

# ACL 2007

# Proceedings of the 45th Annual Meeting of the Association for Computational Linguistics

June 23–30, 2007 Prague, Czech Republic



The Association for Computational Linguistics

It is with great sadness that we record the death on 4 April 2007 of Karen Spärck Jones, who among many other honors and awards, was the President of ACL in 1994 and recipient of the ACL Lifetime Achievement Award in 2004.

These proceedings are dedicated to her memory.

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# **Preface: General Chair**

On behalf of the organizing committee I am delighted to welcome you to the 45th Annual Meeting of the Association for Computational Linguistics, in Prague.

Setting up and running the ACL conference involves a lot of work by many people. Some of them are officially identified as being responsible for various aspects of the conference, while the contributions of others are less visible. I would like to say a warm thank you to the people named below, with apologies to anyone I have overlooked.

The Program Chairs, **Antal van den Bosch** and **Annie Zaenen** have done a great job in managing the almost 600 submissions for the main conference and putting together a high quality program. Through this process Antal has become a 'grandmaster' of the START paper management system and has given a lot of help to other chairs who have had to deal with their own sets of submissions. Many thanks also to their Area Chairs and the program committee of reviewers, and to Florence Reeder for coordinating the pre-submission mentoring service. (Antal and Annie reflect on their PC experience overleaf).

**Sophia Ananiadou** is Chair of the Demo/Poster part of the conference, and has overseen a separate review process to select a high quality set of presentations.

The Student Research Workshop Chairs, **Chris Biemann**, **Violeta Seretan** and **Ellen Riloff** have assembled an excellent program of papers and posters. I encourage everyone to attend the student workshop to hear about the exciting work being carried out by researchers just starting out on their careers in computational linguistics.

Workshops Chair **Simone Teufel** is overseeing 15 workshops – the most ever at an ACL conference – chosen (with the help of **Beth Ann Hockey**, **Katja Markert** and **Dekai Wu**) from a total of 27 proposals. The scale of the workshop program can be gauged by the fact that they received an aggregate total of 470 submissions (without even counting IWPT and EMNLP-CoNLL). **Joakim Nivre**, as Tutorials Chair, has assembled a program of 5 attractive and complementary tutorials, selected from 20 proposals with advice from **Walter Daelemans**, **Robert Dale**, **Nancy Ide**, **Diane Litman** and **Chris Manning**.

One of the most demanding yet least noticed organizational roles is that of Publications Chair. **Su Jian** has done a fantastic job in producing the hardcopy and electronic record of the conference, supported by his team—with notable contributions from **Upali Kohomban** who has cheerfully helped at all stages and whenever needed, day and night, weekdays and weekends.

Sponsorship is another success story, thanks to the Sponsorship Chairs **Martha Palmer**, **Gabor Proszeky**, **Jan Hajic** and **Jun'ichi Tsujii**, who have recruited 12 corporate sponsors. We are very grateful for their financial support.

**Eva Hajicova**, the Local Arrangements Chair, assisted by **Jan Hajic** and **Anna Kotesovcova**, have put in an enormous amount of detailed work to make this conference a success, ably supported by the local team of **Milan Fucik**, **Jaroslava Hlavacova**, **Marketa Lopatkova**, **Jiri Mirovsky**, **Pavel Pecina**,

Pavel Schlesinger, Juraj Simlovic, Miroslav Spousta, Pavel Stranak, Zlatka Subrova, Jan Votrubec, Zdenek Zabokrtsky and Daniel Zeman. From the ACL itself, Kathy McCoy, Dragomir Radev, Priscilla Rasmussen, Mark Steedman and Jun'ichi Tsujii have played strong roles in making decisions and giving advice, and kept everything on track while I was out of action due to ill health last year.

And finally, many thanks to the authors and presenters in the main conference, workshops and co-located events... and to all the participants. I hope you enjoy the formally organized aspects of the conference, take advantage of the opportunity to network with colleagues old and new, and that you also have a chance to appreciate the history and sights of Prague while you are here.

