CONFERENCE PROCEEDINGS

SEPTEMBER 17-21

EMNLP 2015

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Table of Contents

Preface by the General Chair vii

Preface by the Program Committee Co-Chairs ix

Organizing Committee xi

Local Organizing Committee xii

Program Committee xiii

Invited Speaker: Yoshua Benjo xxi

Invited Speaker: Justin Grimmer xxiii

Conference Program xxv

List of Papers lix

Author Index 2603

Preface by the General Chair

August 25, 2015

Welcome to the 2015 Conference on Empirical Methods in Natural Language Processing. EMNLP is annually organized by SIGDAT, the Association for Computational Linguistics' special interest group on linguistic data and corpus-based approaches to NLP. This year the conference will be held on September 17–21 in the enchanting city of Lisbon, Portugal.[1]

EMNLP has continued to increase in prominence as one of the most important conferences in Natural Language Processing (NLP). This year the conference has experienced an unprecedented boost in submitted papers. I believe that this reflects both the growth of the NLP field and also the health and strength of the conference itself, with a history of many years of solid work. With this level of interest at submission time, we are also expecting a record attendance. The conference will span a five-day period this year, and it requires a growing organization structure.

Some of the features introduced in EMNLP 2014 will continue this year (e.g., tutorials, new chairs, posters as parallel sessions, flat rates and flexibility for tutorials and workshops, etc.). We also introduce some innovations, like a revised selection process for which talks are presented as talks versus posters.

This year I had the privilege of coordinating the conference from my General Chair position. This has been a very instructive and enriching exercise which showed me the conference as a whole, from many different angles. Prefaces in the proceedings invariably praise the team of organizers. This one will not be an exception. Organizing a large conference as EMNLP requires excellent people working as a team in multiple interrelated tasks. I have been lucky to work with an outstanding team of people, from whom I learnt a lot. These aren't empty words. I would like to thank each and every chair for the hard work that made the conference a reality.

The Program Chairs, Jian Su and Chris Callison-Burch, did an excellent job at putting together a very interesting program with over 300 papers. They had to deal with a very large number of submissions, which exceeded even our most optimistic expectations. As a consequence, they were forced to be creative and to find solutions on the fly to adapt to the situation. They recruited the largest ever program committee and successfully managed a huge reviewing and decision making process under a very tight schedule. A real gift for the general chair. They complemented the program with very interesting keynote speakers, Yoshua Bengio and Justin Grimmer who will present exciting research topics for our community.

The EMNLP 2015 main conference is accompanied by 7 workshops and 8 tutorials during the first two days. The Workshops Chairs, Zornitsa Kozareva and Jörg Tiedemann, and the Tutorials Chairs, Maggie Li and Khalil Sima'an, conducted the selection processes in a joint effort with the other ACL conferences in 2015 (NAACL and ACL-IJCNLP). This has been the standard procedure from last years. It has the advantage of starting early, avoiding duplicated reviewing and allowing a more balanced selection among conferences. EMNLP attracted a varied and interesting set of workshops and tutorials, which gives more value to the conference.

Daniele Pighin and Yuval Marton were responsible for the always difficult and sometimes thankless task of putting together the conference publications. This is a very complex effort which involves coordination with almost everyone in the team under the pressure of hard publication deadlines. Yuval is serving in this position for a second year. Staggered two year terms for publication chairs is a new addition for

[1] Conference website: `http://www.emnlp2015.org`

EMNLP starting this year, and we hope that it will be a permanent feature. In the first year, publication chairs will learn and do the bulk of proceedings compilation. During the second year their role will be more advisory, instructing and helping the first-year chair. This procedure will help the transmission of the necessary know-how from year to year. Thanks to Yuval and Daniele for accepting the challenge and making it work wonderfully. Finally, this is the second year that EMNLP uses a mobile app for the conference program (Conference4me). The publication chairs also coordinated the integration of the app with SoftConf, which is now smoother and more seamless.

The local organization team was led by André Martins and João Graça. They did an amazing job, working hard and with all the complexities and subtleties of local arrangements. One of the keys for the success was the creation of a large team of local organizers with clearly defined roles and responsibilities. They appointed very committed people: Isabel Trancoso (Local Publicity Chair), Fernando Batista (Handbook Chair), Bruno Martins (Website and App Chair), Luísa Coheur (Student Volunteer Coordinator), and Helena Moniz (Local Arrangements Chair). Thanks to all. I am especially pleased about the new website, which was revamped and looks more professional everyday. This is certainly a good investment for the future.

A large conference as EMNLP needs to focus on dissemination activities too. Barbara Plank acted as the international Publicity Chair. She did a fantastic job and coordinated very well with the local publicity and the website chairs. The calls for papers, calls for participation, and main news of the conference were timely distributed through ACL, the usual distribution lists, and also through the conference website and two Facebook and Twitter accounts. The EMNLP2015 Twitter account garnered more followers than in previous years.

I am really grateful to SIGDAT. Its secretary, Noah Smith, acted as the liasion between SIGDAT and the conference organizers. He was always available and ready to help with very good advice. SIGDAT also provided the funds for the student scholarship program. These grants help covering traveling expenses to a dozen of students. The committee appointed for collecting the applications and making the decisions was formed by Francisco Guzmán and Lluís Padró, who had to analyze all the information and decide the awardees in only a few days.

Another sign of the health of EMNLP and the field in general is the interest showed by sponsors. Thanks to the work of our sponsorship team, formed by João Graça and Hang Li, in coordination with the ACL International Sponsorship Committee, we got a record number of 13 sponsors for EMNLP 2015 (2 platinum, 3 gold, 6 silver and 2 bronze). In addition to these direct sponsors, we also have several smaller supporters, exhibitors, and institutional partners. We are extremely grateful to all these companies and institutions, which make a better conference possible at a more affordable registration fee.

Additionally, we counted on the invaluable help of Priscilla Rasmussen, supporting the local organization in all fronts with her broad experience. She took care of the registration process too. We also got very good advice, know-how, and helpful software and forms from last year general chair and local organizers, Alessandro Moschitti and Kareem Darwish. Thank you.

Finally, I would like to thank the authors of submitted and accepted papers, and all the attendees to the conference, who will be the main actors from September 17 to September 21, 2015. I am convinced that we will experience a fantastic conference, scientifically exciting and full of fond memories, in the unique environment of Lisbon.

Lluís Màrquez
EMNLP 2015 General Chair

Preface by the Program Committee Co-Chairs

August 25, 2015

Welcome to the 2015 Conference on Empirical Methods in Natural Language Processing! This year we received a record number of submissions. There were 1300 valid submissions. The 600 long papers and 700 short papers were allocated to one of 15 areas. The most popular areas this year were Semantics, Statistical Models and Machine Learning Methods, Text Mining and NLP applications, and Machine Translation.

Reviewing for a conference this size involves an enormous volunteer effort from many individuals. We are very grateful to our 30 area chairs and to the more than 900 researchers who reviewed the submissions. We accepted 312 papers (157 long and 155 short papers), representing a global acceptance rate of 24%. An additional 17 papers accepted by the TACL journal were presented at the conference as well.

To decide whether the accepted papers should be presented as talks or posters, we asked the area chairs, the reviewers, and the authors of accepted papers to vote on which papers they would like to attend. We showed the title of each paper and its abstract, but not its authors. 400 people provided their input. We selected talks based on popularity, while ensuring that each area was represented by at least one session. Our rationale for taking a vote was that papers that many people wanted to attend would be better served by presenting a talk in a large room, while papers with more specialized interest would benefit from the one-on-one interactions facilitated by posters. Rather than doing large plenary poster sessions, we have scheduled two parallel poster sessions with small batches of thematically similar papers that will be run simultaneously with the talks.

We selected best papers from a shortlist of 20 papers that were nominated by the area chairs. The best paper committee ranked the nominees, and based on their rankings we selected the following papers for the best paper awards:

- Best paper - *Broad-coverage CCG Semantic Parsing with AMR* by Yoav Artzi, Kenton Lee and Luke Zettlemoyer.
- Best paper - *Semantically Conditioned LSTM-based Natural Language Generation for Spoken Dialogue Systems* by Tsung-Hsien Wen, Milica Gasic, Nikola Mrkšić, Pei-Hao Su, David Vandyke and Steve Young.

IBM has provided a cash scholarship for us to award to the best student paper. This will go to Tsung-Hsien Wen, since he is currently a student. The following papers received an honorable mention for the best paper award:

- Honorable mention for best paper - *Traversing Knowledge Graphs in Vector Space* by Kelvin Guu, John Miller and Percy Liang.
- Honorable mention for best paper - *Building a shared world: mapping distributional to model-theoretic semantic spaces* by Aurélie Herbelot and Eva Maria Vecchi.
- Honorable mention for best paper - *Language Understanding for Text-based Games using Deep Reinforcement Learning* by Karthik Narasimhan, Tejas Kulkarni and Regina Barzilay.
- Honorable mention for best short paper - *Joint Lemmatization and Morphological Tagging with Lemming* by Thomas Müller, Ryan Cotterell, Alexander Fraser and Hinrich Schütze.

- Honorable mention for best short paper - *Semi-Supervised Bootstrapping of Relationship Extractors with Distributional Semantics* by David S. Batista, Bruno Martins and Mário J. Silva.

This year we created a new "Best data set or resource" award, since so much work in our community is driven by data. The paper that receiving this inaugural distinction is:

- Best data set or resource - *A large annotated corpus for learning natural language inference* by Samuel R. Bowman, Gabor Angeli, Christopher Potts and Christopher D. Manning.

With two honorable mentions:

- Notable data set or resource - *That's So Annoying!!!: A Lexical and Frame-Semantic Embedding Based Data Augmentation Approach to Automatic Categorization of Annoying Behaviors using #petpeeve Tweets* by William Yang Wang and Diyi Yang.
- Notable data set or resource - *Modeling Reportable Events as Turning Points in Narrative* by Jessica Ouyang and Kathy McKeown.

We decided to give more awards than in past years by recognizing papers with honorable mentions and by creating the new best data or resource award. Our goal was to recognize roughly the top 1% of all of the submissions to the conference with awards (recognizing approximately the top 5% of accepted papers). We are very grateful to our invited speakers Yoshua Bengio and Justin Grimmer.

Yoshua Bengio is professor of Computer Science and Operations Research at the Université de Montréal. He is the author of two books and more than 200 publications, the most cited being in the areas of deep learning, recurrent neural networks, probabilistic learning algorithms, natural language processing and manifold learning. He co-directs the Canadian Institute for Advanced Research's program on deep learning. He is on the board of NIPS. Professor Bengio's research into deep learning has had a dramatic impact on the field of NLP in the past few years, and has invigorated interest in AI through machine learning.

Justin Grimmer is an associate professor of Political Science at Stanford University. His research uses statistical methods to examine American politics. He is the author of two books on the topic "Representational Style in Congress: What Legislators Say and Why It Matters" and "The Impression of Influence: How Legislator Communication and Government Spending Cultivate a Personal Vote." His work has appeared in the American Political Science Review, American Journal of Political Science, Journal of Politics, Political Analysis, Proceedings of the National Academy of Sciences, Regulation and Governance, and Poetics. Professor Grimmer's research points to exciting new directions for computational social science and how the field of NLP can facilitate research in many areas.

We thank them in advance for coming to the conference and sharing their insights.

We would also like to thank our general chair Lluís Màrquez, André Martins and João Graça and colleagues for their excellent work with the local organization, and Yuval Marton and Daniele Pighin for doing an excellent job assembling these proceedings.

We thank SIGDAT for inviting us to serve as Program Co-Chairs of EMNLP 2015. We hope that the conference is an excellent one. Enjoy your stay in Lisbon!

Chris Callison-Burch and Jian Su
EMNLP 2015 Program Committee Co-Chairs

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Ella Rabinovich; Will Radford; Preethi Raghavan; Altaf Rahman; Rafal Rak; Carlos Ramisch; Mohammad Sadegh Rasooli; Siva Reddy; Sravana Reddy; Marek Rei; Roi Reichart; Nils Reiter; Xiang Ren; Philip Resnik; Corentin Ribeyre; Kyle Richardson; Sebastian Riedel; Martin Riedl; Stefan Riezler; German Rigau; Laura Rimell; Fabio Rinaldi; Miguel Rios; Alan Ritter; Brian Roark; Angus Roberts; Kirk Roberts; Tim Rocktäschel; Horacio Rodriguez; Marcus Rohrbach; Stephen Roller; Francesco Ronzano; Andrew Rosenberg; Paolo Rosso; Michael Roth; Johann Roturier; Mickael Rouvier; Alla Rozovskaya; Eugen Ruppert;

Jun Sun; Markus Saers; Saurav Sahay; Hassan Saif; Hassan Sajjad; Keisuke Sakaguchi; Mohammad Salameh; Diarmuid Ó Séaghdha; Bahar Salehi; Tanja Samardzic; Mark Sammons; Germán Sanchis Trilles; Federico Sangati; Baskaran Sankaran; Motoki Sano; Felix Sasaki; Ryohei Sasano; Asad Sayeed; Carolina Scarton; David Schlangen; Natalie Schluter; Helmut Schmid; Nathan Schneider; Michael Schuhmacher; William Schuler; H. Andrew Schwartz; Lane Schwartz; Roy Schwartz; Holger Schwenk; Hinrich Schütze; Djamé Seddah; Satoshi Sekine; Jean Senellart; Rico Sennrich; Hendra Setiawan; Burr

Settles; Aliaksei Severyn; Serge Sharoff; Shuming Shi; Chaitanya Shivade; Maryam Siahbani; Carina Silberer; Yanchuan Sim; Khalil Sima'an; Patrick Simianer; Kiril Simov; Sameer Singh; Kevin Small; Peter Smit; Noah A. Smith; Jan Šnajder; Artem Sokolov; Swapna Somasundaran; Linfeng Song; Lucia Specia; Vivek Srikumar; Miloš Stanojević; Mark Steedman; Pontus Stenetorp; Brandon Stewart; Veselin Stoyanov; Carlo Strapparava; Karl Stratos; Emma Strubell; Jannik Strötgen; Jian Su; Qi Su; Kazunari Sugiyama; Le Sun; Weiwei Sun; Xu Sun; Mihai Surdeanu; Hisami Suzuki; Swabha Swayamdipta; György Szarvas; Stan Szpakowicz; Idan Szpektor; Felipe Sánchez-Martínez; Anders Søgaard; Patrick Saint-Dizier; Jinsong Su;

Hiroya Takamura; Partha P. Talukdar; Duyu Tang; Jian Tang; Jiliang Tang; Xavier Tannier; Kapil Thadani; Sam Thomson; Jörg Tiedemann; Christoph Tillmann; Ivan Titov; Nadi Tomeh; Sara Tonelli; Fatemeh Torabi Asr; Antonio Toral; Kristina Toutanova; Jun'ichi Tsujii; Oren Tsur; Yoshimasa Tsuruoka; Yulia Tsvetkov; Gokhan Tur; Francis Tyers; Oscar Täckström;

Raghavendra Udupa; Lyle Ungar; Olga Uryupina; Jakob Uszkoreit;

Sowmya Vajjala; Benjamin Van Durme; Daniele Vannella; Ashish Vaswani; Marc Verhagen; Yannick Versley; Laure Vieu; David Vilar; Luke Vilnis; Sami Virpioja; Karthik Visweswariah; Andreas Vlachos; Rob Voigt; Svitlana Volkova; Ivan Vulić; Vinod Vydiswaran; Marieke van Erp; Marten van Schijndel; Antal van den Bosch;

