

WMT 2012

**7th Workshop
on
Statistical Machine Translation**

Proceedings of the Workshop

**June 7-8, 2012
Montréal, Canada**

Production and Manufacturing by
Omnipress, Inc.
2600 Anderson Street
Madison, WI 53707
USA

Shared Tasks supported by the EuroMatrixPlus project (EU Framework Programme 7).

©2012 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 978-1-937284-20-6 / 1-937284-20-4

Introduction

The NAACL 2012 Workshop on Statistical Machine Translation (WMT-2012) took place on Thursday and Friday, June 7–8, 2012 in Montreal, Canada, immediately following the Conference of the North-American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT).

This is the seventh 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, and EMNLP 2011 in Edinburgh, Scotland.

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 three shared tasks: a translation task, a quality estimation task, and a task to test automatic evaluation metrics. 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 45 full paper submissions and 39 shared task submissions. In total WMT-2012 featured 20 full paper oral presentations and 39 shared task poster presentations.

The invited talk was given by Salim Roukos (IBM Research, USA), entitled “Deployment of Statistical Machine Translation for the IBM Enterprise”.

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.

Chris Callison-Burch, Philipp Koehn, Christof Monz, Matt Post, Radu Soricut, and Lucia Specia

Co-Organizers

WMT 5-year Retrospective Best Paper Award

Last year we created a WMT 5-year Retrospective Best Paper Award. This year we selected the best paper from 2007's Workshop on Statistical Machine Translation, which was collocated with ACL in Prague. The goals of this retrospective award are to recognize high-quality work that has stood the test of time, and to highlight the excellent work that appears at WMT.

The WMT12 program committee voted on the best paper from a list of eight nominated papers. Six of these were nominated by high citation counts, which we defined as having 10 or more citations in the ACL anthology network (excluding self-citations), and more than 30 citations on Google Scholar. We also opened the nomination process to the committee, which yielded two further nomination for papers that did not reach the citation threshold but were deemed to be excellent.

The program committee decided to award the WMT 5-year Retrospective Best Paper Award to:

Alon Lavie and Abhaya Agarwal. 2007. *METEOR: An Automatic Metric for MT Evaluation with High Levels of Correlation with Human Judgments*. In Proceedings of the Workshop on Statistical Machine Translation. Pages 228-231.

Like last year's best paper award winner, Lavie and Agarwal's publication was a short paper describing the authors' submission to one of the WMT shared tasks. WMT07 introduced a new shared task to evaluate the quality of automatic metrics for machine translation quality by comparing the metrics' rankings to human rankings of MT systems. In the shared task, METEOR demonstrated higher correlation than BLEU (the de facto standard) across a variety of human evaluation measures, including adequacy and fluency, ranking the translations of whole sentences, and ranking the translation of smaller constituents within sentences.

The program committee members who selected Lavie and Agarwal's paper pointed out that METEOR is the only metric that has managed to compete with BLEU for attention in the MT world without a major funder backing the metric. They pointed out that TER and HTER have also become prominent, but it is not clear whether that would have happened without backing from DARPA. Furthermore, METEOR has contributed substantially to improving the assessment of the quality of MT systems by showing the importance of word similarity beyond surface form.

In many ways this paper represents the ideals of the WMT workshops. It introduced a novel approach to the automatic evaluation of machine translation and demonstrated the metric's value empirically by comparing it to other state-of-the-art metrics on a public data set.

Congratulations to Alon Lavie and Abhaya Agarwal for their excellent work!

