EACL 2006

# Third ACL-SIGSEM Workshop on Prepositions

## Proceedings of the Workshop

Workshop Chairs:
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# Introduction

This volume contains the papers accepted for presentation at the Third ACL-SIGSEM Workshop on Prepositions, hosted in conjunction with the 11th Conference of the European Chapter of the Association for Computational Linguistics on April 3rd, 2006, in Trento, Italy.

This meeting is supported by the ACL Special Interest Group on Semantics (SIGSEM, `http://mcs.open.ac.uk/pp2464/sigsem/`), which aims to promote research in all aspects of computational semantics. Two successful workshops endorsed by ACL-SIGSEM devoted to the topic of prepositions were held in Toulouse, France in September 2003, and Colchester, UK in April 2005.

Prepositions have received a considerable amount of attention in recent years, due to their importance in computational tasks. For instance, in NLP, PP attachment ambiguities have attracted a lot of attention, and different machine learning techniques have been employed with varying degrees of success. Researchers from various perspectives have also looked at spatial or temporal aspects of prepositions, and their cross-linguistic differences, monolingual and cross-linguistic contrasts or the role of prepositions in syntactic alternations. Moreover, in languages like English and German, phrasal verbs have also been the subject of considerable effort, ranging from techniques for their automatic extraction from corpora, to methods for the determination of their semantics. In other languages, like Romance languages or Hindi, the focus has been either on the incorporation of the preposition or its inclusion in the prepositional phrase. All these configurations are of much interest semantically as well as syntactically.

In the call for papers we solicited papers working on aspects of prepositions, such as:

**Descriptions:** prepositions in lexical resources (WordNet, FrameNet), productive versus collocation uses, multilingual descriptions (mismatches, incorporation, divergences), prepositions and thematic roles.

**Applications:** dealing with prepositions in applications e.g. for machine translation, information extraction or natural language generation.

**Representation of prepositions:** prepositions in knowledge bases, cognitive or logic-based formalisms for the description of the semantics of prepositions (in isolation, and in composition/confrontation with the verb and the NP), compositional semantics; implications for AI and KR.

**Prepositions in reasoning procedures:** how different kinds of preposition provide distinct challenges to a reasoning system and how they can be handled.

**Cognitive dimensions of prepositions:** how different kinds of prepositions are acquired/interpreted/represented, in terms of human and/or computational processing.

Of the 17 papers submitted, the program committee selected 13 papers for presentation at the workshop and inclusion in these proceedings, representative of the state of the art in this subject today. Each full-length submission was peer-reviewed by three members of the international program committee, whose job was made difficult by the high quality level of submissions. The accepted papers include proposals for the extraction of prepositional phrases from corpora, creation of a preposition ontology, disambiguation of verb particle sequences, translation of prepositions, interpretation of prepositions for

practical applications, such as question answering systems, quantitative analyses of prepositions and prepositional phrases, as well as analyses within formal grammatical frameworks such as HPSG, LFG and OT. The papers deal not only with English, but also with languages such as German, Swedish, Polish, Finnish and Bengali.

We would like to thank all the authors who submitted papers, the members of the program committee for the time and effort they expended in reviewing the papers, and the panelists for supporting and stimulating this event. Our thanks go also to the executive committee of the ACL-SIGSEM sub-group on prepositions, the organizers of the main conference and Maarten de Rijke and Caroline Sporleder, the EACL 2006 workshop chairs.

Boban Arsenijević, Timothy Baldwin, Beata Trawiński

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# Workshop Program

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09:00-09:30 *Spatial Prepositions in Context: The Semantics of 'near' in the Presence of Distractor Objects*
Fintan J. Costello and John D. Kelleher

09:30-10:00 *Polish Equivalents of Spatial 'at'*
Iwona Knaś

10:00-10:20 *A Quantitative Approach to Preposition-Pronoun Contraction in Polish*
Beata Trawiński

10:20-10:40 *Marked Adpositions*
Sander Lestrade

10:40-11:00 Coffee Break

11:00-11:30 *Semantic Interpretation of Prepositions for NLP Applications*
Sven Hartrumpf, Hermann Helbig and Rainer Osswald

11:30-12:00 *Coverage and Inheritance in The Preposition Project*
Kenneth C. Litkowski and Orin Hargraves

12:00-12:20 *An Ontology-based View on Prepositional Senses*
Tine Lassen

12:20-12:40 *A Conceptual Analysis of the Notion of Instrumentality via a Multilingual Analysis*
Asanee Kawtrakul, Mukda Suktarachan, Bali Ranaivo-Malancon, Pek Kuan, Achla Raina, Sudeshna Sarkar, Alda Mari, Sina Zarriess, Elixabete Murguia and Patrick Saint-Dizier

12:40-14:00 Lunch

14:00-15:00 Discussion

15:00-15:30 *German Particle Verbs and Pleonastic Prepositions*
Ines Rehbein

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15:30-16:00 *Automatic Identification of English Verb Particle Constructions using Linguistic Features*
Su Nam Kim and Timothy Baldwin

16:00-16:20 Coffee Break

16:20-16:50 *On the Prepositions which Introduce an Adjunct of Duration*
Frank Van Eynde

16:50-17:20 *How Bad is the Problem of PP-Attachment? A Comparison of English, German and Swedish*
Martin Volk

17:20-17:40 *Handling of Prepositions in English to Bengali Machine Translation*
Sudip Kumar Naskar and Sivaji Bandyopadhyayn

17:40-18:10 Closing Remarks and Business Meeting