

ACL-08: HLT

**Third Workshop
on
Statistical
Machine Translation**

Proceedings of the Workshop

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Introduction

The ACL 2008 Workshop on Statistical Machine Translation (WMT-08) took place on Thursday, June 19 in Columbus, Ohio, United States, immediately following the annual meeting of the Association for Computational Linguistics, which was hosted by the Ohio State University.

This is the third time this workshop has been held. It has its root in the ACL 2005 Workshop on Building and Using Parallel Texts. In the following years the Workshop on Statistical Machine Translation was held at HLT-NAACL 2006 in New York City, US, and at ACL 2007 in Prague, Czech Republic.

The focus of our workshop was to use parallel corpora for machine translation. Recent experimentation has shown that the performance of SMT systems varies greatly with the source language. In this workshop we encouraged researchers to investigate ways to improve the performance of SMT systems for diverse languages, including morphologically more complex languages and languages with partial free word order.

Prior to the workshop, in addition to soliciting relevant papers for review and possible presentation we conducted a shared task that brought together machine translation systems for an evaluation on previously unseen data. This year's task resembled the shared tasks of previous years in many ways, but also included Hungarian-English and Spanish-German as new language pairs. In addition, we evaluated submitted systems against new test sets from the newswire domain.

The results of the shared task were announced at the workshop, and these proceedings also include an overview paper for the shared task that summarizes the results, as well as provides information about the data used and any procedures that were followed in conducting or scoring the task. In addition, there are short papers from each participating team that describe their underlying system in some detail.

Due to the large number of high quality submission for the full paper track, shared task submissions were presented as posters. The poster session was held in the afternoon and gave participants of the shared task the opportunity to present their approaches. The rest of the day was devoted to oral paper presentations and Daniel Marcu's invited talk in the afternoon.

Like in previous years, we have received a far larger number of submission than we could accept for presentation. This year we have received 18 full paper submissions and 26 shared task submissions. In total WMT-08 featured 12 full paper oral presentations and 25 shared task poster presentations. The invited talk was given by Daniel Marcu of the Information Sciences Institute at the University of Southern California.

We would like to thank the members of the Program Committee for their timely reviews. We also would like to thank the participants of the shared task and all the other volunteers who helped with the manual evaluations. We also acknowledge the financial support of the shared task by the EuroMatrix project funded by the European Commission (6th Framework Programme).

Chris Callison-Burch, Philipp Koehn, Christof Monz, Josh Schroeder, and Cameron Shaw Fordyce
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Mahmoud Ghoneim
Jeffrey Micher

Invited Speaker:

Daniel Marcu (ISI/University of Southern California)

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Conference Program

Thursday, June 19, 2008

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Session 1: Full Papers

8:50–9:10 *An Empirical Study in Source Word Deletion for Phrase-Based Statistical Machine Translation*

Chi-Ho Li, Hailei Zhang, Dongdong Zhang, Mu Li and Ming Zhou

9:10–9:30 *Rich Source-Side Context for Statistical Machine Translation*

Kevin Gimpel and Noah A. Smith

9:30–9:50 *Discriminative Word Alignment via Alignment Matrix Modeling*

Jan Niehues and Stephan Vogel

9:50–10:10 *Regularization and Search for Minimum Error Rate Training*

Daniel Cer, Daniel Jurafsky and Christopher Manning

10:10–10:30 *Learning Performance of a Machine Translation System: a Statistical and Computational Analysis*

Marco Turchi, Tijl De Bie and Nello Cristianini

10:30–11:00 Coffee Break

Session 2: Full Papers

11:00–11:20 *Using Syntax to Improve Word Alignment Precision for Syntax-Based Machine Translation*

Victoria Fossum, Kevin Knight and Steven Abney

11:20–11:40 *Using Shallow Syntax Information to Improve Word Alignment and Reordering for SMT*

Josep M. Crego and Nizar Habash

11:40–12:00 *Improved Tree-to-String Transducer for Machine Translation*

Ding Liu and Daniel Gildea

12:00–12:40 Invited Talk by Daniel Marcu

Thursday, June 19, 2008 (continued)

12:40-2:00 Lunch

Session 3: Shared Task

2:00-2:30 *Further Meta-Evaluation of Machine Translation*
Chris Callison-Burch, Cameron Fordyce, Philipp Koehn, Christof Monz and Josh Schroeder

2:30-2:40 *Limsi's Statistical Translation Systems for WMT'08*
Daniel Déchelotte, Gilles Adda, Alexandre Allauzen, H el ene Bonneau-Maynard, Olivier Galibert, Jean-Luc Gauvain, Philippe Langlais and Fran ois Yvon

2:40-2:50 *The MetaMorpho Translation System*
Attila Nov ak, L aszl o Tihanyi and G abor Pr osz eky

2:50-3:00 *Meteor, M-BLEU and M-TER: Evaluation Metrics for High-Correlation with Human Rankings of Machine Translation Output*
Abhaya Agarwal and Alon Lavie

3:00-3:30 Booster Session: Shared Task

Shared Translation Task

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Thursday, June 19, 2008 (continued)

Shared Evaluation Task

The Role of Pseudo References in MT Evaluation

Joshua Albrecht and Rebecca Hwa

Ranking vs. Regression in Machine Translation Evaluation

Kevin Duh

A Smorgasbord of Features for Automatic MT Evaluation

Jesus Gimenez and Lluís Marquez

3:30-4:40 Coffee Break and Poster Session

Session 4: Full Papers

4:40–5:00 *Fast, Easy, and Cheap: Construction of Statistical Machine Translation Models with MapReduce*

Chris Dyer, Aaron Cordova, Alex Mont and Jimmy Lin

5:00–5:20 *Dynamic Model Interpolation for Statistical Machine Translation*

Andrew Finch and Eiichiro Sumita

5:20–5:40 *Improved Statistical Machine Translation by Multiple Chinese Word Segmentation*

Ruiqiang Zhang, Keiji Yasuda and Eiichiro Sumita

5:40–6:00 *Optimizing Chinese Word Segmentation for Machine Translation Performance*

Pi-Chuan Chang, Michel Galley and Christopher Manning