

# Yuping Lu

PHONE: 669-223-0169  
EMAIL: [yupinglu89@gmail.com](mailto:yupinglu89@gmail.com)

GITHUB: [github.com/YupingLu](https://github.com/YupingLu)  
HOMEPAGE: [yupinglu.me](http://yupinglu.me)

## EDUCATION

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**The University of Tennessee**, Knoxville, TN Aug. 2013 - Aug. 2019  
Ph.D. 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

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Postdoctoral Scholar at **the Advanced Light Source** Sept. 2019 - present  
*Berkeley Lab*

- Applying and developing Machine Learning schemes to enhance accelerator control.
- Applying to the operating accelerator.

Graduate Research Assistant at **ARM Data Center** Oct. 2017 - Aug. 2019  
*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.
- Implemented an R package [pbdADIOS](#) to connect R with ADIOS

Graduate Research Assistant at **Dr. Michael A. Langston's lab** Aug. 2013 - July 2014  
*The University of Tennessee, Knoxville*

- Upgraded [GrAPPA](#) which is a web-based interface for graph theoretical tools.

## R PACKAGES

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- [biclique](#): Maximal Biclique Enumeration in Bipartite Graphs
- [pbdADIOS](#): an R wrapper for ADIOS

## TECHNICAL SKILLS

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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

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Reviewer for Computational Biology and Bioinformatics.	2020 - 2022
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

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1. Clique Selection and its Effect on Paraclique Enrichment: An Experimental Study  
**Yuping Lu**, Charles A. Phillips, Elissa J. Chesler, Michael A. Langston  
*Proceedings of the 12th International Conference on Bioinformatics and Computational Biology (BICOB 2020).*
2. Biclique: Maximal Biclique Enumeration in Bipartite Graphs  
**Yuping Lu**, Charles A. Phillips, Michael A. Langston  
*BMC Research Notes 13, 88 (2020)*
3. A Robustness Metric for Biological Data Clustering Algorithms  
**Yuping Lu**, Charles A. Phillips, Michael A. Langston  
*BMC Bioinformatics 2019, 20(Suppl 15):503*
4. Convolutional Neural Networks for Hydrometeor Classification using Dual Polarization Doppler Radars  
**Yuping Lu**, Jitendra Kumar  
*Proceedings of the 2019 IEEE International Conference on Data Mining Workshops (ICDMW 2019).*
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

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**Simon C. Leemann**  
Staff Scientist  
Accelerator Technology & Applied Physics Division  
Lawrence Berkeley National Laboratory  
Email: [scleemann@lbl.gov](mailto:scleemann@lbl.gov)

**Jitendra Kumar**  
Research Scientist  
Climate Change Science Institute  
Oak Ridge National Laboratory

**Michael A. Langston**  
Professor  
Department of EECS  
The University of Tennessee, Knoxville  
Email: [langston@tennessee.edu](mailto:langston@tennessee.edu)