Wenjia Xu

☐ (+86) 137-1754-6627 | ✉ xuwenjia16@mails.ucas.edu.cn

Education

Institute of Electronics, University of Chinese Academy of Sciences   *Beijing, China*
PHD IN COMPUTER SCIENCE   *2016 - now*
- Supervisor: Prof. Yirong Wu

KTH Royal Institute of Technology   *Stockholm, Sweden*
EXCHANGE STUDENT IN STATISTICAL INFERENCE   *2016.1 - 2016.6*
- Supervisor: Prof. Tobias Oechtering

Beijing Institute of Technology   *Beijing, China*
B.S. IN ELECTRONIC ENGINEERING   *2012 - 2016*
- Rank: 1/59, GPA: 91.4/100

Research Interest

Image Denoising, Image Inpainting, Super Resolution, Visualization for Deep Learning, Detection, CNN Compression

Publication

- **Wenjia Xu**, Guangluan Xu, Yang Wang, Daoyu Lin, Jiuniu Wang, and Yirong Wu, High Quality Remote Sensing Image Super-Resolution Using Deep Memory Connected Network, Acceptted by IEEE International Geoscience and Remote Sensing Symposium(IGARSS), Valencia, 2018. **Accepted as Oral Presentation**

- Daoyu Lin, Yang Wang, Guang-Luan Xu and **Wenjia Xu**, SCRSR: An Effective Recursive Convolutional Neural Network for Fast and Accurate Image Super-Resolution. **Under Review** In: European Conference on Computer Vision (ECCV)(2018)

Skills

DEEP LEARNING SOFTWARE STACKS
- proficent with Pytorch, familiar with TensorFlow, Numpy and IPython Notebook

PROGRAMMING LANGUAGE
- proficent with Python and Matlab, familiar with C/C++

ADDITIONAL SKILLS
- familiar with HTML, JavaScript, CCS, GEOS

ENGLISH STANDARDIZED TEST
- IELTS(Jan, 2018) |Overall Band Score 7.5/9.0, Listening 7.5/9.0, Reading 8.5/9.0, Writing 6.5/9.0, Speaking 6.5/9.0
- GRE(Jun, 2014) |Total 317, Verbal 147/170, Quantitative 170/170, Analytical Writing 3.5/6.0

Honors and Scholarship

Scholarship

- 2015 | Scholarship for Excellent Undergraduate International Exchange Program (10/500), China Scholarship Council
- 2015 | Scholarship of China Century Group (5/500), China Century Group Company
- 2013 | National Scholarship (4/500), Minstry of Education in China
- 2013-2016 | 1st Grade Scholarship (1/59), Beijing Institute of Technology

Awards

- 2017 | Outstanding Student Leader, University of Chinese Academy of Sciences
- 2016 | Outstanding graduate, Beijing Institute of Technology
- 2013 | Outstanding Youth Volunteer, FangShan district, Beijing
- 2013 | The second prize in Electronic Design Contest,Beijing Institute of Technology
- 2013-2015 | Pacemaker to Merit Student, Beijing Institute of Technology

Projects

SCRSR: An Recursive Convolutional Neural Network for Fast and Accurate Image Super-Resolution

Beijing, China

2017.11-now

- Use two-level recursive learning to improve accuracy by increasing depth without adding any weight parameters.
- Propose A Split-Concatenate-Residual (SCR) block to reduce computation and parameters.
- Test the model on benchmark datasets such as BSD100 and Set14. The model achieves better performance against the state-of-the-art methods such as EDSR and LapSRN, in terms of visual quality and run time. The paper is under review in European Conference on Computer Vision(ECCV)(2018).

Remote sensing Image Restoration

Beijing, China

2017.11-now

- Propose a Deep Memory Connected Network based on a convolutional neural network to reconstruct high-resolution image from low-resolution one.
- Use local and global residual connections to combine image detail with environmental information.
- Use down-sampling units, shrinking the spatial size of feature maps.
- Implement the method and test it on UC Merced and GaoFen datasets. Details can be found in paper [1].

Course: Stanford CS231n: Convolutional Neural Networks for Visual Recognition

Beijing, China

2017.9-2017.11

- Implement core functions of typical networks: CNN, RNN, GAN.
- Study training skills.
- Applications: image captioning, visualizing CNN.

Radar Detection Range visualization

Beijing, China

2017.10-now

- Calculate radar maximum detection range.
- Union detection range from several radar system.
- Use GEOS library to render the visualization result.

3D surface construction algorithm

Beijing, China

2017.09-2017.10

- Investigate the marching cubes (MC), the indirect volume rendering algorithm for scalar volumetric data sets.
- Remove the redundancy in the generate triangular facets, reducing space complexity.
- Test the algorithm on Stanford Bunny and Lobster dataset.

Degree Project: Evaluation of Privacy-Preserving Methods for Smart Meter Grids

Stockholm, Sweden

2016.01-2016.06

- Propose an alternative energy source algorithm to minimize the correctness of the hypothesis of the electrical adversary.
- Evaluate the effectiveness of alternative energy source on a public data set. With the alternative energy source, the privacy leakage will be obviously minimized.

Extracurricular Activity

Secretary in Chinese Institute of Electronics Education

Beijing, China

2017.11 - now

Deputy Minster of Practice Department in Student Union of University of Chinese Academic of Sciences

Beijing, China

2017.09 - now