John Carroll ACL 2007 General Chair

# **Preface: Program Chairs**

The number of submissions for this ACL broke a new record: the program committee's selection of 131 papers was based on 588 submissions (after withdrawals). An updated program design with four parallel sessions and 25-minute papers allowed an acceptance rate of 22.3%, and an acceptance of all submissions that were recommended with priority by the area chairs.

First and foremost, we thank all the authors for submitting papers describing their recent work; the sheer amount of submissions reflects how active our field is. We thank **Florence Reeder** for provided mentoring to 17 author teams who felt they needed some writing support. For the selection, we are indebted to the 332 program committee members, who produced one to eleven reviews per reviewer, for a total of close to 1,800 reviews, and to the ten area chairs on whose shoulders rested most of the work of organizing the review process. We decided to work without an area chairs meeting: the two program co-chairs met for two days at Tilburg University, and interacted during that time vigorously with the area chairs by email and sometimes by phone.

As usual the main program will run for three days: there will be four parallel sessions of main session presentations, a demo/poster session organized by **Sophia Ananiadou**, nameMiroslav Spousta and **Zdenek Zabokrtsky**, and a Student Research Workshop – thanks to Ellen Riloff, Violeta Seretan and Chris Biemann for organizing it. Also as usual the conference is flanked by tutorial sessions and workshops; our thanks go to **Joakim Nivre** and **Simone Teufel** for organizing and compiling an excellent package.

The announcements of the ACL Lifetime Award and of the Best Paper Award will provide the customary suspense. They will take place in plenary sessions. Other plenary sessions will be devoted to the business meeting and the two invited talks, which this year will be delivered by **Tom Mitchell** and **Barney Pell**. We are grateful for their kind acceptation of our invitation.

We thank **John Carroll**, General Conference Chair, the Local Arrangements Committee headed by **Eva Hajicova**, and the ACL executive, especially **Dragomir Radev**, for their help and advice, and last year's co-chairs, **Claire Cardie** and **Pierre Isabelle**, for sharing their experience. Our sincere thanks go to **Su Jian** for putting together the proceedings.

Enjoy the conference,

Antal van den Bosch and Annie Zaenen ACL-2007 Program Chairs

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Marilyn Walker, Haifeng Wang, Xinglong Wang, Bonnie Webber, David Weir, Ben Wellner, Richard Wicentowski, Janyce Wiebe, Ross Wilkinson, Yorick Wilks, Theresa Wilson, Shuly Wintner, Dekai Wu,

Fei Xia, Nianwen Xue, Endong Xun,

Muyun Yang, Scott Wen-tau Yih, Anssi Yli-Jyrä,

Dmitry Zelenko, Richard Zens, ChengXiang Zhai, Min Zhang, Tong Zhang, Guodong Zhou

# **Conference Program**

#### Monday, June 25, 2007

8:45-9:00	<b>Opening Session</b>

- 9:00–10:00 Invited Talk by Tom Mitchell
- 10:00-10:30 Break

#### Session 1A: Machine Translation 1

- 10:30–10:55 *Guiding Statistical Word Alignment Models With Prior Knowledge* Yonggang Deng and Yuqing Gao
- 10:55–11:20 *A Discriminative Syntactic Word Order Model for Machine Translation* Pi-Chuan Chang and Kristina Toutanova
- 11:20–11:45 *Tailoring Word Alignments to Syntactic Machine Translation* John DeNero and Dan Klein
- 11:45–12:10 *Transductive Learning for Statistical Machine Translation* Nicola Ueffing, Gholamreza Haffari and Anoop Sarkar

#### Session 1B: Word Sense Disambiguation

- 10:30–10:55 *Word Sense Disambiguation Improves Statistical Machine Translation* Yee Seng Chan, Hwee Tou Ng and David Chiang
- 10:55–11:20 *Learning Expressive Models for Word Sense Disambiguation* Lucia Specia, Mark Stevenson and Maria das Graças Volpe Nunes
- 11:20–11:45 *Domain Adaptation with Active Learning for Word Sense Disambiguation* Yee Seng Chan and Hwee Tou Ng
- 11:45–12:10 *Making Lexical Ontologies Functional and Context-Sensitive* Tony Veale and Yanfen Hao

