

HPC4BD 2017 Foreword

Processing large datasets for extracting information and knowledge has always been a fundamental problem. Today, this problem is further exacerbated, as the data a researcher or a company needs to cope with can be immense in terms of volume, distributed in terms of location, and unstructured in terms of format. Recent advances in computer hardware and storage technologies have allowed us to gather, store, and analyze such large-scale data. However, without scalable and cost effective algorithms that utilize the resources in an efficient way, neither the resources nor the data itself can serve to science and society at its full potential. Analyzing Big Data requires a vast amount of storage and computing resources.

We need to untangle the big, puzzling information we have and while doing this, we need to be fast and robust: the information we need may be crucial for a life-or-death situation. We need to be accurate: a single misleading information extracted from the data can cause an avalanche effect. Each problem has its own characteristic and priorities. Hence, the best algorithm and architecture combination is different for different applications. The HPC4BD workshop aims to bring people who work on data-intensive and HPC in industry, research labs, and academia together to share their problems posed by the Big Data in various application domains and knowledge required to solve them.

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