Houfeng Wang; Joachim Wagner; Aurelien Waite; Xiaojun Wan; Chi Wang; Chuan Wang; Hongling Wang; Hongning Wang; Lu Wang; Rui Wang; Sida I. Wang; Wen Wang; William Yang Wang; Zhiguo Wang; Zhongqing Wang; Zhuoran Wang; Taro Watanabe; Aleksander Wawer; Kellie Webster; Furu Wei; Zhongyu Wei; Daniel Weld; Janyce Wiebe; Michael Wiegand; John Wieting; Jason D Williams; Steven Wilson; Shuly Wintner; Guillaume Wisniewski; Silke Witt-Ehsani; Travis Wolfe; Kam-Fai Wong; Alina Wróblewska; Stephen Wu; Xianchao Wu; Yuanbin Wu; Joern Wuebker;

Yunqing Xia; Tong Xiao; Boyi Xie; Pengtao Xie; Deyi Xiong; Jia Xu; Liheng Xu; Ruifeng Xu; Wei Xu; Wenduan Xu; Ying Xu;

Rui Yan; Bin Yang; Weiwei Yang; Yaqin Yang; Yi Yang; Yi Yang; Helen Yannakoudakis; Jin-ge Yao; Xuchen Yao; Ainur Yessenalina; Xing Yi; Wen-tau Yih; Seid Muhie Yimam; Dani Yogatama; Bei Yu; Dianhai Yu; Liang-Chih Yu; Mo Yu; Zhou Yu; François Yvon; Tae Yano;

Deyu Zhou; Manzil Zaheer; Omar Zaidan; Fabio Massimo Zanzotto; Alessandra Zarcone; Sina Zarrieß; Rabih Zbib; Richard Zens; Torsten Zesch; Luke Zettlemoyer; Feifei Zhai; Ke Zhai; Jiajun Zhang; Kevin Zhang; Meishan Zhang; Min Zhang; Min Zhang; Qi Zhang; Wei Zhang; Wei-Nan Zhang; Yu Zhang; Yuan Zhang; Yuchen Zhang; Yue Zhang; Zhe Zhang; Zhichang Zhang; Hai Zhao; Jun Zhao; Kai Zhao; Qiuye Zhao; Shiqi Zhao; Wayne Xin Zhao; Xin Zhao; Yanyan Zhao; Zhi Zhong; Guangyou Zhou; Guodong Zhou; Junsheng Zhou; Mianwei Zhou; Xinjie Zhou; Jingbo Zhu; Muhua Zhu; Xiaodan Zhu; Imed Zitouni; Bowei Zou; Arkaitz Zubiaga; Pierre Zweigenbaum; Xiaoyan Zhu;

Additional Reviewers

Abeed Sarker; Abouenour Lahsen; Afra Alishahi; Afshin Rahimi; Aitor García Pablos; Aitziber Atutxa Salazar; Alan Lee; Alicia Pérez Ramírez; Anders Johannsen; Anders Søgaard; Andreas Grivas; Anna Jørgensen; Annemarie Friedrich; Antonio Uva; Austin Matthews; Avihai Mejer; Baolin Peng; Benjamin Marie; Benjamin Yap; Bo Han; Bonnie Webber; Bradley Hauer; Camilo Thorne; Chong Zhou; Daniel Torregrosa; David Buttler; Davy Weissenbacher; Desmond Ong; Ehsan Emazadeh; Elias Zavitsanos; Enrique Vidal; Fandong Meng; Federico Nanni; Filipa Peleja; Francis Ferraro; Francisco Rangel; Gözde Özbal; Henry Anaya-Sanchez; Hieu Pham; Ignacio Iacobacci; I-Ta Lee; Jack Hessel; James Cross; Jing Li; Jing Ma; Jintao Ye; Joost Bastings; Kai Zhao; Kateryna Tymoshenko; Kazuya Kawakami; Ke Tao; Ke Zhai; Keith Stevens; Lane Schwartz; Lasse Borgholt; Leila Wehbe; Long Duong; Lucie Flekova; Marc Franco-Salvador; Marco Del Tredici; Maximin Coavoux; Meng Zhang; Michal Lukasik; Mingxuan Wang; Mohamed Mouine; Mohammad Salameh; Muhua Zhu; Nadir Durrani; Nan Yang; Nichola Lubold; Nima Pourdamghani; Nina Zhou; Phil Williams; Prodromos Malakasiotis; Rachel Rudinger; Rui Xia; Serra Sinem Tekiroglu; Shachi H Kumar; Shruti Rijhwani; Songxian Xie; Stas Semeniuta; Stefano Faralli; Stephan Gouws; Stephen Maddock; Sungjoon Park; Susana Palmaz; Tobias Domhan; Tomer Levinboim; Vaggelis Michelioudakis; Vassilis Papavassiliou; Vivek Kulkarni; Wang Ling; Wen Wang; Weston Feely; Wu Kui; Xanda Schofield; Xiang Li; Xiaodong He; Yan Fu; Yanran Li; Yi Luan; Yijia Liu; Yulia Tsvetkov; Zhihua Zhang.

Invited Speaker: Yoshua Bengio

Deep Learning of Semantic Representations

Abstract: The core ingredient of deep learning is the notion of distributed representation. This talk will start by explaining its theoretical advantages, in comparison with non-parametric methods based on counting frequencies of occurrence of observed tuples of values (like with n-grams). The talk will then explain how having multiple levels of representation, i.e., depth, can in principle give another exponential advantage. Neural language models have been extremely successful in recent years but extending their reach from language modeling to machine translation is very appealing because it forces the learned intermediate representations to capture meaning, and we found that the resulting word embeddings are qualitatively different. Recently, we introduced the notion of attention-based encoder-decoder systems, with impressive results on machine translation several language pairs and for mapping an image to a sentence, and these results will conclude the talk.

Biography: Yoshua Bengio received a PhD in Computer Science from McGill University, Canada in 1991. After two post-doctoral years, one at M.I.T. with Michael Jordan and one at AT&T Bell Laboratories with Yann LeCun and Vladimir Vapnik, he became professor at the Department of Computer Science and Operations Research at Université de Montréal. He is the author of two books and more than 200 publications, the most cited being in the areas of deep learning, recurrent neural networks, probabilistic learning algorithms, natural language processing and manifold learning. He is among the most cited Canadian computer scientists and is or has been associate editor of the top journals in machine learning and neural networks. Since '2000 he holds a Canada Research Chair in Statistical Learning Algorithms, since '2006 an NSERC Industrial Chair, since '2005 his is a Senior Fellow of the Canadian Institute for Advanced Research and since 2014 he co-directs its program focused on deep learning. He is on the board of the NIPS foundation and has been program chair and general chair for NIPS. He has co-organized the Learning Workshop for 14 years and co-created the new International Conference on Learning Representations. His current interests are centered around a quest for AI through machine learning, and include fundamental questions on deep learning and representation learning, the geometry of generalization in high-dimensional spaces, manifold learning, biologically inspired learning algorithms, and challenging applications of statistical machine learning.

Invited Speaker: Justin Grimmer

Measuring How Elected Officials and Constituents Communicate

Abstract: This talk will show how elected officials use communication to cultivate support with constituents, how constituents express their views to elected officials, and why biases in both kinds of communication matter for political representation. To demonstrate the bias and its effects, I propose to use novel collections of political texts and new text as data methods. Using the new data and methods, I will show how the incentives of communication contribute to perceptions of an angry public and vitriolic politicians. Among elected officials, the ideologically extreme members of Congress disproportionately participate in policy debates, resulting in political debates that occur between the most extreme members of each party. Among constituents, the most ideologically extreme and angry voters disproportionately contact their member of Congress, creating the impression of a polarized and vitriolic public. The talk will explain how the findings help us to understand how representation occurs in American politics, while also explaining how computational tools can help address questions in the social sciences.

Biography: Justin Grimmer is an associate professor of political science at Stanford University. His research examines how representation occurs in American politics using new statistical methods. His first book Representational Style in Congress: What Legislators Say and Why It Matters (Cambridge University Press, 2013) shows how senators define the type of representation they provide constituents and how this affects constituents' evaluations and was awarded the 2014 Richard Fenno Prize. His second book The Impression of Influence: How Legislator Communication and Government Spending Cultivate a Personal Vote (Princeton University Press, 2014 with Sean J. Westwood and Solomon Messing) demonstrates how legislators ensure they receive credit for government actions. His work has appeared in the American Political Science Review, American Journal of Political Science, Journal of Politics, Political Analysis, Proceedings of the National Academy of Sciences, Regulation and Governance, and Poetics.

Conference Program

Friday, September 18, 2015

18:30–20:00 Welcome Reception

Saturday, September 19, 2015

07:30–18:00 Registration

08:40–10:00 Session P1: Plenary Session

08:40–09:00 *Opening Remarks and Introductory Speeches*
General Chair, Program Co-Chairs and Local Co-Chairs

09:00–10:00 *Invited Talk: Deep Learning of Semantic Representations*
Yoshua Bengio

10:00–10:30 *Coffee break*

10:30–12:10 Session 1A: Semantics 1 (Long + TACL Papers)

10:30–10:55 *Language Understanding for Text-based Games using Deep Reinforcement Learning*
Karthik Narasimhan, Tejas Kulkarni and Regina Barzilay

10:55–11:20 *Distributional vectors encode referential attributes*
Abhijeet Gupta, Gemma Boleda, Marco Baroni and Sebastian Padó

11:20–11:45 *Building a shared world: mapping distributional to model-theoretic semantic spaces*
Aurélie Herbelot and Eva Maria Vecchi

11:45–12:10 *[TACL] Deriving Boolean Structures from Distributional Vectors*
Germán Kruszewski, Denis Paperno and Marco Baroni

Saturday, September 19, 2015 (continued)

10:30–12:10 Session 1B: Machine Translation 1 (Long + TACL Papers)

10:30–10:55 *Dependency Graph-to-String Translation*
Liangyou Li, Andy Way and Qun Liu

10:55–11:20 *Reordering Grammar Induction*
Miloš Stanojević and Khalil Sima'an

11:20–11:45 *Syntax-based Rewriting for Simultaneous Machine Translation*
He He, Alvin Grissom II, John Morgan, Jordan Boyd-Graber and Hal Daumé III

11:45–12:10 *[TACL] Modelling and Optimizing on Syntactic N-Grams for Statistical Machine Translation*
Rico Sennrich

10:30–12:10 Session 1C: NLP for the Web and Social Media, including Computational Social Science (Long Papers)

10:30–10:55 *Identifying Political Sentiment between Nation States with Social Media*
Nathanael Chambers, Victor Bowen, Ethan Genco, Xisen Tian, Eric Young, Ganesh Harihara and Eugene Yang

10:55–11:20 *Open Extraction of Fine-Grained Political Statements*
David Bamman and Noah A. Smith

11:20–11:45 *Using Personal Traits For Brand Preference Prediction*
Chao Yang, Shimei Pan, Jalal Mahmud, Huahai Yang and Padmini Srinivasan

11:45–12:10 *Semantic Annotation for Microblog Topics Using Wikipedia Temporal Information*
Tuan Tran, Nam Khanh Tran, Asmelash Teka Hadgu and Robert Jäschke

10:30–12:10 Session 1D (P1-4): Summarization (Long Paper Posters)

System Combination for Multi-document Summarization
Kai Hong, Mitchell Marcus and Ani Nenkova

Phrase-based Compressive Cross-Language Summarization
Jin-ge Yao, Xiaojun Wan and Jianguo Xiao

Re-evaluating Automatic Summarization with BLEU and 192 Shades of ROUGE
Yvette Graham

Indicative Tweet Generation: An Extractive Summarization Problem?
Priya Sidhaye and Jackie Chi Kit Cheung

10:30–12:10 Session 1D (P5): Language and Vision (Long Paper Posters)

Visual Bilingual Lexicon Induction with Transferred ConvNet Features
Douwe Kiela, Ivan Vulić and Stephen Clark

10:30–12:10 Session 1D (P6-9): Sentiment Analysis and Opinion Mining (Long Paper Posters)

Cross Lingual Sentiment Analysis using Modified BRAE
Sarthak Jain and Shashank Batra

Monotone Submodularity in Opinion Summaries
Jayanth Jayanth, Jayaprakash Sundararaj and Pushpak Bhattacharyya

Joint Prediction for Entity/Event-Level Sentiment Analysis using Probabilistic Soft Logic Models
Lingjia Deng and Janyce Wiebe

Learning to Recognize Affective Polarity in Similes
Ashequl Qadir, Ellen Riloff and Marilyn Walker

10:30–12:10 Session 1E (P1-3): Language and Vision (Short Paper Posters)

Cross-document Event Coreference Resolution based on Cross-media Features
Tongtao Zhang, Hongzhi Li, Heng Ji and Shih-Fu Chang

A Survey of Current Datasets for Vision and Language Research
Francis Ferraro, Nasrin Mostafazadeh, Ting-Hao Huang, Lucy Vanderwende, Jacob Devlin, Michel Galley and Margaret Mitchell

Combining Geometric, Textual and Visual Features for Predicting Prepositions in Image Descriptions
Arnau Ramisa, Josiah Wang, Ying Lu, Emmanuel Dellandrea, Francesc Moreno-Noguer and Robert Gaizauskas

10:30–12:10 Session 1E (P4-16): Statistical Models and Machine Learning Methods for NLP (Short Paper Posters)

On A Strictly Convex IBM Model 1
Andrei Simion, Michael Collins and Cliff Stein

Factorization of Latent Variables in Distributional Semantic Models
Arvid Österlund, David Ödling and Magnus Sahlgren

Non-lexical neural architecture for fine-grained POS Tagging
Matthieu Labeau, Kevin Löser and Alexandre Allauzen

Online Representation Learning in Recurrent Neural Language Models
Marek Rei

A Model of Zero-Shot Learning of Spoken Language Understanding
Majid Yazdani and James Henderson

Modeling Tweet Arrival Times using Log-Gaussian Cox Processes
Michal Lukasik, P. K. Srijith, Trevor Cohn and Kalina Bontcheva

Pre-Computable Multi-Layer Neural Network Language Models
Jacob Devlin, Chris Quirk and Arul Menezes

Birds of a Feather Linked Together: A Discriminative Topic Model using Link-based Priors
Weiwei Yang, Jordan Boyd-Graber and Philip Resnik

Aligning Knowledge and Text Embeddings by Entity Descriptions
Huaping Zhong, Jianwen Zhang, Zhen Wang, Hai Wan and Zheng Chen

An Empirical Analysis of Optimization for Max-Margin NLP
Jonathan K. Kummerfeld, Taylor Berg-Kirkpatrick and Dan Klein

Learning Better Embeddings for Rare Words Using Distributional Representations
Irina Sergienya and Hinrich Schütze

Composing Relationships with Translations
Alberto Garcia-Duran, Antoine Bordes and Nicolas Usunier

Noise or additional information? Leveraging crowdsource annotation item agreement for natural language tasks.
Emily Jamison and Iryna Gurevych

12:10–13:30 ***Lunch***

Saturday, September 19, 2015 (continued)

13:30–15:10 Session 2A: Statistical Modeling and Machine Learning 1 (Long + TACL Papers)

13:30–13:55 *Evaluation methods for unsupervised word embeddings*
Tobias Schnabel, Igor Labutov, David Mimno and Thorsten Joachims

13:55–14:20 *Efficient Methods for Incorporating Knowledge into Topic Models*
Yi Yang, Doug Downey and Jordan Boyd-Graber

14:20–14:45 *Traversing Knowledge Graphs in Vector Space*
Kelvin Guu, John Miller and Percy Liang

14:45–15:10 *[TACL] Improving Topic Models with Latent Feature Word Representations*
Dat Quoc Nguyen, Richard Billingsley, Lan Du and Mark Johnson

13:30–15:10 Session 2B: Tagging, Chunking and Parsing 1 (Long +TACL Papers)

13:30–13:55 *Density-Driven Cross-Lingual Transfer of Dependency Parsers*
Mohammad Sadegh Rasooli and Michael Collins

