

ACL 2014

**Ninth Workshop on
Statistical Machine Translation**

Proceedings of the Workshop

June 26-27, 2014
Baltimore, Maryland, USA

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Introduction

The ACL 2014 Workshop on Statistical Machine Translation (WMT 2014) took place on Thursday and Friday, June 26–27, 2014 in Baltimore, United States, immediately following the Conference of the Association for Computational Linguistics (ACL).

This is the ninth time this workshop has been held. The first time it was held at HLT-NAACL 2006 in New York City, USA. In the following years the Workshop on Statistical Machine Translation was held at ACL 2007 in Prague, Czech Republic, ACL 2008, Columbus, Ohio, USA, EACL 2009 in Athens, Greece, ACL 2010 in Uppsala, Sweden, EMNLP 2011 in Edinburgh, Scotland, NAACL 2012 in Montreal, Canada, and ACL 2013 in Sofia, Bulgaria.

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, languages with partial free word order, and low-resource languages.

Prior to the workshop, in addition to soliciting relevant papers for review and possible presentation, we conducted four shared tasks: a general translation task, a medical translation task, a quality estimation task, and a task to test automatic evaluation metrics. The medical translation task was introduced this year to address the important issue of domain adaptation within SMT. The results of the shared tasks were announced at the workshop, and these proceedings also include an overview paper for the shared tasks 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 greater detail.

Like in previous years, we have received a far larger number of submission than we could accept for presentation. This year we have received 27 full paper submissions and 49 shared task submissions. In total WMT 2014 featured 12 full paper oral presentations and 49 shared task poster presentations.

The invited talk was given by Alon Lavie (Carnegie Mellon University and Safaba Translation Solutions, Inc.) entitled “Machine Translation in Academia and in the Commercial World – a Contrastive Perspective”.

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 evaluations.

Ondřej Bojar, Christian Buck, Christian Federmann, Barry Haddow, Philipp Koehn, Matouš Macháček, Christof Monz, Pavel Pecina, Matt Post, Hervé Saint-Amand, Radu Soricut, and Lucia Specia

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Philipp Koehn (University of Edinburgh / Johns Hopkins University)
Matouš Macháček (Charles University Prague)
Christof Monz (University of Amsterdam)
Pavel Pecina (Charles University Prague)
Matt Post (Johns Hopkins University)
Hervé Saint-Amand (University of Edinburgh)
Radu Soricut (Google)
Lucia Specia (University of Sheffield)

Invited Talk:

Alon Lavie (Research Professor at Carnegie Mellon University / Co-founder, President and CTO - Safaba Translation Solutions, Inc.)

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François Yvon (LIMSIS-CNRS)
Richard Zens (Google)
Hao Zhang (Google)
Liu Zhanyi (Baidu)

