

# Jonathan K. Kummerfeld

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jkummerf@umich.edu

- Education**
- PhD in Computer Science Aug 2010 – Aug 2016  
“Algorithms for Identifying Syntactic Errors and Parsing with Graph Structured Output”  
University of California, Berkeley  
Adviser: Dan Klein
- Bachelor of Science (Advanced) (Honours) Class I with University Medal 2006–2009  
“Adaptive Supertagging for Faster Parsing”  
University of Sydney  
Adviser: James Curran
- Publications**
- Improving Text-to-SQL Evaluation Methodology  
C. Finegan-Dollak\*, **J. K. Kummerfeld\***, L. Zhang, K. R. D. Ramanathan, S. Sadasivam, R. Zhang and D. Radev  
*Association for Computational Linguistics*, 2018
- Factors Influencing the Surprising Instability of Word Embeddings  
L. Wendlandt, **J. K. Kummerfeld**, R. Mihalcea  
*North American Chapter of the Association for Computational Linguistics*, 2018
- Effective Crowdsourcing for a New Type of Summarization Task  
Y. Jiang, C. Finegan-Dollak, **J. K. Kummerfeld**, W. Lasecki  
*North American Chapter of the Association for Computational Linguistics*, 2018
- Data Collection for Dialogue System: A Startup Perspective  
Y. Kang, Y. Zhang, **J. K. Kummerfeld**, L. Tang, J. Mars  
*North American Chapter of the Association for Computational Linguistics*, 2018
- World Knowledge for Semantic Parsing with Abstract Meaning Representation  
C. Welch, **J. K. Kummerfeld**, S. Feng and R. Mihalcea  
*Language Resources and Evaluation Conference*, 2018
- Parsing with Traces: An  $O(n^4)$  Algorithm and a Structural Representation  
**J. K. Kummerfeld** and D. Klein  
*Transactions of the Association for Computational Linguistics*, 2017
- Identifying Products in Online Cybercrime Marketplaces: A Dataset for Fine-grained Domain Adaptation  
G. Durrett, **J. K. Kummerfeld**, T. Berg-Kirkpatrick, R. S. Portnoff, S. Afroz, D. McCoy, K. Levchenko, and V. Paxson  
*Empirical Methods in Natural Language Processing*, 2017
- Understanding Task Design Trade-offs in Crowdsourced Paraphrase Collection  
Y. Jiang, **J. K. Kummerfeld**, and W. S. Lasecki  
*Association for Computational Linguistics*, 2017
- Tools for Automated Analysis of Cybercriminal Markets  
R. S. Portnoff, S. Afroz, G. Durrett, **J. K. Kummerfeld**, T. Berg-Kirkpatrick, D. McCoy, K. Levchenko, and V. Paxson  
*International World Wide Web Conferenc*, 2017
- An Empirical Analysis of Optimization for Max-Margin NLP  
**J. K. Kummerfeld**, T. Berg-Kirkpatrick, and D. Klein  
*Empirical Methods in Natural Language Processing*, 2015

Error-Driven Analysis of Challenges in Coreference Resolution

**J. K. Kummerfeld** and D. Klein

*Empirical Methods in Natural Language Processing*, 2013

An Empirical Examination of Challenges in Chinese Parsing

**J. K. Kummerfeld**, D. Tse, J. R. Curran, and D. Klein

*Association for Computational Linguistics*, 2013

High-velocity Clouds in the Galactic All Sky Survey. I. Catalog

V. A. Moss, N. M. McClure-Griffiths, T. Murphy, D. J. Pisano, **J. K. Kummerfeld**, and J. R. Curran

*The Astrophysical Journal Supplement Series*, 2013, 209:12

Parser Showdown at the Wall Street Corral: An Empirical Investigation of Error Types in Parser Output

**J. K. Kummerfeld**, D. Hall, J. R. Curran, and D. Klein

*Empirical Methods in Natural Language Processing*, 2012

Robust Conversion of CCG Derivations to Phrase Structure Trees

**J. K. Kummerfeld**, D. Klein, and J. R. Curran

*Association for Computational Linguistics*, 2012

Mention Detection: Heuristics for the OntoNotes annotations

**J. K. Kummerfeld**, M. Bansal, D. Burkett, and D. Klein

*Conference on Natural Language Learning*, 2011

Faster Parsing by Supertagger Adaptation

**J. K. Kummerfeld**, J. Roesner, T. Dawborn, J. Haggerty, J. Curran, and S. Clarke

*Association for Computational Linguistics*, 2010

Morphological Analysis Can Improve a CCG Parser for English

M. Honnibal, **J. K. Kummerfeld**, and J. R. Curran

*International Conference on Computational Linguistics*, 2010

Spatiotemporal Hierarchy of Relaxation Events, Dynamical Heterogeneities, and Structural Reorganization in a Supercooled Liquid

R. Candelier, A. Widmer-Cooper, **J. K. Kummerfeld**, O. Dauchot, G. Biroli, P. Harrowell, and D. R. Reichman

*Physical Review Letters*, 2010, 105:135702

Faster Parsing and Supertagging Model Estimation

**J. K. Kummerfeld**, J. Roesner, and J. R. Curran

*Australasian Language Technology Association*, 2009

Classification of Verb Particle Constructions with the Google Web1T Corpus

**J. K. Kummerfeld** and J. R. Curran

*Australasian Language Technology Association*, 2008

The Densest Packing of AB Binary Hard-Sphere Homogeneous Compounds across all Size Ratios

**J. K. Kummerfeld**, T. S. Hudson, and P. Harrowell

*The Journal of Physical Chemistry B*, 2008, 112:10773–10776

**Grants,  
Awards, and  
Honors**

**Outstanding Postdoctoral Fellow Award** 2018  
For excellence in research, mentorship, teaching, leadership, and service.