13:55–14:20 *A Neural Network Model for Low-Resource Universal Dependency Parsing*
Long Duong, Trevor Cohn, Steven Bird and Paul Cook

14:20–14:45 *Improved Transition-based Parsing by Modeling Characters instead of Words with LSTMs*
Miguel Ballesteros, Chris Dyer and Noah A. Smith

14:45–15:10 *[TACL] Approximation-Aware Dependency Parsing by Belief Propagation*
Matthew R. Gormley, Mark Dredze and Jason Eisner

13:30–15:10 Session 2C: Summarization (Long Papers)

13:30–13:55 *Sentence Compression by Deletion with LSTMs*
Katja Filippova, Enrique Alfonseca, Carlos A. Colmenares, Lukasz Kaiser and Oriol Vinyals

13:55–14:20 *An Empirical Comparison Between N-gram and Syntactic Language Models for Word Ordering*
Jiangming Liu and Yue Zhang

14:20–14:45 *A Neural Attention Model for Abstractive Sentence Summarization*
Alexander M. Rush, Sumit Chopra and Jason Weston

14:45–15:10 *Scientific Article Summarization Using Citation-Context and Article's Discourse Structure*
Arman Cohan and Nazli Goharian

13:30–15:10 Session 2D (P1-9): Text Mining and NLP Applications (Long Paper Posters)

Hashtag Recommendation Using Dirichlet Process Mixture Models Incorporating Types of Hashtags
Yeyun Gong, Qi Zhang and Xuanjing Huang

A Graph-based Readability Assessment Method using Word Coupling
Zhiwei Jiang, Gang Sun, Qing Gu, Tao Bai and Daoxu Chen

More Features Are Not Always Better: Evaluating Generalizing Models in Incident Type Classification of Tweets
Axel Schulz, Christian Guckelsberger and Benedikt Schmidt

Flexible Domain Adaptation for Automated Essay Scoring Using Correlated Linear Regression
Peter Phandi, Kian Ming A. Chai and Hwee Tou Ng

Show Me Your Evidence - an Automatic Method for Context Dependent Evidence Detection
Ruty Rinott, Lena Dankin, Carlos Alzate Perez, Mitesh M. Khapra, Ehud Aharoni and Noam Slonim

Spelling Correction of User Search Queries through Statistical Machine Translation
Saša Hasan, Carmen Heger and Saab Mansour

Human Evaluation of Grammatical Error Correction Systems
Roman Grundkiewicz, Marcin Junczys-Dowmunt and Edward Gillian

Learning a Deep Hybrid Model for Semi-Supervised Text Classification
Alexander Ororbia II, C. Lee Giles and David Reitter

Joint Embedding of Query and Ad by Leveraging Implicit Feedback
Sungjin Lee and Yifan Hu

Saturday, September 19, 2015 (continued)

13:30–15:10 Session 2E (P1-11): Information Extraction (Short Paper Posters)

Automatic Extraction of Time Expressions Accross Domains in French Narratives
Mike Donald Tapi Nzali, Xavier Tannier and Aurelie Neveol

Semi-Supervised Bootstrapping of Relationship Extractors with Distributional Semantics
David S. Batista, Bruno Martins and Mário J. Silva

Extraction and generalisation of variables from scientific publications
Erwin Marsi and Pinar Öztürk

Named entity recognition with document-specific KB tag gazetteers
Will Radford, Xavier Carreras and James Henderson

"A Spousal Relation Begins with a Deletion of engage and Ends with an Addition of divorce": Learning State Changing Verbs from Wikipedia Revision History
Derry Tanti Wijaya, Ndapandula Nakashole and Tom Mitchell

Improving Distant Supervision for Information Extraction Using Label Propagation Through Lists
Lidong Bing, Sneha Chaudhari, Richard Wang and William Cohen

An Entity-centric Approach for Overcoming Knowledge Graph Sparsity
Manjunath Hegde and Partha P. Talukdar

Semantic Relation Classification via Convolutional Neural Networks with Simple Negative Sampling
Kun Xu, Yansong Feng, Songfang Huang and Dongyan Zhao

A Baseline Temporal Tagger for all Languages
Jannik Strötgen and Michael Gertz

Named Entity Recognition for Chinese Social Media with Jointly Trained Embeddings
Nanyun Peng and Mark Dredze

Inferring Binary Relation Schemas for Open Information Extraction
Kangqi Luo, Xusheng Luo and Kenny Zhu

13:30–15:10 **Session 2E (P12-16): Information Retrieval and Question Answering (Short Paper Posters)**

LDTM: A Latent Document Type Model for Cumulative Citation Recommendation
Jingang Wang, Dandan Song, Zhiwei Zhang, Lejian Liao, Luo Si and Chin-Yew Lin

Online Sentence Novelty Scoring for Topical Document Streams
Sungjin Lee

Global Thread-level Inference for Comment Classification in Community Question Answering
Shafiq Joty, Alberto Barrón-Cedeño, Giovanni Da San Martino, Simone Filice, Lluís Màrquez, Alessandro Moschitti and Preslav Nakov

Key Concept Identification for Medical Information Retrieval
Jiaping Zheng and Hong Yu

Image-Mediated Learning for Zero-Shot Cross-Lingual Document Retrieval
Ruka Funaki and Hideki Nakayama

15:10–15:40 ***Coffee break***

15:40–17:20 **Session 3A: Sentiment Analysis and Opinion Mining 1 (Long Papers)**

15:40–16:05 *Detecting Risks in the Banking System by Sentiment Analysis*
Clemens Nopp and Allan Hanbury

16:05–16:30 *Sentiment Flow - A General Model of Web Review Argumentation*
Henning Wachsmuth, Johannes Kiesel and Benno Stein

16:30–16:55 *Neural Networks for Open Domain Targeted Sentiment*
Meishan Zhang, Yue Zhang and Duy Tin Vo

16:55–17:20 *Extracting Condition-Opinion Relations Toward Fine-grained Opinion Mining*
Yuki Nakayama and Atsushi Fujii

Saturday, September 19, 2015 (continued)

15:40–17:20 Session 3B: Semantics 2 (Long +TACL Papers)

15:40–16:05 *A large annotated corpus for learning natural language inference*
Samuel R. Bowman, Gabor Angeli, Christopher Potts and Christopher D. Manning

16:05–16:30 *Question-Answer Driven Semantic Role Labeling: Using Natural Language to Annotate Natural Language*
Luheng He, Mike Lewis and Luke Zettlemoyer

16:30–16:55 *[TACL] It's All Fun and Games until Someone Annotates: Video Games with a Purpose for Linguistic Annotation.*
David Jurgens and Roberto Navigli

16:55–17:20 *[TACL] Semantic Proto-Roles*
Drew Reisinger, Rachel Rudinger, Francis Ferraro, Kyle Rawlins and Benjamin Van Durme

15:40–17:20 Session 3C: Information Retrieval and Question Answering (Long Papers)

15:40–16:05 *Name List Only? Target Entity Disambiguation in Short Texts*
Yixin Cao, Juanzi Li, Xiaofei Guo, Shuanhu Bai, Heng Ji and Jie Tang

16:05–16:30 *Biography-Dependent Collaborative Entity Archiving for Slot Filling*
Yu Hong, Xiaobin Wang, Yadong Chen, Jian Wang, Tongtao Zhang and Heng Ji

16:30–16:55 *Stochastic Top-k ListNet*
Tianyi Luo, Dong Wang, Rong Liu and Yiqiao Pan

16:55–17:20 *Exploring Markov Logic Networks for Question Answering*
Tushar Khot, Niranjan Balasubramanian, Eric Gribkoff, Ashish Sabharwal, Peter Clark and Oren Etzioni

15:40–17:20 Session 3D (P1-9): Information Extraction (Long + TACL Paper Posters)

Language and Domain Independent Entity Linking with Quantified Collective Validation
Han Wang, Jin Guang Zheng, Xiaogang Ma, Peter Fox and Heng Ji

Modeling Relation Paths for Representation Learning of Knowledge Bases
Yankai Lin, Zhiyuan Liu, Huanbo Luan, Maosong Sun, Siwei Rao and Song Liu

Corpus-level Fine-grained Entity Typing Using Contextual Information
Yadollah Yaghoobzadeh and Hinrich Schütze

Knowledge Base Unification via Sense Embeddings and Disambiguation
Claudio Delli Bovi, Luis Espinosa Anke and Roberto Navigli

Open-Domain Name Error Detection using a Multi-Task RNN
Hao Cheng, Hao Fang and Mari Ostendorf

Extracting Relations between Non-Standard Entities using Distant Supervision and Imitation Learning
Isabelle Augenstein, Andreas Vlachos and Diana Maynard

Sieve-Based Spatial Relation Extraction with Expanding Parse Trees
Jennifer D'Souza and Vincent Ng

[TACL] Cross-Document Co-Reference Resolution using Sample-Based Clustering with Knowledge Enrichment
Sourav Dutta and Gerhard Weikum

[TACL] Combining Minimally-supervised Methods for Arabic Named Entity Recognition
Maha Althobaiti, Udo Kruschwitz and Massimo Poesio

Saturday, September 19, 2015 (continued)

15:40–17:20 Session 3E (P1-13): Text Mining and NLP Applications (Short Paper Posters)

Mr. Bennet, his coachman, and the Archbishop walk into a bar but only one of them gets recognized: On The Difficulty of Detecting Characters in Literary Texts
Hardik Vala, David Jurgens, Andrew Piper and Derek Ruths

Convolutional Sentence Kernel from Word Embeddings for Short Text Categorization
Jonghoon Kim, Francois Rousseau and Michalis Vazirgiannis

Predicting the Structure of Cooking Recipes
Jermsak Jermsurawong and Nizar Habash

TSDPMM: Incorporating Prior Topic Knowledge into Dirichlet Process Mixture Models for Text Clustering
Linmei Hu, Juanzi Li, Xiaoli Li, Chao Shao and Xuzhong Wang

Sentence Modeling with Gated Recursive Neural Network
Xinchi Chen, Xipeng Qiu, Chenxi Zhu, Shiyu Wu and Xuanjing Huang

Learning Timeline Difference for Text Categorization
Fumiyo Fukumoto and Yoshimi Suzuki

Summarizing Topical Contents from PubMed Documents Using a Thematic Analysis
Sun Kim, Lana Yeganova and W John Wilbur

Recognizing Biographical Sections in Wikipedia
Alessio Palmero Aprosio and Sara Tonelli

Learn to Solve Algebra Word Problems Using Quadratic Programming
Lipu Zhou, Shuaixiang Dai and Liwei Chen

An Unsupervised Method for Discovering Lexical Variations in Roman Urdu Informal Text
Abdul Rafae, Abdul Qayyum, Muhammad Moeenuddin, Asim Karim, Hassan Sajjad and Faisal Kamiran

Component-Enhanced Chinese Character Embeddings
Yanran Li, Wenjie Li, Fei Sun and Sujian Li

Multi-label Text Categorization with Joint Learning Predictions-as-Features Method
Li Li, Houfeng Wang, Xu Sun, Baobao Chang, Shi Zhao and Lei Sha

A Framework for Comparing Groups of Documents
Arun Maiya

Saturday, September 19, 2015 (continued)

Sunday, September 20, 2015

07:30–18:00 Registration

09:00–10:00 Session P2: Plenary Session

Invited Talk: Measuring How Elected Officials and Constituents Communicate
Justin Grimmer

10:00–10:30 ***Coffee break***

10:30–12:10 Session 4A: Information Extraction 1 (Long Papers)

10:30–10:55 *C3EL: A Joint Model for Cross-Document Co-Reference Resolution and Entity Linking*
Sourav Dutta and Gerhard Weikum

10:55–11:20 *Joint Mention Extraction and Classification with Mention Hypergraphs*
Wei Lu and Dan Roth

11:20–11:45 *FINET: Context-Aware Fine-Grained Named Entity Typing*
Luciano Del Corro, Abdalghani Abujabal, Rainer Gemulla and Gerhard Weikum

11:45–12:10 *Joint Entity Recognition and Disambiguation*
Gang Luo, Xiaojiang Huang, Chin-Yew Lin and Zaiqing Nie

10:30–12:10 Session 4B: Statistical Modeling and Machine Learning 2 (Long Papers)

10:30–10:55 *How Much Information Does a Human Translator Add to the Original?*
Barret Zoph, Marjan Ghazvininejad and Kevin Knight

10:55–11:20 *Hierarchical Recurrent Neural Network for Document Modeling*
Rui Lin, Shujie Liu, Muyun Yang, Mu Li, Ming Zhou and Sheng Li

11:20–11:45 *Auto-Sizing Neural Networks: With Applications to n-gram Language Models*
Kenton Murray and David Chiang

11:45–12:10 *Dual Decomposition Inference for Graphical Models over Strings*
Nanyun Peng, Ryan Cotterell and Jason Eisner

Sunday, September 20, 2015 (continued)

10:30–12:10 Session 4C: Discourse (Long +TACL Papers)

10:30–10:55 *Discourse parsing for multi-party chat dialogues*
Stergos Afantenos, Eric Kow, Nicholas Asher and Jérémy Perret

10:55–11:20 *Joint prediction in MST-style discourse parsing for argumentation mining*
Andreas Peldszus and Manfred Stede

11:20–11:45 *[TACL] One Vector is Not Enough: Entity-Augmented Distributed Semantics for Discourse Relations*
Yangfeng Ji and Jacob Eisenstein

11:45–12:10 *[TACL] Latent Structures for Coreference Resolution*
Sebastian Martschat and Michael Strube

10:30–12:10 Session 4D (P1-9): Semantics (Long Paper Posters)

Feature-Rich Two-Stage Logistic Regression for Monolingual Alignment
Md Arafat Sultan, Steven Bethard and Tamara Sumner

Semantic Role Labeling with Neural Network Factors
Nicholas FitzGerald, Oscar Täckström, Kuzman Ganchev and Dipanjan Das

RELLY: Inferring Hypernym Relationships Between Relational Phrases
Adam Grycner, Gerhard Weikum, Jay Pujara, James Foulds and Lise Getoor

Mise en Place: Unsupervised Interpretation of Instructional Recipes
Chloé Kiddon, Ganesa Thandavam Ponnuraj, Luke Zettlemoyer and Yejin Choi

Semantic Framework for Comparison Structures in Natural Language
Omid Bakhshandeh and James Allen

Sarcastic or Not: Word Embeddings to Predict the Literal or Sarcastic Meaning of Words
Debanjan Ghosh, Weiwei Guo and Smaranda Muresan

Incorporating Trustiness and Collective Synonym/Contrastive Evidence into Taxonomy Construction
Tuan Luu Anh, Jung-jae Kim and See Kiong Ng

Learning to Automatically Solve Logic Grid Puzzles
Arindam Mitra and Chitta Baral

Sunday, September 20, 2015 (continued)

10:30–12:10 Session 4E (P1-13): Machine Translation and Multilinguality (Short Paper Posters)

Improving fast_align by Reordering
Chenchen Ding, Masao Utiyama and Eiichiro Sumita

Touch-Based Pre-Post-Editing of Machine Translation Output
Benjamin Marie and Aurélien Max

A Discriminative Training Procedure for Continuous Translation Models
Quoc-Khanh DO, Alexandre Allauzen and François Yvon

System Combination for Machine Translation through Paraphrasing
Wei-Yun Ma and Kathleen McKeown

Hierarchical Incremental Adaptation for Statistical Machine Translation
Joern Wuebker, Spence Green and John DeNero

ReVal: A Simple and Effective Machine Translation Evaluation Metric Based on Recurrent Neural Networks
Rohit Gupta, Constantin Orasan and Josef van Genabith

