Yonatan Bisk

Natural Language Processing
Computer Science

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▬ 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 Categorial 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 **SWAG: A Large-Scale Adversarial Dataset for Grounded Commonsense Inference**
Rowan Zellers, <u>Yonatan Bisk</u>, Roy Schwartz and Yejin Choi,
Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP)

– **Synthetic and Natural Noise Both Break Neural Machine Translation**
Yonatan Belinkov and <u>Yonatan Bisk</u>,
Proceedings of the 6th International Conference on Learning Representations (ICLR), Oral

– **Learning Interpretable Spatial Operations in a Rich 3D Blocks World**
<u>Yonatan Bisk</u>, 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, <u>Yonatan Bisk</u>, Julia Hockenmaier,
Proceedings of the Eighth International Joint Conference on Natural Language Processing, Oral

2016 **Evaluating Induced CCG Parsers on Grounded Semantic Parsing**
<u>Yonatan Bisk</u>, 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**
<u>Yonatan Bisk</u>, Deniz Yuret and Daniel Marcu,
Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics, pp 751 – 761, Oral

– **Supertagging With LSTMs**
Ashish Vaswani, <u>Yonatan Bisk</u>, Kenji Sagae and Ryan Musa,
Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics, pp 232–237, Oral

2015 **Probing the Linguistic Strengths and Limitations of Unsupervised Grammar Induction**
<u>Yonatan Bisk</u> 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, Oral

– **Labeled Grammar Induction with Minimal Supervision**
<u>Yonatan Bisk</u>, 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 Categorial 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 Categorial 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 Categorial 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, Best paper - Oral

– **CHALET: Cornell House Agent Learning Environment**
Claudia Yan, Dipendra Misra, Andrew Bennnett, 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, Oral

– **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 Categorial Grammars**
Yonatan Bisk and Julia Hockenmaier,
NAACL 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

International Conference on Learning Representations (ICLR),	*2019*
Neural Information Processing Systems (NIPS),	*2018*
Association for the Advancement of Artificial Intelligence (AAAI),	*2018*
International Journal of Robotics Research (IJRR),	*2017*
Computational Linguistics Journal (CL),	*2017*
Association for Computational Linguistics (ACL),	*2017, 2018*
Association for Computational Linguistics – Demos,	*2018*
International Joint Conference on Natural Language Processing (IJCNLP),	*2017*
Natural Language Engineering Journal,	*2016*
Empirical Methods in Natural Language Processing (EMNLP),	*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 (NAACL),	*2016 – 2018*
Conference on Computational Natural Language Learning (CoNLL),	*2016 – 2018*
International Conference on Computational Linguistics (Coling),	*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.,	*1yr*
–	**Grace Hopper PC member**, Review submissions to AI Technical Track,	*1yr*
2016	**NCWIT Collegiate Award**, Review applications for the National Center for Women & Information Technology's Collegiate Award honoring college women, ISI	*Ongoing*
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	*Ongoing*
–	**Tech Junket/Women in CS**, CS outreach (presentations and recruitment) for local Urbana-Champaign pre-college students, UIUC	*2yrs*
2008	**Freshman Research Mentor**, Mentored students to perform research, UTexas	*1yr*
–	**First Bytes**, Helped organize a summer camp for girls interested in CS, UTexas	
–	**Co-Founded Breakfast Bytes**, Professor talks for pre-college students, UTexas	*1yr*
–	**CS Roadshow**, CS presentations at Austin middle and high schools, UTexas	*1yr*

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