#### Session 1C: Language Modeling 1

- 10:30–10:55 *A Bayesian Model for Discovering Typological Implications* Hal Daumé III and Lyle Campbell
- 10:55–11:20 *A Discriminative Language Model with Pseudo-negative Samples* Daisuke Okanohara and Jun'ichi Tsujii
- 11:20–11:45 Detecting Erroneous Sentences using Automatically Mined Sequential Patterns Guihua Sun, Xiaohua Liu, Gao Cong, Ming Zhou, Zhongyang Xiong, John Lee and Chin-Yew Lin
- 11:45–12:10 *Vocabulary Decomposition for Estonian Open Vocabulary Speech Recognition* Antti Puurula and Mikko Kurimo

#### Session 1D: Phonology and Morphology 1

- 10:30–10:55 *Phonological Constraints and Morphological Preprocessing for Grapheme-to-Phoneme Conversion* Vera Demberg, Helmut Schmid and Gregor Möhler
- 10:55–11:20 Redundancy Ratio: An Invariant Property of the Consonant Inventories of the World's Languages Animesh Mukherjee, Monojit Choudhury, Anupam Basu and Niloy Ganguly
- 11:20–11:45 *Multilingual Transliteration Using Feature based Phonetic Method* Su-Youn Yoon, Kyoung-Young Kim and Richard Sproat
- 11:45–12:10 *Semantic Transliteration of Personal Names* Haizhou Li, Khe Chai Sim, Jin-Shea Kuo and Minghui Dong
- 12:10-13:30 Lunch

#### Session 2A: Machine Translation 2

- 13:30–13:55 *Generating Complex Morphology for Machine Translation* Einat Minkov, Kristina Toutanova and Hisami Suzuki
- 13:55–14:20 Assisting Translators in Indirect Lexical Transfer Bogdan Babych, Anthony Hartley, Serge Sharoff and Olga Mudraya

- 14:20–14:45 *Forest Rescoring: Faster Decoding with Integrated Language Models* Liang Huang and David Chiang
- 14:45–15:10 Statistical Machine Translation through Global Lexical Selection and Sentence Reconstruction Srinivas Bangalore, Patrick Haffner and Stephan Kanthak

#### Session 2B: Grammars

- 13:30–13:55 *Mildly Context-Sensitive Dependency Languages* Marco Kuhlmann and Mathias Möhl
- 13:55–14:20 Transforming Projective Bilexical Dependency Grammars into Efficiently-parsable CFGs with Unfold-Fold Mark Johnson
- 14:20–14:45 *Parsing and Generation as Datalog Queries* Makoto Kanazawa
- 14:45–15:10 *Optimizing Grammars for Minimum Dependency Length* Daniel Gildea and David Temperley

#### Session 2C: Semantic Role Labeling

- 13:30–13:55 *Generalizing Semantic Role Annotations Across Syntactically Similar Verbs* Andrew Gordon and Reid Swanson
- 13:55–14:20 A Grammar-driven Convolution Tree Kernel for Semantic Role Classification Min Zhang, Wanxiang Che, Aiti Aw, Chew Lim Tan, Guodong Zhou, Ting Liu and Sheng Li
- 14:20–14:45 *Learning Predictive Structures for Semantic Role Labeling of NomBank* Chang Liu and Hwee Tou Ng
- 14:45–15:10 *A Simple, Similarity-based Model for Selectional Preferences* Katrin Erk

#### Session 2D: Language Resources

- 13:30–13:55 *SVM Model Tampering and Anchored Learning: A Case Study in Hebrew NP Chunking* Yoav Goldberg and Michael Elhadad
- 13:55–14:20 *Fully Unsupervised Discovery of Concept-Specific Relationships by Web Mining* Dmitry Davidov, Ari Rappoport and Moshe Koppel
- 14:20–14:45 *Adding Noun Phrase Structure to the Penn Treebank* David Vadas and James Curran
- 14:45–15:10 *Formalism-Independent Parser Evaluation with CCG and DepBank* Stephen Clark and James Curran
- 15:10–15:45 Break