Investigating Continuous Space Language Models for Machine Translation Quality Estimation
Kashif Shah, Raymond W. M. Ng, Fethi Bougares and Lucia Specia

Supervised Phrase Table Triangulation with Neural Word Embeddings for Low-Resource Languages
Tomer Levinboim and David Chiang

Translation Invariant Word Embeddings
Kejun Huang, Matt Gardner, Evangelos Papalexakis, Christos Faloutsos, Nikos Sidiropoulos, Tom Mitchell, Partha P. Talukdar and Xiao Fu

Hierarchical Phrase-based Stream Decoding
Andrew Finch, Xiaolin Wang, Masao Utiyama and Eiichiro Sumita

Rule Selection with Soft Syntactic Features for String-to-Tree Statistical Machine Translation
Fabienne Braune, Nina Seemann and Alexander Fraser

Motivating Personality-aware Machine Translation
Shachar Mirkin, Scott Nowson, Caroline Brun and Julien Perez

Trans-gram, Fast Cross-lingual Word-embeddings
Jocelyn Coulmance, Jean-Marc Marty, Guillaume Wenzek and Amine Benhalloum

Sunday, September 20, 2015 (continued)

10:30–12:10 Session 4E (P14-16): Computational Psycholinguistics (Short Paper Posters)

The Overall Markedness of Discourse Relations
Lifeng Jin and Marie-Catherine de Marneffe

Experiments in Open Domain Deception Detection
Verónica Pérez-Rosas and Rada Mihalcea

A model of rapid phonotactic generalization
Tal Linzen and Timothy O'Donnell

12:10–12:50 *Lunch*

12:50–13:30 Session P3: SIGDAT business meeting

13:30–15:10 Session 5A: Text Mining and NLP Applications 1 (Long + TACL Papers)

13:30–13:55 *[TACL] Unsupervised Identification of Translationese*
Ella Rabinovich and Shuly Wintner

13:55–14:20 *Automatically Solving Number Word Problems by Semantic Parsing and Reasoning*
Shuming Shi, Yuehui Wang, Chin-Yew Lin, Xiaojiang Liu and Yong Rui

14:20–14:45 *[TACL] Which Step Do I Take First? Troubleshooting with Bayesian Models*
Annie Louis and Mirella Lapata

14:45–15:10 *[TACL] Problems in Current Text Simplification Research: New Data Can Help*
Wei Xu, Chris Callison-Burch and Courtney Napoles

Sunday, September 20, 2015 (continued)

13:30–15:10 Session 5B: Semantics 3 (Long +TACL Papers)

13:30–13:55 *Parsing English into Abstract Meaning Representation Using Syntax-Based Machine Translation*
Michael Pust, Ulf Hermjakob, Kevin Knight, Daniel Marcu and Jonathan May

13:55–14:20 *The Forest Convolutional Network: Compositional Distributional Semantics with a Neural Chart and without Binarization*
Phong Le and Willem Zuidema

14:20–14:45 *Alignment-Based Compositional Semantics for Instruction Following*
Jacob Andreas and Dan Klein

14:45–15:10 *[TACL] Context-aware Frame-Semantic Role Labeling*
Michael Roth and Mirella Lapata

13:30–15:10 Session 5C: Phonology and Word Segmentation (Long Papers)

13:30–13:55 *Do we need bigram alignment models? On the effect of alignment quality on transduction accuracy in G2P*
Steffen Eger

13:55–14:20 *Keyboard Logs as Natural Annotations for Word Segmentation*
Fumihiko Takahasi and Shinsuke Mori

14:20–14:45 *Long Short-Term Memory Neural Networks for Chinese Word Segmentation*
Xinchi Chen, Xipeng Qiu, Chenxi Zhu, Pengfei Liu and Xuanjing Huang

14:45–15:10 *Semi-supervised Chinese Word Segmentation based on Bilingual Information*
Wei Chen and Bo Xu

13:30–15:10 Session 5D (P1-8): Machine Translation and Multilinguality (Long Paper Posters)

Hierarchical Back-off Modeling of Hiero Grammar based on Non-parametric Bayesian Model
Hidetaka Kamigaito, Taro Watanabe, Hiroya Takamura, Manabu Okumura and Eiichiro Sumita

Consistency-Aware Search for Word Alignment
Shiqi Shen, Yang Liu, Maosong Sun and Huanbo Luan

Graph-Based Collective Lexical Selection for Statistical Machine Translation
Jinsong Su, Deyi Xiong, Shujian Huang, Xianpei Han and Junfeng Yao

Bilingual Correspondence Recursive Autoencoder for Statistical Machine Translation
Jinsong Su, Deyi Xiong, Biao Zhang, Yang Liu, Junfeng Yao and Min Zhang

How to Avoid Unwanted Pregnancies: Domain Adaptation using Neural Network Models
Shafiq Joty, Hassan Sajjad, Nadir Durrani, Kamla Al-Mannai, Ahmed Abdelali and Stephan Vogel

Detecting Content-Heavy Sentences: A Cross-Language Case Study
Junyi Jessy Li and Ani Nenkova

Search-Aware Tuning for Hierarchical Phrase-based Decoding
Feifei Zhai, Liang Huang and Kai Zhao

Part-of-speech Taggers for Low-resource Languages using CCA Features
Young-Bum Kim, Benjamin Snyder and Ruhi Sarikaya

Sunday, September 20, 2015 (continued)

13:30–15:10 Session 5E (P1-12): Tagging, Chunking, Sytnax and Parsing (Short Paper Posters)

An Improved Tag Dictionary for Faster Part-of-Speech Tagging
Robert Moore

Improving Arabic Diacritization through Syntactic Analysis
Anas Shahrour, Salam Khalifa and Nizar Habash

Combining Discrete and Continuous Features for Deterministic Transition-based Dependency Parsing
Meishan Zhang and Yue Zhang

Efficient Inner-to-outer Greedy Algorithm for Higher-order Labeled Dependency Parsing
Xuezhe Ma and Eduard Hovy

Online Updating of Word Representations for Part-of-Speech Tagging
Wenpeng Yin, Tobias Schnabel and Hinrich Schütze

Empty Category Detection using Path Features and Distributed Case Frames
Shunsuke Takeno, Masaaki Nagata and Kazuhide Yamamoto

Foreebank: Syntactic Analysis of Customer Support Forums
Rasoul Kaljahi, Jennifer Foster, Johann Roturier, Corentin Ribeyre, Teresa Lynn and Joseph Le Roux

Semi-supervised Dependency Parsing using Bilexical Contextual Features from Auto-Parsed Data
Eliyahu Kiperwasser and Yoav Goldberg

Improved Transition-Based Parsing and Tagging with Neural Networks
Chris Alberti, David Weiss, Greg Coppola and Slav Petrov

Syntactic Parse Fusion
Do Kook Choe, David McClosky and Eugene Charniak

Not All Contexts Are Created Equal: Better Word Representations with Variable Attention
Wang Ling, Yulia Tsvetkov, Silvio Amir, Ramon Fermandez, Chris Dyer, Alan W Black, Isabel Trancoso and Chu-Cheng Lin

An Improved Non-monotonic Transition System for Dependency Parsing
Matthew Honnibal and Mark Johnson

Sunday, September 20, 2015 (continued)

15:10–15:40 ***Coffee break***

15:40–17:20 **Session 6A: Machine Translation 2 (Long Papers)**

15:40–16:05 *Improving Statistical Machine Translation with a Multilingual Paraphrase Database*
Ramtin Mehdizadeh Seraj, Maryam Siahbani and Anoop Sarkar

16:05–16:30 *Learning Semantic Representations for Nonterminals in Hierarchical Phrase-Based Translation*
Xing Wang, Deyi Xiong and Min Zhang

16:30–16:55 *A Comparison between Count and Neural Network Models Based on Joint Translation and Reordering Sequences*
Andreas Guta, Tamer Alkhouli, Jan-Thorsten Peter, Joern Wuebker and Hermann Ney

16:55–17:20 *Effective Approaches to Attention-based Neural Machine Translation*
Thang Luong, Hieu Pham and Christopher D. Manning

15:40–17:20 **Session 6B: Sentiment Analysis and Opinion Mining 2 / Tagging, Chunking and Parsing 2 (Long Papers)**

15:40–16:05 *Document Modeling with Gated Recurrent Neural Network for Sentiment Classification*
Duyu Tang, Bing Qin and Ting Liu

16:05–16:30 *Fine-grained Opinion Mining with Recurrent Neural Networks and Word Embeddings*
Pengfei Liu, Shafiq Joty and Helen Meng

16:30–16:55 *Joint A* CCG Parsing and Semantic Role Labelling*
Mike Lewis, Luheng He and Luke Zettlemoyer

16:55–17:20 *Improving Semantic Parsing with Enriched Synchronous Context-Free Grammar*
Junhui Li, Muhua Zhu, Wei Lu and Guodong Zhou

Sunday, September 20, 2015 (continued)

15:40–17:20 Session 6C: Language and Vision / Information Extraction 2 (Long Papers)

15:40–16:05 *Solving Geometry Problems: Combining Text and Diagram Interpretation*
Minjoon Seo, Hannaneh Hajishirzi, Ali Farhadi, Oren Etzioni and Clint Malcolm

16:05–16:30 *Do You See What I Mean? Visual Resolution of Linguistic Ambiguities*
Yevgeni Berzak, Andrei Barbu, Daniel Harari, Boris Katz and Shimon Ullman

16:30–16:55 *Efficient and Expressive Knowledge Base Completion Using Subgraph Feature Extraction*
Matt Gardner and Tom Mitchell

16:55–17:20 *Representing Text for Joint Embedding of Text and Knowledge Bases*
Kristina Toutanova, Danqi Chen, Patrick Pantel, Hoifung Poon, Pallavi Choudhury and Michael Gamon

15:40–17:20 Session 6D (P1-11): Statistical Models and Machine Learning Methods for NLP (Long Paper Posters)

A Utility Model of Authors in the Scientific Community
Yanchuan Sim, Bryan Routledge and Noah A. Smith

Finding Function in Form: Compositional Character Models for Open Vocabulary Word Representation
Wang Ling, Chris Dyer, Alan W Black, Isabel Trancoso, Ramon Fermandez, Silvio Amir, Luis Marujo and Tiago Luis

Syntax-Aware Multi-Sense Word Embeddings for Deep Compositional Models of Meaning
Jianpeng Cheng and Dimitri Kartsaklis

Conversation Trees: A Grammar Model for Topic Structure in Forums
Annie Louis and Shay B. Cohen

Fast, Flexible Models for Discovering Topic Correlation across Weakly-Related Collections
Jingwei Zhang, Aaron Gerow, Jaan Altosaar, James Evans and Richard Jean So

Molding CNNs for text: non-linear, non-consecutive convolutions
Tao Lei, Regina Barzilay and Tommi Jaakkola

Multi-Perspective Sentence Similarity Modeling with Convolutional Neural Networks
Hua He, Kevin Gimpel and Jimmy Lin

Posterior calibration and exploratory analysis for natural language processing models
Khanh Nguyen and Brendan O'Connor

A Generative Word Embedding Model and its Low Rank Positive Semidefinite Solution
Shaohua Li, Jun Zhu and Chunyan Miao

Reading Documents for Bayesian Online Change Point Detection
Taehoon Kim and Jaesik Choi

15:40–17:20 Session 6E (P1-13): Semantics (Short Paper Posters)

Recognizing Textual Entailment Using Probabilistic Inference
Lei Sha, Sujian Li, Baobao Chang, Zhifang Sui and Tingsong Jiang

Chinese Semantic Role Labeling with Bidirectional Recurrent Neural Networks
Zhen Wang, Tingsong Jiang, Baobao Chang and Zhifang Sui

Unsupervised Negation Focus Identification with Word-Topic Graph Model
Bowei Zou, Guodong Zhou and Qiaoming Zhu

Reverse-engineering Language: A Study on the Semantic Compositionality of German Compounds
Corina Dima

Event Detection and Factuality Assessment with Non-Expert Supervision
Kenton Lee, Yoav Artzi, Yejin Choi and Luke Zettlemoyer

Large-Scale Acquisition of Entailment Pattern Pairs by Exploiting Transitivity
Julien Kloetzer, Kentaro Torisawa, Chikara Hashimoto and Jong-Hoon Oh

Context-Dependent Knowledge Graph Embedding
Yuanfei Luo, Quan Wang, Bin Wang and Li Guo

Learning to Identify the Best Contexts for Knowledge-based WSD
Evgenia Wasserman Pritsker, William Cohen and Einat Minkov

Sunday, September 20, 2015 (continued)

Measuring Prerequisite Relations Among Concepts
Chen Liang, Zhaohui Wu, Wenyi Huang and C. Lee Giles

Adapting Phrase-based Machine Translation to Normalise Medical Terms in Social Media Messages
Nut Limsopatham and Nigel Collier

Script Induction as Language Modeling
Rachel Rudinger, Pushpendre Rastogi, Francis Ferraro and Benjamin Van Durme

Online Learning of Interpretable Word Embeddings
Hongyin Luo, Zhiyuan Liu, Huanbo Luan and Maosong Sun

A Strong Lexical Matching Method for the Machine Comprehension Test
Ellery Smith, Nicola Greco, Matko Bosnjak and Andreas Vlachos

19:00–23:00 Conference Dinner

Monday, September 21, 2015

07:30–18:00 Registration

09:00–10:00 Session P4: Plenary Session

09:00–09:05 *Best Paper Awards*
Chris Callison-Burch and Jian Su

09:05–09:30 *Broad-coverage CCG Semantic Parsing with AMR*
Yoav Artzi, Kenton Lee and Luke Zettlemoyer

09:30–09:55 *Semantically Conditioned LSTM-based Natural Language Generation for Spoken Dialogue Systems*
Tsung-Hsien Wen, Milica Gasic, Nikola Mrkšić, Pei-Hao Su, David Vandyke and Steve Young

09:55–10:05 *A Large Annotated Corpus for Learning Natural Language Inference*
Samuel R. Bowman, Gabor Angeli, Christopher Potts and Christopher D. Manning

10:05–10:30 ***Coffee break***

Monday, September 21, 2015 (continued)

10:30–12:10 Session 7A: Semantics 4 (Long +TACL Papers)

10:30–10:55 *Do Multi-Sense Embeddings Improve Natural Language Understanding?*
Jiwei Li and Dan Jurafsky

10:55–11:20 *Learning Semantic Composition to Detect Non-compositionality of Multiword Expressions*
Majid Yazdani, Meghdad Farahmand and James Henderson

11:20–11:45 *Solving General Arithmetic Word Problems*
Subhro Roy and Dan Roth

11:45–12:10 *[TACL] From Paraphrase Database to Compositional Paraphrase Model and Back*
John Wieting, Mohit Bansal, Kevin Gimpel, Karen Livescu and Dan Roth

10:30–12:10 Session 7B: Information Extraction 3 (Long Papers)

10:30–10:55 *Distant Supervision for Relation Extraction via Piecewise Convolutional Neural Networks*
Daojian Zeng, Kang Liu, Yubo Chen and Jun Zhao

10:55–11:20 *CORE: Context-Aware Open Relation Extraction with Factorization Machines*
Fabio Petroni, Luciano Del Corro and Rainer Gemulla

11:20–11:45 *Improved Relation Extraction with Feature-Rich Compositional Embedding Models*
Matthew R. Gormley, Mo Yu and Mark Dredze

11:45–12:10 *Classifying Relations via Long Short Term Memory Networks along Shortest Dependency Paths*
Yan Xu, Lili Mou, Ge Li, Yunchuan Chen, Hao Peng and Zhi Jin

10:30–12:10 Session 7C: Computational Psycholinguistics / Machine Translation 3 (Long Papers)

10:30–10:55 *A Computational Cognitive Model of Novel Word Generalization*
Aida Nematzadeh, Erin Grant and Suzanne Stevenson

