

Kaoning Hu

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Education

State University of New York at Binghamton, Binghamton, New York

PhD, Computer Science

July 2015

Concentration: Computer Vision, Pattern Recognition, and Human-Computer Interaction

Huazhong University of Science & Technology (HUST), Wuhan, China

MS, Electronics & Information Engineering

June 2008

BS, Electronics & Information Engineering

June 2006

Work Experience

Assistant Professor – Department of Computer Science and Information Systems, Texas A&M University - Commerce

Aug 2017 – present

Courses teaching: CSCI 151/COSC 1436 Introduction to Computer Science and Programming,
COSC 2336 Data Structures and Algorithms,
CSCI 380 Web Programming and Interface,
CSCI 450 Computer Architecture (undergraduate level),
CSCI 457 Programming Mobile Devices,
CSCI 515 Fund of Programming C/C++,
CSCI 527 Advanced Databases,
CSCI 540 Computer Architecture (graduate level),
CSCI 563 Information Security

Responsibility: Teach undergraduate and graduate students,
carry out research program, searching for external fund,
serve the department as GA coordinator, graduate student advisor,
and serve the university in multiple events and commencements.

Assistant Professor – Department of Math & Computer Science, Webster University

Aug 2016 – Aug 2017

Assistant Professor – Dept. of Math & Computer Science, University of Central Missouri

Aug 2015 – Aug 2016

Academic Service

Program Committee:

- First Workshop on Applied Multimodal Affect Recognition, Workshop at FG 2020 (15th IEEE International Conference on Automatic Face and Gesture Recognition).

Reviewer of the following academic journal and conferences:

- IEEE International Conference on Automatic Face & Gesture Recognition (FGR 2018 - 2023)
- IEEE Transaction on Biometrics, Behavior, and Identity Science (TBIOM 2019 and 2022)
- International Conference on Digital Image Computing: Tech. and App. (DICTA 2017 - present)
- International Conference on Pattern Recognition (ICPR 2016, 2018)
- Elsevier Journal Neurocomputing (NEUCOM 2017)

- IEEE Conference on Visual Communications & Image Processing (VCIP 2017)

Publications

Dongeun Lee, **Kaoning Hu**, Omar El Ariss and Kibum Kwon. "Multiple Programming Languages for Improving Computational Thinking in CS1". Special Interest Group Computer Science Education - Technical Symposium (SIGCSE TS), **2023**.

Omar El Ariss and **Kaoning Hu**. "ResNet-based Parkinson's Disease Classification." IEEE Transactions on Artificial Intelligence (IEEE TAI), **2022**

Kaoning Hu, Dongeun Lee, and Tianyang Wang. "Single Image Super-Resolution Using Vectorization and Texture Synthesis." 2021 the 16th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP), **2021**

Kaoning Hu, Lijun Yin, and Tianyang Wang. "Temporal Interframe Pattern Analysis for Static and Dynamic Hand Gesture Recognition." 2019 IEEE International Conference on Image Processing (ICIP). IEEE, **2019**.

Tianyang Wang, Jun Huan, Bo Li, and **Kaoning Hu**. "Rethink Gaussian Denoising Prior for Real-world Image Denoising." 2019 IEEE 31st International Conference on Tools with Artificial Intelligence (ICTAI). IEEE, **2019**.

Urcun Tanik, Sang C. Suh, Abdullah Arslan, **Kaoning Hu**, Hemanth Bandi. "International Convergence on the Transdisciplinary Resource Correlation Platform". Society of Design and Process Science (SDPS) **2017**.

Tianyang Wang, Mingxuan Sun, and **Kaoning Hu**. "Dilated Residual Network for Image Denoising." Accepted by IEEE International Conference on Tools with Artificial Intelligence (ICTAI), **2017**.

Kaoning Hu and Lijun Yin. "Multiple Feature Representations from Multi-Layer Geometric Shape for Hand Gesture Analysis." In Automatic Face and Gesture Recognition (FG), 2015 11th IEEE International Conference and Workshops on, vol. 1, pp. 1-7. IEEE, 2015.

Kaoning Hu and Lijun Yin. "Multi-scale Topological Features for Hand Posture Representation and Analysis." Computer Vision (ICCV), 2013 IEEE International Conference on, pp. 1928-1935. IEEE, 2013.

Michael J. Reale, Shaun Canavan, Lijun Yin, Kaoning Hu, and Terry Hung. "A Multi-Gesture Interaction System Using A 3-D Iris Disk Model for Gaze Estimation and An Active Appearance Model for 3-D Hand Pointing." Multimedia, IEEE Transactions on, 13, no. 3 (2011): 474-486.

Kaoning Hu, Shaun Canavan, and Lijun Yin. "Hand Pointing Estimation for Human Computer Interaction Based on Two Orthogonal-Views." In Pattern Recognition (ICPR), 2010 20th International Conference on, pp. 3760-3763. IEEE, 2010. (With Patent No. 8,971,572)

Yiping Xu, Kaoning Hu, Yan Tian, and Fuyuan Peng. "Classification of Hyperspectral imagery using SIFT for spectral matching." In Image and Signal Processing, 2008. CISP'08. Congress on, vol. 2, pp. 704-708. IEEE, 2008.

Yiping Xu, Kaoning Hu, and Jianxin Han. "Classification based on the EMD of hyperspectral curve." In Second International Conference on Spatial Information Technology, pp. 679541-679541. International Society for Optics and Photonics, 2007.

Yiping Xu, Kaoning Hu, and Jianxin Han. "Hyperspectral image fusion using empirical mode decomposition." In International Symposium on Multispectral Image Processing and Pattern Recognition, pp. 67891R-67891R. International Society for Optics and Photonics, 2007.

Grants/Awards

Multilingual Computational Thinking: Teaching Introductory Programming Classes Through Low-Level and High-Level Programming Languages. Co-PI, Sept 2020 - Aug 2023. \$300,000. Funded.

Work in progress

Kaoning Hu, Dongeun Lee, and Omar El Ariss. "Image Rotation using Bicubic Interpolation with a Sigmoid Parasite".

Dongeun Lee, Kaoning Hu, Omar El Ariss and Kibum Kwon. "Game Programming to Reduce Cognitive Load of Learning Multiple Programming Languages in Introductory Programming Courses".

Dongeun Lee, Kaoning Hu, Omar El Ariss and Kibum Kwon. "Simultaneous Use of Multiple Programming Languages for Improving Computational Thinking in Introductory Programming Courses".