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Norbert E. Fuchs (Ed.)

# Controlled Natural Language

Workshop on Controlled Natural Language, CNL 2009  
Marettimo Island, Italy, June 8-10, 2009  
Revised Papers

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# Preface

*Controlled natural languages (CNLs) are subsets of natural languages, obtained by restricting the grammar and vocabulary in order to reduce or eliminate ambiguity and complexity. Traditionally, controlled languages fall into two major types: those that improve readability for human readers, and those that enable reliable automatic semantic analysis of the language. [...] The second type of languages has a formal logical basis, i.e. they have a formal syntax and semantics, and can be mapped to an existing formal language, such as first-order logic. Thus, those languages can be used as knowledge representation languages, and writing of those languages is supported by fully automatic consistency and redundancy checks, query answering, etc.*

Wikipedia

Various controlled natural languages of the second type have been developed by a number of organizations, and have been used in many different application domains, most recently within the Semantic Web.

The workshop CNL 2009 was dedicated to discussing the similarities and the differences of existing controlled natural languages of the second type, possible improvements to these languages, relations to other knowledge representation languages, tool support, existing and future applications, and further topics of interest. Specifically, CNL 2009 addressed the following aspects of controlled natural languages (CNLs):

- Design of CNLs
- Parsing of CNLs
- CNLs for knowledge representation
- CNLs for specifications
- CNLs and the Semantic Web
- CNLs as user interface
- CNLs for interaction and communication
- Tool support for CNLs
- Reasoning in CNLs
- Comparisons of CNLs
- Applications of CNLs
- Business rules
- User studies
- Theoretical results

The workshop was informal with lots of time for presentations and discussions in the fashion of the seminars organized at Dagstuhl in Germany. Based on the high number and the quality of the submissions, the large number of participants – altogether 36 researchers from 15 countries – and the positive feedback of the participants, the workshop can be considered a great success.

Researchers submitted 31 extended abstracts of which the Program Committee accepted 24. Two extended abstracts were withdrawn by their authors after acceptance.

Revised versions of the remaining 22 extended abstracts were published as *CEUR Workshop Proceedings (Volume 448)*.

During the workshop authors had ample time to present their work and to have it discussed by the participants. All authors of accepted extended abstracts were then invited to submit full papers taking the discussions during the workshop into account. Subsequently, 17 full papers were submitted of which the Program Committee accepted 16. This volume contains revised versions of these 16 full papers roughly divided into the two groups "Language Aspects" and "Tools and Applications." Note that some papers fall into both groups: using a controlled natural language in an application domain often requires domain-specific language features.

Additionally, this volume contains the invited paper "On Controlled Natural Languages: Properties and Prospects" by Adam Wyner et al. that summarizes a collaborative effort of the CNL community to define the concept "controlled natural language."

I would like to thank the authors of the extended abstracts and of the full papers for their contributions to the workshop. I also thank the members of the Program Committee and the additional reviewers for their great effort – first reviewing the extended abstracts and then the full papers – and for their constructive feedback that helped the authors to improve their papers. The submission and reviewing process and the compilation of the proceedings were greatly facilitated by the EasyChair system. Further thanks go to Randy Goebel, Joerg Siekmann and Wolfgang Wahlster – the editors of the series *Lecture Notes in Artificial Intelligence (LNCS/LNAI)* – and to the Springer staff for publishing the proceedings of CNL 2009. Last, but not least, I would like to thank my colleagues at the Department of Informatics and at the Institute of Computational Linguistics of the University of Zurich – Evelyne Berger, Kaarel Kaljurand, Tobias Kuhn, Cerstin Mahlow, and Michael Piotrowski – for generously helping me whenever I got stuck.

Il successo del seminario CNL 2009 non sarebbe stato possibile senza il generoso sostegno di Fausto Gobbo e del personale del Marettimo Residence, e senza il grande aiuto che ho ricevuto da Vito Vaccaro dell'Associazione Culturale, Sportiva, Ricreativa, Turistica "Marettimo". Vorrei cogliere questa occasione per ringraziarli tutti.

February 2010

Norbert E. Fuchs

# Organization

The Workshop on Controlled Natural Language (CNL 2009) – organized by Norbert E. Fuchs of the University of Zurich – took place June 8-10, 2009 at the Marettimo Residence on the Sicilian island Marettimo. Further details can be found on the website of the workshop (<http://attempto.ifi.uzh.ch/site/cnl2009/>).

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