10:55–11:20 *Personality Profiling of Fictional Characters using Sense-Level Links between Lexical Resources*
Lucie Flekova and Iryna Gurevych

11:20–11:45 *Leave-one-out Word Alignment without Garbage Collector Effects*
Xiaolin Wang, Masao Utiyama, Andrew Finch, Taro Watanabe and Eiichiro Sumita

11:45–12:10 *Generalized Agreement for Bidirectional Word Alignment*
Chunyang Liu, Yang Liu, Maosong Sun, Huanbo Luan and Heng Yu

10:30–12:10 Session 7D (P1-6): Word Segmentation, Tagging and Parsing (Long +TACL Paper Posters)

A Transition-based Model for Joint Segmentation, POS-tagging and Normalization
Tao Qian, Yue Zhang, Meishan Zhang, Yafeng Ren and Donghong Ji

Multilingual discriminative lexicalized phrase structure parsing
Benoit Crabbé

Hierarchical Low-Rank Tensors for Multilingual Transfer Parsing
Yuan Zhang and Regina Barzilay

Diversity in Spectral Learning for Natural Language Parsing
Shashi Narayan and Shay B. Cohen

Transition-based Dependency Parsing Using Two Heterogeneous Gated Recursive Neural Networks
Xinchi Chen, Yaqian Zhou, Chenxi Zhu, Xipeng Qiu and Xuanjing Huang

[TACL] A Graph-based Lattice Dependency Parser for Joint Morphological Segmentation and Syntactic Analysis
Wolfgang Seeker and Özlem Çetinoğlu

10:30–12:10 Session 7E (P1-3): Spoken Language Processing (Short Paper Posters)

Turn-taking phenomena in incremental dialogue systems
Hatim Khouzaimi, Romain Laroche and Fabrice Lefevre

Hierarchical Latent Words Language Models for Robust Modeling to Out-Of Domain Tasks
Ryo Masumura, Taichi Asami, Takanobu Oba, Hirokazu Masataki, Sumitaka Sakauchi and Akinori Ito

A Coarse-Grained Model for Optimal Coupling of ASR and SMT Systems for Speech Translation
Gaurav Kumar, Graeme Blackwood, Jan Trmal, Daniel Povey and Sanjeev Khudanpur

10:30–12:10 Session 7E (P4-18): Summarization (Short Paper Posters)

Abstractive Multi-document Summarization with Semantic Information Extraction
Wei Li

Concept-based Summarization using Integer Linear Programming: From Concept Pruning to Multiple Optimal Solutions
Florian Boudin, Hugo Mougard and Benoit Favre

GhostWriter: Using an LSTM for Automatic Rap Lyric Generation
Peter Potash, Alexey Romanov and Anna Rumshisky

Better Summarization Evaluation with Word Embeddings for ROUGE
Jun-Ping Ng and Viktoria Abrecht

Krimping texts for better summarization
Marina Litvak, Mark Last and Natalia Vanetik

From the Virtual to the RealWorld: Referring to Objects in Real-World Spatial Scenes
Dimitra Gkatzia, Verena Rieser, Phil Bartie and William Mackaness

An Unsupervised Bayesian Modelling Approach for Storyline Detection on News Articles
Deyu Zhou, Haiyang Xu and Yulan He

Topical Coherence for Graph-based Extractive Summarization
Daraksha Parveen, Hans-Martin Ramsl and Michael Strube

Monday, September 21, 2015 (continued)

Summarizing Student Responses to Reflection Prompts
Wencan Luo and Diane Litman

Extractive Summarization by Maximizing Semantic Volume
Dani Yogatama, Fei Liu and Noah A. Smith

LCSTS: A Large Scale Chinese Short Text Summarization Dataset
Baotian Hu, Qingcai Chen and Fangze Zhu

Discourse Planning with an N-gram Model of Relations
Or Biran and Kathleen McKeown

Experiments with Generative Models for Dependency Tree Linearization
Richard Futrell and Edward Gibson

Summarization Based on Embedding Distributions
Hayato Kobayashi, Masaki Noguchi and Taichi Yatsuka

Reversibility reconsidered: finite-state factors for efficient probabilistic sampling in parsing and generation
Marc Dymetman, Sriram Venkatapathy and Chunyang Xiao

12:10–13:30 ***Lunch***

13:30–15:15 **Session 8A: Fun and Quirky Topics (Short Papers)**

13:30–13:45 *A quantitative analysis of gender differences in movies using psycholinguistic normatives*
Anil Ramakrishna, Nikolaos Malandrakis, Elizabeth Staruk and Shrikanth Narayanan

13:45–14:00 *EMNLP versus ACL: Analyzing NLP research over time*
Sujatha Das Gollapalli and Xiaoli Li

14:00–14:15 *Answering Elementary Science Questions by Constructing Coherent Scenes using Background Knowledge*
Yang Li and Peter Clark

14:15–14:30 *WikiQA: A Challenge Dataset for Open-Domain Question Answering*
Yi Yang, Wen-tau Yih and Christopher Meek

Monday, September 21, 2015 (continued)

14:30–14:45 *Personalized Machine Translation: Predicting Translational Preferences*
Shachar Mirkin and Jean-Luc Meunier

14:45–15:00 *Talking to the crowd: What do people react to in online discussions?*
Aaron Jaech, Victoria Zayats, Hao Fang, Mari Ostendorf and Hannaneh Hajishirzi

15:00–15:15 *What Your Username Says About You*
Aaron Jaech and Mari Ostendorf

13:30–15:15 Session 8B: Semantics 5 (Short Papers)

13:30–13:45 *Knowledge Base Inference using Bridging Entities*
Bhushan Kotnis, Pradeep Bansal and Partha P. Talukdar

13:45–14:00 *Specializing Word Embeddings for Similarity or Relatedness*
Douwe Kiela, Felix Hill and Stephen Clark

14:00–14:15 *Evaluation of Word Vector Representations by Subspace Alignment*
Yulia Tsvetkov, Manaal Faruqui, Wang Ling, Guillaume Lample and Chris Dyer

14:15–14:30 *Higher-order logical inference with compositional semantics*
Koji Mineshima, Pascual Martínez-Gómez, Yusuke Miyao and Daisuke Bekki

14:30–14:45 *Any-language frame-semantic parsing*
Anders Johannsen, Héctor Martínez Alonso and Anders Søgaard

15:00–15:15 *What's in an Embedding? Analyzing Word Embeddings through Multilingual Evaluation*
Arne Köhn

13:30–15:15 Session 8C: Statistical Modeling, Machine Learning / Machine Translation (Short Papers)

13:30–13:45 *Joint Event Trigger Identification and Event Coreference Resolution with Structured Perceptron*
Jun Araki and Teruko Mitamura

13:45–14:00 *A Joint Dependency Model of Morphological and Syntactic Structure for Statistical Machine Translation*
Rico Sennrich and Barry Haddow

14:00–14:15 *Variable-Length Word Encodings for Neural Translation Models*
Rohan Chitnis and John DeNero

14:15–14:30 *A Binarized Neural Network Joint Model for Machine Translation*
Jingyi Zhang, Masao Utiyama, Eiichiro Sumita, Graham Neubig and Satoshi Nakamura

14:30–14:45 *Bayesian Optimization of Text Representations*
Dani Yogatama, Lingpeng Kong and Noah A. Smith

14:45–15:00 *A Comparative Study on Regularization Strategies for Embedding-based Neural Networks*
Hao Peng, Lili Mou, Ge Li, Yunchuan Chen, Yangyang Lu and Zhi Jin

15:00–15:15 *Efficient Hyper-parameter Optimization for NLP Applications*
Lidan Wang, Minwei Feng, Bowen Zhou, Bing Xiang and Sridhar Mahadevan

13:30–15:15 Session 8D (P1-6): NLP for the Web and Social Media, including Computational Social Science (Long Paper Posters)

Improved Arabic Dialect Classification with Social Media Data
Fei Huang

Exploiting Debate Portals for Semi-Supervised Argumentation Mining in User-Generated Web Discourse
Ivan Habernal and Iryna Gurevych

Confounds and Consequences in Geotagged Twitter Data
Umashanthi Pavalanathan and Jacob Eisenstein

Modeling Reportable Events as Turning Points in Narrative
Jessica Ouyang and Kathleen McKeown

Towards the Extraction of Customer-to-Customer Suggestions from Reviews
Sapna Negi and Paul Buitelaar

Using Content-level Structures for Summarizing Microblog Repost Trees
Jing Li, Wei Gao, Zhongyu Wei, Baolin Peng and Kam-Fai Wong

13:30–15:15 Session 8D (P7-9): Discourse (Long Paper Posters)

Intra-sentential Zero Anaphora Resolution using Subject Sharing Recognition
Ryu Iida, Kentaro Torisawa, Chikara Hashimoto, Jong-Hoon Oh and Julien Kloetzer

Estimation of Discourse Segmentation Labels from Crowd Data
Ziheng Huang, Jialu Zhong and Rebecca J. Passonneau

Comparing Word Representations for Implicit Discourse Relation Classification
Chloé Braud and Pascal Denis

13:30–15:15 Session 8E (P1-9): Discourse (Short Paper Posters)

Better Document-level Sentiment Analysis from RST Discourse Parsing
Parminder Bhatia, Yangfeng Ji and Jacob Eisenstein

Closing the Gap: Domain Adaptation from Explicit to Implicit Discourse Relations
Yangfeng Ji, Gongbo Zhang and Jacob Eisenstein

Wikification of Concept Mentions within Spoken Dialogues Using Domain Constraints from Wikipedia
Seokhwan Kim, Rafael E. Banchs and Haizhou Li

Shallow Convolutional Neural Network for Implicit Discourse Relation Recognition
Biao Zhang, Jinsong Su, Deyi Xiong, Yaojie Lu, Hong Duan and Junfeng Yao

On the Role of Discourse Markers for Discriminating Claims and Premises in Argumentative Discourse
Judith Eckle-Kohler, Roland Kluge and Iryna Gurevych

Fatal or not? Finding errors that lead to dialogue breakdowns in chat-oriented dialogue systems
Ryuichiro Higashinaka, Masahiro Mizukami, Kotaro Funakoshi, Masahiro Araki, Hiroshi Tsukahara and Yuka Kobayashi

Learning Word Meanings and Grammar for Describing Everyday Activities in Smart Environments
Muhammad Attamimi, Yuji Ando, Tomoaki Nakamura, Takayuki Nagai, Daichi Mochihashi, Ichiro Kobayashi and Hideki Asoh

Discourse Element Identification in Student Essays based on Global and Local Cohesion
Wei Song, Ruiji Fu, Lizhen Liu and Ting Liu

Adapting Coreference Resolution for Narrative Processing
Quynh Ngoc Thi Do, Steven Bethard and Marie-Francine Moens

13:30–15:15 Session 8E (P10-15): Phonology, Morphology and Word Segmentation (Short Paper Posters)

Joint Lemmatization and Morphological Tagging with Lemming
Thomas Müller, Ryan Cotterell, Alexander Fraser and Hinrich Schütze

Transducer Disambiguation with Sparse Topological Features
Gonzalo Iglesias, Adrià de Gispert and Bill Byrne

Arabic Diacritization with Recurrent Neural Networks
Yonatan Belinkov and James Glass

Automatic Diacritics Restoration for Hungarian
Attila Novák and Borbála Siklósi

Morphological Analysis for Unsegmented Languages using Recurrent Neural Network Language Model
Hajime Morita, Daisuke Kawahara and Sadao Kurohashi

Can Symbol Grounding Improve Low-Level NLP? Word Segmentation as a Case Study
Hirotaka Kameko, Shinsuke Mori and Yoshimasa Tsuruoka

15:15–15:40 ***Coffee break***

Monday, September 21, 2015 (continued)

15:40–17:20 Session 9A: Statistical Modeling and Machine Learning 3 (Long + TACL Papers)

15:40–16:05 *When Are Tree Structures Necessary for Deep Learning of Representations?*
Jiwei Li, Thang Luong, Dan Jurafsky and Eduard Hovy

16:05–16:30 *Discriminative Neural Sentence Modeling by Tree-Based Convolution*
Lili Mou, Hao Peng, Ge Li, Yan Xu, Lu Zhang and Zhi Jin

16:30–16:55 *Multi-Timescale Long Short-Term Memory Neural Network for Modelling Sentences and Documents*
Pengfei Liu, Xipeng Qiu, Xinchi Chen, Shiyu Wu and Xuanjing Huang

16:55–17:20 *[TACL] Learning Structural Kernels for Natural Language Processing*
Daniel Beck, Trevor Cohn, Christian Hardmeier and Lucia Specia

15:40–17:20 Session 9B: Text Mining and NLP Applications 2 (Long Papers)

15:40–16:05 *Verbal and Nonverbal Clues for Real-life Deception Detection*
Verónica Pérez-Rosas, Mohamed Abouelenien, Rada Mihalcea, Yao Xiao, CJ Linton and Mihai Burzo

16:05–16:30 *Social Media Text Classification under Negative Covariate Shift*
Geli Fei and Bing Liu

16:30–16:55 *Co-Training for Topic Classification of Scholarly Data*
Cornelia Caragea, Florin Bulgarov and Rada Mihalcea

16:55–17:20 *Humor Recognition and Humor Anchor Extraction*
Diyi Yang, Alon Lavie, Chris Dyer and Eduard Hovy

15:40–17:20 Session 9C: Spoken Language Processing and Language Modeling (Long Papers)

15:40–16:05 *Topic Identification and Discovery on Text and Speech*
Chandler May, Francis Ferraro, Alan McCree, Jonathan Wintrode, Daniel Garcia-Romero and Benjamin Van Durme

16:05–16:30 *A Dynamic Programming Algorithm for Computing N-gram Posteriors from Lattices*
Dogan Can and Shrikanth Narayanan

16:30–16:55 *Bilingual Structured Language Models for Statistical Machine Translation*
Ekaterina Garmash and Christof Monz

16:55–17:20 *Compact, Efficient and Unlimited Capacity: Language Modeling with Compressed Suffix Trees*
Ehsan Shareghi, Matthias Petri, Gholamreza Haffari and Trevor Cohn

15:40–17:20 Session 9D (P1-8): Semantics (Long Paper Posters)

ERSOM: A Structural Ontology Matching Approach Using Automatically Learned Entity Representation
Chuncheng Xiang, Tingsong Jiang, Baobao Chang and Zhifang Sui

A Single Word is not Enough: Ranking Multiword Expressions Using Distributional Semantics
Martin Riedl and Chris Biemann

Syntactic Dependencies and Distributed Word Representations for Analogy Detection and Mining
Likun Qiu, Yue Zhang and Yanan Lu

Navigating the Semantic Horizon using Relative Neighborhood Graphs
Amaru Cuba Gyllensten and Magnus Sahlgren

Multi- and Cross-Modal Semantics Beyond Vision: Grounding in Auditory Perception
Douwe Kiela and Stephen Clark

Automatic recognition of habituals: a three-way classification of clausal aspect
Annemarie Friedrich and Manfred Pinkal

Distributed Representations for Unsupervised Semantic Role Labeling
Kristian Woodsend and Mirella Lapata

A Tableau Prover for Natural Logic and Language
Lasha Abzianidze

15:40–17:20 Session 9E (P1-9): Sentiment Analysis and Opinion Mining (Short Paper Posters)

JEAM: A Novel Model for Cross-Domain Sentiment Classification Based on Emotion Analysis
Kun-Hu Luo, Zhi-Hong Deng, Hongliang Yu and Liang-Chen Wei

PhraseRNN: Phrase Recursive Neural Network for Aspect-based Sentiment Analysis
Thien Hai Nguyen and Kiyoaki Shirai

