Zhiqian Chen

Ph.D., Assistant Professor
Computer Science and Engineering, Mississippi State University

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[link to the latest CV]

EDUCATION

Virginia Tech, Virginia, United States
- *Ph.D.*, Computer Science,   *Aug '14 - Jul '20*
Peking University, Beijing, China
- *MEng*, Software Engineering,   *Sep '10 - Jul '13*
Huazhong University of Sci. & Tech., Wuhan, China
- *BSc*, Software Engineering   *Sep '05 - Jul '09*
- *BSc*, Japanese   *Sept '07 - Jul '09*

WORK EXPERIENCE

Mississippi State University, MS, U.S.
- *Assistant Professor*: Computer Science and Engineering,   *Aug '20 - present*
Toyota Research Institute North America, MI, U.S.
- *Research Intern*: Machine learning for material researchg,   *May '16 - Aug '16*
- **Award**: *Outstanding Contribution Award* by Toyota Research.
Baidu Inc.
- *Research and Development*: Data mining on user behavior pattern   *Jul '11 - Aug '13*
- **The Best Team in 2012** at Baidu Inc. (Top 3)

PUBLICATIONS

1. Subhodip Biswas, Fanglan Chen, <u>**Zhiqian Chen**</u>, Chang-Tien Lu, and Naren Ramakrishnan. "Incorporating do-main knowledge into Memetic Algorithms for solving Spatial Optimization problems". *In Proceedings of the 28th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems* (**SIGSPATIAL**) 2020. (accepted)

2. Fanglan Chen, <u>**Zhiqian Chen**</u>, Subhodip Biswas, Lei Shuo, Chang-Tien Lu, and Naren Ramakrishnan. "Graph convolutional networks with Kalman filtering for traffic prediction". *In Proceedings of the 28th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems* (**SIGSPATIAL**) 2020. (accepted)

3. Ying Zhang, Xingfeng He, <u>**Zhiqian Chen**</u>, Qiang Bai, Charles A.Roberts, Debasish Banerjee, Tomoya Matsunaga, Yifei Mo, Chen Ling. "Unsupervised Discovery of Solid-State Lithium Ion Conductors". **Nature Communications** (IF: 11.880, h5-index: 260), 2019. DOI: 10.1038/s41467-019-13214-1 [Selected as 22nd of Top 50 Chemistry and Materials Sciences Articles in Nature Communications. (Top 50 Collection)]

4. Zhao Ding, <u>**Zhiqian Chen**</u>, Leon Shaw, Tianyi Ma, Wenhui Ma, Chang-Tien Lu. "Predicting the Hydrogen Release Ability of $LiBH_4$-based Mixtures by Ensemble Machine Learning". **Energy Storage Materials**. DOI: 10.1016/j.ensm.2019.12.010 (accepted, IF: 15.97)

5. Subhodip Biswas, Fanglan Chen, Andreea Sistrunk, Nathan Self, <u>**Zhiqian Chen**</u>, Chang-Tien Lu, Naren Ramakrishnan, "Geospatial Clustering for Balanced and Proximal Schools", *Proceedings of the Tenth AAAI Symposium on Educational Advances in Artificial Intelligence* (**AAAI-EAAI**), New York, NY, February 8-9, 2020.

6. <u>**Zhiqian Chen**</u>, Gaurav Kolhe, Setareh Rafatirad, Chang-Tien Lu, Sai Manoj Pudukotai Dinakarrao , Houman Homayoun and Liang Zhao. "Estimating the Circuit Deobfuscating Runtime based on Graph Deep Learning". Design, Automation, and Test in Europe (**DATE**), 2020. (acceptance rate: 26%)

7. Subhodip Biswas, Fanglan Chen, <u>**Zhiqian Chen**</u>, Andreea Sistrunk, Nathan Self, Kaiqun Fu, Chang-Tien Lu, Naren Ramakrishnan. "REGAL: A Regionalization framework for school boundaries". *Proceeding of the 27th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems* (**SIGSPATIAL**), Paper ID: 258, Chicago, IL, Nov. 5-8, 2019. DOI: 10.1145/3347146.3359377

8. Taoran Ji, <u>**Zhiqian Chen**</u>, Nathan Self, Kaiqun Fu, Chang-Tien Lu, Naren Ramakrishnan. "Patent Citation Dynamics Modeling via Multi-Attention Recurrent Networks". *Proceedings of the 28th International Joint Conference on Artificial Intelligence* (**IJCAI**), pp. 2621-2627, Macao, China, Aug. 10-16, 2019. DOI: 10.24963/ijcai.2019/364 (Acceptance rate: 17.8%)

9. Zhao Ding, Shaoyuan Li, Yang Zhou, <u>**Zhiqian Chen**</u>, Weijie Yang, Wenhui Ma, Leon Shaw. "LiBH₄ for hydrogen storage - New perspectives". **Nano Materials Science**, 2019. DOI: 10.1016/j.nanoms.2019.09.003

10. <u>**Zhiqian Chen**</u>, Feng Chen, Rongjie Lai, Xuchao Zhang, Chang-Tien Lu. "Rational Neural Networks for Approximating Jump Discontinuities of Graph Convolution Operator". *Proceedings of the IEEE*

International Conference on Data Mining (**ICDM**), pp. 59-68, Singapore, Nov. 17-20, 2018. DOI: 10.1109/ICDM.2018.00021 (Acceptance rate: 8.86% Full Paper)

