LANTAO YU

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CURRENT POSITION

Ph.D. Student at Rice University **May 2016 - Present**
Advisor: Michael T. Orchard
Department of Electrical and Computer Engineering
Thesis Title: **Location-Directed Complex-Valued Modeling for Image Processing**

EDUCATION BACKGROUND

Rice University, Houston, TX **Aug. 2012 - Apr. 2016**
Master of Science in Electrical and Computer Engineering

GPA: 3.97/4.3
Advisor: Michael T. Orchard
Thesis: **Determining Accurate Locations of Edges in Natural Images: A Phase-based, Non-parametric Framework**

Tianjin University, Tianjin, China **Sept. 2008 - July. 2012**
Bachelor of Engineering in Measuring and Control Technology and Instrument (with honor)

GPA: 3.83/4.0, Major GPA: 3.92/4.0
Thesis: **Biomimetic Compound Eye Sensitivity and Object Detection**

INDUSTRY EXPERIENCE

Mitsubishi Electric Research Laboratories, Cambridge, MA **May 2019 - Aug. 2019**
Research Scientist

Mentor: Dehong Liu
Collaborators: Hassan Mansour, Petros T. Boufounos, and Yanting Ma
Project: **Multi-Band Image Fusion**

PROGRAMMING SKILLS

MATLAB, Python, C/C++

PUBLICATION LIST/CONFERENCE

[1] Lantao Yu and Michael T. Orchard, "When Spatially-Variant Filtering Meets Low-Rank Regularization: Exploiting Non-Local Similarity for Single Image Interpolation", 2019 26th IEEE International Conference on Image Processing (ICIP). (**Oral, state-of-the-art performance**)

[2] Lantao Yu and Michael T. Orchard, "Accurate Edge Location Identification Based on Location-directed Image Modeling", 2019 26th IEEE International Conference on Image Processing (ICIP).

[3] Lantao Yu and Michael T. Orchard, "Single Image Interpolation Exploiting Semi-Local Similarity", 2019 44th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 1722-1726. (**Oral, state-of-the-art performance**)

[4] Lantao Yu and Michael T. Orchard, "Location-directed Image Modeling and its Application to Image Interpolation", 2018 25th IEEE International Conference on Image Processing (ICIP), 2192-2196.

[5] Lantao Yu, Dehong Liu, Hassan Mansour, Petros T. Boufounos, and Yanting Ma, "Blind Multispectral Image Pan-sharpening", 2020 45th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 1429-1433. (**Oral, state-of-the-art performance**)

PUBLICATION LIST/JOURNAL(TO BE SUBMITTED)

[1] Lantao Yu and Michael T. Orchard, "Manifold-Inspired Single Image Interpolation", IEEE Transactions on Image Processing.

[2] Lantao Yu and Michael T. Orchard, "Complex-Valued Image Modeling and its Applications to Image Compression", IEEE Transactions on Image Processing.

[3] Lantao Yu, Dehong Liu, Hassan Mansour, Petros T. Boufounos, and Yanting Ma, "Blind Multispectral Image Pan-sharpening", IEEE Transactions on Geoscience and Remote Sensing.

ACADEMIC SERVICE

IEEE Transactions on Image Processing, Reviewer
IEEE Transactions on Multimedia, Reviewer

PATENT(FILED)

"Systems and Methods for Blind Multi-Spectral Image Fusion", April, 2020.

TALK

"Location-directed Complex-Valued Modeling for Image Processing", Athens, Greece, Oct. 2018.

"When Spatially-Variant Filtering Meets Low-Rank Regularization: Exploiting Non-Local Similarity for Single Image Interpolation", Shenzhen, Chengdu, Xi'An, Sept. 2019.

AWARDS

National Scholarship (China's Most Prestigious Award for Undergraduate Students)	**Sept. 2011**
Rice Graduate Fellowship	**Aug. 2012 - May. 2013**
Rice Engineering Alumni Travel Award	**Feb. 2019, Sept. 2019**
IEEE Signal Processing Society Travel Award (33/839)	**Oct. 2018**
Honorable Mention in Mathematical Contest in Modeling	**Feb. 2012**

COURSES

Digital Signal Processing	**A+**
Statistical Signal Processing	**A**
Advanced Digital Signal Processing:	**A**
Computational Photography	**A**
Data Mining & Statistical Learning	**B+**
Introduction to Advanced VLSI Design	**A**
Introduction to Random Processes	**A+**
Introduction to Information Theory	**A**
Introduction to Linear Programming	**A-**
Advanced Topics in Optimization	**A**