Zhang Shu Hao   shuhao.zhang@comp.nus.edu.sg

EDUCATION

National University of Singapore, Singapore

Ph.D (transferred) Supervisor: Prof. He Bing Sheng   Jan 2016 – present

Nanyang Technological University, Singapore

Ph.D (part time) Supervisor: Prof. He Bing Sheng   Aug 2014 – Jun 2016

Nanyang Technological University, Singapore

B.E(hons)., Computer Engineering   Aug 2010 – Aug 2014
- *GPA 4.83/5.0*

WORK EXPERIENCE

Research Fellow/Assistant   Aug 2018 – present
NUS-Grab AI Lab Singapore
Massive trajectory data is being generated by GPS-equipped devices, such as cars and mobile phones, which is used increasingly in transportation, location-based services, and urban computing.
My research involves investigating new opportunities to enhance real-time trajectory data management including design of new framework with related techniques and software modules.

Research Associate (Ph.D scholars)   Aug 2014 – Aug 2018
Research & Innovation, SAP Singapore
With the advancement in sensor technology, a lot of manufacturing industries are investing to use such sensors/robots to monitor/automate their processes making them more efficient, effective and productive. In parallel, event-based systems are rapidly gaining importance in many big data application domains such as complex event processing and real-time analytics.
My research involves investigating new opportunities to enhance complex event processing including design of new framework with related techniques and software modules.
Two patents filed.

Research Assistant (Internship)   Jun 2012 – Aug 2013
Division of DCT, Data Storage Institute
Contributed on varies projects of cloud security area.

PROJECT EXPERIENCE

Final Year Project   Jan 2013 – Dec 2013
PDCC lab, Nanyang Technological University
Towareds Portable and efficient in memroy database system
Supervisor: Prof. He Bing Sheng
Undergradutate Research on Campus Scholars   Aug 2011 – Apr 2012
PDCC lab, Nanyang Technological University
With autohotkey, autoit. Contributed on built testing-script on co-docx
Supervisors: Prof. Sun Cheng zheng

AWARDS

Student Awards — National University of Singapore
- Research Achievement Award   2017

Student Awards — Nanyang Technological University

- Dean's list student   2010 – 2013
- Best peer tutor/coach awards   2012 – 2013
- AY11-12 URECA Certificate   2011 – 2012
- Senior Middle 3 Singapore Government Full Scholarship   2010 – 2014

PUBLICATIONS

1. **Shuhao Zhang**, Yingjun Wu, Feng Zhang, Bingsheng He, "Scaling Stream Processing with Transactional State Management on Multicores" *Under Review*

2. **Shuhao Zhang**, Jiong He, Amelie Chi Zhou, Bingsheng He, "BriskStream: Scaling Data Stream Processing on Shared-Memory Multicore Architectures" *SIGMOD, 2019*

3. **Shuhao Zhang**, Bingsheng He, Daniel Dahlmeier, Amelie Chi Zhou, Thomas Heinze, "Revisiting the design of data stream processing systems on multi-core processors" *ICDE, 2017*

4. **Shuhao Zhang**, Hoang Tam Vo, Daniel Dahlmeier, Bingsheng He, "Multi-Query Optimization for Complex Event Processing in SAP ESP" *ICDE, 2017*

5. Feng Zhang, Jidong Zhai, Bingsheng He, **Shuhao Zhang**, Wenguang Chen, "Understanding Co-running Behaviors on Integrated CPU/GPU Architectures" *TPDS, 2017*

6. Shanjiang Tang, Bingsheng He, **Shuhao Zhang**, Zhaojie Niu, "Elastic Multi-Resource Fairness: Balancing Fairness and Efficiency in Coupled CPU-GPU Architectures" *SC, 2016*.

7. Zeke Wang, **Shuhao Zhang**, Bingsheng He,Wei Zhang, "Melia: A MapReduce Framework on OpenCL-Based FPGAs" *IEEE TPDS, 2016*.

8. Feng Zhang, Jidong Zhai, Wenguang Chen, Bingsheng He, **Shuhao Zhang**, "To Co-run, or Not to Co-run: A Performance Study on Integrated Architectures" *MASCOTS (short-paper), 2015*.

9. Jiong He, **Shuhao Zhang**, Bingsheng He, "In-Cache Query Co-Processing on Coupled CPU-GPU Architectures", VLDB, 2014.

10. **Shuhao Zhang**, Jiong He, Bingsheng He, Mian Lu, "OmniDB: Towards Portable and Efficient Query Processing on Parallel CPU/GPU Architectures" *VLDB (demo) 2013.*

11. Ren Shuqin, **Shu Hao Zhang**, Yong Zhen Chen, Miguel Rodel Felipe, Ya Jun Ha, Khin Mi Mi Aung, "Empirical Study of Accelerating Data Protection for Multi-tenant Storage" *AISS*, 2013.

PATENTS

1. **Shuhao Zhang**, Bingsheng He, Daniel Hermann Richard Dahlmeier, "Efficient execution of data stream processing systems on multi-core processors", *US Patent App. 15/348,932*, 2018.

2. **Shuhao Zhang**, Hoang Tam Vo, Daniel Hermann Richard Dahlmeier, Bingsheng He, "Multi-query optimizer for complex event processing", *US Patent App. 9,953,056*, 2018.