

# XUEJIAN RONG

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## 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

## EXPERIENCE

*05/2018-08/2018*            Research Intern, Siemens Corporate Research. *Princeton, NJ*  
Mentor: Dr. [Srikrishna Karanam](#) and Dr. [Ziyan Wu](#)  
To explore in the research areas of Person Re-identification and Activity Recognition.

*09/2013-05/2018*            Research Assistant, Media Lab, CUNY. *New York, NY*  
Mentor: Dr. [Yingli Tian](#)

### **[Visual-Linguistic Understanding on Scene Text Images, 09/2016-05/2018]**

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.

### **[Scene Text Detection and Recognition in Natural Images, 09/2013-05/2018]**

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.

### **[Intelligent Navigation Aid for Visually Impaired Persons, 09/2014-03/2016]**

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. Demo presented in Department of Transportation.

*03/2012-06/2013*            Research Assistant, Robotics Lab, NUAA. *Nanjing, Jiangsu, China*  
Mentor: Dr. [Bing Qiao](#)

### **[3D Object Recognition for Remote Robot Operation]**

Designed rendering algorithms to control the Haptic Interaction Point (HIP) of robot arms to interact with virtual environments created from the depth data captured by MICROSOFT KINECT.

09/2017-  
10/2017

Adjunct Lecturer, ChinaHadoop. *Beijing, China*

*Deep Learning in Computer Vision*, 900+ students, online course on the leading education platform in China.

## SELECTED PUBLICATIONS

**Xuejian Rong**, Chucai Yi, and Yingli Tian. *Unambiguous Text Localization, Retrieval, and Recognition for Cluttered Scenes*. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2017. (*Under Review*)

**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.

**Xuejian Rong**, Bing Li, Aris Ardit, 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 Ardit. *Demo: Assisting Visually Impaired People Navigate Indoors*. The 25th International Joint Conference on Artificial Intelligence (**IJCAI**), 2016.

**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.

## TALKS AND 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

## SKILLS

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

*Tools* OpenCV, PyTorch, TensorFlow, PyCharm, L<sup>A</sup>T<sub>E</sub>X, GNU Linux

## PROFESSIONAL ACTIVITIES

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

## REFERENCES

*Yingli Tian* Professor, IEEE Fellow, CUNY. ytian@ccny.cuny.edu

*Xiaodong Yang* Research Scientist, NVIDIA Research. xiaodongy@nvidia.com

*Chucai Yi* Research Engineer, Google. gschucai@gmail.com