ACL 2007

Proceedings of the ACL-PASCAL Workshop on Textual Entailment and Paraphrasing

June 28-29, 2007
Prague, Czech Republic

The Association for Computational Linguistics

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acl@aclweb.org

PREFACE

Recognizing and generating textual entailment and paraphrases are regarded as important technologies in a broad range of NLP applications, including, information extraction, summarization, question answering, information retrieval, machine translation and text generation. Both textual entailment and paraphrasing address relevant aspects of natural language semantics. Entailment is a directional relation between two expressions in which one of them implies the other, whereas paraphrase is a relation in which two expressions convey essentially the same meaning. Indeed, paraphrase can be defined as bi-directional entailment. While it may be debatable how such semantic definitions can be made well-founded, in practice we have already seen evidence that such knowledge is essential for many applications.

There have been two lines of workshops in this field. One is a series of three workshops on paraphrasing -- in Tokyo 2001, in Sapporo at ACL-2003 and in Jeju at IJCNLP-2005. The other is the Workshop on Empirical Modeling of Semantic Equivalence and Entailment (at ACL-2005), and two workshops of the previous PASCAL Recognizing Textual Entailment (RTE) Challenges (2005 and 2006). We combine those two lines of similar effort together at this workshop in order to see the convergence of the field and exchange ideas among a wider audience.

The workshop has two parts. The first is the general session where submission was open, which covers a wide variety of topics including knowledge formalisms and resources and techniques for acquiring and utilizing knowledge. The second part is the concluding workshop of the 3rd PASCAL RTE Challenge, the primary benchmark for textual entailment recognition systems (see the RTE-3 organizers paper). The workshop program includes the general session papers and selected presentations and a poster session of participating RTE-3 systems.

We appreciate the contributions of all presenters and participants.

Workshop Chairs,

General Session:
Satoshi Sekine (New York University)
Kentaro Inui (Nara Institute of Science and Technology)

PASCAL RTE-3 Challenge:
Ido Dagan (Bar Ilan University)
Bill Dolan (Microsoft Research)
Danilo Giampiccolo (CELCT)
Bernardo Magnini (ITC-irst)

Organizers

Chairs:

General Session:

Satoshi Sekine, New York University
Kentaro Inui, Nara Institute of Science and Technology

PASCAL RTE-3 Challenge:

Ido Dagan, Bar Ilan University
Bill Dolan, Microsoft Research
Danilo Giampiccolo, CELCT
Bernardo Magnini, ITC-irst

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Donia Scott, Open University
Kentaro Torisawa, JAIST
Lucy Vanderwende, Microsoft Research
Kazuhide Yamamoto, Nagaoka University of Technology
Fabio Zanzotto, University of Rome "Tor Vergata"

Invited Speaker:

Oren Etzioni, University of Washington

Website:

http://nlp.cs.nyu.edu/WTEP

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Conference Program

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Danilo Giampiccolo, Bernardo Magnini, Ido Dagan and Bill Dolan

Linguistic-Semantic Systems

2:30–2:55 *A Semantic Approach To Textual Entailment: System Evaluation and Task Analysis*
Aljoscha Burchardt, Nils Reiter, Stefan Thater and Anette Frank

2:55–3:20 *Precision-focused Textual Inference*
Daniel Bobrow, Dick Crouch, Tracy Halloway King, Cleo Condoravdi, Lauri Karttunen, Rowan Nairn, Valeria de Paiva and Annie Zaenen

3:20–3:45 *COGEX at RTE 3*
Marta Tatu and Dan Moldovan

COFFEE BREAK

GENERAL SESSION–Resources for Entailment

4:15–4:40 *A Corpus of Fine-Grained Entailment Relations*
Rodney D. Nielsen and Wayne Ward

4:40–5:10 RTE Poster Booster (2 min presentation each)

5:10–6:15 RTE Poster Session

Recognizing Textual Entailment Using Sentence Similarity based on Dependency Tree Skeletons
Rui Wang and Günter Neumann

Learning Textual Entailment using SVMs and String Similarity Measures
Prodromos Malakasiotis and Ion Androutsopoulos

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Rodolfo Delmonte, Antonella Bristot, Marco Aldo Piccolino Boniforti and Sara Tonelli

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Textual Entailment Through Extended Lexical Overlap and Lexico-Semantic Matching
Rod Adams, Gabriel Nicolae, Cristina Nicolae and Sanda Harabagiu

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9:00–9:25 *Hypothesis Transformation and Semantic Variability Rules Used in Recognizing Textual Entailment*
Adrian Iftene and Alexandra Balahur-Dobrescu

9:25–9:50 *Semantic Inference at the Lexical-Syntactic Level for Textual Entailment Recognition*
Roy Bar-Haim, Ido Dagan, Iddo Greental, Idan Szpektor and Moshe Friedman

9:50–10:15 *An Extensible Probabilistic Transformation-based Approach to the Third Recognizing Textual Entailment Challenge*
Stefan Harmeling

10:15–10:45 Hoa Trang Dang, Ellen Voorhees, Christopher Manning, Dan Moldovan: Pilot Task Overview

COFFEE BREAK

GENERAL SESSION–Paraphrase Generation

11:15–11:40 *Mutaphrase: Paraphrasing with FrameNet*
Michael Ellsworth and Adam Janin

11:40–12:05 *A Compositional Approach toward Dynamic Phrasal Thesaurus*
Atsushi Fujita, Shuhei Kato, Naoki Kato and Satoshi Sato

12:05–1:00 Invited Talk–Oren Etzioni: Machine Reading and Open Information Extraction

Friday, June 29, 2007 (continued)

LUNCH BREAK

RTE-Other Approaches

2:30–2:55 *Machine Learning Based Semantic Inference: Experiments and Observations at RTE-3*
Baoli Li, Joseph Irwin, Ernest V. Garcia and Ashwin Ram

2:55–3:20 *Learning Alignments and Leveraging Natural Logic*
Nathanael Chambers, Daniel Cer, Trond Grenager, David Hall, Chloe Kiddon, Bill MacCartney, Marie-Catherine de Marneffe, Daniel Ramage, Eric Yeh and Christopher D. Manning

3:20-3:45 *A Discourse Commitment-Based Framework for Recognizing Textual Entailment*
Andrew Hickl and Jeremy Bensley

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4:15–4:40 *Biology Based Alignments of Paraphrases for Sentence Compression*
João Cordeiro, Gaël Dias and Guillaume Cleuziou

4:40–5:05 *A first order semantic approach to adjectival inference*
Marilisa Amoia and Claire Gardent

5:05–5:30 *Natural Logic for Textual Inference*
Bill MacCartney and Christopher D. Manning

5:30–6:15 Open discussion–what next?