

# **NAACL-HLT 2007/AMTA Workshop on Syntax and Structure in Statistical Translation**

**(SSST)**

**Held at NAACL-HLT 2007**

**Rochester, New York, USA  
26 April 2007**

**Editors:**

**Dekai Wu**

**David Chiang**

**ISBN: 978-1-61738-515-5**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2007) by the Association for Computational Linguistics  
All rights reserved.

Printed by Curran Associates, Inc. (2010)

For permission requests, please contact the Association for Computational Linguistics  
at the address below.

Association for Computational Linguistics  
209 N. Eighth Street  
Stroudsburg, Pennsylvania 18360

Phone: 1-570-476-8006  
Fax: 1-570-476-0860

[acl@aclweb.org](mailto:acl@aclweb.org)

## Table of Contents

<i>Chunk-Level Reordering of Source Language Sentences with Automatically Learned Rules for Statistical Machine Translation</i> Yuqi ZHANG, Richard ZENS and Hermann NEY .....	1
<i>Extraction Phenomena in Synchronous TAG Syntax and Semantics</i> Rebecca NESSON and Stuart M. SHIEBER .....	9
<i>Inversion Transduction Grammar for Joint Phrasal Translation Modeling</i> Colin CHERRY and Dekang LIN .....	17
<i>Factorization of Synchronous Context-Free Grammars in Linear Time</i> Hao ZHANG and Daniel GILDEA .....	25
<i>Binarization, Synchronous Binarization, and Target-side Binarization</i> Liang HUANG .....	33
<i>Machine Translation as Tree Labeling</i> Mark HOPKINS and Jonas KUHN .....	41
<i>Discriminative word alignment by learning the alignment structure and syntactic divergence between a language pair</i> Sriram VENKATAPATHY and Aravind JOSHI .....	49
<i>Generation in Machine Translation from Deep Syntactic Trees</i> Keith HALL and Petr NĚMEC .....	57
<i>Combining Morphosyntactic Enriched Representation with n-best Reranking in Statistical Translation</i> Hélène BONNEAU-MAYNARD, Alexandre ALLAUZEN, Daniel DÉCHELOTTE and Holger SCHWENK .....	65
<i>A Walk on the Other Side: Using SMT Components in a Transfer-Based Translation System</i> Ariadna FONT LLITJÓS and Stephan VOGEL .....	72
<i>Dependency-Based Automatic Evaluation for Machine Translation</i> Karolina OWCZARZAK, Josef VAN GENABITH and Andy WAY .....	80
<i>Probabilistic Synchronous Tree-Adjoining Grammars for Machine Translation: The Argument from Bilingual Dictionaries</i> Stuart M. SHIEBER .....	88
<i>Three models for discriminative machine translation using Global Lexical Selection and Sentence Reconstruction</i> Sriram VENKATAPATHY and Srinivas BANGALORE .....	96
<i>Comparing Reordering Constraints for SMT Using Efficient BLEU Oracle Computation</i> Markus DREYER, Keith HALL and Sanjeev KHUDANPUR .....	103
<b>Author Index.....</b>	<b>111</b>