#### Session 3A, Machine Learning Methods 1

- 15:45–16:10 *Frustratingly Easy Domain Adaptation* Hal Daumé III
- 16:10–16:35 *Instance Weighting for Domain Adaptation in NLP* Jing Jiang and ChengXiang Zhai
- 16:35–17:00 *The Infinite Tree* Jenny Rose Finkel, Trond Grenager and Christopher D. Manning
- 17:00–17:25 *Guiding Semi-Supervision with Constraint-Driven Learning* Ming-Wei Chang, Lev Ratinov and Dan Roth

#### Session 3B: Machine Translation 3

- 15:45–16:10 *Supertagged Phrase-Based Statistical Machine Translation* Hany Hassan, Khalil Sima'an and Andy Way
- 16:10–16:35 *Regression for Sentence-Level MT Evaluation with Pseudo References* Joshua S. Albrecht and Rebecca Hwa
- 16:35–17:00 *Bootstrapping Word Alignment via Word Packing* Yanjun Ma, Nicolas Stroppa and Andy Way
- 17:00–17:25 *Improved Word-Level System Combination for Machine Translation* Antti-Veikko Rosti, Spyros Matsoukas and Richard Schwartz

#### **Session 3C: Generation**

- 15:45–16:10 *Generating Constituent Order in German Clauses* Katja Filippova and Michael Strube
- 16:10–16:35 A Symbolic Approach to Near-Deterministic Surface Realisation using Tree Adjoining Grammar Claire Gardent and Eric Kow
- 16:35–17:00 *Sentence Generation as a Planning Problem* Alexander Koller and Matthew Stone
- 17:00–17:25 *GLEU: Automatic Evaluation of Sentence-Level Fluency* Andrew Mutton, Mark Dras, Stephen Wan and Robert Dale

#### Session 3D: Multimodality 1

- 15:45–16:10 *Conditional Modality Fusion for Coreference Resolution* Jacob Eisenstein and Randall Davis
- 16:10–16:35 The Utility of a Graphical Representation of Discourse Structure in Spoken Dialogue Systems
   Mihai Rotaru and Diane Litman
- 16:35–17:00 Automated Vocabulary Acquisition and Interpretation in Multimodal Conversational Systems
   Yi Liu, Joyce Chai and Rong Jin
- 17:00–17:25 *A Multimodal Interface for Access to Content in the Home* Michael Johnston, Luis Fernando D'Haro, Michelle Levine and Bernard Renger

#### **Tuesday, June 26, 2007**

#### Session 4A, Parsing 1

- 09:00–09:25 *Fast Unsupervised Incremental Parsing* Yoav Seginer
- 09:25–09:50 *K-best Spanning Tree Parsing* Keith Hall
- 09:50–10:15 Is the End of Supervised Parsing in Sight? Rens Bod
- 10:15–10:40 An Ensemble Method for Selection of High Quality Parses Roi Reichart and Ari Rappoport

#### Session 4B: Sentiment 1

- 09:00–09:25 *Opinion Mining using Econometrics: A Case Study on Reputation Systems* Anindya Ghose, Panagiotis Ipeirotis and Arun Sundararajan
- 09:25–09:50 *PageRanking WordNet Synsets: An Application to Opinion Mining* Andrea Esuli and Fabrizio Sebastiani
- 09:50–10:15 *Structured Models for Fine-to-Coarse Sentiment Analysis* Ryan McDonald, Kerry Hannan, Tyler Neylon, Mike Wells and Jeff Reynar
- 10:15–10:40 Biographies, Bollywood, Boom-boxes and Blenders: Domain Adaptation for Sentiment Classification John Blitzer, Mark Dredze and Fernando Pereira

#### Session 4C: Paraphrasing, Textual Entailment

- 09:00–09:25 Clustering Clauses for High-Level Relation Detection: An Information-theoretic Approach Samuel Brody
- 09:25–09:50 *Instance-based Evaluation of Entailment Rule Acquisition* Idan Szpektor, Eyal Shnarch and Ido Dagan
- 09:50–10:15 *Statistical Machine Translation for Query Expansion in Answer Retrieval* Stefan Riezler, Alexander Vasserman, Ioannis Tsochantaridis, Vibhu Mittal and Yi Liu
- 10:15–10:40 A Computational Model of Text Reuse in Ancient Literary Texts John Lee

