

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 <i>June 16, 2022</i>
Efficient Relevance Search over Large Graphs The Hong Kong University of Science and Technology (Guangzhou)	Guangzhou, China <i>May 5, 2022</i>
Efficient and Effective Similarity Search over Bipartite Graphs WWW 2022	Lyon, France <i>April 29, 2022</i>
Fast Approximate All Pairwise CoSimRanks via Random Projection WISE 2021	Melbourne, Australia <i>October 26, 2021</i>
Scaling Attributed Network Embedding to Massive Graphs Renmin University of China	Beijing, China <i>August 30, 2021</i>
Scaling Attributed Network Embedding to Massive Graphs VLDB 2021	Copenhagen, Denmark <i>August 19, 2021</i>
Effective and Scalable Clustering on Massive Attributed Graphs WWW 2021	Ljubljana, Slovenia <i>April 23, 2021</i>
Homogeneous Network Embedding for Massive Graphs via Reweighted Personalized PageRank Japan VLDB 2020	Tokyo, <i>September 4, 2020</i>
Efficient Estimation of Heat Kernel PageRank for Local Clustering SIGMOD 2019	Amsterdam, The Netherlands <i>July 4, 2019</i>