ASTD: Arabic Sentiment Tweets Dataset
Mahmoud Nabil, Mohamed Aly and Amir Atiya

Adjective Intensity and Sentiment Analysis
Raksha Sharma, Mohit Gupta, Astha Agarwal and Pushpak Bhattacharyya

The Rating Game: Sentiment Rating Reproducibility from Text
Lasse Borgholt, Peter Simonsen and Dirk Hovy

A Multi-lingual Annotated Dataset for Aspect-Oriented Opinion Mining
Salud M. Jiménez-Zafra, Giacomo Berardi, Andrea Esuli, Diego Marcheggiani, María Teresa Martín-Valdivia and Alejandro Moreo Fernández

Deep Convolutional Neural Network Textual Features and Multiple Kernel Learning for Utterance-level Multimodal Sentiment Analysis
Soujanya Poria, Erik Cambria and Alexander Gelbukh

SLSA: A Sentiment Lexicon for Standard Arabic
Ramy Eskander and Owen Rambow

Reinforcing the Topic of Embeddings with Theta Pure Dependence for Text Classification
Ning Xing, Yuexian Hou, Peng Zhang, Wenjie Li and Dawei Song

15:40–17:20 **Session 9E (P10-17): NLP for the Web and Social Media, including Computational Social Science (Short Paper Posters)**

That's So Annoying!!!: A Lexical and Frame-Semantic Embedding Based Data Augmentation Approach to Automatic Categorization of Annoying Behaviors using #petpeeve Tweets
William Yang Wang and Diyi Yang

Detection of Steganographic Techniques on Twitter
Alex Wilson, Phil Blunsom and Andrew Ker

#SupportTheCause: Identifying Motivations to Participate in Online Health Campaigns
Dong Nguyen, Tijs van den Broek, Claudia Hauff, Djoerd Hiemstra and Michel Ehrenhard

An Analysis of Domestic Abuse Discourse on Reddit
Nicolas Schrading, Cecilia Ovesdotter Alm, Ray Ptucha and Christopher Homan

Twitter-scale New Event Detection via K-term Hashing
Dominik Wurzer, Victor Lavrenko and Miles Osborne

Classifying Tweet Level Judgements of Rumours in Social Media
Michal Lukasik, Trevor Cohn and Kalina Bontcheva

Identification and Verification of Simple Claims about Statistical Properties
Andreas Vlachos and Sebastian Riedel

17:30–17:50 **Session P5: Closing Remarks**

18:30–20:00 **Farewell Drink**

List of Papers

Language Understanding for Text-based Games using Deep Reinforcement Learning
Karthik Narasimhan, Tejas Kulkarni and Regina Barzilay 1

Distributional vectors encode referential attributes
Abhijeet Gupta, Gemma Boleda, Marco Baroni and Sebastian Padó 12

Building a shared world: mapping distributional to model-theoretic semantic spaces
Aurélie Herbelot and Eva Maria Vecchi 22

Dependency Graph-to-String Translation
Liangyou Li, Andy Way and Qun Liu 33

Reordering Grammar Induction
Miloš Stanojević and Khalil Sima'an 44

Syntax-based Rewriting for Simultaneous Machine Translation
He He, Alvin Grissom II, John Morgan, Jordan Boyd-Graber and Hal Daumé III 55

Identifying Political Sentiment between Nation States with Social Media
Nathanael Chambers, Victor Bowen, Ethan Genco, Xisen Tian, Eric Young, Ganesh Harihara and Eugene Yang 65

Open Extraction of Fine-Grained Political Statements
David Bamman and Noah A. Smith 76

Using Personal Traits For Brand Preference Prediction
Chao Yang, Shimei Pan, Jalal Mahmud, Huahai Yang and Padmini Srinivasan 86

Semantic Annotation for Microblog Topics Using Wikipedia Temporal Information
Tuan Tran, Nam Khanh Tran, Asmelash Teka Hadgu and Robert Jäschke 97

System Combination for Multi-document Summarization
Kai Hong, Mitchell Marcus and Ani Nenkova 107

Phrase-based Compressive Cross-Language Summarization
Jin-ge Yao, Xiaojun Wan and Jianguo Xiao 118

Re-evaluating Automatic Summarization with BLEU and 192 Shades of ROUGE
Yvette Graham 128

Indicative Tweet Generation: An Extractive Summarization Problem?
Priya Sidhaye and Jackie Chi Kit Cheung 138

Visual Bilingual Lexicon Induction with Transferred ConvNet Features
Douwe Kiela, Ivan Vulić and Stephen Clark 148

Cross Lingual Sentiment Analysis using Modified BRAE
Sarthak Jain and Shashank Batra 159

Monotone Submodularity in Opinion Summaries
Jayanth Jayanth, Jayaprakash Sundararaj and Pushpak Bhattacharyya 169

Joint Prediction for Entity/Event-Level Sentiment Analysis using Probabilistic Soft Logic Models
Lingjia Deng and Janyce Wiebe 179

Learning to Recognize Affective Polarity in Similes
Ashequl Qadir, Ellen Riloff and Marilyn Walker 190

Cross-document Event Coreference Resolution based on Cross-media Features
Tongtao Zhang, Hongzhi Li, Heng Ji and Shih-Fu Chang 201

A Survey of Current Datasets for Vision and Language Research
Francis Ferraro, Nasrin Mostafazadeh, Ting-Hao Huang, Lucy Vanderwende, Jacob Devlin, Michel Galley and Margaret Mitchell 207

Combining Geometric, Textual and Visual Features for Predicting Prepositions in Image Descriptions
Arnau Ramisa, Josiah Wang, Ying Lu, Emmanuel Dellandrea, Francesc Moreno-Noguer and Robert Gaizauskas 214

On A Strictly Convex IBM Model 1
Andrei Simion, Michael Collins and Cliff Stein 221

Factorization of Latent Variables in Distributional Semantic Models
Arvid Österlund, David Ödling and Magnus Sahlgren 227

Non-lexical neural architecture for fine-grained POS Tagging
Matthieu Labeau, Kevin Löser and Alexandre Allauzen 232

Online Representation Learning in Recurrent Neural Language Models
Marek Rei 238

A Model of Zero-Shot Learning of Spoken Language Understanding
Majid Yazdani and James Henderson 244

Modeling Tweet Arrival Times using Log-Gaussian Cox Processes
Michal Lukasik, P. K. Srijith, Trevor Cohn and Kalina Bontcheva 250

Pre-Computable Multi-Layer Neural Network Language Models
Jacob Devlin, Chris Quirk and Arul Menezes 256

Birds of a Feather Linked Together: A Discriminative Topic Model using Link-based Priors
Weiwei Yang, Jordan Boyd-Graber and Philip Resnik 261

Aligning Knowledge and Text Embeddings by Entity Descriptions
Huaping Zhong, Jianwen Zhang, Zhen Wang, Hai Wan and Zheng Chen 267

An Empirical Analysis of Optimization for Max-Margin NLP
Jonathan K. Kummerfeld, Taylor Berg-Kirkpatrick and Dan Klein 273

Learning Better Embeddings for Rare Words Using Distributional Representations
Irina Sergienya and Hinrich Schütze 280

Composing Relationships with Translations
Alberto Garcia-Duran, Antoine Bordes and Nicolas Usunier 286

Noise or additional information? Leveraging crowdsource annotation item agreement for natural language tasks.
Emily Jamison and Iryna Gurevych 291

Evaluation methods for unsupervised word embeddings
Tobias Schnabel, Igor Labutov, David Mimno and Thorsten Joachims 298

Efficient Methods for Incorporating Knowledge into Topic Models
Yi Yang, Doug Downey and Jordan Boyd-Graber 308

Traversing Knowledge Graphs in Vector Space
Kelvin Guu, John Miller and Percy Liang 318

Density-Driven Cross-Lingual Transfer of Dependency Parsers
Mohammad Sadegh Rasooli and Michael Collins 328

A Neural Network Model for Low-Resource Universal Dependency Parsing
Long Duong, Trevor Cohn, Steven Bird and Paul Cook 339

Improved Transition-based Parsing by Modeling Characters instead of Words with LSTMs
Miguel Ballesteros, Chris Dyer and Noah A. Smith 349

Sentence Compression by Deletion with LSTMs
Katja Filippova, Enrique Alfonseca, Carlos A. Colmenares, Lukasz Kaiser and Oriol Vinyals . 360

An Empirical Comparison Between N-gram and Syntactic Language Models for Word Ordering
Jiangming Liu and Yue Zhang 369

A Neural Attention Model for Abstractive Sentence Summarization
Alexander M. Rush, Sumit Chopra and Jason Weston 379

Scientific Article Summarization Using Citation-Context and Article's Discourse Structure
Arman Cohan and Nazli Goharian 390

Hashtag Recommendation Using Dirichlet Process Mixture Models Incorporating Types of Hashtags
Yeyun Gong, Qi Zhang and Xuanjing Huang 401

A Graph-based Readability Assessment Method using Word Coupling
Zhiwei Jiang, Gang Sun, Qing Gu, Tao Bai and Daoxu Chen 411

More Features Are Not Always Better: Evaluating Generalizing Models in Incident Type Classification of Tweets
Axel Schulz, Christian Guckelsberger and Benedikt Schmidt 421

Flexible Domain Adaptation for Automated Essay Scoring Using Correlated Linear Regression
Peter Phandi, Kian Ming A. Chai and Hwee Tou Ng 431

Show Me Your Evidence - an Automatic Method for Context Dependent Evidence Detection
Ruty Rinott, Lena Dankin, Carlos Alzate Perez, Mitesh M. Khapra, Ehud Aharoni and Noam Slonim 440

Spelling Correction of User Search Queries through Statistical Machine Translation
Saša Hasan, Carmen Heger and Saab Mansour 451

Human Evaluation of Grammatical Error Correction Systems
Roman Grundkiewicz, Marcin Junczys-Dowmunt and Edward Gillian 461

Learning a Deep Hybrid Model for Semi-Supervised Text Classification
Alexander Ororbia II, C. Lee Giles and David Reitter 471

Joint Embedding of Query and Ad by Leveraging Implicit Feedback
Sungjin Lee and Yifan Hu 482

Automatic Extraction of Time Expressions Accross Domains in French Narratives
Mike Donald Tapi Nzali, Xavier Tannier and Aurelie Neveol 492

Semi-Supervised Bootstrapping of Relationship Extractors with Distributional Semantics
David S. Batista, Bruno Martins and Mário J. Silva 499

Extraction and generalisation of variables from scientific publications
Erwin Marsi and Pinar Öztürk 505

Named entity recognition with document-specific KB tag gazetteers
Will Radford, Xavier Carreras and James Henderson 512

"A Spousal Relation Begins with a Deletion of engage and Ends with an Addition of divorce": Learning State Changing Verbs from Wikipedia Revision History
Derry Tanti Wijaya, Ndapandula Nakashole and Tom Mitchell 518

Improving Distant Supervision for Information Extraction Using Label Propagation Through Lists
Lidong Bing, Sneha Chaudhari, Richard Wang and William Cohen 524

An Entity-centric Approach for Overcoming Knowledge Graph Sparsity
Manjunath Hegde and Partha P. Talukdar 530

Semantic Relation Classification via Convolutional Neural Networks with Simple Negative Sampling
Kun Xu, Yansong Feng, Songfang Huang and Dongyan Zhao 536

A Baseline Temporal Tagger for all Languages
Jannik Strötgen and Michael Gertz 541

Named Entity Recognition for Chinese Social Media with Jointly Trained Embeddings
Nanyun Peng and Mark Dredze 548

Inferring Binary Relation Schemas for Open Information Extraction
Kangqi Luo, Xusheng Luo and Kenny Zhu 555

LDTM: A Latent Document Type Model for Cumulative Citation Recommendation
Jingang Wang, Dandan Song, Zhiwei Zhang, Lejian Liao, Luo Si and Chin-Yew Lin 561

Online Sentence Novelty Scoring for Topical Document Streams
Sungjin Lee 567

Global Thread-level Inference for Comment Classification in Community Question Answering
Shafiq Joty, Alberto Barrón-Cedeño, Giovanni Da San Martino, Simone Filice, Lluís Màrquez, Alessandro Moschitti and Preslav Nakov 573

Key Concept Identification for Medical Information Retrieval
Jiaping Zheng and Hong Yu 579

Image-Mediated Learning for Zero-Shot Cross-Lingual Document Retrieval
Ruka Funaki and Hideki Nakayama 585

Detecting Risks in the Banking System by Sentiment Analysis
Clemens Nopp and Allan Hanbury 591

Sentiment Flow - A General Model of Web Review Argumentation
Henning Wachsmuth, Johannes Kiesel and Benno Stein 601

Neural Networks for Open Domain Targeted Sentiment
Meishan Zhang, Yue Zhang and Duy Tin Vo 612

Extracting Condition-Opinion Relations Toward Fine-grained Opinion Mining
Yuki Nakayama and Atsushi Fujii 622

A large annotated corpus for learning natural language inference
Samuel R. Bowman, Gabor Angeli, Christopher Potts and Christopher D. Manning 632

Question-Answer Driven Semantic Role Labeling: Using Natural Language to Annotate Natural Language
Luheng He, Mike Lewis and Luke Zettlemoyer 643

Name List Only? Target Entity Disambiguation in Short Texts
Yixin Cao, Juanzi Li, Xiaofei Guo, Shuanhu Bai, Heng Ji and Jie Tang 654

Biography-Dependent Collaborative Entity Archiving for Slot Filling
Yu Hong, Xiaobin Wang, Yadong Chen, Jian Wang, Tongtao Zhang and Heng Ji 665

Stochastic Top-k ListNet
Tianyi Luo, Dong Wang, Rong Liu and Yiqiao Pan 676

Exploring Markov Logic Networks for Question Answering
Tushar Khot, Niranjan Balasubramanian, Eric Gribkoff, Ashish Sabharwal, Peter Clark and Oren Etzioni 685

Language and Domain Independent Entity Linking with Quantified Collective Validation
Han Wang, Jin Guang Zheng, Xiaogang Ma, Peter Fox and Heng Ji 695

Modeling Relation Paths for Representation Learning of Knowledge Bases
Yankai Lin, Zhiyuan Liu, Huanbo Luan, Maosong Sun, Siwei Rao and Song Liu 705

Corpus-level Fine-grained Entity Typing Using Contextual Information
Yadollah Yaghoobzadeh and Hinrich Schütze 715

Knowledge Base Unification via Sense Embeddings and Disambiguation
Claudio Delli Bovi, Luis Espinosa Anke and Roberto Navigli 726

Open-Domain Name Error Detection using a Multi-Task RNN
Hao Cheng, Hao Fang and Mari Ostendorf 737

Extracting Relations between Non-Standard Entities using Distant Supervision and Imitation Learning
Isabelle Augenstein, Andreas Vlachos and Diana Maynard 747

Sieve-Based Spatial Relation Extraction with Expanding Parse Trees
Jennifer D'Souza and Vincent Ng 758

Mr. Bennet, his coachman, and the Archbishop walk into a bar but only one of them gets recognized: On The Difficulty of Detecting Characters in Literary Texts
Hardik Vala, David Jurgens, Andrew Piper and Derek Ruths 769

Convolutional Sentence Kernel from Word Embeddings for Short Text Categorization
Jonghoon Kim, Francois Rousseau and Michalis Vazirgiannis 775

Predicting the Structure of Cooking Recipes
Jermsak Jermsurawong and Nizar Habash 781

TSDPMM: Incorporating Prior Topic Knowledge into Dirichlet Process Mixture Models for Text Clustering
Linmei Hu, Juanzi Li, Xiaoli Li, Chao Shao and Xuzhong Wang 787

Sentence Modeling with Gated Recursive Neural Network
Xinchi Chen, Xipeng Qiu, Chenxi Zhu, Shiyu Wu and Xuanjing Huang 793

