Yonatan Bisk

Natural Language Processing
Computer Science

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of Computer Sci & Eng
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Positions

Current   **Postdoctoral Scholar**, *University of Washington*
Advisor: Yejin Choi

2015   **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   Yonatan Belinkov and <u>Yonatan Bisk</u>, **Synthetic and Natural Noise Both Break Neural Machine Translation**, *Proceedings of the 6th International Conference on Learning Representations (ICLR)*   🔗

–   <u>Yonatan Bisk</u>, Kevin Shih, Yejin Choi and Daniel Marcu, **Learning Interpretable Spatial Operations in a Rich 3D Blocks World**, *Proceedings of the Thirty-Second Conference on Artificial Intelligence (AAAI-18)*   🔗

2017   Alice Lai, <u>Yonatan Bisk</u>, Julia Hockenmaier, **Natural Language Inference from Multiple Premises**, *Proceedings of the Eighth International Joint Conference on Natural Language Processing*   🔗

2016   <u>Yonatan Bisk</u>, Siva Reddy, John Blitzer, Julia Hockenmaier and Mark Steedman, **Evaluating Induced CCG Parsers on Grounded Semantic Parsing**, *Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing, pp 2022 – 2027*   🔗

–   <u>Yonatan Bisk</u>, Deniz Yuret and Daniel Marcu, **Natural Language Communication with Robots**, *Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics, pp 751 – 761*   🔗

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

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

–   Yonatan Bisk, Christos Christodoulopoulos and Julia Hockenmaier, **Labeled Grammar Induction with Minimal Supervision**, *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   Yonatan Bisk and Julia Hockenmaier, **An HDP Model for Inducing Combinatory Categorial Grammars**, *Transactions of the Association for Computational Linguistics*, Vol 1, pp 75-88   🔗

2012   Yonatan Bisk and Julia Hockenmaier, **Simple Robust Grammar Induction with Combinatory Categorial Grammars**, *Proceedings of the Twenty-Sixth Conference on Artificial Intelligence (AAAI-12), pp 1643–1649*   🔗

–   Tim Weninger, Yonatan Bisk and Jiawei Han, **Document-Topic Hierarchies from Document Graphs**, *Proceedings of the 21st ACM International Conference on Information and Knowledge Management (CIKM 2012)*   🔗

2010   Julia Hockenmaier and Yonatan Bisk, **Normal-form parsing for Combinatory Categorial Grammars with generalized composition and type-raising**, *Proceedings of the 23rd International Conference on Computational Linguistics (Coling 2010), pp 465–473*   🔗

Workshop Publications & Tech Reports

2018   Claudia Yan, Dipendra Misra, Andrew Bennnett, Aaron Walsman, Yonatan Biskand Yoav Artzi, **CHALET: Cornell House Agent Learning Environment**, *ArXiv*   🔗

2016   Ke Tran, Yonatan Bisk, Ashish Vaswani, Daniel Marcu and Kevin Knight, **Unsupervised Neural Hidden Markov Models**, *Proceedings of the Workshop on Structured Prediction for NLP, pp 63–71*   🔗

–   Yonatan Bisk, Daniel Marcu and William Wong, **Towards a Dataset for Human Computer Communication via Grounded Language Acquisition**, *Proceedings of the AAAI 2016 Workshop on Symbiotic Cognitive Systems, pp 729 – 732*   🔗

2012   Yonatan Bisk and Julia Hockenmaier, **Induction of Linguistic Structure with Combinatory Categorial Grammars**, *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

Association for the Advancement of Artificial Intelligence,	*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 – 2017*
European Chapter of the Association for Computational Linguistics,	*2014, 2017*
N. American Chapter of the Association for Computational Ling,	*2016, 2017*
Conference on Computational Natural Language Learning,	*2016, 2017*
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., *Ongoing*

– **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

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

Spring 2016	**Master's Student**, Junpeng Xiao devised an interactive interface to our AI agent for use in DARPA meetings, USC
Summer 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
Fall 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 of Illinois at Urbana-Champaign,   danr@illinois.edu