Organizers:

Chris Callison-Burch (Johns Hopkins University)
Philipp Koehn (University of Edinburgh)
Christof Monz (University of Amsterdam)
Matt Post (Johns Hopkins University)
Radu Soricut (SDL Language Weaver)
Lucia Specia (University of Sheffield)

Invited Talk:

Salim Roukos (IBM Research)

Program Committee:

Steve Abney (University of Michigan)
Lars Ahrenberg (Linköping University)
Necip Fazil Ayan (SRI International)
Oliver Bender (RWTH Aachen)
Nicola Bertoldi (FBK)
Alexandra Birch (University of Edinburgh)
Arianna Bisazza (FBK)
Graeme Blackwood (IBM)
Ondrej Bojar (Charles University)
Antal van Den Bosch (Radboud University Nijmegen)
Chris Brockett (Microsoft)
Hailong Cao (NICT)
Michael Carl (Saarland University)
Marine Carpuat (Columbia University)
Francisco Casacuberta (University of Valencia)
Daniel Cer (Stanford University)
Mauro Cettolo (FBK)
Boxing Chen (National Research Council Canada)
Colin Cherry (National Research Council Canada)
David Chiang (ISI)
Michael Denkowski (Carnegie Mellon University)
Markus Dreyer (SDL Language Weaver)
Kevin Duh (NAIST)
Chris Dyer (CMU)

Yang Feng (Sheffield University)
Andrew Finch (NICT)
Jose Fonollosa (University of Catalonia)
George Foster (National Research Council Canada)
Alex Fraser (University of Stuttgart)
Michel Galley (Microsoft)
Niyu Ge (IBM)
Josef van Genabith (Dublin City University)
Ulrich Germann (University of Toronto)
Daniel Gildea (University of Rochester)
Kevin Gimpel (CMU)
Cyril Goutte (National Research Council Canada)
Barry Haddow (University of Edinburgh)
Keith Hall (Google)
Greg Hanneman (Carnegie Mellon University)
Christian Hardmeier (Uppsala University)
Xiadong He (Microsoft)
Yifan He (Dublin City University)
Kenneth Heafield (Carnegie Mellon University)
John Henderson (MITRE)
Silja Hildebrand (Carnegie Mellon University)
Hieu Hoang (University of Edinburgh)
Young-Sook Hwang (SK Telecom)
Gonzalo Iglesias (University of Cambridge)
Pierre Isabelle (National Research Council Canada)
Abe Ittycheriah (IBM)
Howard Johnson (National Research Council Canada)
Doug Jones (Lincoln Labs)
Damianos Karakos (Johns Hopkins University)
Maxim Khalilov (TAUS)
Kevin Knight (ISI)
Greg Kondrak (University of Alberta)
Roland Kuhn (National Research Council Canada)
Shankar Kumar (Google)
Philippe Langlais (University of Montreal)
Gregor Leusch (SAIC)
Zhifei Li (Google)
Qun Liu (Chinese Academy of Sciences)
Shujie Liu (Harbin Institute of Technology)
Zhanyi Liu (Harbin Institute of Technology)
Klaus Macherey (Google)
Wolfgang Macherey (Google)

Daniel Marcu (ISI)
Jose Marino (University of Catalonia)
Lambert Mathias (JHU)
Spyros Matsoukas (Raytheon BBN Technologies)
Arne Mauser (RWTH Aachen)
Yashar Mehdad (FBK)
Arul Menezes (Microsoft)
Shachar Mirkin (Xerox)
Bob Moore (Google)
Dragos Munteanu (SDL Language Weaver)
Markos Mylonakis (Xerox)
Preslav Nakov (Qatar Computing Research Institute)
Steve de Neefe (SDL Language Weaver)
Vassilina Nikoulina (Xerox)
Kemal Oflazer (CMU)
Sergio Penkale (Dublin City University)
Kay Peterson (NIST)
Daniele Pighin (University of Catalonia)
Maja Popovic (DFKI)
Chris Quirk (Microsoft)
Stefan Riezler (University of Heidelberg)
Marta Ruiz Costa-Jussa (University of Catalonia)
Felipe Sanchez-Martinez (University of Alicante)
Anoop Sarkar (Simon Fraser University)
Jean Senellart (Systran)
Wade Shen (Lincoln Labs)
Joerg Tiedemann (Uppsala University)
Christoph Tillmann (IBM)
Roy Tromble (Google)
Dan Tufis (Romanian Academy)
Jakob Uszkoreit (Google)
Masao Utiyama (NICT)
David Vilar (RWTH Aachen)
Martin Volk (University of Zurich)
Clare Voss (Army Research Labs)
Haifeng Wang (Baidu)
Taro Watanabe (NICT)
Ralph Weischedel (Raytheon BBN Technologies)
Hua Wu (Baidu)
Ning Xi (Nanjing University)
Peng Xu (Google)
Francois Yvon (LIMSI)

