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Zhiqian Chen

Employment History

2020–present **Assistnat Professor**, *Mississippi State University*.

Education

2014–2020 **PhD, Computer Science**, *Virginia Tech*, Virginia, United States.
2010–2013 **MS, Software Engineering**, *Peking University*, China.
2005–2009 **BE, Software Engineering**, *Huazhong Univ. of Sci. & Tech.*, China.

Funding Awards, Honor & Patent

Funding Sole-PI, NSF Funding on Network Flow (Award Number: 2153369)
Funding Co-PI, USDA Funding on Advancing Agricultural Research through High Performance Computing
Funding Sole-PI, Undergraduate Research Program at Mississippi State, 2022
Award Best Paper Award at ACM SIGSPATIAL 2020
Award Best Paper Award at GISTAM 2015
Award Outstanding Contribution Award, 2016, Toyota Research Institute, North America (TRI-NA)
Award Travel Award: ICDM 2018, SDM 2022, KDD 2019 DLG
Honor Editor's Choice Article, www.mdpi.com/journal/sensors/editors_choice
Honor 22nd in *Top 50 Chemistry and Materials Sciences Articles*, www.nature.com/collections/giacagiaca
U.S. Patent High-throughput method to predict bulk properties of inorganic materials

Editor/Review Service

Reviewer International Conference on Machine Learning (*ICML*), 2021, 2022
Reviewer International Conference on Learning Representations (*ICLR*), 2022, 2023
Reviewer Neural Information Processing System (*NeurIPS*), 2020, 2021, 2022
Reviewer AAAI conference on Artificial Intelligence (*AAAI*), 2021, 2022, 2023
Reviewer International Joint Conference on Artificial Intelligence (*IJCAI*), 2022, 2023
Reviewer ACM SIG on Knowledge Discovery and Data Mining (*KDD*), 2020, 2022, 2023
Reviewer ACM SIG on Information Retrieval (*SIGIR*), 2020, 2022, 2023
Reviewer Reviewer, IEEE Transactions on Knowledge and Data Engineering (*TKDE*), 2020
Reviewer Reviewer, ACM Transactions on Knowledge Discovery from Data (*TKDD*), 2021
Reviewer Knowledge-Based Systems, 2021
Reviewer Reviewer, Neurocomputing by Elsevier 2021, 2022
Editorial Board Frontiers in Big Data - Data Science
Panelist NSF Panel Review

Publications

[1] Fanglan Chen, Subhodip Biswas, Zhiqian Chen, Shuo Lei, Naren Ramakrishnan, and Chang-Tien Lu. Exploring tradeoffs in automated school redistricting: Computational and ethical perspectives. *Proceedings of the AAAI Conference on Artificial Intelligence*, 2023.

[2] Kourosh T Baghaei, Amirreza Payandeh, Pooya Fayyazsanavi, Shahram Rahimi, Zhiqian Chen, and Somayeh Bakhtiari Ramezani. Deep representation learning: Fundamentals, perspectives, applications, and open challenges. *arXiv preprint arXiv:2211.14732*, 2022.

[3] Subhodip Biswas, Fanglan Chen, Zhiqian Chen, Chang-Tien Lu, and Naren Ramakrishnan. Memetic algorithms for spatial partitioning problems. *ACM Transactions on Spatial Systems and Algorithms*, 2022.

[4] Subhodip Biswas, Fanglan Chen, Zhiqian Chen, Chang-Tien Lu, and Naren Ramakrishnan. Sampling-based techniques for designing school boundaries. *arXiv preprint arXiv:2206.03703*, 2022.

[5] Zhiqian Chen and Zonghan Zhang. Demystifying graph convolution with a simple concatenation. *arXiv preprint arXiv:2207.12931*, 2022.

[6] Beiyu Lin, Xiaowei Jia, and Zhiqian Chen. Studying spread patterns of covid-19 based on spatiotemporal data. 2022.

