# Table of Contents

*Improvements in Unsupervised Co-Occurrence Based Parsing*
  Christian Hänig .......................................................... 1

*Viterbi Training Improves Unsupervised Dependency Parsing*
  Valentin I. Spitkovsky, Hiyan Alshawi, Daniel Jurafsky and Christopher D. Manning ....... 9

*Driving Semantic Parsing from the World’s Response*
  James Clarke, Dan Goldwasser, Ming-Wei Chang and Dan Roth .................................. 18

*Efficient, Correct, Unsupervised Learning for Context-Sensitive Languages*
  Alexander Clark .......................................................... 28

*Identifying Patterns for Unsupervised Grammar Induction*
  Jesús Santamaría and Lourdes Araujo .................................. 38

*Learning Better Monolingual Models with Unannotated Bilingual Text*
  David Burkett, Slav Petrov, John Blitzer and Dan Klein ........................................ 46

*(Invited Talk) Clueless: Explorations in Unsupervised, Knowledge-Lean Extraction of Lexical-Semantic Information*
  Lillian Lee ........................................................................ 55

*(Invited Talk) Bayesian Hidden Markov Models and Extensions*
  Zoubin Ghahramani ................................................................ 56

*Improved Unsupervised POS Induction Using Intrinsic Clustering Quality and a Zipfian Constraint*
  Roi Reichart, Raanan Fattal and Ari Rappoport ................................. 57

*Syntactic and Semantic Structure for Opinion Expression Detection*
  Richard Johansson and Alessandro Moschitti ........................................... 67

*Type Level Clustering Evaluation: New Measures and a POS Induction Case Study*
  Roi Reichart, Omri Abend and Ari Rappoport ........................................ 77

*Recession Segmentation: Simpler Online Word Segmentation Using Limited Resources*
  Constantine Lignos and Charles Yang ............................................. 88

*Computing Optimal Alignments for the IBM-3 Translation Model*
  Thomas Schoenemann .................................................................. 98

*Semi-Supervised Recognition of Sarcasm in Twitter and Amazon*
  Dmitry Davidov, Oren Tsur and Ari Rappoport .................................. 107

*Learning Probabilistic Synchronous CFGs for Phrase-Based Translation*
  Markos Mylonakis and Khalil Sima’an .......................................... 117

*A Semi-Supervised Batch-Mode Active Learning Strategy for Improved Statistical Machine Translation*
  Sankaranarayanan Ananthakrishnan, Rohit Prasad, David Stallard and Prem Natarajan .... 126

*Improving Word Alignment by Semi-Supervised Ensemble*
  Shujian Huang, Kangxi Li, Xinyu Dai and Jiajun Chen .................................. 135
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Comparative Study of Bayesian Models for Unsupervised Sentiment Detection</td>
<td>Chenghua Lin, Yulan He and Richard Everson</td>
<td>144</td>
</tr>
<tr>
<td>A Hybrid Approach to Emotional Sentence Polarity and Intensity Classification</td>
<td>Jorge Carrillo de Albornoz, Laura Plaza and Pablo Gervás</td>
<td>153</td>
</tr>
<tr>
<td>Cross-Caption Coreference Resolution for Automatic Image Understanding</td>
<td>Micah Hodosh, Peter Young, Cyrus Rashtchian and Julia Hockenmaier</td>
<td>162</td>
</tr>
<tr>
<td>Improved Natural Language Learning via Variance-Regularization Support Vector Machines</td>
<td>Shane Bergsma, Dekang Lin and Dale Schuurmans</td>
<td>172</td>
</tr>
<tr>
<td>Online Entropy-Based Model of Lexical Category Acquisition</td>
<td>Grzegorz Chrupala and Afra Alishahi</td>
<td>182</td>
</tr>
<tr>
<td>Tagging and Linking Web Forum Posts</td>
<td>Su Nam Kim, Li Wang and Timothy Baldwin</td>
<td>192</td>
</tr>
<tr>
<td>Joint Entity and Relation Extraction Using Card-Pyramid Parsing</td>
<td>Rohit Kate and Raymond Mooney</td>
<td>203</td>
</tr>
<tr>
<td>Distributed Asynchronous Online Learning for Natural Language Processing</td>
<td>Kevin Gimpel, Dipanjan Das and Noah A. Smith</td>
<td>213</td>
</tr>
<tr>
<td>On Reverse Feature Engineering of Syntactic Tree Kernels</td>
<td>Daniele Pighin and Alessandro Moschitti</td>
<td>223</td>
</tr>
<tr>
<td>Inspecting the Structural Biases of Dependency Parsing Algorithms</td>
<td>Yoav Goldberg and Michael Elhadad</td>
<td>234</td>
</tr>
</tbody>
</table>