

January 25th, 2017

An Industrial Point of View on Next-Generation Graph Computing

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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.



Short Bio

Toyotaro Suzumura is a research scientist and technical leader 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, and 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, after finishing his Ph.D. the same year. As for his academic career, he had been appointed as a visiting associate professor at Tokyo Institute of Technology. Since 2009 he has supervised 16 graduate students in his own laboratory (Suzumura Laboratory). As visiting associate professor of University College Dublin in Ireland since 2014 he has been in charge of supervising 10 master students and 3 Ph.D. students.