Table of Contents

<i>Efficient Elicitation of Annotations for Human Evaluation of Machine Translation</i> Keisuke Sakaguchi, Matt Post and Benjamin Van Durme	1
<i>Findings of the 2014 Workshop on Statistical Machine Translation</i> Ondrej Bojar, Christian Buck, Christian Federmann, Barry Haddow, Philipp Koehn, Johannes Leve- ling, Christof Monz, Pavel Pecina, Matt Post, Herve Saint-Amand, Radu Soricut, Lucia Specia and Aleš Tamchyna	12
<i>Parallel FDA5 for Fast Deployment of Accurate Statistical Machine Translation Systems</i> Ergun Bicici, Qun Liu and Andy Way	59
<i>Yandex School of Data Analysis Russian-English Machine Translation System for WMT14</i> Alexey Borisov and Irina Galinskaya	66
<i>CimS – The CIS and IMS joint submission to WMT 2014 translating from English into German</i> Fabienne Cap, Marion Weller, Anita Ramm and Alexander Fraser	71
<i>English-to-Hindi system description for WMT 2014: Deep Source-Context Features for Moses</i> Marta R. Costa-jussà, Parth Gupta, Paolo Rosso and Rafael E. Banchs	79
<i>The KIT-LIMSI Translation System for WMT 2014</i> Quoc Khanh Do, Teresa Herrmann, Jan Niehues, Alexander Allauzen, François Yvon and Alex Waibel	84
<i>The IIT Bombay Hindi-English Translation System at WMT 2014</i> Piyush Dugarwal, Rajen Chatterjee, Abhijit Mishra, Anoop Kunchukuttan, Ritesh Shah and Push- pak Bhattacharyya	90
<i>Edinburgh’s Phrase-based Machine Translation Systems for WMT-14</i> Nadir Durrani, Barry Haddow, Philipp Koehn and Kenneth Heafield	97
<i>EU-BRIDGE MT: Combined Machine Translation</i> Markus Freitag, Stephan Peitz, Joern Wuebker, Hermann Ney, Matthias Huck, Rico Sennrich, Nadir Durrani, Maria Nadejde, Philip Williams, Philipp Koehn, Teresa Herrmann, Eunah Cho and Alex Waibel 105	
<i>Phrasal: A Toolkit for New Directions in Statistical Machine Translation</i> Spence Green, Daniel Cer and Christopher Manning	114
<i>Anaphora Models and Reordering for Phrase-Based SMT</i> Christian Hardmeier, Sara Stymne, Jörg Tiedemann, Aaron Smith and Joakim Nivre	122
<i>The Karlsruhe Institute of Technology Translation Systems for the WMT 2014</i> Teresa Herrmann, Mohammed Mediani, Eunah Cho, Thanh-Le Ha, Jan Niehues, Isabel Slawik, Yuqi Zhang and Alex Waibel	130
<i>The DCU-ICTCAS MT system at WMT 2014 on German-English Translation Task</i> Liangyou Li, Xiaofeng Wu, Santiago Cortes Vaillo, Jun Xie, Andy Way and Qun Liu	136
<i>The CMU Machine Translation Systems at WMT 2014</i> Austin Matthews, Waleed Ammar, Archana Bhatia, Weston Feely, Greg Hanneman, Eva Schlinger, Swabha Swayamdipta, Yulia Tsvetkov, Alon Lavie and Chris Dyer	142

