ACL 2007

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

June 28-29, 2007
Prague, Czech Republic
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 (CEICT)
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

Program Committee:
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Rada Mihalcea, University of North Texas
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Kiyonori Ohtake, ATR
Ellen Riloff, University of Utah
Dan Roth, University of Illinois at Urbana-Champaign
Satoshi Sato, Nagoya University
Hinrich Schuetze, University of Stuttgart
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

Thursday, June 28, 2007

2:00–2:05 Introduction

RTE SESSION

2:05–2:30 The Third PASCAL Recognizing Textual Entailment Challenge
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
Entailment and Anaphora Resolution in RTE3  
Rodolfo Delmonte, Antonella Bristot, Marco Aldo Piccolino Boniforti and Sara Tonelli

On the Role of Lexical and World Knowledge in RTE3  
Peter Clark, Phil Harrison, John Thompson, William Murray, Jerry Hobbs and Christiane Fellbaum

Machine Learning with Semantic-Based Distances Between Sentences for Textual Entailment  
Daniel Ferrés and Horacio Rodríguez

A Perspective-Based Approach for Solving Textual Entailment Recognition  
Óscar Ferrández, Daniel Micol, Rafael Muñoz and Manuel Palomar

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Fabio Massimo Zanzotto, Marco Pennacchiotti and Alessandro Moschitti

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Arturo Montejo-Ráez, Jose Manuel Perea, Fernando Martínez-Santiago, Miguel Ángel García-Cumbrares, Maite Martín Valdivia and Alfonso Ureña-López

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SVO triple based Latent Semantic Analysis for recognising textual entailment  
Gaston Burek, Christian Pietsch and Anne De Roeck
Thursday, June 28, 2007 (continued)

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

Friday, June 29, 2007

RTE–Transformation-based systems

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

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

COFFEE BREAK

GENERAL SESSION–Entailment and Paraphrase Acquisition

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?