#### Tuesday, June 26, 2007 (continued)

#### Session 4D: Discourse and Dialog 1

- 09:00–09:25 *Finding Document Topics for Improving Topic Segmentation* Olivier Ferret
- 09:25–09:50 *The Utility of Parse-derived Features for Automatic Discourse Segmentation* Seeger Fisher and Brian Roark
- 09:50–10:15 *PERSONAGE: Personality Generation for Dialogue* François Mairesse and Marilyn Walker
- 10:15–10:40 *Making Sense of Sound: Unsupervised Topic Segmentation over Acoustic Input* Igor Malioutov, Alex Park, Regina Barzilay and James Glass
- 10:40-11:10 Break
- 11:10-12:10 LifeTime Achievement Award
- 12:10-13:30 Lunch
- 13:00-14:30 ACL Business Meeting

#### Session 5A: Language Modeling 2

- 14:30–14:55 *Randomised Language Modelling for Statistical Machine Translation* David Talbot and Miles Osborne
- 14:55–15:20 *Bilingual-LSA Based LM Adaptation for Spoken Language Translation* Yik-Cheung Tam, Ian Lane and Tanja Schultz

#### **Session 5B: Coreference**

- 14:30–14:55 Coreference Resolution Using Semantic Relatedness Information from Automatically Discovered Patterns
   Xiaofeng Yang and Jian Su
- 14:55–15:20 Semantic Class Induction and Coreference Resolution Vincent Ng

#### Tuesday, June 26, 2007 (continued)

#### **Session 5C: Summarization**

- 14:30–14:55 *Generating a Table-of-Contents* S. R. K. Branavan, Pawan Deshpande and Regina Barzilay
- 14:55–15:20 Towards an Iterative Reinforcement Approach for Simultaneous Document Summarization and Keyword Extraction Xiaojun Wan, Jianwu Yang and Jianguo Xiao

#### **Session 5D: Semantic Relations**

- 14:30–14:55 *Fast Semantic Extraction Using a Novel Neural Network Architecture* Ronan Collobert and Jason Weston
- 14:55–15:20 Improving the Interpretation of Noun Phrases with Cross-linguistic Information Roxana Girju
- 15:20–15:45 Break

#### **Session 6A: Information Extraction**

- 15:45–16:10 *Learning to Extract Relations from the Web using Minimal Supervision* Razvan Bunescu and Raymond Mooney
- 16:10–16:35 A Seed-driven Bottom-up Machine Learning Framework for Extracting Relations of Various Complexity Feiyu Xu, Hans Uszkoreit and Hong Li
- 16:35–17:00 *A Multi-resolution Framework for Information Extraction from Free Text* Mstislav Maslennikov and Tat-Seng Chua
- 17:00–17:25 Using Corpus Statistics on Entities to Improve Semi-supervised Relation Extraction from the Web Benjamin Rosenfeld and Ronen Feldman

#### Tuesday, June 26, 2007 (continued)

#### Session 6B: Parsing 2

- 15:45–16:10 Beyond Projectivity: Multilingual Evaluation of Constraints and Measures on Non-Projective Structures Jiří Havelka
- 16:10–16:35 Self-Training for Enhancement and Domain Adaptation of Statistical Parsers Trained on Small Datasets Roi Reichart and Ari Rappoport
- 16:35–17:00 *HPSG Parsing with Shallow Dependency Constraints* Kenji Sagae, Yusuke Miyao and Jun'ichi Tsujii
- 17:00–17:25 *Constituent Parsing with Incremental Sigmoid Belief Networks* Ivan Titov and James Henderson

#### Session 6C: Multilinguality 1

- 15:45–16:10 *Corpus Effects on the Evaluation of Automated Transliteration Systems* Sarvnaz Karimi, Andrew Turpin and Falk Scholer
- 16:10–16:35 Collapsed Consonant and Vowel Models: New Approaches for English-Persian Transliteration and Back-Transliteration Sarvnaz Karimi, Falk Scholer and Andrew Turpin
- 16:35–17:00 *Alignment-Based Discriminative String Similarity* Shane Bergsma and Grzegorz Kondrak
- 17:00–17:25 *Bilingual Terminology Mining Using Brain, not brawn comparable corpora* Emmanuel Morin, Béatrice Daille, Koichi Takeuchi and Kyo Kageura