<i>Stanford University’s Submissions to the WMT 2014 Translation Task</i>	
Julia Neidert, Sebastian Schuster, Spence Green, Kenneth Heafield and Christopher Manning .	150
<i>The RWTH Aachen German-English Machine Translation System for WMT 2014</i>	
Stephan Peitz, Joern Wuebker, Markus Freitag and Hermann Ney	157
<i>Large-scale Exact Decoding: The IMS-TTT submission to WMT14</i>	
Daniel Quernheim and Fabienne Cap	163
<i>Abu-MaTran at WMT 2014 Translation Task: Two-step Data Selection and RBMT-Style Synthetic Rules</i>	
Raphael Rubino, Antonio Toral, Víctor M. Sánchez-Cartagena, Jorge Ferrández-Tordera, Sergio Ortiz Rojas, Gema Ramírez-Sánchez, Felipe Sánchez-Martínez and Andy Way	171
<i>The UA-Prompsit hybrid machine translation system for the 2014 Workshop on Statistical Machine Translation</i>	
Víctor M. Sánchez-Cartagena, Juan Antonio Pérez-Ortiz and Felipe Sánchez-Martínez	178
<i>Machine Translation and Monolingual Postediting: The AFRL WMT-14 System</i>	
Lane Schwartz, Timothy Anderson, Jeremy Gwinnup and Katherine Young	186
<i>CUNI in WMT14: Chimera Still Awaits Bellerophon</i>	
Aleš Tamchyna, Martin Popel, Rudolf Rosa and Ondrej Bojar	195
<i>Manawi: Using Multi-Word Expressions and Named Entities to Improve Machine Translation</i>	
Liling Tan and Santanu Pal	201
<i>Edinburgh’s Syntax-Based Systems at WMT 2014</i>	
Philip Williams, Rico Sennrich, Maria Nadejde, Matthias Huck, Eva Hasler and Philipp Koehn	207
<i>DCU-Lingo24 Participation in WMT 2014 Hindi-English Translation task</i>	
Xiaofeng Wu, Rejwanul Haque, Tsuyoshi Okita, Piyush Arora, Andy Way and Qun Liu	215
<i>Machine Translation of Medical Texts in the Khresmoi Project</i>	
Ondřej Dušek, Jan Hajič, Jaroslava Hlaváčová, Michal Novák, Pavel Pecina, Rudolf Rosa, Aleš Tamchyna, Zdeňka Urešová and Daniel Zeman	221
<i>Postech’s System Description for Medical Text Translation Task</i>	
Jianri Li, Se-Jong Kim, Hwidong Na and Jong-Hyeok Lee	229
<i>Domain Adaptation for Medical Text Translation using Web Resources</i>	
Yi Lu, Longyue Wang, Derek F. Wong, Lidia S. Chao and Yiming Wang	233
<i>DCU Terminology Translation System for Medical Query Subtask at WMT14</i>	
Tsuyoshi Okita, Ali Vahid, Andy Way and Qun Liu	239
<i>LIMSI @ WMT’14 Medical Translation Task</i>	
Nicolas Pécheux, Li Gong, Quoc Khanh Do, Benjamin Marie, Yulia Ivanishcheva, Alexander Al-lauzen, Thomas Lavergne, Jan Niehues, Aurélien Max and François Yvon	246
<i>Combining Domain Adaptation Approaches for Medical Text Translation</i>	
Longyue Wang, Yi Lu, Derek F. Wong, Lidia S. Chao, Yiming Wang and Francisco Oliveira . .	254
<i>Experiments in Medical Translation Shared Task at WMT 2014</i>	
Jian Zhang	260

<i>Randomized Significance Tests in Machine Translation</i> Yvette Graham, Nitika Mathur and Timothy Baldwin	266
<i>Estimating Word Alignment Quality for SMT Reordering Tasks</i> Sara Stymne, Jörg Tiedemann and Joakim Nivre	275
<i>Dependency-based Automatic Enumeration of Semantically Equivalent Word Orders for Evaluating Japanese Translations</i> Hideki Isozaki, Natsume Kouchi and Tsutomu Hirao	287
<i>Results of the WMT14 Metrics Shared Task</i> Matous Machacek and Ondrej Bojar	293
<i>Efforts on Machine Learning over Human-mediated Translation Edit Rate</i> Eleftherios Avramidis	302
<i>SHEF-Lite 2.0: Sparse Multi-task Gaussian Processes for Translation Quality Estimation</i> Daniel Beck, Kashif Shah and Lucia Specia	307
<i>Referential Translation Machines for Predicting Translation Quality</i> Ergun Bicici and Andy Way	313
<i>FBK-UPV-UEdin participation in the WMT14 Quality Estimation shared-task</i> José Guilherme Camargo de Souza, Jesús González-Rubio, Christian Buck, Marco Turchi and Matteo Negri	322
<i>Target-Centric Features for Translation Quality Estimation</i> Chris Hokamp, Iacer Calixto, Joachim Wagner and Jian Zhang	329
<i>LIG System for Word Level QE task at WMT14</i> Ngoc Quang Luong, Laurent Besacier and Benjamin Lecouteux	335
<i>Exploring Consensus in Machine Translation for Quality Estimation</i> Carolina Scarton and Lucia Specia	342
<i>LIMSI Submission for WMT'14 QE Task</i> Guillaume Wisniewski, Nicolas Pécheux, Alexander Allauzen and François Yvon	348
<i>Parmesan: Meteor without Paraphrases with Paraphrased References</i> Petra Barancikova	355
<i>A Systematic Comparison of Smoothing Techniques for Sentence-Level BLEU</i> Boxing Chen and Colin Cherry	362
<i>VERTa participation in the WMT14 Metrics Task</i> Elisabet Comelles and Jordi Atserias	368
<i>Meteor Universal: Language Specific Translation Evaluation for Any Target Language</i> Michael Denkowski and Alon Lavie	376
<i>Application of Prize based on Sentence Length in Chunk-based Automatic Evaluation of Machine Translation</i> Hiroshi Echizen'ya, Kenji Araki and Eduard Hovy	381
<i>LAYERED: Metric for Machine Translation Evaluation</i> Shubham Gautam and Pushpak Bhattacharyya	387