Daniel Zeman (Charles University)
Richard Zens (Google)
Bing Zhang (Raytheon BBN Technologies)
Hao Zhang (Google)
Joy Zhang (CMU)

Table of Contents

<i>Putting Human Assessments of Machine Translation Systems in Order</i> Adam Lopez	1
<i>Findings of the 2012 Workshop on Statistical Machine Translation</i> Chris Callison-Burch, Philipp Koehn, Christof Monz, Matt Post, Radu Soricut and Lucia Specia	10
<i>Semantic Textual Similarity for MT evaluation</i> Julio Castillo and Paula Estrella	52
<i>Improving AMBER, an MT Evaluation Metric</i> Boxing Chen, Roland Kuhn and George Foster	59
<i>TerrorCat: a Translation Error Categorization-based MT Quality Metric</i> Mark Fishel, Rico Sennrich, Maja Popović and Ondřej Bojar	64
<i>Class error rates for evaluation of machine translation output</i> Maja Popovic	71
<i>SPEDE: Probabilistic Edit Distance Metrics for MT Evaluation</i> Mengqiu Wang and Christopher Manning	76
<i>Quality estimation for Machine Translation output using linguistic analysis and decoding features</i> Eleftherios Avramidis	84
<i>Black Box Features for the WMT 2012 Quality Estimation Shared Task</i> Christian Buck	91
<i>Linguistic Features for Quality Estimation</i> Mariano Felice and Lucia Specia	96
<i>PRHLT Submission to the WMT12 Quality Estimation Task</i> Jesús González-Rubio, Alberto Sanchís and Francisco Casacuberta	104
<i>Tree Kernels for Machine Translation Quality Estimation</i> Christian Hardmeier, Joakim Nivre and Jörg Tiedemann	109
<i>LORIA System for the WMT12 Quality Estimation Shared Task</i> David Langlois, Sylvain Raybaud and Kamel Smaïli	114
<i>Quality Estimation: an experimental study using unsupervised similarity measures</i> Erwan Moreau and Carl Vogel	120
<i>The UPC Submission to the WMT 2012 Shared Task on Quality Estimation</i> Daniele Pighin, Meritxell González and Lluís Màrquez	127

<i>Morpheme- and POS-based IBM1 and language model scores for translation quality estimation</i>	
Maja Popovic	133
<i>DCU-Symantec Submission for the WMT 2012 Quality Estimation Task</i>	
Raphael Rubino, Jennifer Foster, Joachim Wagner, Johann Roturier, Rasul Samad Zadeh Kaljahi and Fred Hollowood	138
<i>The SDL Language Weaver Systems in the WMT12 Quality Estimation Shared Task</i>	
Radu Soricut, Nguyen Bach and Ziyuan Wang	145
<i>Regression with Phrase Indicators for Estimating MT Quality</i>	
Chunyang Wu and Hai Zhao	152
<i>Non-Linear Models for Confidence Estimation</i>	
Yong Zhuang, Guillaume Wisniewski and François Yvon	157
<i>Combining Quality Prediction and System Selection for Improved Automatic Translation Output</i>	
Radu Soricut and Sushant Narsale	163
<i>Match without a Referee: Evaluating MT Adequacy without Reference Translations</i>	
Yashar Mehdad, Matteo Negri and Marcello Federico	171
<i>Comparing human perceptions of post-editing effort with post-editing operations</i>	
Maarit Koponen	181
<i>Review of Hypothesis Alignment Algorithms for MT System Combination via Confusion Network Decoding</i>	
Antti-Veikko Rosti, Xiaodong He, Damianos Karakos, Gregor Leusch, Yuan Cao, Markus Freitag, Spyros Matsoukas, Hermann Ney, Jason Smith and Bing Zhang	191
<i>On Hierarchical Re-ordering and Permutation Parsing for Phrase-based Decoding</i>	
Colin Cherry, Robert C. Moore and Chris Quirk	200
<i>CCG Syntactic Reordering Models for Phrase-based Machine Translation</i>	
Dennis Nolan Mehay and Christopher Hardie Brew	210
<i>Using Categorial Grammar to Label Translation Rules</i>	
Jonathan Weese, Chris Callison-Burch and Adam Lopez	222
<i>Using Syntactic Head Information in Hierarchical Phrase-Based Translation</i>	
Junhui Li, Zhaopeng Tu, Guodong Zhou and Josef van Genabith	232
<i>Fully Automatic Semantic MT Evaluation</i>	
Chi-kiu Lo, Anand Karthik Tumuluru and Dekai Wu	243
<i>Probes in a Taxonomy of Factored Phrase-Based Models</i>	
Ondřej Bojar, Bushra Jawaid and Amir Kamran	253
<i>The CMU-Avenue French-English Translation System</i>	
Michael Denkowski, Greg Hanneman and Alon Lavie	261

