Siqiang Luo

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Education

Ph.D.	**The University of Hong Kong** (HKU)
July. 2015-June. 2019	Database Group, Department of Computer Science, HKU
Primary Supervisor	Prof. Ben Kao
	GPA: 4.0/4.0.
M.S.	**Fudan University** (FDU)
Sept. 2010-July 2013	Database Group, School of Computer Science, FDU
	GPA: 3.69/4.0.
B.S.	**Fudan University** (FDU)
Sept. 2006-July 2010	School of Computer Science, FDU
	GPA: 3.66/4.0.

Research Interest

- My Ph.D. topic is about designing self-adaptive indexes for database systems. I am most interested in developing auto-tuned indexes that can adjust themselves to various system workloads (e.g., various arrival rates of queries or updates).

- I am also interested in designing practical graph algorithms which are parallelizable in multi-core servers or modern distributed systems like Hadoop/Giraph.

Publications

[1] **Siqiang Luo**, Ben Kao, Guoliang Li, etc., **"TOAIN: A Throughput Optimizing Adaptive Index for Answering Dynamic kNN Queries on Road Networks"**, *To appear in PVLDB 2018.*

[2] Xiang Li, Ben Kao, **Siqiang Luo**, Martin Ester, **"ROSC: Robust Spectral Clustering on Multi-scale Data"**, *To appear in WWW 2018.*

[3] **Siqiang Luo**, Jiafeng Hu, Reynold Cheng, etc., **"SEQ: Example-based Query for Spatial Objects"**, *CIKM 2017.* (short paper)

[4] Jiafeng Hu, Reynold Cheng, Zhipeng Huang, Yixiang Fang, **Siqiang Luo**, **"On Embedding Uncertain Graphs"**, *CIKM 2017.*

[5] Yixiang Fang, Reynold Cheng, **Siqiang Luo**, Jiafeng Hu, and Kai Huang, **"C-Explorer: Browsing Communities in Large Graphs"**, *PVLDB 2017.* (demo)

[6] Yixiang Fang, Reynold Cheng, Yankai Chen, **Siqiang Luo**, Jiafeng Hu, **"Effective and efficient attributed community search"**, *VLDBJ 2017.* (extension of PVLDB 2016 paper)

[7] Yixiang Fang, Reynold Cheng, Xiaodong Li, **Siqiang Luo**, Jiafeng Hu, **"Effective Community Search over Large Spatial Graphs"**, *PVLDB 2017.*

[8] Jiafeng Hu, Xiaowei Wu, Reynold Cheng, **Siqiang Luo**, Yixiang Fang, **"On Minimal Steiner Maximum-Connected Subgraph Queries"**, *TKDE 2017.* (extension of CIKM 2016 paper)

[9] Yixiang Fang, Reynold Cheng, **Siqiang Luo**, Jiafeng Hu, **"Effective Community Search for Large Attributed Graphs"**, *PVLDB 2016.*

[10] Jiafeng Hu, Xiaowei Wu, Reynold Cheng, **Siqiang Luo** and Yixiang Fang, **"Querying Minimal Steiner Maximum-Connected Subgraphs in Large Graphs"**, *CIKM 2016.*

[11] **Siqiang Luo**, Yifeng Luo, Shuigeng Zhou, Gao Cong, Jihong Guan, **"Distributed Spatial Keyword Querying on Road Networks"**, *EDBT 2014.*

[12] Diwen Zhu, Hui Ma, Xiaokui Xiao, **Siqiang Luo**, Youze Tang, Shuigeng Zhou, **"Shortest path and distance queries on road networks: towards bridging theory and practice"**, *SIGMOD 2013.*

[13] **Siqiang Luo**, Yifeng Luo, Shuigeng Zhou, Gao Cong, Jihong Guan, **"DISKs: A System for Distributed Spatial Group Keyword Search on Road Networks"**, *PVLDB 2012.* (demo)

[13] **Siqiang Luo**, Junping Zhang, **"Multi-Operator Image Retargeting with Automatic Integration of Direct and Indirect Seam Carving"**, *Image and Vision Computing, 2012.*

[14] Yifeng Luo, **Siqiang Luo**, Jihong Guan, Shuigeng Zhou, **"A RAMCloud Storage System based on HDFS: Architecture, implementation and evaluation"**, *Journal of Systems and Software, 2013.*

Patents

CN101609547B   **Siqiang Luo**, Junping Zhang, **"Seamless Image Procesing Method based on Accumulative Energy"**

Work Experience

Aug. 2013 - May. 2015   Full-Stack Software Engineer (full-time)

Works Applications Co., Ltd., Shanghai

Project   Developed an easy-to-configure module that supports a modern ERP system known as AI Works (http://www.worksap.com/aiworks/).

Internship

Jun. 2017 - Sep. 2017   Research Intern

Nanyang Technological University, Singapore

Project   Batch personalized PageRanks, collaborate with Tencent researchers.

Advisor   Prof. Xiaokui Xiao

Jul. 2016 - Aug. 2016   Research Assistant

Tsinghua University, Beijing, China

Project   Developed **TOAIN**, an auto-tuned adaptive index for optimizing throughputs for systems like Uber. Published in PVLDB 2018.

Advisor   Prof. Guoliang Li

Sep. 2011 - Jun. 2012   Research Assistant

Nanyang Technological University, Singapore

Project   Developed **Arterial Hierachy**, an index that enables efficient shortest path queries. Published in SIGMOD 2013.

Advisor   Prof. Xiaokui Xiao

Jul. 2012 - Sep. 2012   Software Engineer

Microsoft, Beijing, China

Jul. 2009 - Sep. 2009   Data Engineer

Shanda Games Limited, Shanghai, China

Selected Awards

Sep. 2017   Pilot Scheme Scholarship, The University of Hong Kong

Dec. 2015	Hong Kong PhD Fellowship (the highest award for fresh PhDs in Hong Kong)
July 2013	Outstanding Graduates of Shanghai (top 5%)
Oct. 2012	Intel Scholarship (5 out of 3,000 of Fudan students)
Nov. 2012	National Scholarship (top scholarship in China)
May. 2010	Wang Dao Scholar (top 1% of Fudan students)
Oct. 2004, 2005	1st Prize of National Mathematical Olympiad in Senior

Activities

Teaching Assistant	CCST 9047 (The Age of Big Data.), The University of Hong Kong, 2017
Teaching Assistant	CCST 9047 (The Age of Big Data.), The University of Hong Kong, 2016
Teaching Assistant	COMP 2396 (Object-oriented Programming.), The University of Hong Kong, 2015
Invited Reviewers	Geoinformatica
External Reviewers	SIGMOD 16~18, VLDB 16~18, ICDE 16~17, KDD 17, etc.

Skills

C/C++, JAVA, Javascript (jQuery), Git, HTML, CSS, Hadoop, Giraph, Spring MVC, Latex