Yuping (Allan) Lu

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Education

The University of Tennessee, Knoxville, TN — Aug. 2013 - Present
Ph.D. student in Computer Science
Research Interests: Graph Algorithms, Machine Learning
Advisor: Dr. Michael A. Langston | GPA: 3.91

Nanjing Agricultural University, Nanjing, Jiangsu Province, China — Sept. 2007 - May 2011
BEng in Computer Science
Advisor: Dr. Huanliang Xu | GPA: 3.64

Experience

Graduate Research Assistant at **ARM Data Center** — Oct. 2017 - Present
Oak Ridge National Laboratory
- Radar data (NEXRAD, ARM CSAPR) classification using convolutional neural networks.
- Detecting outliers in streaming time series data from ARM distributed sensors.

Graduate Research Assistant at **Office of Information Technology** — July 2014 - Oct. 2017
The University of Tennessee, Knoxville
- University web server configuration and optimization.
- Google Search Appliance administration and implementation.

Research Intern at **the Scientific Data Group**
Oak Ridge National Laboratory
- Developed pbdR tools for singularity container. — June 2017 - Aug. 2017
- Implemented an R package pbdADIOS to connect R with ADIOS — May 2016 - Aug. 2016

Graduate Research Assistant at **Dr. Michael A. Langston's lab** — Aug. 2013 - June 2014
The University of Tennessee, Knoxville
- Upgraded GrAPPA which is a web-based interface for graph theoretical tools.

Implementation Engineer at **ZTEsoft (now Whale Cloud)** — July 2011 - May 2012
Nanjing, Jiangsu Province, China

Presentation

A Robustness Metric for Biological Data Clustering Algorithms [3]. *ISBRA 2018*, Beijing, China, June 10, 2018

R Packages

- **biclique**: Maximal Biclique Enumeration in Bipartite Graphs
- **pbdADIOS**: an R wrapper for ADIOS

Technical Skills

Programming languages: C/C++, Python, R, PHP, HTML+CSS+JS
Softwares: PyTorch, Jupyter, NumPy, NetCDF, Docker, Git, LaTeX
HPC experience: ORNL CADES, LBNL NERSC

Activities and Awards

Graduate Student Senate Travel Award, the University of Tennessee, Knoxville.	2018
Reviewer for the 9th International Workshop on Algorithms and Computation.	2015
Reviewer for the 9th International Workshop on Frontiers in Algorithmics.	2015
Student Volunteer for XSEDE14 : Atlanta, GA, USA.	July 13-18, 2014
Department excellence award, the University of Tennessee, Knoxville	2013
Outstanding graduate and several scholarships, Nanjing Agricultural University	2007 - 2011

Publications

1. Convolutional Neural Networks for Hydrometeor Classification using Dual Polarization Doppler Radars
   Yuping Lu, Jitendra Kumar
   To be submitted.
2. Biclique: Maximal Biclique Enumeration in Bipartite Graphs
   Yuping Lu, Charles A. Phillips, Michael A. Langston
   BMC Research Notes – To be submitted.
3. Clique Selection and its Effect on Paraclique Enrichment: An Experimental Study
   Yuping Lu, Charles A. Phillips, Elissa J. Chesler, Michael A. Langston
   BMC Research Notes – Under review.
4. A Robustness Metric for Biological Data Clustering Algorithms
   Yuping Lu, Charles A. Phillips, Michael A. Langston
   BMC Bioinformatics – Under final round review.
5. Detecting Outliers in Streaming Time Series Data from ARM Distributed Sensors
   Yuping Lu, Jitendra Kumar, Nathan Collier, Bhargavi Krishna, Michael A. Langston
   Proceedings of the 2018 IEEE International Conference on Data Mining Workshops (ICDMW 2018).
6. Enrichment vs Robustness: A Comparison of Transcriptomic Data Clustering Metrics
   Yuping Lu, Charles A. Phillips, Michael A. Langston
   BMC Bioinformatics 17 (10), 297, August 2016.
7. Digital Gene Expression Profiling of the Phytophthora Sojae Transcriptome
   Wenwu Ye, Xiaoli Wang, Kai Tao, **Yuping Lu**, Tingting Dai, Suomeng Dong, Daolong Dou, Mark Gijzen, Yuanchao Wang
   Molecular Plant-Microbe Interactions, 24(12):1530–1539, December 2011.

References

Michael A. Langston
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Jitendra Kumar
Research Scientist
Climate Change Science Institute
Oak Ridge National Laboratory
Email: kumarj@ornl.gov