<i>IPA and STOUT: Leveraging Linguistic and Source-based Features for Machine Translation Evaluation</i> Meritxell González, Alberto Barrón-Cedeño and Lluís Màrquez	394
<i>DiscoTK: Using Discourse Structure for Machine Translation Evaluation</i> Shafiq Joty, Francisco Guzmán, Lluís Màrquez and Preslav Nakov	402
<i>Tolerant BLEU: a Submission to the WMT14 Metrics Task</i> Jindřich Libovický and Pavel Pecina	409
<i>BEER: BETter Evaluation as Ranking</i> Milos Stanojevic and Khalil Sima'an	414
<i>RED, The DCU-CASICT Submission of Metrics Tasks</i> Xiaofeng Wu, Hui Yu and Qun Liu	420
<i>Crowdsourcing High-Quality Parallel Data Extraction from Twitter</i> Wang Ling, Luis Marujo, Chris Dyer, Alan W Black and Isabel Trancoso	426
<i>Using Comparable Corpora to Adapt MT Models to New Domains</i> Ann Irvine and Chris Callison-Burch	437
<i>Dynamic Topic Adaptation for SMT using Distributional Profiles</i> Eva Hasler, Barry Haddow and Philipp Koehn	445
<i>Unsupervised Adaptation for Statistical Machine Translation</i> Saab Mansour and Hermann Ney	457
<i>An Empirical Comparison of Features and Tuning for Phrase-based Machine Translation</i> Spence Green, Daniel Cer and Christopher Manning	466
<i>Bayesian Reordering Model with Feature Selection</i> Abdullah Alrajeh and Mahesan Niranjan	477
<i>Augmenting String-to-Tree and Tree-to-String Translation with Non-Syntactic Phrases</i> Matthias Huck, Hieu Hoang and Philipp Koehn	486
<i>Linear Mixture Models for Robust Machine Translation</i> Marine Carpuat, Cyril Goutte and George Foster	499

Workshop Program

Thursday, June 26, 2014

9:00–9:10 Opening Remarks

Session 1: Shared Translation Tasks

9:10–9:30 *Efficient Elicitation of Annotations for Human Evaluation of Machine Translation*
Keisuke Sakaguchi, Matt Post and Benjamin Van Durme

9:30–10:00 *Findings of the 2014 Workshop on Statistical Machine Translation*
Ondrej Bojar, Christian Buck, Christian Federmann, Barry Haddow, Philipp Koehn, Johannes Leveling, Christof Monz, Pavel Pecina, Matt Post, Herve Saint-Amand, Radu Soricut, Lucia Specia and Aleš Tamchyna

10:00–10:30 Panel Discussion

10:30–11:00 Coffee

Session 2: Poster Session

11:00–12:30 Shared Task: Translation

Parallel FDA5 for Fast Deployment of Accurate Statistical Machine Translation Systems
Ergun Biciçi, Qun Liu and Andy Way

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Thursday, June 26, 2014 (continued)

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Experiments in Medical Translation Shared Task at WMT 2014

Jian Zhang

Thursday, June 26, 2014 (continued)

12:30–14:00 Lunch

Session 3: Invited Talk

14:00–15:30 *Machine Translation in Academia and in the Commercial World – a Contrastive Perspective*. Alon Lavie, Research Professor – Carnegie Mellon University, Co-founder, President and CTO – Safaba Translation Solutions, Inc.

