

Renchi Yang (杨任驰)

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EDUCATION

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

Advisors: Xiaokui Xiao and Sourav S. Bhowmick

Nanyang Technological University (NTU)

Jul 2016 - Jul 2020

B.Eng. in Software Engineering

(awarded in Jul 2015)

Beijing University of Posts and Telecommunications (BUPT)

Aug 2011 - Jul 2015

RESEARCH INTERESTS

- Databases and Data Management and Analytics: graph query processing, similarity search
- The Web and Information Retrieval: search and ranking, recommendation, web mining
- Data Mining and Machine Learning: social network analysis, graph representation learning

WORK EXPERIENCES

Assistant Professor

Department of Computer Science, Hong Kong Baptist University

Hong Kong SAR

Jan 2023 -

Postdoctoral Research Fellow

School of Computing, National University of Singapore

Singapore

May 2021 - Present

Research Assistant

College of Science and Engineering, Hamad Bin Khalifa University

Doha, Qatar

Feb 2021 - May 2021

Research Assistant

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

Singapore

Jun 2016 - Jan 2021

Back-end Software Engineer

Social Network Group, Tencent, Inc.

Shenzhen, China

Jul 2015 - Jun 2016

Data Engineer Intern

Mobile and Cloud Computing Division, Baidu, Inc.

Beijing, China

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
- SIGMOD 2019 Travel Award

PUBLICATIONS

- [1] **Renchi Yang** and Jing Tang. "Efficient Estimation of Pairwise Effective Resistance". In: *Proceedings of the International Conference on Management of Data (SIGMOD)*. 2023, To Appear.
- [2] **Renchi Yang**. "Efficient and Effective Similarity Search over Bipartite Graphs". In: *The Web Conference (WWW)*. 2022, pp. 308–318. (**Best Paper Award Nominee**, 11/323).
- [3] **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.
- [4] **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**).
- [5] **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**).
- [6] 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.

- [7] **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**, 1/216).
- [8] **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.
- [9] **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**).
- [10] 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.
- [11] **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.
- [12] 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.
- [13] **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.
- [14] 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.
- [15] 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, WSDM 2023, WWW 2023
- Subreviewer or External reviewer for the following conferences/workshops:
 - VLDB 2023, CIKM 2022, 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 (invited talk) The Hong Kong University of Science and Technology (Guangzhou)	Guangzhou, China May 5, 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 (invited talk) 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 PPR VLDB 2020	Tokyo, Japan September 4, 2020
Efficient Estimation of Heat Kernel PageRank for Local Clustering SIGMOD 2019	Amsterdam, The Netherlands July 4, 2019