

Renchi Yang (杨任驰)

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EDUCATION

Ph.D. in Computer Science (awarded in Jan 2021)

Nanyang Technological University (NTU)

Advisors: Xiaokui Xiao and Sourav S. Bhowmick

Jul 2016 - Jul 2020

B.Eng. in Software Engineering

Beijing University of Posts and Telecommunications (BUPT)

(awarded in Jul 2015)

Aug 2011 - Jul 2015

RESEARCH INTERESTS

- Big Data Management and Analytics - graph query processing, graph clustering, network embedding

WORK EXPERIENCES

Postdoctoral Research Fellow

Singapore

School of Computing, National University of Singapore

May 2021 - Present

Research Assistant

Doha, Qatar

College of Science and Engineering, Hamad Bin Khalifa University

Feb 2021 - May 2021

Research Assistant

Singapore

Rolls-Royce@NTU Corporate Lab / Alibaba-NTU SG Joint Research Institute

Jun 2016 - Jan 2021

Back-end Software Engineer

Shenzhen, China

Social Network Group, Tencent, Inc.

Jul 2015 - Jun 2016

Data Engineer Intern

Beijing, China

Mobile and Cloud Computing Division, Baidu, Inc.

Nov 2014 - Apr 2015

SELECTED HONORS

- Honorable mention as one of the best PC Members in WWW 2022
- Best Paper Award Nominee in WWW 2022
- 2022 ACM SIGMOD Research Highlight Award
- Best Research Paper Award in VLDB 2021
- 10th Prize of KDD Cup 2020 AutoGraph
- SIGMOD 2019 Travel Award

PUBLICATIONS

- [1] **Renchi Yang**. “Efficient and Effective Similarity Search over Bipartite Graphs”. In: *The Web Conference (WWW)*. 2022, pp. 308–318. (**Best Paper Award Nominee**).
- [2] **Renchi Yang**, Jieming Shi, Keke Huang, and Xiaokui Xiao. “Scalable and Effective Bipartite Network Embedding”. In: *Proceedings of the International Conference on Management of Data (SIGMOD)*. 2022, pp. 1977–1991.
- [3] **Renchi Yang**, Jieming Shi, Xiaokui Xiao, Yin Yang, Sourav S. Bhowmick, and Juncheng Liu. “No PANE, No Gain: Scaling Attributed Network Embedding in a Single Server”. In: *ACM SIGMOD Record* (2022), pp. 42–49. (special issue for **ACM SIGMOD Research Highlight Award**).
- [4] **Renchi Yang**, Jieming Shi, Xiaokui Xiao, Yin Yang, Sourav S. Bhowmick, and Juncheng Liu. “PANE: Scalable and Effective Attributed Network Embedding”. In: *Submitted to The VLDB Journal (VLDBJ)* (2022), (**Invited Paper**).
- [5] Tianyuan Jin, Yu Yang, **Renchi Yang**, Jieming Shi, Keke Huang, and Xiaokui Xiao. “Unconstrained Submodular Maximization with Modular Costs: Tight Approximation and Application to Profit Maximization”. In: *Proceedings of the VLDB Endowment (PVLDB)* (2021), pp. 1756–1768.
- [6] **Renchi Yang**, Jieming Shi, Xiaokui Xiao, Yin Yang, Juncheng Liu, and Sourav S. Bhowmick. “Scaling Attributed Network Embedding to Massive Graphs”. In: *Proceedings of the VLDB Endowment (PVLDB)* (2021), pp. 37–49. (**Best Research Paper Award**).
- [7] **Renchi Yang**, Jieming Shi, Yin Yang, Keke Huang, Shiqi Zhang, and Xiaokui Xiao. “Effective and Scalable Clustering on Massive Attributed Graphs”. In: *The Web Conference (WWW)*. 2021, pp. 3675–3687.

- [8] **Renchi Yang** and Xiaokui Xiao. “Fast Approximate All Pairwise CoSimRanks via Random Projection”. In: *Web Information Systems Engineering (WISE)*. Vol. 13080. 2021, pp. 438–452. (**Invited Paper**).
- [9] Jieming Shi*, Tianyuan Jin*, **Renchi Yang**, Xiaokui Xiao, and Yin Yang. “Realtime Index-Free Single Source SimRank Processing on Web-Scale Graphs”. In: *Proceedings of the VLDB Endowment (PVLDB)* (2020), pp. 966–978.
- [10] **Renchi Yang**, Jieming Shi, Xiaokui Xiao, Yin Yang, and Sourav S. Bhowmick. “Homogeneous Network Embedding for Massive Graphs via Reweighted Personalized PageRank”. In: *Proceedings of the VLDB Endowment (PVLDB)* (2020), pp. 670–683.
- [11] Jieming Shi, **Renchi Yang**, Tianyuan Jin, Xiaokui Xiao, and Yin Yang. “Realtime Top-k Personalized PageRank over Large Graphs on GPUs”. In: *Proceedings of the VLDB Endowment (PVLDB)* (2019), pp. 15–28.
- [12] **Renchi Yang**, Xiaokui Xiao, Zhewei Wei, Sourav S. Bhowmick, Jun Zhao, and Rong-Hua Li. “Efficient Estimation of Heat Kernel PageRank for Local Clustering”. In: *Proceedings of the International Conference on Management of Data (SIGMOD)*. 2019, pp. 1339–1356.
- [13] Sibow Wang, **Renchi Yang**, Runhui Wang, Xiaokui Xiao, Zhewei Wei, Wenqing Lin, Yin Yang, and Nan Tang. “Efficient Algorithms for Approximate Single-Source Personalized PageRank Queries”. In: *Transactions on Database Systems (TODS)* (2019), 18:1–18:37.
- [14] Sibow Wang, **Renchi Yang**, Xiaokui Xiao, Zhewei Wei, and Yin Yang. “FORA: Simple and Effective Approximate Single-Source Personalized PageRank”. In: *Proceedings of the International Conference on Knowledge Discovery and Data Mining (SIGKDD)*. 2017, pp. 505–514.

ACADEMIC SERVICES

- Invited reviewer for the following journals:
 - TKDE, VLDBJ
- Program committee member for the following conferences/workshops:
 - WWW 2022, KDD 2022, ECML-PKDD 2022
- External reviewer for the following conferences/workshops:
 - VLDB 2023, WWW 2021, ICDM 2021, ICDE 2020, VLDB 2020, KDD 2019, IJCAI 2019, CIKM 2019

ACADEMIC TALKS

Scalable and Effective Bipartite Network Embedding SIGMOD 2022	Philadelphia, USA June 16, 2022
Efficient Relevance Search over Large graphs The Hong Kong university of Science and Technology	HongKong, China June 16, 2022
Efficient and Effective Similarity Search over Bipartite Graphs WWW 2022	Lyon, France April 29, 2022
Fast Approximate All Pairwise CoSimRanks via Random Projection WISE 2021	Melbourne, Australia October 26, 2021
Scaling Attributed Network Embedding to Massive Graphs Renmin University of China	Beijing, China August 30, 2021
Scaling Attributed Network Embedding to Massive Graphs VLDB 2021	Copenhagen, Denmark August 19, 2021
Effective and Scalable Clustering on Massive Attributed Graphs WWW 2021	Ljubljana, Slovenia April 23, 2021
Homogeneous Network Embedding for Massive Graphs via Reweighted Personalized PageRank Japan VLDB 2020	Tokyo, September 4, 2020
Efficient Estimation of Heat Kernel PageRank for Local Clustering SIGMOD 2019	Amsterdam, The Netherlands July 4, 2019