

ACL HLT 2011

**Workshop on Relational Models of Semantics
RELMS 2011**

Proceedings of the Workshop

23 June, 2011
Portland, Oregon, USA

Production and Manufacturing by
Omnipress, Inc.
2600 Anderson Street
Madison, WI 53704 USA

©2011 The Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)
209 N. Eighth Street
Stroudsburg, PA 18360
USA
Tel: +1-570-476-8006
Fax: +1-570-476-0860
acl@aclweb.org

ISBN 978-1-932432-98-5

Preface

The ACL 2011 Workshop on *Relational Models of Semantics* (RELMS 2011) took place on June 23, 2011 in Portland, Oregon, USA, immediately following the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL 2011).

We had envisioned the workshop as a meeting place for those concerned with a view of semantics deeper than what a word or a collocation carry in text. A non-trivial text describes relations among the entities and events to which it refers. While models of meaning which focus on the lexical stratum are undoubtedly important, it is relations that bind individual pieces together.

The modelling of semantic relations has taken a variety of forms in natural language processing. Ontology learning and information extraction focus on learning “encyclopedic” relations between entities in the domain of the discourse. Structured prediction tasks such as semantic role labelling or biomedical event extraction require reasoning about the relational content of a text: which entities and events mentioned are interrelated. The interpretation of compound nouns – in the presence of little contextual knowledge – benefits from recognizing probable and plausible relations between two entities. And so on.

Reality seldom lives up to expectations, so we have been fortunate to receive a number of good submissions. The participants found out how rich language resources can advance the cause of deep semantic analysis (the invited talk by Martha Palmer and the paper by Coyne et al.) and how such resources can be built up (Ayşe et al. and Bonial et al.). They further heard about discovering elements implicit in texts (Tonelli and Delmonte, Gerber and Chai). There were also papers on classifying relations (Choi, Palmer and Jamison), on information extraction (Surdeanu et al.) and even on the connection between relations and sentiment (Kolya et al.). We thank the Authors for letting us put together such an interestingly varied program.

The success of the workshop was only possible with the support of all of the authors who submitted their papers for review and then presented them, the program committee members who constructively assessed the submissions, the invited speaker (Martha Palmer) and the panelists (Timothy Baldwin, Eduard Hovy, Saif Mohammad, and Sebastian Riedel) who shared their views on interesting topics, and the registered participants. We thank them all for their support for this workshop.

The RELMS 2011 co-organizers:

Su Nam Kim, Zornitsa Kozareva, Preslav Nakov, Diarmuid Ó Séaghdha, Sebastian Padó, and Stan Szpakowicz

Organization

The ACL 2011 Workshop on Relational Models of Semantics (RELMS 2011) was endorsed by SIGLEX:
The Special Interest Group on the Lexicon of the Association for Computational Linguistics.

Organizers:

Su Nam Kim, The University of Melbourne, Australia
Zornitsa Kozareva, University of Southern California, USA
Preslav Nakov, National University of Singapore, Singapore
Diarmuid Ó Séaghdha, University of Cambridge, UK
Sebastian Padó, Universität Heidelberg, Germany
Stan Szpakowicz, University of Ottawa, Canada

Program Committee:

Eneko Agirre, University of the Basque Country, Spain
Timothy Baldwin, The University of Melbourne, Australia
Ken Barker, University of Texas at Austin, USA
Paul Buitelaar, National University of Ireland, Galway, Ireland
Nathanael Chambers, Stanford University, USA
Yee Seng Chan, University of Illinois at Urbana-Champaign, USA
Mark Craven, University of Wisconsin-Madison, USA
Matthew Gerber, Michigan State University, USA
Roxana Girju, University of Illinois at Urbana-Champaign, USA
Sanda Harabagiu, University of Texas at Dallas, USA
Iris Hendrickx, University of Lisboa, Portugal
Raphael Hoffmann, University of Washington, USA
Sophia Katrenko, University of Amsterdam, The Netherlands
Roman Klinger, Fraunhofer Institute for Algorithms and Scientific Computing, Germany
Milen Kouylekov, Celi SRL Torino, Italy
Kenneth Litkowski, CL Research, USA
Dan Moldovan, University of Texas at Dallas, USA
Vivi Nastase, HITS gGmbH, Germany
Roberto Navigli, Sapienza University of Rome, Italy
Patrick Pantel, Microsoft Research, USA
Marco Pennacchiotti, Yahoo! Inc., USA
Simone Paolo Ponzetto, University of Heidelberg, Germany
Sampo Pyysalo, University of Tokyo, Japan
Sebastian Riedel, University of Massachusetts-Amherst, USA
Alan Ritter, University of Washington, USA
Lorenza Romano, Cross Library Services srl, Italy
Dan Roth, University of Illinois at Urbana Champaign, USA
Barbara Rosario, Intel Labs, USA