#### Session 6D: Language Modeling 3

- 15:45–16:10 Unsupervised Language Model Adaptation Incorporating Named Entity Information Feifan Liu and Yang Liu
- 16:10–16:35 *Coordinate Noun Phrase Disambiguation in a Generative Parsing Model* Deirdre Hogan
- 16:35–17:00 *A Unified Tagging Approach to Text Normalization* Conghui Zhu, Jie Tang, Hang Li, Hwee Tou Ng and Tiejun Zhao
- 17:00–17:25 *Sparse Information Extraction: Unsupervised Language Models to the Rescue* Doug Downey, Stefan Schoenmackers and Oren Etzioni

#### Wednesday, June 27, 2007

#### **Session 7A: Machine Translation 4**

- 09:00–09:25 *Forest-to-String Statistical Translation Rules* Yang Liu, Yun Huang, Qun Liu and Shouxun Lin
- 09:25–09:50 *Ordering Phrases with Function Words* Hendra Setiawan, Min-Yen Kan and Haizhou Li
- 09:50–10:15 *A Probabilistic Approach to Syntax-based Reordering for Statistical Machine Translation* Chi-Ho Li, Minghui Li, Dongdong Zhang, Mu Li, Ming Zhou and Yi Guan
- 10:15–10:40 *Machine Translation by Triangulation: Making Effective Use of Multi-Parallel Corpora* Trevor Cohn and Mirella Lapata

#### **Session 7B: Sequence Processing**

- 09:00–09:25 *A Maximum Expected Utility Framework for Binary Sequence Labeling* Martin Jansche
- 09:25–09:50 *A Fully Bayesian Approach to Unsupervised Part-of-speech Tagging* Sharon Goldwater and Tom Griffiths
- 09:50–10:15 *Computationally Efficient M-Estimation of Log-Linear Structure Models* Noah A. Smith, Douglas L. Vail and John D. Lafferty
- 10:15–10:40 *Guided Learning for Bidirectional Sequence Classification* Libin Shen, Giorgio Satta and Aravind Joshi

#### Session 7C: Question Answering

- 09:00–09:25 Different Structures for Evaluating Answers to Complex Questions: Pyramids Won't Topple, and Neither Will Human Assessors Hoa Trang Dang and Jimmy Lin
- 09:25–09:50 *Exploiting Syntactic and Shallow Semantic Kernels for Question Answer Classification* Alessandro Moschitti, Silvia Quarteroni, Roberto Basili and Suresh Manandhar
- 09:50–10:15 *Language-independent Probabilistic Answer Ranking for Question Answering* Jeongwoo Ko, Teruko Mitamura and Eric Nyberg

## Session 7D: Discourse and Dialog 2

09:00-09:25	<i>Learning to Compose Effective Strategies from a Library of Dialogue Components</i> Martijn Spitters, Marco De Boni, Jakub Zavrel and Remko Bonnema
09:25–09:50	On the Role of Context and Prosody in the Interpretation of 'okay' Agustín Gravano, Stefan Benus, Héctor Chávez, Julia Hirschberg and Lauren Wilcox
09:50–10:15	Predicting Success in Dialogue David Reitter and Johanna D. Moore
10:15–10:40	Resolving It, This, and That in Unrestricted Multi-Party Dialog Christoph Müller
10:40-11:10	Break
11:10-12:10	Invited Talk by Barney Pell
12:10-13:30	Lunch
	Session 8A: Machine Learning Methods 2
13:30–13:55	A Comparative Study of Parameter Estimation Methods for Statistical Natural Language Processing Jianfeng Gao, Galen Andrew, Mark Johnson and Kristina Toutanova
13:55–14:20	Grammar Approximation by Representative Sublanguage: A New Model for Language Learning Smaranda Muresan and Owen Rambow
14:20–14:45	<i>Chinese Segmentation with a Word-Based Perceptron Algorithm</i> Yue Zhang and Stephen Clark
14:45-15:10	Unsupervised Coreference Resolution in a Nonparametric Bayesian Model Aria Haghighi and Dan Klein

