XUEJIAN RONG

email xrong@ccny.cuny.edu

website http://xrong.org

phone (917)717-3986

address Steinman Hall ST512, 160 Convent Avenue, New York, NY 10031

EDUCATION

09/2013-present The City College, City University of New York (CUNY), USA.

Ph.D. Candidate in Electrical Engineering Expected December 2018

Committee: Yingli Tian (chair), Ioannis Stamos, Jizhong Xiao, Zhigang Zhu

Research Focus: Computer Vision & Image Processing & Machine Learning

09/2009-06/2013 Nanjing University of Aeronautics and Astronautics (NUAA), China.

B.E. in Control Science and Engineering Outstanding Undergraduate Thesis Award

SELECTED PUBLICATIONS

Xuejian Rong, Chucai Yi, and Yingli Tian. *Unambiguous Text Localization and Retrieval for Cluttered Scenes*. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017. (*Spotlight Presentation*)

Yang Xian, **Xuejian Rong**, Xiaodong Yang, and Yingli Tian. *Evaluation of Low-Level Features for Real-World Surveillance Event Detection*. IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2017.

J. Pablo Munoz, Bing Li, **Xuejian Rong**, Jizhong Xiao, Yingli Tian, and Aris Arditi. *An Assistive Indoor Navigation System for the Visually Impaired in Multi-Floor Environments*. IEEE International Conference on CYBER Technology in Automation (**CYBER**), 2017. (*Best Paper Award*)

Xuejian Rong, Bing Li, Aris Arditi, and Yingli Tian. *Guided Text Spotting for Assistive Blind Navigation in Unfamiliar Environments*. International Symposium on Visual Computing (**ISVC**), 2016. (*Oral Presentation*)

Xuejian Rong and Yingli Tian. *Adaptive Shrinkage Cascades for Blind Image Deconvolution*. IEEE International Conference on Digital Signal Processing (**DSP**), 2016. (*Oral Presentation*)

Yuancheng Ye, **Xuejian Rong**, Xiaodong Yang, and Yingli Tian. *Region Trajectories for Video Semantic Concept Detection*. ACM International Conference on Multimedia Retrieval (**ICMR**), 2016.

J. Pablo Munoz, Bing Li, **Xuejian Rong**, Jizhong Xiao, Yingli Tian, Aris Arditi. *Demo: Assisting Visually Impaired People Navigate Indoors*. The 25th International Joint Conference on Artificial Intelligence (**IJCAI**), 2016.

Bing Li, Xiaochen Zhang, J. Pablo Munoz, Jizhong Xiao, **Xuejian Rong**, and Yingli Tian. *Assisting Blind People to Avoid Obstacles: An Wearable Obstacle Stereo Feedback System based on 3D Detection*. IEEE International Conference on Robotics and Biomimetics (**ROBIO**), 2015.

Xuejian Rong, Chucai Yi, Xiaodong Yang, and Yingli Tian. *Scene Text Recognition in Multiple Frames based on Text Tracking*. IEEE International Conference on Multimedia and Expo (**ICME**), 2014.

Xuejian Rong, Chucai Yi, Yingli Tian. *Recognizing Text-based Traffic Guide Panels with Cascaded Localization Network*. ECCV Workshop on Computer Vision for Road Scene Understanding and Autonomous Driving (**CVRSUAD**), 2016.

Bing Li, J. Pablo Munoz, **Xuejian Rong**, Jizhong Xiao, Yingli Tian, Aris Arditi. *ISANA: Wearable Context-Aware Indoor Assistive Navigation with Obstacle Avoidance for the Blind*. ECCV Workshop on Assistive Computer Vision and Robotics (**ACVR**), 2016.

RESEARCH EXPERIENCE

2016-Present Visual-Linguistic Understanding on Scene Text Images

Designed new deep neural networks to model the relationship between the scene text instances and context concepts in surrounding environments, which results in better image captioning and visual question answering performance. The proposed framework connects and benefits the Natural Language Processing and Computer Vision research areas.

2013-Present Scene Text Detection and Recognition in Natural Images

Designed new deep learning based inference algorithms for scene text detection, retrieval, and recognition in the wild, in the presence of image degradations like blur, distortion, noise, cluttered background, etc. Recognized texts in indoor environments usually carry important contextual information which could significantly assist the independent travel of blind or visually impaired persons.

2014-2016 Intelligent Navigation Aid for Visually Impaired Persons

Designed new image deblurring algorithms to remove the degradations in captured indoor videos, then adopted the deblurred videos to perform real-time indoor navigation and automatic destination recognition for the visually impaired people.

2012-2013 Microsoft Kinect based 3D Object Recognition for Remote Operation

Designed rendering algorithms to control the Haptic Interaction Point (HIP) to interact with virtual environments created by the depth images captured by Kinect (Microsoft Corp.)

TEACHING EXPERIENCE

2017 EE I2200 Digital Image Processing

Teaching Assistant, The City College, City University of New York.

2017 Deep Learning in Computer Vision

Instructor, 800+ students, online course on *ChinaHadoop*, the leading IT education platform in China.

ACADEMIC HONORS

2017 IEEE CVPR, Spotlight Presentation on Scene Text Extraction

2016 IEEE ICME, Doctoral Consortium Travel Award

2013-2017 Graduate Research Fellowship, CUNY

2013 Outstanding Thesis Award, NUAA

2009-2012 First Class Academic Scholarship, NUAA

SKILLS

Programming Languages C, C++, Python, Matlab, and Shell with practical experiences

Tools OpenCV, PyTorch, TensorFlow, PyCharm, LaTeX, GNU Linux

PROFESSIONAL ACTIVITIES

Reviewer CVPR, ICCV, BMVC, ICIP, ICME, ICDAR, TMM, TIP, MVA, JVCI, etc.

REFERENCE

Yingli Tian Professor, The City University of New York. ytian@ccny.cuny.edu.