Caroline Sporleder, Saarland University, Germany
Carlo Strapparava, FBK-irst, Italy
György Szarvas, Technical University of Darmstadt, Germany
Peter Turney, National Research Council of Canada, Canada
Benjamin Van Durme, Johns Hopkins University, USA
Tony Veale, University College Dublin, Ireland
Andreas Vlachos, University of Wisconsin-Madison, USA
Rui Wang, DFKI GmbH, Germany
Limin Yao, University of Massachusetts Amherst, USA
Deniz Yuret, Koç University, Turkey

Additional Reviewers:

Brian Davis, National University of Ireland, Galway, Ireland

Invited Speaker:

Martha Palmer, University of Colorado, USA

Panelists:

Timothy Baldwin, The University of Melbourne, Australia
Eduard Hovy, University of Southern California, USA
Saif Mohammad, National Research Council, Canada
Sebastian Riedel, University of Massachusetts, USA

Table of Contents

<i>Going Beyond Shallow Semantics</i>	
Martha Palmer	1
<i>Customizing an Information Extraction System to a New Domain</i>	
Mihai Surdeanu, David McClosky, Mason Smith, Andrey Gusev and Christopher Manning	2
<i>Extraction of Semantic Word Relations in Turkish from Dictionary Definitions</i>	
Şerbetçi Ayşe, Orhan Zeynep and Pehlivan İlknur	11
<i>Identifying Event – Sentiment Association using Lexical Equivalence and Co-reference Approaches</i>	
Anup Kolya, Dipankar Das, Asif Ekbal and Sivaji Bandyopadhyay	19
<i>VigNet: Grounding Language in Graphics using Frame Semantics</i>	
Bob Coyne, Daniel Bauer and Owen Rambow	28
<i>Transition-based Semantic Role Labeling Using Predicate Argument Clustering</i>	
Jinho D. Choi and Martha Palmer	37
<i>Using Grammar Rule Clusters for Semantic Relation Classification</i>	
Emily Jamison	46
<i>Desperately Seeking Implicit Arguments in Text</i>	
Sara Tonelli and Rodolfo Delmonte	54
<i>A Joint Model of Implicit Arguments for Nominal Predicates</i>	
Matthew Gerber, Joyce Chai and Robert Bart	63
<i>Incorporating Coercive Constructions into a Verb Lexicon</i>	
Claire Bonial, Susan Windisch Brown, Jena D. Hwang, Christopher Parisien, Martha Palmer and Suzanne Stevenson	72

RELMS'2011 Workshop Program

Thursday: June 23, 2011

09:00-09:05 **Welcome**

09:05-10:30 **Session 1**

(09:05-10:05)

Invited Talk

Going Beyond Shallow Semantics

Martha Palmer, University of Colorado

(10:05-10:30)

Customizing an Information Extraction System to a New Domain

Mihai Surdeanu, David McClosky, Mason Smith, Andrey Gusev and Christopher Manning

10:30-11:00 Morning break

11:00-12:15 **Session 2**

(11:00-11:25)

Extraction of Semantic Word Relations in Turkish from Dictionary Definitions

Şerbetçi Ayşe, Orhan Zeynep and Pehlivan İlknur

(11:25-11:50)

Identifying Event – Sentiment Association using Lexical Equivalence and Co-reference Approaches

Anup Kolya, Dipankar Das, Asif Ekbal and Sivaji Bandyopadhyay

(11:50-12:15)

VigNet: Grounding Language in Graphics using Frame Semantics

Bob Coyne, Daniel Bauer and Owen Rambow

12:15-13:40 Lunch break

Thursday: June 23, 2011 (continued)

13:40-14:30 **Session 3**

(13:40-14:05)

Transition-based Semantic Role Labeling Using Predicate Argument Clustering

Jinho D. Choi and Martha Palmer

(14:05-14:30)

Using Grammar Rule Clusters for Semantic Relation Classification

Emily Jamison

14:30-15:30 **Panel**

- Timothy Baldwin, The University of Melbourne
- Eduard Hovy, University of Southern California
- Saif Mohammad, National Research Council Canada
- Sebastian Riedel, University of Massachusetts

15:30-16:00 Afternoon break

16:00-17:15 **Session 4**

(16:00-16:25)

Desperately Seeking Implicit Arguments in Text

Sara Tonelli and Rodolfo Delmonte

(16:25-16:50)

A Joint Model of Implicit Arguments for Nominal Predicates

Matthew Gerber, Joyce Chai and Robert Bart

(16:50-17:15)

Incorporating Coercive Constructions into a Verb Lexicon

Claire Bonial, Susan Windisch Brown, Jena D. Hwang, Christopher Parisien, Martha Palmer and Suzanne Stevenson

17:15-17:20 **Closing remarks**