

Yonatan Bisk

Natural Language Processing
Computer Science

Paul G. Allen School
of Computer Sci & Eng
185 E Stevens Way NE
Seattle, WA 98195
✉ ybisk@yonatanbisk.com

Positions

- ... **Postdoctoral Scholar**, *University of Washington*
Advisor: Yejin Choi
- 2017 **Postdoctoral Scholar**, *Information Sciences Institute, University of Southern California*
Advisor: Daniel Marcu

Education

- 2015 **PhD in Computer Science**, *The University of Illinois at Urbana-Champaign*,
Thesis: **Unsupervised Grammar Induction with Combinatory Categorical Grammars**
Advisor: Julia Hockenmaier
Committee: Jason Eisner, Dan Roth, ChengXiang Zhai
- 2009 **BS in Computer Science**, *The University of Texas at Austin*, Turing Scholar,
Thesis: The Necessity of Separating Control and Logic When Grounding Language using Neuroevolution
Advisor: Risto Miikkulainen Second Reader: Raymond Mooney

Conference and Journal Publications

- 2018 **Synthetic and Natural Noise Both Break Neural Machine Translation**
Yonatan Belinkov and [Yonatan Bisk](#),
Proceedings of the 6th International Conference on Learning Representations (ICLR)
 - **Learning Interpretable Spatial Operations in a Rich 3D Blocks World**
[Yonatan Bisk](#), Kevin Shih, Yejin Choi and Daniel Marcu,
Proceedings of the Thirty-Second Conference on Artificial Intelligence (AAAI-18)
- 2017 **Natural Language Inference from Multiple Premises**
Alice Lai, [Yonatan Bisk](#), Julia Hockenmaier,
Proceedings of the Eighth International Joint Conference on Natural Language Processing
- 2016 **Evaluating Induced CCG Parsers on Grounded Semantic Parsing**
[Yonatan Bisk](#), Siva Reddy, John Blitzer, Julia Hockenmaier and Mark Steedman,
Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing, pp 2022 – 2027
 - **Natural Language Communication with Robots**
[Yonatan Bisk](#), Deniz Yuret and Daniel Marcu,
Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics, pp 751 – 761
 - **Supertagging With LSTMs**
Ashish Vaswani, [Yonatan Bisk](#), Kenji Sagae and Ryan Musa,
Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics, pp 232–237
- 2015 **Probing the Linguistic Strengths and Limitations of Unsupervised Grammar Induction**
[Yonatan Bisk](#) and Julia Hockenmaier,
Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers), pp 1395 – 1404
 - **Labeled Grammar Induction with Minimal Supervision**
[Yonatan Bisk](#), Christos Christodoulopoulos and Julia Hockenmaier,
Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 2: Short Papers), pp 870 – 876
- 2013 **An HDP Model for Inducing Combinatory Categorical Grammars**
[Yonatan Bisk](#) and Julia Hockenmaier,
Transactions of the Association for Computational Linguistics, Vol 1, pp 75–88

- 2012 **Simple Robust Grammar Induction with Combinatory Categorical Grammars**
 Yonatan Bisk and Julia Hockenmaier,
Proceedings of the Twenty-Sixth Conference on Artificial Intelligence (AAAI-12), pp 1643–1649
- **Document-Topic Hierarchies from Document Graphs**
 Tim Weninger, Yonatan Bisk and Jiawei Han,
Proceedings of the 21st ACM International Conference on Information and Knowledge Management (CIKM)
- 2010 **Normal-form parsing for Combinatory Categorical Grammars with generalized composition and type-raising**
 Julia Hockenmaier and Yonatan Bisk,
Proceedings of the 23rd International Conference on Computational Linguistics (Coling 2010), pp 465–473

