Zhen Cao

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Dept. of Computer Science
Rice University
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EDUCATION

Rice University   Aug 2018- present
Ph.D student in Department of Computer Science
Research Interest: Bioinformatics, Phylogenomics
Advisor: Professor Luay Nakhleh

Beijing University of Posts and Telecommunications, China   Sept 2014- July 2018
Bachelor of Engineering in Computer Science and Technology
Graduation project: Design and Implementation of Multiple Object Tracking Based on Deep Learning
Advisor: Professor Bin Wu
Comprehensive GPA 91.01/100, rank 6/311 (first 3 years)

PEER-REVIEWED PUBLICATIONS

- **Z. Cao**, J. Zhu and L. Nakhleh. Empirical Performance of Tree-based Inference of Phylogenetic Networks. Workshop on Algorithms in Bioinformatics (WABI), 2019.

- **Z. Cao**, Z. Gu, Y. Wang, and H. Cui. Panacea: a Low-Latency Energy-Efficient Neighbor Discovery Protocol in Wireless Sensor Networks. IEEE Wireless Communications and Networking Conference (WCNC), 2018.

- P. Zhou, **Z. Cao**, et al. EDM-JBW: A Novel Event Detection Model Based on JS-ID'Forder and Bikmeans with Word Embedding for News Streams. Journal of Computational Science, 2018.

- T. Shen, Y. Wang, Z. Gu, D. Li, **Z. Cao**, et al. Alano: An Efficient Neighbor Discovery Algorithm In An Energy-Restricted Large-Scale Network. IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS), 2018.

- Y. Fu, Y. Wang, Z. Gu, X. Zheng, T. Wei, **Z. Cao**, et al. How Local Information Improves Rendezvous in Cognitive Radio Networks. IEEE International Conference on Sensing, Communication and Networking (SECON), 2018.

- P. Zhou, B. Wu, and **Z. Cao**. EMMBTT: A Novel Event Evolution Model Based on TFxIEF and TDC in Tracking News Streams. IEEE International Conference on Data Science in Cyberspace, 2017.

NON PEER-REVIEWED PUBLICATIONS

- **Z. Cao**, X. Liu, HA. Ogilvie, Z. Yan, L. Nakhleh. Practical Aspects of Phylogenetic Network Analysis Using PhyloNet. (Book Chapter) bioRxiv, page 746362, 2019.

- **Z. Cao**, J. Zhu and L. Nakhleh. Empirical Performance of Tree-based Inference of Phylogenetic Networks. American Society of Human Genetics (ASHG), poster, 2019.

AWARDS

- Selected participation in CRA-W Grad Cohort Workshop for Women   April 2019
- Graduate student fellowship, Department of Computer Science, Rice University   2018
- Mathematical Contest In Modeling, Meritorious Winner   2017
- Undergraduate Scholarship, Beijing University of Posts and Telecommunications   2015–2017

EXPERIENCE

Research Assistant   Aug 2018-present
Department of Computer Science, Rice University
Advisor: Professor Luay Nakhleh
- Research interest: scalable methods for phylogenetic network inference.

Teaching Assistant
Department of Computer Science, Rice University
- COMP 571 Bioinformatics: Sequence   Fall 2019
  Instructor: Dr. Huw Ogilvie
- COMP 580/480 Probabilistic Algorithms and Data Structures   Spring 2019
  Instructor: Dr. Anshumali Shrivastava

Student Research Assistant   July-Oct in 2017
Department of Computer Science, the University of Hong Kong
Advisor: Dr. Heming Cui
- Implemented a neighbor discovery framework; improved the discovery rate by up to 95.5%.
- Designed a neighbor discovery protocol by alleviating collisions; wrote a paper accepted by *WCNC*.

Student Research Assistant   Mar-July in 2017
Beijing Key Lab of Intelligent Telecommunication Software and Multimedia, BUPT
Advisor: Prof. Bin Wu
- Implemented a news event evolution model; the paper was presented in *DSC*.
- Designed and implemented the news event detection model; wrote a paper in the press of *JOCS*.

Professional Service

- Faculty candidate committee of graduate students, Department of Computer Science, Rice University, Spring 2019
- Volunteer in APNet (Asia-Pacific Workshop on Networking), Hong Kong, Aug 2017.