

Preface

This volume contains the revised and extended proceedings of the fourth edition of SLATE, the 4th Symposium on Languages, Applications and Technologies, held at the Complutense University of Madrid, Spain, during June 18–19, 2015.

We continually use languages. First, to communicate between ourselves. Later, to communicate with computers. And more recently, with the advent of networks, we found a way to make computers communicate between themselves. All these different forms of communication use languages, different languages, but that still share many similarities. In SLATE we are interested in discussing these languages. Languages being such a broad subject, SLATE is organized in three main tracks:

- HHL Track: Processing Human–Human Languages. HHL is a forum dedicated to the discussion of research projects and ideas involving natural language processing and their industrial application. In 2015 this track was chaired by Alberto Simões.
- HCL Track: Processing Human–Computer Languages. HCL is a forum where researchers, developers, and educators exchange ideas and information on the latest academic or industrial work on language design, processing, assessment, and applications. The SLATE 2015 HCL chair was José-Luis Sierra-Rodríguez.
- CCL Track: Processing Computer–Computer Languages. The main goal of CCL is to provide a broad platform for discussion on the XML markup language: examples of usage and associated technologies. In 2015 this track was chaired by José Paulo Leal.

In this 4th edition we received 40 full-paper submissions and seven short-paper submissions. After a thorough peer-review process, in which each paper was reviewed by three anonymous reviewers, 17 papers were accepted as full papers (about 42 % full-paper acceptance rate). In addition, ten full papers were invited to be resubmitted as short papers, and nine short papers were finally accepted for publication and presentation at the symposium (about 52 % short-paper acceptance rate). This volume contains the extended and revised versions of all the papers presented at SLATE 2015.

The presentations were divided into the following eight sessions: Document Processing (CCL), Domain-Specific Languages (HCL), Tools for Natural Language Speech and Text Processing (HHL), Web Technologies and Practical Cases (CCL), Semantic and Text Classification (HHL), Human–Computer Language Processing (HCL), Semantic Web and Ontologies (CCL), and Grammars (HCL). In addition, a Lightning Talks and Demo Session was also included allowing for late-breaking presentations and tool demos. Finally, the SLATE 2015 program also included two keynotes: one on the application of grammar inference to software language engineering, by Marjan Mernik from the University of Maribor, Slovenia, and another on the role of ontologies in machine for machine communication, by Asunción Gómez from the Technical University of Madrid, Spain.

The organizers of SLATE 2015 want to thank the many people without whom this event would never have been possible. In particular, the UCM's Faculty of Philology for serving as the venue of the symposium; the UCM's Computer Science School for sponsoring the keynotes through its PhD Program Conference Cycle; the UCM's General Foundation for being in charge of the finances of the event; the Madrid City Council for organizing the symposium social activities; the Santander-UCM research grants for partially funding one of the keynotes; the members of the ILSA (Implementation of Language-Driven Software and Applications) Research Group for their collaboration in the local organization of the event; Springer for giving us the opportunity to publish this proceedings volume as part of the CCIS series; COMLAN and COMSIS journals for accepting submissions of additionally revised and extended journal-oriented versions of the best papers presented at the symposium; the EasyChair conference management system; the Program Committee members for spending their time reviewing the papers and writing the reports; the authors of the submitted papers for their contribution and interest in the symposium; and, finally, to all participants who came to Madrid and contributed such a fruitful meeting.

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José-Luis Sierra-Rodríguez
José Paulo Leal
Alberto Simões

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Sierra-Rodríguez, J.-L.; Leal, J.-P.; Simões, A. (Eds.)

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