15:30–16:00 Coffee

Session 4: Evaluation

16:00–16:20 *Randomized Significance Tests in Machine Translation*
Yvette Graham, Nitika Mathur and Timothy Baldwin

16:20–16:40 *Estimating Word Alignment Quality for SMT Reordering Tasks*
Sara Stymne, Jörg Tiedemann and Joakim Nivre

16:40–17:00 *Dependency-based Automatic Enumeration of Semantically Equivalent Word Orders for Evaluating Japanese Translations*
Hideki Isozaki, Natsume Kouchi and Tsutomu Hirao

Friday, June 27, 2014

Session 5: Shared Evaluation Metrics and Quality Estimation Tasks

9:00–9:30 Quality Estimation Shared Task

9:30–9:50 *Results of the WMT14 Metrics Shared Task*
Matous Machacek and Ondrej Bojar

9:50–10:30 Panel

10:30–11:00 Coffee

Friday, June 27, 2014 (continued)

Session 6: Poster Session

11:00–12:30 Shared Task: Quality Estimation

Efforts on Machine Learning over Human-mediated Translation Edit Rate
Eleftherios Avramidis

SHEF-Lite 2.0: Sparse Multi-task Gaussian Processes for Translation Quality Estimation
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Referential Translation Machines for Predicting Translation Quality
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Carolina Scarton and Lucia Specia

LIMSI Submission for WMT'14 QE Task
Guillaume Wisniewski, Nicolas Pécheux, Alexander Allauzen and François Yvon

11:00–12:30 Shared Task: Evaluation Metrics

Parmesan: Meteor without Paraphrases with Paraphrased References
Petra Barancikova

A Systematic Comparison of Smoothing Techniques for Sentence-Level BLEU
Boxing Chen and Colin Cherry

Friday, June 27, 2014 (continued)

VERTa participation in the WMT14 Metrics Task

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Meteor Universal: Language Specific Translation Evaluation for Any Target Language

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Tolerant BLEU: a Submission to the WMT14 Metrics Task

Jindřich Libovický and Pavel Pecina

BEER: BETter Evaluation as Ranking

Milos Stanojevic and Khalil Sima'an

RED, The DCU-CASICT Submission of Metrics Tasks

Xiaofeng Wu, Hui Yu and Qun Liu

12:30–14:00 Lunch

Friday, June 27, 2014 (continued)

Session 7: Data and Adaptation

- 14:00–14:20 *Crowdsourcing High-Quality Parallel Data Extraction from Twitter*
Wang Ling, Luis Marujo, Chris Dyer, Alan W Black and Isabel Trancoso
- 14:20–14:40 *Using Comparable Corpora to Adapt MT Models to New Domains*
Ann Irvine and Chris Callison-Burch
- 14:40–15:00 *Dynamic Topic Adaptation for SMT using Distributional Profiles*
Eva Hasler, Barry Haddow and Philipp Koehn
- 15:00–15:20 *Unsupervised Adaptation for Statistical Machine Translation*
Saab Mansour and Hermann Ney
- 15:20–16:00 Coffee

Session 8: Translation Models

- 16:00–16:20 *An Empirical Comparison of Features and Tuning for Phrase-based Machine Translation*
Spence Green, Daniel Cer and Christopher Manning
- 16:20–16:40 *Bayesian Reordering Model with Feature Selection*
Abdullah Alrajeh and Mahesan Niranjan
- 16:40–17:00 *Augmenting String-to-Tree and Tree-to-String Translation with Non-Syntactic Phrases*
Matthias Huck, Hieu Hoang and Philipp Koehn
- 17:00–17:20 *Linear Mixture Models for Robust Machine Translation*
Marine Carpuat, Cyril Goutte and George Foster

