Zhiqian Chen

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Employment History

2020–present **Assistnat Professor**, *Mississippi State University*.
2014–2020 **Research Assistant**, *Virginia Tech*.

Education

2014–2020 **PhD, Computer Science**, *Virginia Tech*, Falls Church, Virginia.
2010–2013 **MS, Software Engineering**, *Peking University*, China.
2005–2009 **BE, Software Engineering**, *Huazhong Univ. of Sci. & Tech.*, China.
2007–2009 **BA, Japanese Language**, *Huazhong Univ. of Sci. & Tech.*, China.

Awards & Patent

Award Best Paper Award at ACM SIGSPATIAL 2020
Award Best Paper Award at GISTAM 2015
U.S. Patent High-throughput method to predict bulk properties of inorganic materials. publication # US10773959B2
Award Outstanding Contribution Award, 2016, Toyota Research

Review Service

ICML International Conference on Machine Learning, 2021
ICLR International Conference on Learning Representations, 2022
NeurIPS Neural Information Processing System, 2019, 2020, 2021
AAAI AAAI conference on Artificial Intelligence, 2020, 2021, 2022
KDD ACM SIG on Knowledge Discovery and Data Mining, 2020
TKDE IEEE Transactions on Knowledge and Data Engineering, 2019, 2020
TKDD ACM Transactions on Knowledge Discovery from Data, 2021
Neurocomputing Neurocomputing, , 2019, 2020, 2021
Scientific Reports Scientific Reports, 2021
NSF Panel Review

Publications

[1] Zhiqian Chen, Fanglan Chen, Lei Zhang, Taoran Ji, Kaiqun Fu, Liang Zhao, Feng Chen, Lingfei Wu, Charu Aggarwal, and Chang-Tien Lu. Bridging the gap between spatial and spectral domains: A united framework for graph neural networks. *arXiv preprint arXiv:2107.10234*, 2021.

[2] 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, 2021.

[3] 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.

[4] 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.

[5] 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.

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[7] 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.

[8] 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.

[9] Zhiqian Chen. *Graph Neural Networks: Techniques and Applications*. PhD thesis, Virginia Tech, 2020.

[10] Zhiqian Chen, Fanglan Chen, Lei Zhang, Taoran Ji, Kaiqun Fu, Liang Zhao, Feng Chen, Lingfei Wu, Charu Aggarwal, and Chang-Tien Lu. Bridging the gap between spatial and spectral domains: A survey on graph neural networks. 2020.

[11] Zhiqian Chen, Gaurav Kolhe, Setareh Rafatirad, Chang-Tien Lu, Sai Manoj PD, Houman Homayoun, and Liang Zhao. Estimating the circuit de-obfuscation runtime based on graph deep learning. In *2020 Design, Automation & Test in Europe Conference & Exhibition (DATE)*, pages 358–363. IEEE, 2020.

[12] Zhao Ding, Zhiqian Chen, Tianyi Ma, Chang-Tien Lu, Wenhui Ma, and Leon Shaw. Predicting the hydrogen release ability of libh4-based mixtures by ensemble machine learning. *Energy Storage Materials*, 27:466–477, 2020.

[13] Zhao Ding, Shaoyuan Li, Yang Zhou, Zhiqian Chen, Weijie Yang, Wenhui Ma, and Leon Shaw. Libh4 for hydrogen storage-new perspectives. *Nano Materials Science*, 2(2):109–119, 2020.

[14] Jianfeng He, Xuchao Zhang, Shuo Lei, Zhiqian Chen, Fanglan Chen, Abdulaziz Alhamadani, Bei Xiao, and ChangTien Lu. Towards more accurate uncertainty estimation in text classification. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pages 8362–8372, 2020.

[15] Subhodip Biswas, Fanglan Chen, Zhiqian Chen, Andreea Sistrunk, Nathan Self, Chang-Tien Lu, and Naren Ramakrishnan. Regal: A regionalization framework for school boundaries. In *Proceedings of the 27th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems*, pages 544–547, 2019.

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[17] Ying Zhang, Xingfeng He, Zhiqian Chen, Qiang Bai, Adelaide M Nolan, Charles A Roberts, Debasish Banerjee, Tomoya Matsunaga, Yifei Mo, and Chen Ling. Unsupervised discovery of solid-state lithium ion conductors. *Nature communications*, 10(1):1–7, 2019.

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[20] Manu Shukla, Zhiqian Chen, and Chang-Tien Lu. Dimpl: A distributed in-memory drone flight path builder system. *Journal of Big Data*, 5(1):1–29, 2018.

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[30] Zhiqian Chen and Wenya Feng. Detecting impolite crawler by using time series analysis. In *2013 IEEE 25th International Conference on Tools with Artificial Intelligence*, pages 123–126. IEEE, 2013.