<i>Formemes in English-Czech Deep Syntactic MT</i>	
Ondřej Dušek, Zdeněk Žabokrtský, Martin Popel, Martin Majliš, Michal Novák and David Mareček	
	267
<i>The TALP-UPC phrase-based translation systems for WMT12: Morphology simplification and domain adaptation</i>	
Lluís Formiga, Carlos A. Henríquez Q., Adolfo Hernández, José B. Mariño, Enric Monte and José A. R. Fonollosa	275
<i>Joshua 4.0: Packing, PRO, and Paraphrases</i>	
Juri Ganitkevitch, Yuan Cao, Jonathan Weese, Matt Post and Chris Callison-Burch	283
<i>Syntax-aware Phrase-based Statistical Machine Translation: System Description</i>	
Ulrich Germann	292
<i>QCRI at WMT12: Experiments in Spanish-English and German-English Machine Translation of News Text</i>	
Francisco Guzman, Preslav Nakov, Ahmed Thabet and Stephan Vogel	298
<i>The RWTH Aachen Machine Translation System for WMT 2012</i>	
Matthias Huck, Stephan Peitz, Markus Freitag, Malte Nuhn and Hermann Ney	304
<i>Machine Learning for Hybrid Machine Translation</i>	
Sabine Hunsicker, Chen Yu and Christian Federmann	312
<i>Towards Effective Use of Training Data in Statistical Machine Translation</i>	
Philipp Koehn and Barry Haddow	317
<i>Joint WMT 2012 Submission of the QUAERO Project</i>	
Freitag Markus, Peitz Stephan, Huck Matthias, Ney Hermann, Niehues Jan, Herrmann Teresa, Waibel Alex, Hai-son Le, Lavergne Thomas, Allauzen Alexandre, Buschbeck Bianka, Crego Joseph Maria and Senellart Jean	322
<i>LIMSI @ WMT12</i>	
Hai-Son Le, Thomas Lavergne, Alexandre Allauzen, Marianna Apidianaki, Li Gong, Aurélien Max, Artem Sokolov, Guillaume Wisniewski and François Yvon	330
<i>UPM system for WMT 2012</i>	
Verónica López-Ludeña, Rubén San-Segundo and Juan M. Montero	338
<i>PROMT DeepHybrid system for WMT12 shared translation task</i>	
Alexander Molchanov	345
<i>The Karlsruhe Institute of Technology Translation Systems for the WMT 2012</i>	
Jan Niehues, Yuqi Zhang, Mohammed Mediani, Teresa Herrmann, Eunah Cho and Alex Waibel	349
<i>Kriya - The SFU System for Translation Task at WMT-12</i>	
Majid Razmara, Baskaran Sankaran, Ann Clifton and Anoop Sarkar	356