Learning Timeline Difference for Text Categorization
Fumiyo Fukumoto and Yoshimi Suzuki 799

Summarizing Topical Contents from PubMed Documents Using a Thematic Analysis
Sun Kim, Lana Yeganova and W John Wilbur 805

Recognizing Biographical Sections in Wikipedia
Alessio Palmero Aprosio and Sara Tonelli 811

Learn to Solve Algebra Word Problems Using Quadratic Programming
Lipu Zhou, Shuaixiang Dai and Liwei Chen 817

An Unsupervised Method for Discovering Lexical Variations in Roman Urdu Informal Text
Abdul Rafae, Abdul Qayyum, Muhammad Moeenuddin, Asim Karim, Hassan Sajjad and Faisal Kamiran 823

Component-Enhanced Chinese Character Embeddings
Yanran Li, Wenjie Li, Fei Sun and Sujian Li 829

Multi-label Text Categorization with Joint Learning Predictions-as-Features Method
Li Li, Houfeng Wang, Xu Sun, Baobao Chang, Shi Zhao and Lei Sha 835

A Framework for Comparing Groups of Documents
Arun Maiya 840

C3EL: A Joint Model for Cross-Document Co-Reference Resolution and Entity Linking
Sourav Dutta and Gerhard Weikum 846

Joint Mention Extraction and Classification with Mention Hypergraphs
Wei Lu and Dan Roth 857

FINET: Context-Aware Fine-Grained Named Entity Typing
Luciano Del Corro, Abdalghani Abujabal, Rainer Gemulla and Gerhard Weikum 868

Joint Entity Recognition and Disambiguation
Gang Luo, Xiaojiang Huang, Chin-Yew Lin and Zaiqing Nie 879

How Much Information Does a Human Translator Add to the Original?
Barret Zoph, Marjan Ghazvininejad and Kevin Knight 889

Hierarchical Recurrent Neural Network for Document Modeling
Rui Lin, Shujie Liu, Muyun Yang, Mu Li, Ming Zhou and Sheng Li 899

Auto-Sizing Neural Networks: With Applications to n-gram Language Models
Kenton Murray and David Chiang 908

Dual Decomposition Inference for Graphical Models over Strings
Nanyun Peng, Ryan Cotterell and Jason Eisner 917

Discourse parsing for multi-party chat dialogues
Stergos Afantenos, Eric Kow, Nicholas Asher and Jérémy Perret 928

Joint prediction in MST-style discourse parsing for argumentation mining
Andreas Peldszus and Manfred Stede 938

Feature-Rich Two-Stage Logistic Regression for Monolingual Alignment
Md Arafat Sultan, Steven Bethard and Tamara Sumner 949

Semantic Role Labeling with Neural Network Factors
Nicholas FitzGerald, Oscar Täckström, Kuzman Ganchev and Dipanjan Das 960

RELLY: Inferring Hypernym Relationships Between Relational Phrases
Adam Grycner, Gerhard Weikum, Jay Pujara, James Foulds and Lise Getoor 971

Mise en Place: Unsupervised Interpretation of Instructional Recipes
Chloé Kiddon, Ganesa Thandavam Ponnuraj, Luke Zettlemoyer and Yejin Choi 982

Semantic Framework for Comparison Structures in Natural Language
Omid Bakhshandeh and James Allen 993

Sarcastic or Not: Word Embeddings to Predict the Literal or Sarcastic Meaning of Words
Debanjan Ghosh, Weiwei Guo and Smaranda Muresan 1003

Incorporating Trustiness and Collective Synonym/Contrastive Evidence into Taxonomy Construction
Tuan Luu Anh, Jung-jae Kim and See Kiong Ng 1013

Learning to Automatically Solve Logic Grid Puzzles
Arindam Mitra and Chitta Baral 1023

Improving fast_align by Reordering
Chenchen Ding, Masao Utiyama and Eiichiro Sumita 1034

Touch-Based Pre-Post-Editing of Machine Translation Output
Benjamin Marie and Aurélien Max 1040

A Discriminative Training Procedure for Continuous Translation Models
Quoc-Khanh DO, Alexandre Allauzen and François Yvon 1046

System Combination for Machine Translation through Paraphrasing
Wei-Yun Ma and Kathleen McKeown 1053

Hierarchical Incremental Adaptation for Statistical Machine Translation
Joern Wuebker, Spence Green and John DeNero 1059

ReVal: A Simple and Effective Machine Translation Evaluation Metric Based on Recurrent Neural Networks
Rohit Gupta, Constantin Orasan and Josef van Genabith 1066

Investigating Continuous Space Language Models for Machine Translation Quality Estimation
Kashif Shah, Raymond W. M. Ng, Fethi Bougares and Lucia Specia 1073

Supervised Phrase Table Triangulation with Neural Word Embeddings for Low-Resource Languages
Tomer Levinboim and David Chiang 1079

Translation Invariant Word Embeddings
Kejun Huang, Matt Gardner, Evangelos Papalexakis, Christos Faloutsos, Nikos Sidiropoulos, Tom Mitchell, Partha P. Talukdar and Xiao Fu 1084

Hierarchical Phrase-based Stream Decoding
Andrew Finch, Xiaolin Wang, Masao Utiyama and Eiichiro Sumita 1089

Rule Selection with Soft Syntactic Features for String-to-Tree Statistical Machine Translation
Fabienne Braune, Nina Seemann and Alexander Fraser 1095

Motivating Personality-aware Machine Translation
Shachar Mirkin, Scott Nowson, Caroline Brun and Julien Perez 1102

Trans-gram, Fast Cross-lingual Word-embeddings
Jocelyn Coulmance, Jean-Marc Marty, Guillaume Wenzek and Amine Benhalloum 1109

The Overall Markedness of Discourse Relations
Lifeng Jin and Marie-Catherine de Marneffe 1114

Experiments in Open Domain Deception Detection
Verónica Pérez-Rosas and Rada Mihalcea 1120

A model of rapid phonotactic generalization
Tal Linzen and Timothy O'Donnell 1126

Automatically Solving Number Word Problems by Semantic Parsing and Reasoning
Shuming Shi, Yuehui Wang, Chin-Yew Lin, Xiaojiang Liu and Yong Rui 1132

Parsing English into Abstract Meaning Representation Using Syntax-Based Machine Translation
Michael Pust, Ulf Hermjakob, Kevin Knight, Daniel Marcu and Jonathan May 1143

The Forest Convolutional Network: Compositional Distributional Semantics with a Neural Chart and without Binarization
Phong Le and Willem Zuidema 1155

Alignment-Based Compositional Semantics for Instruction Following
Jacob Andreas and Dan Klein 1165

Do we need bigram alignment models? On the effect of alignment quality on transduction accuracy in G2P
Steffen Eger 1175

Keyboard Logs as Natural Annotations for Word Segmentation
Fumihiko Takahasi and Shinsuke Mori 1186

Long Short-Term Memory Neural Networks for Chinese Word Segmentation
Xinchi Chen, Xipeng Qiu, Chenxi Zhu, Pengfei Liu and Xuanjing Huang 1197

Semi-supervised Chinese Word Segmentation based on Bilingual Information
Wei Chen and Bo Xu 1207

Hierarchical Back-off Modeling of Hiero Grammar based on Non-parametric Bayesian Model
Hidetaka Kamigaito, Taro Watanabe, Hiroya Takamura, Manabu Okumura and Eiichiro Sumita 1217

Consistency-Aware Search for Word Alignment
Shiqi Shen, Yang Liu, Maosong Sun and Huanbo Luan 1228

Graph-Based Collective Lexical Selection for Statistical Machine Translation
Jinsong Su, Deyi Xiong, Shujian Huang, Xianpei Han and Junfeng Yao 1238

Bilingual Correspondence Recursive Autoencoder for Statistical Machine Translation
Jinsong Su, Deyi Xiong, Biao Zhang, Yang Liu, Junfeng Yao and Min Zhang 1248

How to Avoid Unwanted Pregnancies: Domain Adaptation using Neural Network Models
Shafiq Joty, Hassan Sajjad, Nadir Durrani, Kamla Al-Mannai, Ahmed Abdelali and Stephan Vogel 1259

Detecting Content-Heavy Sentences: A Cross-Language Case Study
Junyi Jessy Li and Ani Nenkova 1271

Search-Aware Tuning for Hierarchical Phrase-based Decoding
Feifei Zhai, Liang Huang and Kai Zhao 1282

Part-of-speech Taggers for Low-resource Languages using CCA Features
Young-Bum Kim, Benjamin Snyder and Ruhi Sarikaya 1292

An Improved Tag Dictionary for Faster Part-of-Speech Tagging
Robert Moore 1303

Improving Arabic Diacritization through Syntactic Analysis
Anas Shahrour, Salam Khalifa and Nizar Habash 1309

Combining Discrete and Continuous Features for Deterministic Transition-based Dependency Parsing
Meishan Zhang and Yue Zhang 1316

Efficient Inner-to-outer Greedy Algorithm for Higher-order Labeled Dependency Parsing
Xuezhe Ma and Eduard Hovy 1322

Online Updating of Word Representations for Part-of-Speech Tagging
Wenpeng Yin, Tobias Schnabel and Hinrich Schütze 1329

Empty Category Detection using Path Features and Distributed Case Frames
Shunsuke Takeno, Masaaki Nagata and Kazuhide Yamamoto 1335

Foreebank: Syntactic Analysis of Customer Support Forums
Rasoul Kaljahi, Jennifer Foster, Johann Roturier, Corentin Ribeyre, Teresa Lynn and Joseph Le Roux 1341

Semi-supervised Dependency Parsing using Bilexical Contextual Features from Auto-Parsed Data
Eliyahu Kiperwasser and Yoav Goldberg 1348

Improved Transition-Based Parsing and Tagging with Neural Networks
Chris Alberti, David Weiss, Greg Coppola and Slav Petrov 1354

Syntactic Parse Fusion
Do Kook Choe, David McClosky and Eugene Charniak 1360

Not All Contexts Are Created Equal: Better Word Representations with Variable Attention
Wang Ling, Yulia Tsvetkov, Silvio Amir, Ramon Fermandez, Chris Dyer, Alan W Black, Isabel Trancoso and Chu-Cheng Lin 1367

An Improved Non-monotonic Transition System for Dependency Parsing
Matthew Honnibal and Mark Johnson 1373

Improving Statistical Machine Translation with a Multilingual Paraphrase Database
Ramtin Mehdizadeh Seraj, Maryam Siahbani and Anoop Sarkar 1379

Learning Semantic Representations for Nonterminals in Hierarchical Phrase-Based Translation
Xing Wang, Deyi Xiong and Min Zhang 1391

A Comparison between Count and Neural Network Models Based on Joint Translation and Reordering Sequences
Andreas Guta, Tamer Alkhouli, Jan-Thorsten Peter, Joern Wuebker and Hermann Ney 1401

Effective Approaches to Attention-based Neural Machine Translation
Thang Luong, Hieu Pham and Christopher D. Manning 1412

Document Modeling with Gated Recurrent Neural Network for Sentiment Classification
Duyu Tang, Bing Qin and Ting Liu 1422

Fine-grained Opinion Mining with Recurrent Neural Networks and Word Embeddings
Pengfei Liu, Shafiq Joty and Helen Meng 1433

Joint A CCG Parsing and Semantic Role Labelling*
Mike Lewis, Luheng He and Luke Zettlemoyer 1444

Improving Semantic Parsing with Enriched Synchronous Context-Free Grammar
Junhui Li, Muhua Zhu, Wei Lu and Guodong Zhou 1455

Solving Geometry Problems: Combining Text and Diagram Interpretation
Minjoon Seo, Hannaneh Hajishirzi, Ali Farhadi, Oren Etzioni and Clint Malcolm 1466

Do You See What I Mean? Visual Resolution of Linguistic Ambiguities
Yevgeni Berzak, Andrei Barbu, Daniel Harari, Boris Katz and Shimon Ullman 1477

Efficient and Expressive Knowledge Base Completion Using Subgraph Feature Extraction
Matt Gardner and Tom Mitchell 1488

Representing Text for Joint Embedding of Text and Knowledge Bases
Kristina Toutanova, Danqi Chen, Patrick Pantel, Hoifung Poon, Pallavi Choudhury and Michael Gamon 1499

A Utility Model of Authors in the Scientific Community
Yanchuan Sim, Bryan Routledge and Noah A. Smith 1510

Finding Function in Form: Compositional Character Models for Open Vocabulary Word Representation
Wang Ling, Chris Dyer, Alan W Black, Isabel Trancoso, Ramon Fermandez, Silvio Amir, Luis Marujo and Tiago Luis 1520

Syntax-Aware Multi-Sense Word Embeddings for Deep Compositional Models of Meaning
Jianpeng Cheng and Dimitri Kartsaklis 1531

Conversation Trees: A Grammar Model for Topic Structure in Forums
Annie Louis and Shay B. Cohen 1543

Fast, Flexible Models for Discovering Topic Correlation across Weakly-Related Collections
Jingwei Zhang, Aaron Gerow, Jaan Altosaar, James Evans and Richard Jean So 1554

Molding CNNs for text: non-linear, non-consecutive convolutions
Tao Lei, Regina Barzilay and Tommi Jaakkola 1565

Multi-Perspective Sentence Similarity Modeling with Convolutional Neural Networks
Hua He, Kevin Gimpel and Jimmy Lin 1576

Posterior calibration and exploratory analysis for natural language processing models
Khanh Nguyen and Brendan O'Connor 1587

A Generative Word Embedding Model and its Low Rank Positive Semidefinite Solution
Shaohua Li, Jun Zhu and Chunyan Miao 1599

Reading Documents for Bayesian Online Change Point Detection
Taehoon Kim and Jaesik Choi 1610

Recognizing Textual Entailment Using Probabilistic Inference
Lei Sha, Sujian Li, Baobao Chang, Zhifang Sui and Tingsong Jiang 1620

Chinese Semantic Role Labeling with Bidirectional Recurrent Neural Networks
Zhen Wang, Tingsong Jiang, Baobao Chang and Zhifang Sui 1626

Unsupervised Negation Focus Identification with Word-Topic Graph Model
Bowei Zou, Guodong Zhou and Qiaoming Zhu 1632

Reverse-engineering Language: A Study on the Semantic Compositionality of German Compounds
Corina Dima 1637

Event Detection and Factuality Assessment with Non-Expert Supervision
Kenton Lee, Yoav Artzi, Yejin Choi and Luke Zettlemoyer 1643

Large-Scale Acquisition of Entailment Pattern Pairs by Exploiting Transitivity
Julien Kloetzer, Kentaro Torisawa, Chikara Hashimoto and Jong-Hoon Oh 1649

Context-Dependent Knowledge Graph Embedding
Yuanfei Luo, Quan Wang, Bin Wang and Li Guo 1656

Learning to Identify the Best Contexts for Knowledge-based WSD
Evgenia Wasserman Pritsker, William Cohen and Einat Minkov 1662

Measuring Prerequisite Relations Among Concepts
Chen Liang, Zhaohui Wu, Wenyi Huang and C. Lee Giles 1668

Adapting Phrase-based Machine Translation to Normalise Medical Terms in Social Media Messages
Nut Limsopatham and Nigel Collier 1675

Script Induction as Language Modeling
Rachel Rudinger, Pushpendre Rastogi, Francis Ferraro and Benjamin Van Durme 1681

Online Learning of Interpretable Word Embeddings
Hongyin Luo, Zhiyuan Liu, Huanbo Luan and Maosong Sun 1687

A Strong Lexical Matching Method for the Machine Comprehension Test
Ellery Smith, Nicola Greco, Matko Bosnjak and Andreas Vlachos 1693