11 Kaiqun Fu, **Zhiqian Chen**, Chang-Tien Lu. "StreetNet: Preference Learning with Convolutional Neural Network on Urban Crime Perception". *Proceeding of the 26th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems* (**SIGSPATIAL**), Seattle, WA, Nov. 6-9, 2018. DOI: 10.1145/3274895.3274975

12 Manu Shukla, **Zhiqian Chen**, Chang-Tien Lu. "DIMPL: A Distributed In-Memory Drone Flight Path Builder System". **Journal of Big Data**, Springer, July 2018, Vol. 5, No.24. DOI: 10.1186/s40537-018-0134-7

13 Xuchao Zhang, Liang Zhao, **Zhiqian Chen**, Chang-Tien Lu. "Distributed Self-Paced Learning in Alternating Direction Method of Multipliers". *Proceedings of the Twenty-Seventh International Joint Conference on Artificial Intelligence* (**IJCAI**), pp. 3148-3154, Stockholm, Sweden, July 13-19, 2018. https://www.ijcai.org/proceedings/2018/437, DOI: 10.24963/ijcai.2018/437 (Acceptance rate: 20.46%)

14 Bingsheng Wang*, **Zhiqian Chen***, Arnold P. Boedihardjo, Chang-Tien Lu. "Virtual Metering: An Efficient Water Disaggregation Algorithm via Non-Intrusive Load Monitoring". *ACM Transactions on Intelligent Systems and Technology* (**TIST**), Vol. 9, Issue 4, Article No. 39, February 2018. DOI: 10.1145/3141770

15 **Zhiqian Chen**, Chih-Wei Wu, Yen-Cheng Lu, Alexander Lerch, Chang-Tien Lu. "Learning to Fuse Music Genres with Generative Adversarial Dual Learning". *Proceedings of the IEEE International Conference on Data Mining* (**ICDM**), pp. 817-822, New Orleans, Louisiana, Nov. 18-21, 2017. DOI: 10.1109/ICDM.2017.98 (Acceptance rate: 19.9%)

16 Xuchao Zhang, Liang Zhao, **Zhiqian Chen**, Arnold P. Boedihardjo, Chang-Tien Lu. "Trendi: Tracking Stories in News and Microblogs via Emerging, Evolving and Fading Topics". *Proceedings of the IEEE International Conference on Big Data* (**Big Data**), pp. 1590-1599, Boston, MA, Dec. 11-14, 2017. DOI: 10.1109/BigData.2017.8258093

17 Xuchao Zhang, **Zhiqian Chen**, Liang Zhao, Arnold P. Boedihardjo, Chang-Tien Lu. "TRACES: Generating Twitter Stories via Shared Subspace and Temporal Smoothness". Proceedings of the IEEE International Conference on Big Data (**Big Data**), pp. 1688-1693, Boston, MA, Dec. 11-14, 2017. DOI: 10.1109/BigData.2017.8258107

18 **Zhiqian Chen**, Xuchao Zhang, Arnold P. Boedihardjo, Jing Dai, Chang-Tien Lu. "Multimodal Storytelling via Generative Adversarial Imitation Learning". *Proceeding of the 26th International Joint Conference on Artificial Intelligence* (**IJCAI**), Melbourne, Australia, August 19-25, 2017. DOI: 10.24963/ijcai.2017/554 (Acceptance rate: 26%)

19 Xuchao Zhang, **Zhiqian Chen**, Weisheng Zhong, Arnold P. Boedihardjo, Chang-Tien Lu. "Storytelling in heterogeneous Twitter entity network based on hierarchical cluster routing". *Proceedings of the IEEE International Conference on Big Data* (**Big Data**), pp. 1522-1531, Washington, DC, Dec. 5-8, 2016. DOI: 10.1109/BigData.2016.7840760

20 Manu Shukla, **Zhiqian Chen**, Chang-Tien Lu. "DIFPL: Distributed drone flight path builder system". *Proceedings of the 1st International Conference on Geographical Information Systems Theory, Applications and Management* (**GISTAM**), Barcelona, Spain, April 28-30, 2015. DOI: 10.5220/0005378700170026 (Best Student Paper Award)

21 **Zhiqian Chen**, Wenya Feng. "Detecting Impolite Crawler by Using Time Series Analysis". *Proceedings of 25th IEEE International Conference on Tools with Artificial Intelligence* (**ICTAI**), pp. 123-126, Herndon, VA, USA, November 4-6, 2013. DOI: 10.1109/ICTAI.2013.28

Awards & Patent

Outstanding Contribution Award, summer 2016, Toyota Research
Best Student Paper Award at GISTAM 2015
IEEE International Conference on Data Mining travel award 2017, 2018
U.S. Patent: "System and method to quantify structural properties and predict bulk properties of inorganic materials". (publication # US20180336288A1)

Review Service

IEEE Transactions on Knowledge and Data Engineering (**TKDE**)
ACM SIG on Knowledge Discovery and Data Mining (**KDD**) 2020
Neural Information Processing Systems (**NeurIPS**) 2019, 2020
International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**) 2020
ACM International Conference on Information and Knowledge Management (**CIKM**) 2019
AAAI conference on Artificial Intelligence (**AAAI**) 2020, 2021