<i>DEPFIx: A System for Automatic Correction of Czech MT Outputs</i> Rudolf Rosa, David Mareček and Ondřej Dušek	362
<i>LIUM's SMT Machine Translation Systems for WMT 2012</i> Christophe Servan, Patrik Lambert, Anthony Rousseau, Holger Schwenk and Loïc Barrault . .	369
<i>Selecting Data for English-to-Czech Machine Translation</i> Aleš Tamchyna, Petra Galuščáková, Amir Kamran, Miloš Stanojević and Ondřej Bojar	374
<i>DFKI's SMT System for WMT 2012</i> David Vilar	382
<i>GHKM Rule Extraction and Scope-3 Parsing in Moses</i> Philip Williams and Philipp Koehn	388
<i>Data Issues of the Multilingual Translation Matrix</i> Daniel Zeman	395
<i>Constructing Parallel Corpora for Six Indian Languages via Crowdsourcing</i> Matt Post, Chris Callison-Burch and Miles Osborne	401
<i>Twitter Translation using Translation-Based Cross-Lingual Retrieval</i> Laura Jehl, Felix Hieber and Stefan Riezler	410
<i>Analysing the Effect of Out-of-Domain Data on SMT Systems</i> Barry Haddow and Philipp Koehn	422
<i>Evaluating the Learning Curve of Domain Adaptive Statistical Machine Translation Systems</i> Nicola Bertoldi, Mauro Cettolo, Marcello Federico and Christian Buck	433
<i>The Trouble with SMT Consistency</i> Marine Carpuat and Michel Simard	442
<i>Phrase Model Training for Statistical Machine Translation with Word Lattices of Preprocessing Alternatives</i> Joern Wuebker and Hermann Ney	450
<i>Leave-One-Out Phrase Model Training for Large-Scale Deployment</i> Joern Wuebker, Mei-Yuh Hwang and Chris Quirk	460
<i>Direct Error Rate Minimization for Statistical Machine Translation</i> Tagyoung Chung and Michel Galley	468
<i>Optimization Strategies for Online Large-Margin Learning in Machine Translation</i> Vladimir Eidelman	480

Conference Program

Thursday, June 7, 2012

9:00–9:10 Opening Remarks: Future Funding and Research Survey Wiki

Session 1: Shared Tasks and their Evaluation

9:10–9:30 *Putting Human Assessments of Machine Translation Systems in Order*
Adam Lopez

9:30–10:30 *Findings of the 2012 Workshop on Statistical Machine Translation*
Chris Callison-Burch, Philipp Koehn, Christof Monz, Matt Post, Radu Soricut and Lucia Specia

10:30–11:00 Coffee

Session 2: Shared Quality Estimation and Metrics Tasks

11:00–12:40 Poster Session: Evaluation Metrics

Semantic Textual Similarity for MT evaluation
Julio Castillo and Paula Estrella

Improving AMBER, an MT Evaluation Metric
Boxing Chen, Roland Kuhn and George Foster

TerrorCat: a Translation Error Categorization-based MT Quality Metric
Mark Fishel, Rico Sennrich, Maja Popović and Ondřej Bojar

Class error rates for evaluation of machine translation output
Maja Popovic

SPEDE: Probabilistic Edit Distance Metrics for MT Evaluation
Mengqiu Wang and Christopher Manning

11:00–12:40 Poster Session: Quality Estimation Task

Quality estimation for Machine Translation output using linguistic analysis and decoding features
Eleftherios Avramidis

Thursday, June 7, 2012 (continued)

Black Box Features for the WMT 2012 Quality Estimation Shared Task

Christian Buck

Linguistic Features for Quality Estimation

Mariano Felice and Lucia Specia

PRHLT Submission to the WMT12 Quality Estimation Task

Jesús González-Rubio, Alberto Sanchís and Francisco Casacuberta

Tree Kernels for Machine Translation Quality Estimation

Christian Hardmeier, Joakim Nivre and Jörg Tiedemann

LORIA System for the WMT12 Quality Estimation Shared Task

David Langlois, Sylvain Raybaud and Kamel Smaïli

Quality Estimation: an experimental study using unsupervised similarity measures

Erwan Moreau and Carl Vogel

The UPC Submission to the WMT 2012 Shared Task on Quality Estimation

Daniele Pighin, Meritxell González and Lluís Màrquez

Morpheme- and POS-based IBM1 and language model scores for translation quality estimation

