

Preface

In recent years, data explosion has become an inevitable trend as the world is more connected than ever before. In the era of big data, the complexity, diversity, frequently changed workloads, and rapid evolution of big data systems give rise to new challenges with traditional benchmarks being inadequate. As architecture, systems, and data management experts from both industry and academia communities pay greater attention to innovative systems and architectures, the pressure of benchmarking and evaluating big data systems increases. Benchmarking big data systems not only motivates system engineering efforts that optimize the performance and efficiency of system execution, but also promotes improvement in big data technology and stimulates investigations into new data management systems, hardware architectures, operating systems, and programming systems.

This book includes papers from the 6th Workshop on Big Data Benchmarks, Performance Optimization, and Emerging Hardware (BPOE-6) (http://prof.ict.ac.cn/bpoe_6_vldb), which was co-located with VLDB 2015 (<http://vldb.org/2015/>), a premier conference on data management, database, and information systems. The workshop focuses on architecture and system support for big data systems, aiming at bringing researchers and practitioners from data management, architecture, and systems research communities together to discuss the research issues at the intersection of these areas. This book also invites three papers from several industry partners, including two papers describing tools used in system benchmarking and monitoring and one paper discussing principles and methodologies in existing big data benchmarks.

The call for papers for the BPOE-6 workshop attracted a number of high-quality international submissions. During a rigorous review process, in which each paper was assessed by at least four experts, we selected eight out of ten submissions for presentation at BPOE-6. In addition, several prestigious keynote speakers were invited, including Prof. Xiaodong Zhang, Ohio State University (<http://web.cse.ohio-state.edu/~zhang/>), whose topic was “Fast Data Accesses in Memory and Storage,” and Prof. Dhableswar K. (DK) Panda, Ohio State University (<http://www.cse.ohio-state.edu/~panda/>), whose topic was “Accelerating and Benchmarking Big Data Processing on Modern HPC Clusters HPC and Big Data.”

We are very grateful to the efforts of all authors related to writing, revising, and presenting their papers at BPOE workshops. Finally, we appreciate the indispensable support of the BPOE Program Committee and thank them for their efforts and contributions in maintaining the high standards of the BPOE workshop.

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