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Large-Scale Knowledge Resources

Construction and Application

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Preface

At the start of the 21st century, we are now well on the way towards a knowledge-intensive society, in which knowledge plays ever more important roles. Thus, research interest should inevitably shift from information to knowledge, with the problems of building, organizing, maintaining and utilizing knowledge becoming central issues in a wide variety of fields. The 21st Century COE program "Framework for Systematization and Application of Large-scale Knowledge Resources (COE-LKR)" conducted by the Tokyo Institute of Technology is one of several early attempts worldwide to address these important issues. Inspired by this project, LKR2008 aimed at bringing together diverse contributions in cognitive science, computer science, education and linguistics to explore design, construction, extension, maintenance, validation and application of knowledge.

Responding to our call for papers, we received 38 submission from a variety of research areas. Each paper was reviewed by three Program Committee members. Since we were aiming at an interdisciplinary conference covering a wide range of topics concerning large-scale knowledge resources (LKR), each paper was assigned a reviewer from a topic area outside the main thrust of the paper. This reviewer was asked to assess whether the authors described the motivation and importance of their work in a comprehensible manner even for readers in other research areas. Following a rigorous reviewing process, we accepted 14 regular papers and 12 poster papers.

While the technical program covered a broad range of application areas, papers can be roughly classified into four major areas. First, some authors reported on their experience building large-scale resources, with a particular emphasis on language resources and ontologies. Second, a major focus was in the extraction of knowledge from large sets of data, ranging from mining of text data to semantic analysis of content such as images and video. Third, some papers reported on experiences with operating actual LKR systems, including question and answer systems, inductive reasoning systems, etc. Finally, several papers focused on infrastructure problems to enable efficient LKR systems to be deployed.

We would like to thank the Program Committee members for their hard work. In addition to these technical papers, this volume includes six papers by the invited speakers. We hope the conference and this volume will contribute to opening up a new interdisciplinary research area on LKR.

Antonio Ortega Tokunaga Takenobu

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