Maja Popovic

DCU-Symantec Submission for the WMT 2012 Quality Estimation Task

Raphael Rubino, Jennifer Foster, Joachim Wagner, Johann Roturier, Rasul Samad Zadeh Kaljahi and Fred Hollowood

The SDL Language Weaver Systems in the WMT12 Quality Estimation Shared Task

Radu Soricut, Nguyen Bach and Ziyuan Wang

Regression with Phrase Indicators for Estimating MT Quality

Chunyang Wu and Hai Zhao

12:40–14:00 Lunch

Thursday, June 7, 2012 (continued)

Session 3: Invited Talk

14:00–15:30 Salim Roukas: Deployment of SMT for the IBM Enterprise

15:30–16:00 Coffee

Session 4: Confidence Estimation and System Combination

16:00–16:20 *Non-Linear Models for Confidence Estimation*
Yong Zhuang, Guillaume Wisniewski and François Yvon

16:20–16:40 *Combining Quality Prediction and System Selection for Improved Automatic Translation Output*
Radu Soricut and Sushant Narsale

16:40–17:00 *Match without a Referee: Evaluating MT Adequacy without Reference Translations*
Yashar Mehdad, Matteo Negri and Marcello Federico

17:00–17:20 *Comparing human perceptions of post-editing effort with post-editing operations*
Maarit Koponen

17:20–17:40 *Review of Hypothesis Alignment Algorithms for MT System Combination via Confusion Network Decoding*
Antti-Veikko Rosti, Xiaodong He, Damianos Karakos, Gregor Leusch, Yuan Cao, Markus Freitag, Spyros Matsoukas, Hermann Ney, Jason Smith and Bing Zhang

Friday, June 8, 2012

Session 5: Reordering, Syntax and Semantics

9:00–9:20 *On Hierarchical Re-ordering and Permutation Parsing for Phrase-based Decoding*
Colin Cherry, Robert C. Moore and Chris Quirk

9:20–9:40 *CCG Syntactic Reordering Models for Phrase-based Machine Translation*
Dennis Nolan Mehay and Christopher Hardie Brew

9:40–10:00 *Using Categorical Grammar to Label Translation Rules*
Jonathan Weese, Chris Callison-Burch and Adam Lopez

Friday, June 8, 2012 (continued)

10:20–10:20 *Using Syntactic Head Information in Hierarchical Phrase-Based Translation*
Junhui Li, Zhaopeng Tu, Guodong Zhou and Josef van Genabith

10:20–10:40 *Fully Automatic Semantic MT Evaluation*
Chi-kiu Lo, Anand Karthik Tumuluru and Dekai Wu

10:40–11:00 Coffee

Session 6: Translation Task

11:00–12:40 Poster Session: Translation Task

Probes in a Taxonomy of Factored Phrase-Based Models
Ondřej Bojar, Bushra Jawaid and Amir Kamran

The CMU-Avenue French-English Translation System
Michael Denkowski, Greg Hanneman and Alon Lavie

Formemes in English-Czech Deep Syntactic MT
Ondřej Dušek, Zdeněk Žabokrtský, Martin Popel, Martin Majliš, Michal Novák and David Mareček

The TALP-UPC phrase-based translation systems for WMT12: Morphology simplification and domain adaptation
Lluís Formiga, Carlos A. Henríquez Q., Adolfo Hernández, José B. Mariño, Enric Monte and José A. R. Fonollosa

Joshua 4.0: Packing, PRO, and Paraphrases
Juri Ganitkevitch, Yuan Cao, Jonathan Weese, Matt Post and Chris Callison-Burch

Syntax-aware Phrase-based Statistical Machine Translation: System Description
Ulrich Germann