Workshop Publications & Tech Reports

- 2018 **Inducing Grammars with and for Neural Machine Translation**
 Ke Tran and Yonatan Bisk,
Workshop on Neural Machine Translation
- **CHALET: Cornell House Agent Learning Environment**
 Claudia Yan, Dipendra Misra, Andrew Bennett, Aaron Walsman, Yonatan Bisk and Yoav Artzi,
ArXiv
- 2016 **Unsupervised Neural Hidden Markov Models**
 Ke Tran, Yonatan Bisk, Ashish Vaswani, Daniel Marcu and Kevin Knight,
Proceedings of the Workshop on Structured Prediction for NLP, pp 63–71
- **Towards a Dataset for Human Computer Communication via Grounded Language Acquisition**
 Yonatan Bisk, Daniel Marcu and William Wong,
Proceedings of the AAAI 2016 Workshop on Symbiotic Cognitive Systems, pp 729 – 732
- 2012 **Induction of Linguistic Structure with Combinatory Categorical Grammars**
 Yonatan Bisk and Julia Hockenmaier,
NAAACL HLT Workshop on Inducing Linguistic Structure, pp 90–95

Conference Organization / Area-Chair

- 2018 **Conference Organizer**, *Social Media Chair*, North American Chapter of the Association for Computational Linguistics
- **Area Chair**, International Conference on Computational Linguistics
 - **Workshop Organizer**, *Generalization in the Age of Deep Learning*, North American Chapter of the Association for Computational Linguistics
- 2017 **Conference Organizer**, *Student Scholarship Chair and Student Volunteer Coordinator*, Conference on Empirical Methods in Natural Language Processing
- **Workshop Organizer**, *Language Grounding for Robotics*, Conference of the Association for Computational Linguistics
- 2016 **Area-Chair**, *Semantic Parsing and Semantic Role Labeling*, Conference on Lexical and Computational Semantics (*SEM)

Invitations and Talks

- 2017 **Invited Talk**, *University of Notre Dame NLP Seminar*
Invited Talk, *University of California, Irvine AI/ML Seminar*
Invited Talk, *Pacific Northwest National Laboratory*
- 2016 **Invited Poster**, *The Impact of Computing in Our Physical World session of the CRA's Computing Community Consortium (CCC) Symposium on Computing Research*
- 2015 **Colloquium Talk**, *Toyota Tech. Inst. of Chicago's Midwest Speech & Language Days*
- 2013 **Colloquium Talk**, *Toyota Tech. Inst. of Chicago's Midwest Speech & Language Days*

Reviewer

Neural Information Processing Systems (NIPS),

2018

Association for the Advancement of Artificial Intelligence (AAAI),	2018
International Journal of Robotics Research,	2017
Computational Linguistics Journal,	2017
Association for Computational Linguistics,	2017, 2018
Association for Computational Linguistics – Demos,	2018
International Joint Conference on Natural Language Processing,	2017
Natural Language Engineering Journal,	2016
Empirical Methods in Natural Language Processing,	2013 – 2018
Empirical Methods in Natural Language Processing – Demos,	2018
European Chapter of the Association for Computational Linguistics,	2014, 2017
N. American Chapter of the Association for Computational Ling,	2016 – 2018
Conference on Computational Natural Language Learning,	2016 – 2018
International Conference on Computational Linguistics,	2016
NAACL Student Research Workshop,	2013, 2015, 2018
EACL Student Research Workshop,	2017
Spatial Language Understanding (SpLU) Workshop,	2018
Workshop on Ethics in NLP,	2017, 2018
AAAI Symp. on Natural Communication for Human-Robot Collaboration,	2017
PC Member 2012 Vol 1. & PC Co-Chair 2013, 2015 Vol 2./Vol 3., @TinyToCS, Papers describing significant research contributions to CS in 140 characters or less	

Diversity and Inclusion

2018	ACM Council on Diversity & Inclusion, Investigating and initiating institutional change within ACM on behalf of underrepresented groups.,	<i>Ongoing</i>
	– Grace Hopper PC member, Review submissions to AI Technical Track,	<i>1yr</i>
2016	NCWIT Collegiate Award, Review applications for the National Center for Women & Information Technology's Collegiate Award honoring college women, ISI	<i>Ongoing</i>
2009	NCWIT Aspirations in Computing, Review applications for the National Center for Women & Information Technology's Award for Aspirations in Computing which supports high-school girls interested in CS, UIUC, ISI	<i>Ongoing</i>
	– Tech Junket/Women in CS, CS outreach (presentations and recruitment) for local Urbana-Champaign pre-college students, UIUC	<i>2yrs</i>
2008	Freshman Research Mentor, Mentored students to perform research, UTexas	<i>1yr</i>
	– First Bytes, Helped organize a summer camp for girls interested in CS, UTexas	
	– Co-Founded Breakfast Bytes, Professor talks for pre-college students, UTexas	<i>1yr</i>
	– CS Roadshow, CS presentations at Austin middle and high schools, UTexas	<i>1yr</i>