**Michigan Institute for Data Science Music Initiative** 2018  
Co-PI on grant to develop models that map text to music (75k)

	<b>Allen Institute for AI Key Scientific Challenges Program</b>	2017
	Unrestricted funding to support research (10k)	
	<b>Chair's Special Award</b>	2013
	For services to the EECS department during student admissions and recruitment	
	<b>Outstanding Graduate Student Instructor Award</b>	2011
	University wide award in recognition of exceptional achievements as a teacher	
	<b>General Sir John Monash Award</b>	2009
	"Australia's most prestigious postgraduate scholarships"	
	<b>University Medal in Computer Science</b>	2009
	For outstanding results, awarded at the discretion of the university senate	
<b>Employment</b>	University of Michigan	September 2016 – Present
	Postdoctoral Research Fellow in Computer Science Engineering.	
	<b>Consultant / Technical Adviser</b>	
	Clinic	January 2017 – Present
	Naming Matters	May 2015 – Present
	WriteLab	March 2014 – May 2018
	Acquired by Chegg in May 2018	
	Techbridge	September 2013 - May 2014
	<b>Software Engineer – Intern</b>	
	Google Research – Mountain View, NLP team	May - August 2012
	Google – Sydney, Infrastructure team	December 2007 - February 2008
	<b>Research Assistant</b> , University of Sydney	
	School of Information Technologies, Prof. Kay	2010
	School of Physics, Dr. Murphy	2010
	School of Chemistry, Prof. Harrowell	2009
	School of Letters, Art and Media, Dr. Bode	2008, 2009
<b>Teaching, Mentoring, Invited Talks</b>	<b>Instructor</b>	
	Artificial Intelligence, Berkeley	Summer 2014
	Co-taught upper division course – gave lectures, managed TAs, and prepared exams. Evaluation: 6.3 / 7 (top 11% of UCB EECS instructors with public results).	
	<b>Talks</b>	
	University of California, Berkeley, NLP Seminar	February 2018
	Midwest Speech and Language Days & CL Colloquium	2017, 2018
	University of Macquarie, Centre for Language Technology	June 2016, August 2017
	Sydney Humans, Language, Technology MeetUp	May 2016, August 2017
	University of Sydney	May 2016
	Information Sciences Institute, Natural Language Seminar	March 2016
	CommonCrawl, Big Open Data Hackathon	May 2014
	Cambridge Computer Laboratory	August 2013
	Berkeley Syntax Circle	2012
	<b>Guest Lecturer</b>	
	The Anatomy of Natural Language Processing Systems, Michigan	Winter 2018
	The Beauty and Joy of Computing, Berkeley	Summer 2014
	Applied Natural Language Processing, Berkeley	Fall 2013
	Proseminar in the Digital Humanities, Berkeley	Spring 2013

### **Michigan Undergraduate Research Opportunity Program Mentor**

Hyun A. Chung (2nd year) - "Tweet Topic Classification"	2017-2018
Orion Cleaver (2nd year) - "Coreference Resolution on Long Text"	2017-2018
Joseph Peper (transfer) - "Disentangling Online Chat"	2016-2017
Thomas Searle (1st year) - "Analysing the Top Million Websites"	2016-2017

### **Teaching Assistant**

Artificial Intelligence, Berkeley Fall 2011  
Held sections and office hours, prepared assignments, exams and sections.

Artificial Intelligence (Advanced), Sydney Fall 2009  
Held sections (third year elective Computer Science course).

Informatics (Advanced), Sydney Fall 2009  
Held sections and graded assignments (first year core Computer Science course).

### **High School Outreach**

Australian Informatics Olympiad 2007-2010  
Gave lectures, prepared exams and autograders, prepared labs.

National Computer Science School 2007, 2008, 2010  
Led a group of 16 high school students, who learned python and built a search engine.

Computational Linguistics Olympiads 2013, 2014, 2015, 2016  
Set problems for the competition.

### **Professional Service**

Dialog System Technology Challenges 7, Task Organiser 2018

### **University Internal**

Hiring Committee for Research Investigator, Michigan Medical School 2017  
Graduate Admissions Committee, Michigan Artificial Intelligence 2017  
Graduate Admissions Committee, Berkeley Artificial Intelligence 2015  
President, Berkeley Computer Science Graduate Student Association 2012-2013

### **Journal Reviewer**

Transactions of the Association for Computational Linguistics (TACL) 2016  
Journal of Artificial Intelligence Research (JAIR) 2017  
Computer Speech & Language (CSL) 2017

### **Program Committee**

Association for Computational Linguistics (ACL) 2014 (2nd), 2017, 2018  
North American Chapter of the ACL (NAACL) 2015, 2016, 2018  
European Chapter of the ACL (EACL) 2016, 2017  
Empirical Methods in Natural Language Processing (EMNLP) 2015, 2016, 2017, 2018  
International Joint Conference on Natural Language Processing (IJCNLP) 2017  
Association for the Advancement of Artificial Intelligence (AAAI) 2016  
World Wide Web Conference (WWW) 2016  
Conference on Natural Language Learning (CoNLL) 2016, 2017, 2018  
Workshop on Noisy User-generated Text 2018  
Workshop on Ethics in NLP 2017  
Student Research Workshop at NAACL 2015, 2016, 2018  
Student Research Workshop at ACL 2014  
Gen-Deep Workshop at NAACL 2018