QCRI at WMT12: Experiments in Spanish-English and German-English Machine Translation of News Text
Francisco Guzman, Preslav Nakov, Ahmed Thabet and Stephan Vogel

The RWTH Aachen Machine Translation System for WMT 2012
Matthias Huck, Stephan Peitz, Markus Freitag, Malte Nuhn and Hermann Ney

Friday, June 8, 2012 (continued)

Machine Learning for Hybrid Machine Translation

Sabine Hunsicker, Chen Yu and Christian Federmann

Towards Effective Use of Training Data in Statistical Machine Translation

Philipp Koehn and Barry Haddow

Joint WMT 2012 Submission of the QUAERO Project

Freitag Markus, Peitz Stephan, Huck Matthias, Ney Hermann, Niehues Jan, Herrmann Teresa, Waibel Alex, Hai-son Le, Lavergne Thomas, Allauzen Alexandre, Buschbeck Bianka, Crego Joseph Maria and Senellart Jean

LIMSI @ WMT12

Hai-Son Le, Thomas Lavergne, Alexandre Allauzen, Marianna Apidianaki, Li Gong, Aurélien Max, Artem Sokolov, Guillaume Wisniewski and François Yvon

UPM system for WMT 2012

Verónica López-Ludeña, Rubén San-Segundo and Juan M. Montero

PROMT DeepHybrid system for WMT12 shared translation task

Alexander Molchanov

The Karlsruhe Institute of Technology Translation Systems for the WMT 2012

Jan Niehues, Yuqi Zhang, Mohammed Mediani, Teresa Herrmann, Eunah Cho and Alex Waibel

Kriya - The SFU System for Translation Task at WMT-12

Majid Razmara, Baskaran Sankaran, Ann Clifton and Anoop Sarkar

DEPFIK: A System for Automatic Correction of Czech MT Outputs

Rudolf Rosa, David Mareček and Ondřej Dušek

LIUM's SMT Machine Translation Systems for WMT 2012

Christophe Servan, Patrik Lambert, Anthony Rousseau, Holger Schwenk and Loïc Barrault

Selecting Data for English-to-Czech Machine Translation

Aleš Tamchyna, Petra Galuščáková, Amir Kamran, Miloš Stanojević and Ondřej Bojar

DFKI's SMT System for WMT 2012

David Vilar

Friday, June 8, 2012 (continued)

GHKM Rule Extraction and Scope-3 Parsing in Moses

Philip Williams and Philipp Koehn

Data Issues of the Multilingual Translation Matrix

Daniel Zeman

12:40–14:00 Lunch

Session 7: Corpus Creation and Adaptation

14:00–14:20 *Constructing Parallel Corpora for Six Indian Languages via Crowdsourcing*

Matt Post, Chris Callison-Burch and Miles Osborne

14:20–14:40 *Twitter Translation using Translation-Based Cross-Lingual Retrieval*

Laura Jehl, Felix Hieber and Stefan Riezler

14:40–15:00 *Analysing the Effect of Out-of-Domain Data on SMT Systems*

Barry Haddow and Philipp Koehn

15:00–15:20 *Evaluating the Learning Curve of Domain Adaptive Statistical Machine Translation Systems*

Nicola Bertoldi, Mauro Cettolo, Marcello Federico and Christian Buck

15:20–15:40 *The Trouble with SMT Consistency*

Marine Carpuat and Michel Simard

15:40–16:00 Coffee

Friday, June 8, 2012 (continued)

Session 8: Phrase Model Training and Optimization

- 16:00–16:20 *Phrase Model Training for Statistical Machine Translation with Word Lattices of Preprocessing Alternatives*
Joern Wuebker and Hermann Ney
- 16:20–16:40 *Leave-One-Out Phrase Model Training for Large-Scale Deployment*
Joern Wuebker, Mei-Yuh Hwang and Chris Quirk
- 16:40–17:00 *Direct Error Rate Minimization for Statistical Machine Translation*
Tagyoung Chung and Michel Galley
- 17:00–17:20 *Optimization Strategies for Online Large-Margin Learning in Machine Translation*
Vladimir Eidelman