Community Service

2017	Association for Computing Machinery Future of Computing Academy Member, “... a platform that enables the next generation of researchers, ... to develop a coherent and influential voice that addresses challenging issues facing the field and society in general”
2017	NSF review panel, Scholarships in the Division of Undergraduate Education
2017	Intel International Science and Engineering Fair, Pre-college science competition in May 2017 for the Association for the Advancement of Artificial Intelligence (AAAI)

University Service

2017	Organize UW NLP Seminar, Coordinate with professors to invite and host speakers to the department	2yrs
2015	USC Postdoc Association Representative,	1yr
2013	Fellowships, Assistantships, and Admissions Committee, Decide which students are admitted to the CS PhD and MS programs	1yr
	– Departmental Graduate Academic Council, Vet departmental seminars and policies in addition to creating new useful resources and seminars for students	1yr
	– Departmental Grievance Committee, Evaluate validity of complaints filed by students against professors	2yrs
2011	Engineering Graduate Student Advisory Committee, Advise the engineering dean on graduate matters and organize events for students	1yr
2010	Organize Artificial Intelligence & Information Systems Seminar, Coordinate with professors to invite and host speakers to the department	5yrs
2009	PhD Ambassador & Mentor, Introduce students to the department and graduate school both during visits and adjustment to the department upon entry	4yrs

Awards, Honors, and Fellowships

2018	Finalist, UW Postdoc Mentoring Award, University of Washington
2014	Andrew and Shana Laursen Fellow, University of Illinois
2013	State Farm Companies Foundation Doctoral Scholarship, University of Illinois
2013	Graduate Student Outstanding Ambassador Award, University of Illinois
2012	Cognitive Science / Artificial Intelligence Award, Beckman Institute
2011	Honorable Mention for NSF Graduate Research Fellowship Program
2009	Honorable Mention for NSF Graduate Research Fellowship Program
2008	College of Natural Science Summer Research Fellowship, UTexas
2007	Departmental Summer Research Fellowship, UTexas

Teaching

2014	Teaching Assistant, Graduate Machine Learning in NLP (# Students: 27), UIUC
2011	Teaching Assistant, Artificial Intelligence (# Students: 97), UIUC
2010	Teaching Assistant, Artificial Intelligence (# Students: 63), UIUC

Students & Interns

2016	Master's Student, Junpeng Xiao devised an interactive interface to our AI agent for use in DARPA meetings, USC
2016	Ph.D. Intern, Ke Tran, a Ph.D. student at the University of Amsterdam, published a workshop paper with an invited talk on the unsupervised use of Neural Networks with Bayesian models, ISI
2016	Master's Student, Kai Jiang is working on a new data collection paradigm for dialogue based AI systems. Anticipated publication and data release in Mid 2017, USC

Industry Employment

2014	NLP Research Intern, Google, Inc., Mountain View, CA Informing grammar induction with semantics under John Blitzer
2013	NLP Research Intern, Google, Inc., Mountain View, CA Leveraged syntactic information in question answering with John Blitzer
2009	iPhone Development Intern, Apple, Inc., Cupertino, CA Create robust metrics for evaluating keyboard and auto-correction performance

2006 **SQL Server Intern**, *Microsoft Corporation*, Redmond, WA
Created data-mining ribbon for Excel 2007 and UI test cases for SQL server

References

John Blitzer,
Senior Research Scientist at Google Inc, blitzer@google.com

Yejin Choi,
Associate Prof at the University of Washington, yejin@cs.washington.edu

Yolanda Gil,
Research Prof at the University of Southern California, gil@isi.edu

Julia Hockenmaier,
Associate Prof at the University of Illinois at Urbana-Champaign, juliahmr@illinois.edu

Kevin Knight,
Prof at the University of Southern California, knight@isi.edu

Daniel Marcu,
*Research Associate Prof at USC's Information Sciences Institute &
Senior Research Scientist at Amazon Inc*, marcu@isi.edu

Dan Roth,
Prof at the University Pennsylvania, danroth@seas.upenn.edu