[7] Guangyu Meng, Qisheng Jiang, Kaiqun Fu, Beiyu Lin, Chang-Tien Lu, and Zhiqian Chen. Early forecast of traffic accident impact based on a single-snapshot observation (student abstract). In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 36, pages 13015–13016, 2022.

[8] Setareh Rafatirad, Houman Homayoun, Zhiqian Chen, and Sai Manoj Pudukotai Dinakarrao. *Machine Learning for Computer Scientists and Data Analysts: From an Applied Perspective*. Springer Nature, 2022.

[9] Jason Wang, Kaiqun Fu, Zhiqian Chen, and Chang-Tien Lu. Augmentation of chinese character representations with compositional graph learning (student abstract). 2022.

[10] Lei Zhang, Zhiqian Chen, Chang-Tien Lu, and Liang Zhao. From "dynamics on graphs" to "dynamics of graphs": An adaptive echo-state network solution (student abstract). In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 36, pages 13111–13112, 2022.

[11] Zonghan Zhang, Subhodip Biswas, Fanglan Chen, Kaiqun Fu, Taoran Ji, Chang-Tien Lu, Naren Ramakrishnan, and Zhiqian Chen. Blocking influence at collective level with hard constraints (student abstract). 2022.

[12] Zonghan Zhang and Zhiqian Chen. Explain influence maximization with sobol indices. *arXiv preprint arXiv:2207.07833*, 2022.

[13] Zhiqian Chen, Lei Zhang, Gaurav Kolhe, Hadi Mardani Kamali, Setareh Rafatirad, Sai Manoj Pudukotai Dinakarrao, Houman Homayoun, Chang-Tien Lu, and Liang Zhao. Deep graph learning for circuit deobfuscation. *Frontiers in big Data*, 4:608286, 2021.

[14] Kaiqun Fu, Taoran Ji, Nathan Self, Zhiqian Chen, and Chang-Tien Lu. A hierarchical attention graph convolutional network for traffic incident impact forecasting. In *2021 IEEE International Conference on Big Data (Big Data)*, pages 1619–1624. IEEE, 2021.

[15] Taoran Ji, Nathan Self, Kaiqun Fu, Zhiqian Chen, Naren Ramakrishnan, and Chang-Tien Lu. Dynamic multi-context attention networks for citation forecasting of scientific publications. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 35, pages 7953–7960, 2021.

[16] Guoming Li, Yanbo Huang, Zhiqian Chen, Gary D Chesser, Joseph L Purswell, John Linhoss, and Yang Zhao. Practices and applications of convolutional neural network-based computer vision systems in animal farming: A review. *Sensors*, 21(4):1492, 2021.

[17] Guoming Li, Xue Hui, Zhiqian Chen, Gary D Chesser Jr, and Yang Zhao. Development and evaluation of a method to detect broilers continuously walking around feeder as an indication of restricted feeding behaviors. *Computers and Electronics in Agriculture*, 181:105982, 2021.

[18] Padmaksha Roy, Shailik Sarkar, Subhodip Biswas, Fanglan Chen, Zhiqian Chen, Naren Ramakrishnan, and Chang-Tien Lu. Deep diffusion-based forecasting of covid-19 by incorporating network-level mobility information. In *Proceedings of the 2021 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, pages 168–175, 2021.

[19] Subhodip Biswas, Fanglan Chen, Zhiqian Chen, Chang-Tien Lu, and Naren Ramakrishnan. Incorporating domain knowledge into memetic algorithms for solving spatial optimization problems. In *Proceedings of the 28th International Conference on Advances in Geographic Information Systems*, pages 25–35, 2020.

[20] Subhodip Biswas, Fanglan Chen, Andreea Sistrunk, Sathappan Muthiah, Zhiqian Chen, Nathan Self, Chang-Tien Lu, and Naren Ramakrishnan. Geospatial clustering for balanced and proximal schools. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 34, pages 13358–13365, 2020.

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