Broad-coverage CCG Semantic Parsing with AMR
Yoav Artzi, Kenton Lee and Luke Zettlemoyer 1699

Semantically Conditioned LSTM-based Natural Language Generation for Spoken Dialogue Systems
Tsung-Hsien Wen, Milica Gasic, Nikola Mrkšić, Pei-Hao Su, David Vandyke and Steve Young1711

Do Multi-Sense Embeddings Improve Natural Language Understanding?
Jiwei Li and Dan Jurafsky 1722

Learning Semantic Composition to Detect Non-compositionality of Multiword Expressions
Majid Yazdani, Meghdad Farahmand and James Henderson 1733

Solving General Arithmetic Word Problems
Subhro Roy and Dan Roth 1743

Distant Supervision for Relation Extraction via Piecewise Convolutional Neural Networks
Daojian Zeng, Kang Liu, Yubo Chen and Jun Zhao 1753

CORE: Context-Aware Open Relation Extraction with Factorization Machines
Fabio Petroni, Luciano Del Corro and Rainer Gemulla 1763

Improved Relation Extraction with Feature-Rich Compositional Embedding Models
Matthew R. Gormley, Mo Yu and Mark Dredze 1774

Classifying Relations via Long Short Term Memory Networks along Shortest Dependency Paths
Yan Xu, Lili Mou, Ge Li, Yunchuan Chen, Hao Peng and Zhi Jin 1785

A Computational Cognitive Model of Novel Word Generalization
Aida Nematzadeh, Erin Grant and Suzanne Stevenson 1795

Personality Profiling of Fictional Characters using Sense-Level Links between Lexical Resources
Lucie Flekova and Iryna Gurevych 1805

Leave-one-out Word Alignment without Garbage Collector Effects
Xiaolin Wang, Masao Utiyama, Andrew Finch, Taro Watanabe and Eiichiro Sumita 1817

Generalized Agreement for Bidirectional Word Alignment
Chunyang Liu, Yang Liu, Maosong Sun, Huanbo Luan and Heng Yu 1828

A Transition-based Model for Joint Segmentation, POS-tagging and Normalization
Tao Qian, Yue Zhang, Meishan Zhang, Yafeng Ren and Donghong Ji 1837

Multilingual discriminative lexicalized phrase structure parsing
Benoit Crabbé 1847

Hierarchical Low-Rank Tensors for Multilingual Transfer Parsing
Yuan Zhang and Regina Barzilay 1857

Diversity in Spectral Learning for Natural Language Parsing
Shashi Narayan and Shay B. Cohen 1868

Transition-based Dependency Parsing Using Two Heterogeneous Gated Recursive Neural Networks
Xinchi Chen, Yaqian Zhou, Chenxi Zhu, Xipeng Qiu and Xuanjing Huang 1879

Turn-taking phenomena in incremental dialogue systems
Hatim Khouzaimi, Romain Laroche and Fabrice Lefevre 1890

Hierarchical Latent Words Language Models for Robust Modeling to Out-Of Domain Tasks
Ryo Masumura, Taichi Asami, Takanobu Oba, Hirokazu Masataki, Sumitaka Sakauchi and Akinori Ito 1896

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Gaurav Kumar, Graeme Blackwood, Jan Trmal, Daniel Povey and Sanjeev Khudanpur 1902

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Wei Li 1908

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Jun-Ping Ng and Viktoria Abrecht 1925

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Marina Litvak, Mark Last and Natalia Vanetik 1931

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Dimitra Gkatzia, Verena Rieser, Phil Bartie and William Mackaness 1936

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Deyu Zhou, Haiyang Xu and Yulan He 1943

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Daraksha Parveen, Hans-Martin Ramsl and Michael Strube 1949

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Wencan Luo and Diane Litman 1955

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Dani Yogatama, Fei Liu and Noah A. Smith 1961

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Baotian Hu, Qingcai Chen and Fangze Zhu 1967

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Or Biran and Kathleen McKeown 1973

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Richard Futrell and Edward Gibson 1978

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Hayato Kobayashi, Masaki Noguchi and Taichi Yatsuka 1984

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Marc Dymetman, Sriram Venkatapathy and Chunyang Xiao 1990

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Anil Ramakrishna, Nikolaos Malandrakis, Elizabeth Staruk and Shrikanth Narayanan 1996

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Sujatha Das Gollapalli and Xiaoli Li 2002

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Yang Li and Peter Clark 2007

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Yi Yang, Wen-tau Yih and Christopher Meek 2013

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Shachar Mirkin and Jean-Luc Meunier 2019

Talking to the crowd: What do people react to in online discussions?
Aaron Jaech, Victoria Zayats, Hao Fang, Mari Ostendorf and Hannaneh Hajishirzi 2026

What Your Username Says About You
Aaron Jaech and Mari Ostendorf 2032

Knowledge Base Inference using Bridging Entities
Bhushan Kotnis, Pradeep Bansal and Partha P. Talukdar 2038

Specializing Word Embeddings for Similarity or Relatedness
Douwe Kiela, Felix Hill and Stephen Clark 2044

Evaluation of Word Vector Representations by Subspace Alignment
Yulia Tsvetkov, Manaal Faruqui, Wang Ling, Guillaume Lample and Chris Dyer 2049

Higher-order logical inference with compositional semantics
Koji Mineshima, Pascual Martínez-Gómez, Yusuke Miyao and Daisuke Bekki 2055

Any-language frame-semantic parsing
Anders Johannsen, Héctor Martínez Alonso and Anders Søgaard 2062

What's in an Embedding? Analyzing Word Embeddings through Multilingual Evaluation
Arne Köhn 2067

Joint Event Trigger Identification and Event Coreference Resolution with Structured Perceptron
Jun Araki and Teruko Mitamura 2074

A Joint Dependency Model of Morphological and Syntactic Structure for Statistical Machine Translation
Rico Sennrich and Barry Haddow 2081

Variable-Length Word Encodings for Neural Translation Models
Rohan Chitnis and John DeNero 2088

A Binarized Neural Network Joint Model for Machine Translation
Jingyi Zhang, Masao Utiyama, Eiichiro Sumita, Graham Neubig and Satoshi Nakamura 2094

Bayesian Optimization of Text Representations
Dani Yogatama, Lingpeng Kong and Noah A. Smith 2100

A Comparative Study on Regularization Strategies for Embedding-based Neural Networks
Hao Peng, Lili Mou, Ge Li, Yunchuan Chen, Yangyang Lu and Zhi Jin 2106

Efficient Hyper-parameter Optimization for NLP Applications
Lidan Wang, Minwei Feng, Bowen Zhou, Bing Xiang and Sridhar Mahadevan 2112

Improved Arabic Dialect Classification with Social Media Data
Fei Huang 2118

Exploiting Debate Portals for Semi-Supervised Argumentation Mining in User-Generated Web Discourse
Ivan Habernal and Iryna Gurevych 2127

Confounds and Consequences in Geotagged Twitter Data
Umashanthi Pavalanathan and Jacob Eisenstein 2138

Modeling Reportable Events as Turning Points in Narrative
Jessica Ouyang and Kathleen McKeown 2149

Towards the Extraction of Customer-to-Customer Suggestions from Reviews
Sapna Negi and Paul Buitelaar 2159

Using Content-level Structures for Summarizing Microblog Repost Trees
Jing Li, Wei Gao, Zhongyu Wei, Baolin Peng and Kam-Fai Wong 2168

Intra-sentential Zero Anaphora Resolution using Subject Sharing Recognition
Ryu Iida, Kentaro Torisawa, Chikara Hashimoto, Jong-Hoon Oh and Julien Kloetzer 2179

Estimation of Discourse Segmentation Labels from Crowd Data
Ziheng Huang, Jialu Zhong and Rebecca J. Passonneau 2190

Comparing Word Representations for Implicit Discourse Relation Classification
Chloé Braud and Pascal Denis 2201

Better Document-level Sentiment Analysis from RST Discourse Parsing
Parminder Bhatia, Yangfeng Ji and Jacob Eisenstein 2212

Closing the Gap: Domain Adaptation from Explicit to Implicit Discourse Relations
Yangfeng Ji, Gongbo Zhang and Jacob Eisenstein 2219

Wikification of Concept Mentions within Spoken Dialogues Using Domain Constraints from Wikipedia
Seokhwan Kim, Rafael E. Banchs and Haizhou Li 2225

Shallow Convolutional Neural Network for Implicit Discourse Relation Recognition
Biao Zhang, Jinsong Su, Deyi Xiong, Yaojie Lu, Hong Duan and Junfeng Yao 2230

On the Role of Discourse Markers for Discriminating Claims and Premises in Argumentative Discourse
Judith Eckle-Kohler, Roland Kluge and Iryna Gurevych 2236

Fatal or not? Finding errors that lead to dialogue breakdowns in chat-oriented dialogue systems
Ryuichiro Higashinaka, Masahiro Mizukami, Kotaro Funakoshi, Masahiro Araki, Hiroshi Tsukahara and Yuka Kobayashi 2243

Learning Word Meanings and Grammar for Describing Everyday Activities in Smart Environments
Muhammad Attamimi, Yuji Ando, Tomoaki Nakamura, Takayuki Nagai, Daichi Mochihashi, Ichiro Kobayashi and Hideki Asoh 2249

Discourse Element Identification in Student Essays based on Global and Local Cohesion
Wei Song, Ruiji Fu, Lizhen Liu and Ting Liu 2255

Adapting Coreference Resolution for Narrative Processing
Quynh Ngoc Thi Do, Steven Bethard and Marie-Francine Moens 2262

Joint Lemmatization and Morphological Tagging with Lemming
Thomas Müller, Ryan Cotterell, Alexander Fraser and Hinrich Schütze 2268

Transducer Disambiguation with Sparse Topological Features
Gonzalo Iglesias, Adrià de Gispert and Bill Byrne 2275

Arabic Diacritization with Recurrent Neural Networks
Yonatan Belinkov and James Glass 2281

Automatic Diacritics Restoration for Hungarian
Attila Novák and Borbála Siklósi 2286

Morphological Analysis for Unsegmented Languages using Recurrent Neural Network Language Model
Hajime Morita, Daisuke Kawahara and Sadao Kurohashi 2292

Can Symbol Grounding Improve Low-Level NLP? Word Segmentation as a Case Study
Hirotaka Kameko, Shinsuke Mori and Yoshimasa Tsuruoka 2298

When Are Tree Structures Necessary for Deep Learning of Representations?
Jiwei Li, Thang Luong, Dan Jurafsky and Eduard Hovy 2304

Discriminative Neural Sentence Modeling by Tree-Based Convolution
Lili Mou, Hao Peng, Ge Li, Yan Xu, Lu Zhang and Zhi Jin 2315

Multi-Timescale Long Short-Term Memory Neural Network for Modelling Sentences and Documents
Pengfei Liu, Xipeng Qiu, Xinchi Chen, Shiyu Wu and Xuanjing Huang 2326

Verbal and Nonverbal Clues for Real-life Deception Detection
Verónica Pérez-Rosas, Mohamed Abouelenien, Rada Mihalcea, Yao Xiao, CJ Linton and Mihai Burzo 2336

Social Media Text Classification under Negative Covariate Shift
Geli Fei and Bing Liu 2347

Co-Training for Topic Classification of Scholarly Data
Cornelia Caragea, Florin Bulgarov and Rada Mihalcea 2357

Humor Recognition and Humor Anchor Extraction
Diyi Yang, Alon Lavie, Chris Dyer and Eduard Hovy 2367

Topic Identification and Discovery on Text and Speech
Chandler May, Francis Ferraro, Alan McCree, Jonathan Wintrode, Daniel Garcia-Romero and Benjamin Van Durme 2377

A Dynamic Programming Algorithm for Computing N-gram Posteriors from Lattices
Dogan Can and Shrikanth Narayanan 2388

Bilingual Structured Language Models for Statistical Machine Translation
Ekaterina Garmash and Christof Monz 2398

Compact, Efficient and Unlimited Capacity: Language Modeling with Compressed Suffix Trees
Ehsan Shareghi, Matthias Petri, Gholamreza Haffari and Trevor Cohn 2409

ERSOM: A Structural Ontology Matching Approach Using Automatically Learned Entity Representation
Chuncheng Xiang, Tingsong Jiang, Baobao Chang and Zhifang Sui 2419

A Single Word is not Enough: Ranking Multiword Expressions Using Distributional Semantics
Martin Riedl and Chris Biemann 2430

Syntactic Dependencies and Distributed Word Representations for Analogy Detection and Mining
Likun Qiu, Yue Zhang and Yanan Lu 2441

Navigating the Semantic Horizon using Relative Neighborhood Graphs
Amaru Cuba Gyllensten and Magnus Sahlgren 2451

Multi- and Cross-Modal Semantics Beyond Vision: Grounding in Auditory Perception
Douwe Kiela and Stephen Clark 2461

Automatic recognition of habituals: a three-way classification of clausal aspect
Annemarie Friedrich and Manfred Pinkal 2471

Distributed Representations for Unsupervised Semantic Role Labeling
Kristian Woodsend and Mirella Lapata 2482

A Tableau Prover for Natural Logic and Language
Lasha Abzianidze 2492

JEAM: A Novel Model for Cross-Domain Sentiment Classification Based on Emotion Analysis
Kun-Hu Luo, Zhi-Hong Deng, Hongliang Yu and Liang-Chen Wei 2503

PhraseRNN: Phrase Recursive Neural Network for Aspect-based Sentiment Analysis
Thien Hai Nguyen and Kiyoaki Shirai 2509

ASTD: Arabic Sentiment Tweets Dataset
Mahmoud Nabil, Mohamed Aly and Amir Atiya 2515

Adjective Intensity and Sentiment Analysis
Raksha Sharma, Mohit Gupta, Astha Agarwal and Pushpak Bhattacharyya 2520

The Rating Game: Sentiment Rating Reproducibility from Text
Lasse Borgholt, Peter Simonsen and Dirk Hovy 2527

A Multi-lingual Annotated Dataset for Aspect-Oriented Opinion Mining
Salud M. Jiménez-Zafra, Giacomo Berardi, Andrea Esuli, Diego Marcheggiani, María Teresa Martín-Valdivia and Alejandro Moreo Fernández 2533

Deep Convolutional Neural Network Textual Features and Multiple Kernel Learning for Utterance-level Multimodal Sentiment Analysis
Soujanya Poria, Erik Cambria and Alexander Gelbukh 2539

SLSA: A Sentiment Lexicon for Standard Arabic
Ramy Eskander and Owen Rambow 2545

Reinforcing the Topic of Embeddings with Theta Pure Dependence for Text Classification
Ning Xing, Yuexian Hou, Peng Zhang, Wenjie Li and Dawei Song 2551

That's So Annoying!!!: A Lexical and Frame-Semantic Embedding Based Data Augmentation Approach to Automatic Categorization of Annoying Behaviors using #petpeeve Tweets
William Yang Wang and Diyi Yang 2557

Detection of Steganographic Techniques on Twitter
Alex Wilson, Phil Blunsom and Andrew Ker 2564

#SupportTheCause: Identifying Motivations to Participate in Online Health Campaigns
Dong Nguyen, Tijs van den Broek, Claudia Hauff, Djoerd Hiemstra and Michel Ehrenhard . . 2570

An Analysis of Domestic Abuse Discourse on Reddit
Nicolas Schrading, Cecilia Ovesdotter Alm, Ray Ptucha and Christopher Homan 2577

Twitter-scale New Event Detection via K-term Hashing
Dominik Wurzer, Victor Lavrenko and Miles Osborne 2584

Classifying Tweet Level Judgements of Rumours in Social Media
Michal Lukasik, Trevor Cohn and Kalina Bontcheva 2590

Identification and Verification of Simple Claims about Statistical Properties
Andreas Vlachos and Sebastian Riedel 2596