#### Session 8B: Machine Translation and Multilinguality

- 13:30–13:55 *Pivot Language Approach for Phrase-Based Statistical Machine Translation* Hua Wu and Haifeng Wang
- 13:55–14:20 *Bootstrapping a Stochastic Transducer for Arabic-English Transliteration Extraction* Tarek Sherif and Grzegorz Kondrak
- 14:20–14:45 *Benefits of the Passively Parallel Rosetta Stone? Cross-Language Information Retrieval with over 30 Languages* Peter A. Chew and Ahmed Abdelali
- 14:45–15:10 *A Re-examination of Machine Learning Approaches for Sentence-Level MT Evaluation* Joshua S. Albrecht and Rebecca Hwa

#### **Session 8C: Lexicon and Lexical Semantics**

- 13:30–13:55 *Automatic Acquisition of Ranked Qualia Structures from the Web* Philipp Cimiano and Johanna Wenderoth
- 13:55–14:20 *A Sequencing Model for Situation Entity Classification* Alexis Palmer, Elias Ponvert, Jason Baldridge and Carlota Smith
- 14:20–14:45 Words and Echoes: Assessing and Mitigating the Non-Randomness Problem in Word Frequency Distribution Modeling Marco Baroni and Stefan Evert
- 14:45–15:10 A System for Large-Scale Acquisition of Verbal, Nominal and Adjectival Subcategorization Frames from Corpora Judita Preiss, Ted Briscoe and Anna Korhonen

#### Session 8D: Phonology and Morphology 2

- 13:30–13:55 *A Language-Independent Unsupervised Model for Morphological Segmentation* Vera Demberg
- 13:55–14:20 Using Mazurkiewicz Trace Languages for Partition-Based Morphology François Barthélemy
- 14:20–14:45 *Much ado about nothing: A Social Network Model of Russian Paradigmatic Gaps* Robert Daland, Andrea D. Sims and Janet Pierrehumbert
- 14:45–15:10 *Substring-Based Transliteration* Tarek Sherif and Grzegorz Kondrak
- 15:10–15:45 Break

#### Session 9A: Parsing 3

- 15:45–16:10 *Pipeline Iteration* Kristy Hollingshead and Brian Roark
- 16:10–16:35 *Learning Synchronous Grammars for Semantic Parsing with Lambda Calculus* Yuk Wah Wong and Raymond Mooney
- 16:35–17:00 *Generalizing Tree Transformations for Inductive Dependency Parsing* Jens Nilsson, Joakim Nivre and Johan Hall

#### Session 9B: Sentiment 2

- 15:45–16:10 *Learning Multilingual Subjective Language via Cross-Lingual Projections* Rada Mihalcea, Carmen Banea and Janyce Wiebe
- 16:10–16:35 *Sentiment Polarity Identification in Financial News: A Cohesion-based Approach* Ann Devitt and Khurshid Ahmad
- 16:35–17:00 *Weakly Supervised Learning for Hedge Classification in Scientific Literature* Ben Medlock and Ted Briscoe

#### Session 9C: Multimodality 2

- 15:45–16:10 *Text Analysis for Automatic Image Annotation* Koen Deschacht and Marie-Francine Moens
- 16:10–16:35 *User Requirements Analysis for Meeting Information Retrieval Based on Query Elicitation* Vincenzo Pallotta, Violeta Seretan and Marita Ailomaa
- 16:35–17:00 *Combining Multiple Knowledge Sources for Dialogue Segmentation in Multimedia Archives* Pei-Yun Hsueh and Johanna D. Moore

#### Session 9D: Text mining and Retrieval

- 15:45–16:10 *Topic Analysis for Psychiatric Document Retrieval* Liang-Chih Yu, Chung-Hsien Wu, Chin-Yew Lin, Eduard Hovy and Chia-Ling Lin
- 16:10–16:35 *What to be? Electronic Career Guidance Based on Semantic Relatedness* Iryna Gurevych, Christof Müller and Torsten Zesch
- 16:35–17:00 Extracting Social Networks and Biographical Facts From Conversational Speech Transcripts Hongyan Jing, Nanda Kambhatla and Salim Roukos
- 17:10 Best Paper Award (Plenary Session)