust part-based hand gesture recognition using Kinect sensor", IEEE Trans. on Multimedia (T-MM), 2013. (2016 IEEE Trans. on Multimedia Best Paper Award)

J. Yuan, J. Meng, Y. Wu, and J. Luo, "Mining recurring events through forest growing", IEEE Trans. on Circuits and Systems for Video Technology (TCSVT), 2008.

A. Mishra, Y. Lu, J. Meng, A. W. Anderson, and Z. Ding, "Unified framework for anisotropic interpolation and smoothing of diffusion tensor images', NeuroImage, 2006.

CONFERENCE PAPERS

L. Huang, J. Tan, J. Meng, J. Liu, and J. Yuan, "HOT-Net: non-autoregressive transformer for 3D hand-object pose estimation", ACM International Conference on Multimedia (MM), 2020.

Z. Weng, J. Meng, Z. Ding, and J. Yuan, "S3F: a multi-view slow-fast network for Alzheimer's disease diagnosis", IEEE International Conference on Multimedia and Expo. (ICME), 2020.

S. Wang, J. Meng, J. Yuan, and YP Tan, "Joint representative selection and feature learning: a semi-supervised approach", IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2019.

T. Yu, J. Meng, and J. Yuan, "Multi-view harmonized bilinear network for 3D object recognition", IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2018 (Spotlight).

W. Hong, J. Meng, and J. Yuan, "Distributed composite quantization", AAAI Conference on Artificial Intelligence (AAAI), 2018 (Oral).

W. Hong, J. Meng, and J. Yuan, "Tensorized projection for high-dimensional binary embedding", AAAI Conference on Artificial Intelligence (AAAI), 2018.

T. Yu, J. Meng, and J. Yuan, "Is my object in this video? Reconstruction-based object search in video", International Joint Conference on Artificial Intelligence (IJCAI), 2017.

J. Meng, H. Wang, J. Yuan, and YP Tan, "From keyframes to key objects: video summarization by representative object proposal selection", IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016.

J. Meng, J. Yuan, G. Wang, and YP Tan, "Fast object instance search in videos from one example", IEEE International Conference on Image Processing (ICIP), 2015.

J. Meng, J. Yuan, G. Wang, and J. Xu, "Object instance search in videos", Intl. Conf. on Information, Communication and Signal Processing (ICICS), 2013.

Y. Jiang, J. Yuan, and J. Meng, "Rapid object search engine for contextual advertisement", ACM International Conference on Multimedia (ACM MM), 2012 (Demo).

Y. Jiang, J. Meng, and J. Yuan, "Randomized spatial context for object search", IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2012.

Z. Ren, J. Meng, and J. Yuan, "Depth camera based hand gesture recognition and its applications in human-computer-interaction", Intl. Conf. on Information, Communication and Signal Processing (ICICS), 2011 (invited oral paper).

Z. Ren, J. Meng, J. Yuan, and Z. Zhang, "Robust hand gesture recognition with Kinect sensor", ACM International Conference on Multimedia (ACM MM), 2011 (Technical Demo).

Y. Jiang, J. Meng, and J. Yuan, "Grid-based local feature bundling for efficient object search", IEEE International Conference on Image Processing (ICIP), 2011 (Oral).

J. Meng, J. Yuan, Y. Jiang, N. Narasimhan, V. Vasudevan, and Y. Wu, "Interactive visual object search through mutual information maximization", ACM International Conference on Multimedia (ACM MM), 2010.

J. Meng, J. Yuan, M. Hans, and Y. Wu, "Mining motifs from human motion", Eurographics, 2008. (Videos)

J. Yuan, W. Wang, J. Meng, Y. Wu, and D. Li, "Mining repetitive clips through finding continuous paths", ACM International Conference on Multimedia (ACM MM), 2007.

B. Bodenheimer, J. Meng, H. Wu, G. Narasimham, B. Rump, T. P. McNamara, T. H. Carr, and J. J. Rieser, "Distance estimation in virtual and real environments using bisection", Symposium on Applied Perception in Graphics and Visualization (APGV), 2007.

J. Meng, J. J. Rieser, and B. Bodenheimer, "Distance estimation in virtual environments using bisection", Symposium on Applied Perception in Graphics and Visualization (APGV), 2006.

PATENTS

"System and Method for Large Scale Visual Object Search", US provisional patent application, filed 05/2012.

"System and Method for Robust Hand Gesture Recognition Using Commodity Depth Sensor", US provisional patent application, filed 10/28/2011.

"Method for Selecting an Avatar in a Virtual Scene from a Mobile Terminal", US 2011/0239115 A1, filed 03/26/2010

"Method and Apparatus for Collaborative Design of an Avatar or Other Graphical Structure", US 2009/0254832 A1, filed 04/03/2008.

SERVICE AND MEBERSHIP

IEEE Senior Member

Associate Editor

IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)	2019-
Signal Processing: Image Communication	2020-
The Visual Computer (TVCJ)	2017-

Technical Program Co-Chair

IEEE Conf. on Visual Communications and Image Processing (VCIP)	2022

Area Chair

Winter Conference on Applications of Computer Vision (WACV)	2022
AAAI	2021, 2022
International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	2021
IEEE International Symposium on Circuits and Systems (ISCAS)	2020-2021
IEEE Conf. on Multimedia and Expo. (ICME)	2019
IEEE Conf. on Image Processing (ICIP)	2018-2021

Session Chair

IEEE Conf. on Image Processing (ICIP)	2020

Finance Chair

IEEE Conf. on Visual Communications and Image Processing (VCIP)	2015

Technical Committee Member

IEEE CAS Visual Signal Processing and Commu. Technical Committee	2020-
IEEE Image, Video, and Multimedia Signal Processing Technical Committee	2019-
- Web and Publicity Subcommittee Chair	2021-
IEEE CAS Multimedia Systems and Applications Technical Committee	2018-

Workshop Co-organizer

Workshop on Multi-Sensor for Action and Gesture Recognition (MAGR), Asian Conference on Pattern Recognition (ACPR)	2019