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FOREWORD

The present volumes aim to offer an overview of the variety of research strands pursued at the "Istituto di Linguistica Computazionale" (ILC) of the National Research Council (CNR) in Pisa. To this end, we have put together a number of articles which report on some of the activities carried out at ILC over the last few years. The idea of publishing an overview of the activities carried out at the Institute was first launched during the previous ILC Scientific Committee, whose members were: Bernard Quemada (president), Nicoletta Calzolari, Milvio Capovani, Franco Montanari, Joanna Monti, Lorenzo Moretti, Angel Martin Municio, Laura Pecchia, Eugenio Picchi, Irina Prodanof, and Antonio Zampolli. We take this opportunity to warmly thank them all for their continuing support to the research activities reported here. We would also like to thank the members of the Editorial Board for their invaluable contribution and precious suggestions and, of course, all the individual contributors to this work.

The collection starts with an introductory article by Antonio Zampolli, and this is followed by a large number of articles ordered alphabetically. The main purpose of Zampolli's introduction is to present a historical background of the Institute itself and to provide a comprehensive, unifying vision of the various research issues described in the rest of the book. The reader is thus invited to use the introduction as a kind of "road map" through the whole book, whereby all the research activities described in detail in the following papers are placed in their historical and strategic context.

In keeping with the research strategies developed at ILC, this collection looks at Computational Linguistics (CL) as a multidisciplinary, but autonomous field, whose focus is the development of know-how, methods, technology and highly specialised tools for language processing. Although CL owes a considerable debt to a number of other disciplines, it must be appreciated that its specific focus makes CL very different from those neighbouring fields. Human language technology has a 'pervasive' and 'horizontal' character, as language is the

privileged means for the types of communicative interaction through which most of our social, economic and cultural activities unfold. The automatic treatment of language is thus complementary to both Information Society Technologies and the Humanities, with its own - well recognized - identity.

ILC has reached a prominent position as an internationally recognised Center of Excellence in the field, mainly because it has always emphasised - in defining its own strategic objectives - the interdependence between basic and applied research, on the one hand, and between different approaches to CL, on the other hand, with a view to their integration within a unifying perspective. This vision has prompted a variety of research activities spanning virtually all aspects of language technology, from language resources to prototypes of NLP products, from computational philology to machine learning and humanities computing, and favouring a strong synergy among them, e.g. through the integration of common methodologies and tools. The other main strength of ILC has been its leading role in continuously launching new research paradigms at an international level, and in being proactive in a very large number of international initiatives, as witnessed by its involvement in international projects, associations, conferences, etc.

We hope that the present volumes will throw this role into sharper relief, showing the full breath of ILC interests and the number of its links with state-of-the-art and innovative research going on in Europe and world-wide. We also hope that it will be instrumental in promoting - with all the possible and necessary means - Italian as a leading language in the Information Society. It is only through innovative research and the development of technologies, products, and services necessary to automatically process our language and link it to the other languages of the world that we can put our national community in a position to adequately meet the challenges of the global society. An inescapable priority, also emphasised in the 6th Framework Program of the EC, is now to build a society based on information and knowledge, and language is the main access key to knowledge. A further area in which ILC is committed to carrying out research - with great opportunities in Italy, traditional producer of culture -

is that of cultural heritage and digital content where, once again, human language technologies and multimedia play a fundamental role.

To conclude, in the coming decade ILC needs to be in a position - with the support of CNR and MIUR (Ministry of Education, University and Research) - to maintain and strengthen its leading role in the evolving nature of CL throughout the world. It will do so by continuing to foster the close links among basic long-term research, strategic planning, and applied research, by favouring technology transfer to industry, by promoting the symbiosis of the various disciplinary competences involved, by entering new fields such as multimodality, by prompting synergies between the different scientific communities operating in CL through major international organisations, and - last but not least - by training new, young researchers for the future of this area.

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