

SORS: An Industrial Point of View on Next-Generation Graph Computing

Abstract:

In the era of big data, the graph models are becoming very popular data models as they can naturally represent many real world problems. Over the past several years, the efforts to accelerate graph computing on supercomputing systems have increased. Based on the speaker's research experiences with real customers over the past 2 years, he will present from an industrial point of view the next-generation graph computing. The speaker will identify what kind of research themes would be demanded and what kind of software ecosystems should be developed in our community.

Speakers



Bio: Toyotaro Suzumura is a research scientist and technical lead of the Network Science and Big Data Analytics Department at IBM T.J. Watson Research Center in New York, USA as well as a visiting full professor at Barcelona Supercomputing center in Spain, a visiting research scientist at the University of Tokyo. He has broad knowledge and experience in the research and development of computer science including big data processing in large-scale distributed systems, parallel and distributed middleware and its application to real-time data stream computing, large-scale graph processing, cloud computing, and various performance optimization technologies, design and implementation of dynamic scripting language and object-oriented parallel language and large-scale traffic simulation. Dr. Suzumura has been working for IBM Research since 2004 for 13 years after finishing his Ph.D. in 2004. As for his academic career, he had been appointed as a visiting associate professor at Tokyo Institute of Technology since 2009 supervising 16 graduate students in his own laboratory “Suzumura Laboratory” and also a visiting associate professor of University College Dublin in Ireland since 2014/04 supervising 10 master students and 3 Ph.D. students.

Since 2013/10, he has worked for IBM Research – Ireland, the R&D headquarter of IBM Research in Europe as an international assignment specifically focusing on a variety of Smarter-Cities related technologies. Since 2015/04, he joined the headquarter of IBM Research - IBM T.J. Watson Research Center as a full-time research staff member and been leading a team of large-scale graph processing platforms. He has published over 60 reviewed research papers including top-quality international conferences and workshops as well as serving on numerous program committees and as workshop/track/area chair for top-tier

conferences. He will be a program chair for IEEE BigData 2017. He is co-principal investigator on Japanese government projects. One of his notable achievements is that he and his team won the first place at the world competition of “Big Data” processing on supercomputers called “Graph500” (<http://www.graph500.org>) in June 2014, June and November 2015, and June and November 2016.



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Source URL (retrieved on 14 jul 2024 - 01:05): <https://www.bsc.es/ca/research-and-development/research-seminars/sors-industrial-point-view-next-generation-graph-computing>