Ryan Cotterell

CONTACT INFORMATION

Department of Computer Science
Johns Hopkins University
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EDUCATION

Johns Hopkins University Spring 2019 (Expected)
Ph.D. in Computer Science
Advisors: Jason Eisner and David Yarowsky

Ludwig-Maximilians-Universität München 2014-2016
Visiting Ph.D. Student
Advisor: Hinrich Schütze

Johns Hopkins University
M.S.E. in Computer Science
Advisor: Chris Callison-Burch
GPA: 4.0

Johns Hopkins University Spring 2013
B.A. in Cognitive Science
Minors: Linguistics
Advisor: Colin Wilson
GPA: 3.87 (*General Honors*)
Major GPA: 4.0 (*Departmental Honors*)

Faculty of Liberal Arts and Sciences of St. Petersburg State University Fall 2009
Study Abroad, St. Petersburg, Russia

TEACHING

Teaching Assistant
Johns Hopkins University **Spring Semester 2014**
Course: Automata and Computation Theory (600.271)
Professor: Stephen Checkoway
I managed three course assistants and held weekly office hours.

Teaching Assistant
Johns Hopkins University **Fall Semester 2013**
Course: Natural Language Processing (600.465)
Professor: Jason Eisner
I led weekly discussion sections to cement concepts and improve problem solving skills. I supervised three course assistants in grading the assignments.

GRANTS

Grant title: PURA (Provost Undergraduate Research Award)
Awarding body: Johns Hopkins University.
Amount: $1,000.
Awarded to investigate phonological opacity in Portuguese and Turkish.

AWARDS

National Defense Science and Engineering Fellowship (NDSEG) 2016-2019
DAAD Long-term Research Grant, Germany 2015-2016

Fulbright Research Grant, Germany	2014-2015
George M.L. Sommerman Engineering Graduate Teaching Assistant Award Finalist	2014
Computer Science Department Outstanding Teaching Assistant	2014
Cognitive Science Undergraduate Research Award	2013

Publications

Refereed Journal Papers

1. Ryan Cotterell, Nanyun Peng, and Jason Eisner. Modeling Word Forms Using Latent Underlying Morphs and Phonology. In TACL 2015.

Refereed Conference Papers

2. Ryan Cotterell, Arun Kumar and Hinrich Schütze. Morphological Segmentation Inside-Out. In EMNLP 2016 (Short Papers).
3. Katharina Kann, Ryan Cotterell, Hinrich Schütze. Neural Morphological Analysis: Encoding-Decoding Canonical Segments. In EMNLP 2016 (Short Papers).
4. Tim Vieira*, Ryan Cotterell* and Jason Eisner. Speed-Accuracy Tradeoffs in Tagging with Variable-Order CRFs and Structured Sparsity. In EMNLP 2016 (Short Papers).
5. Ryan Cotterell, Hinrich Schütze and Jason Eisner. Morphological Smoothing and Extrapolation of Word Embeddings. In ACL 2016.
6. Ryan Cotterell, Tim Vieira and Hinrich Schütze. A Joint Model of Orthography and Morphological Segmentation. In NAACL 2016 (Short Papers).
7. Pushpendre Rastogi, Ryan Cotterell and Jason Eisner. Weighting Finite-State Transductions With Neural Contex. In NAACL 2016.
8. John Sylak-Glassman and Ryan Cotterell. Contrastive Morphological Typology and Logical Hierarchies. In Chicago Linguistic Society 2016.
9. Nanyun Peng, Ryan Cotterell and Jason Eisner. Dual Decomposition for Graphical Models over Strings. In EMNLP 2015.
10. Thomas Müller, Ryan Cotterell, Alexander Fraser and Hinrich Schütze. Joint Lemmatization and Morphological Tagging with LEMMING. In EMNLP 2015 (Short Papers).
11. Ryan Cotterell, Thomas Müller, Alexander Fraser and Hinrich Schütze. Labeled Morphological Segmentation with Semi-Markov Models. In CoNLL 2015.
12. Ryan Cotterell and Jason Eisner. Penalized Expectation Propagation for Graphical Models over Strings. In NAACL 2015.
13. Ryan Cotterell and Hinrich Schütze. Morphological Word Embeddings. In NAACL 2015 (Short Papers).
14. Ryan Cotterell, Nanyun Peng, and Jason Eisner. Stochastic Contextual Edit Distance and Probabilistic FSTs. In ACL 2014 (Short Papers).
15. Ryan Cotterell and Chris Callison-Burch. A Multi-Dialect, Multi-Genre Corpus of Informal Written Arabic. In LREC 2014.

Refereed Workshop Papers

16. Gaurav Kumar, Yuan Cao, Ryan Cotterell, Chris Callison-Burch, Daniel Povey and Sanjeev Khudanpur. Translation of the CALLHOME Egyptian Arabic Corpus For Conversational Speech Translation. In IWLST 2014.
17. Ryan Cotterell, Adithya Renduchintala, Naomi Saphra, and Chris Callison-Burch. An Algerian Arabic-French Code-Switched Corpus. In LREC-2014 Workshop on Free/Open-Source Arabic Corpora and Corpora Processing Tools.

Technical Reports

18. David Etter, Francis Ferraro, Ryan Cotterell, Olivia Buzek, and Benjamin Van Durme. Nerit: Named Entity Recognition for Informal Text. Technical Report 11. Human Language Technology Center of Excellence, Johns Hopkins University. July, 2013.

Invited Talks

1. Graphical Models over Strings. University of Alberta. October 2016.
2. Graphical Models over Strings. Johns Hopkins University. September 2016.
3. Modeling Word Forms Using Latent Underlying Morphs and Phohonology. Universität Tübingen. July, 2016.
4. Modeling Word Forms Using Latent Underlying Morphs and Phonology. Xerox Research Centre Europe. December, 2015.
5. Modeling Word Forms Using Latent Underlying Morphs and Phonology. Priberam Labs. September, 2015.
6. A Probabilistic Approach to Synchronic Phonology. Institut für Phonetik und Sprachverarbeitung, LMU. November, 2014.

Service

Journal Reviewer: *Computational Linguistics* (2015)
Conference Reviewer: NAACL 2016, ACL 2016, EMNLP 2016, COLING 2016, EACL 2017, AAAI 2016 (secondary)
CLSP Happy Hour Coordinator

References

Jason Eisner (`jason@cs.jhu.edu`), Johns Hopkins University
David Yarowsky (`yarowsky@jhu.edu`), Johns Hopkins University
Colin Wilson (`wilson@cogsci.jhu.edu`), Johns Hopkins University

Skills

Programming Languages: Java, Perl, Python, Cython, Ocaml, Lisp, C, C++, R, Scala

Languages: English, German, Spanish, Russian, Portuguese

Graduate Coursework: Natural Language Processing, Speech Processing, Machine Learning, Artificial Intelligence, Programming Language Theory, Non-linear Optimization, Stochastic Optimization, Neural Networks, Real Analysis, Software Engineering, Representation Learning, Big Data, Bayesian Statistics.