# ALVIN GRISSOM II

Associate Professor of Computer Science, Haverford College
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## DEGREES

**Ph.D., Computer Science** 2017
University of Colorado Boulder *Boulder, Colorado, USA*
*Thesis: Incremental Prediction and Decision-making for Simultaneous Machine Translation*
Advisor: Jordan Boyd-Graber

**M.S., Computer Science** 2009
Emory University *Atlanta, Georgia, USA*
*Thesis: Sentiment in Japanese: A Corpus-based Approach with Sociolinguistic Implications*
Advisor: Eugene Agichtein

**B.A., Computer Science**, Mathematics Minor 2006
Hendrix College *Conway, Arkansas, USA*

**Certificate, Asian Studies** 2004
Kansai Gaidai University *Hirakata City, Japan*

## ACADEMIC APPOINTMENTS

**Haverford College** July 2020-Present
*Associate Professor of Computer Science (Tenured), 2024-Present* *Haverford, PA, USA*

Assistant Professor of Computer Science, 2020-2023
Visiting Scholar, University of Tokyo, 8/2023-7/2024

**Ursinus College** August 2017 - May 2020
*Assistant Professor of Computer Science* *Collegeville, PA, USA*

## PEER-REVIEWED PUBLICATIONS

Haverford students marked with *.
Other undergraduate students marked with **.

**Rapidly Piloting Real-time Linguistic Assistance for Simultaneous Interpreters with Untrained Bilingual Surrogates** 2024
*LREC-COLING* *Turin, Italy*

Alvin Grissom II, Jo Shoemaker, Benjamin Goldman*, Ruikang Shi*, Craig Stewart, C. Anton Rytting, Leah Findlater and Jordan Boyd-Graber

**Rare but Severe Neural Machine Translation Errors Induced by Minimal Deletion: An Empirical Study on Chinese and English** 2022
*COLING (31% acceptance rate)* *Gyeongju, South Korea*

Ruikang Shi*, Alvin Grissom II, and Duc Minh Trinh*

**An Attentive Recurrent Model for Incremental Prediction of Sentence-final Verbs** 2020
*Findings of EMNLP*

Wenyan Li, Alvin Grissom II, and Jordan Boyd-Graber

**Investigating Sports Commentator Bias within a Large Corpus of American Football Broadcasts** 2019
*EMNLP (20.5% acceptance rate)* *Hong Kong*

Jack Merullo**, Luke Yeh**, Abram Handler, Alvin Grissom II, Brendan O'Connor, and Mohit Iyyer

**Gower as Data: Exploring the Application of Machine Learning to Gower's Middle English Corpus** 2019
*Accessus 5(2), 8*

Kara L. McShane and Alvin Grissom II

**Pathologies of Neural Models Make Interpretation Difficult** 2018
*EMNLP (25% acceptance rate)* *Brussels*

Shi Feng, Eric Wallace**, Alvin Grissom II, Mohit Iyyer, Pedro Rodriguez, and Jordan Boyd-Graber

**Substring Frequency Features for Segmentation of Japanese Katakana Words with Unlabeled Corpora** 2017
*IJCNLP (31% accepted)* *Taipei*

Yoshinari Fujinuma and Alvin Grissom II

**Incremental Prediction of Sentence-final Verbs: Humans versus Machines** 2016
*CoNLL (20% acceptance rate)* *Berlin*

Alvin Grissom II, Naho Orita, and Jordan Boyd-Graber

**Syntax-based Reordering for Simultaneous Machine Translation** 2015
*EMNLP (24% acceptance rate)* *Lisbon*

He He, Alvin Grissom II, Jordan Boyd-Graber, and Hal Daumé III

**Don't Until the Final Verb Wait: Reinforcement Learning for Simultaneous Machine Translation** 2014
*EMNLP (30% acceptance rate)* *Doha*

Alvin Grissom II, He He, Jordan Boyd-Graber, John Morgan, and Hal Daumé III

**Annotating Factive Verbs** 2012
*LREC* *Istanbul*

Alvin Grissom II and Yusuke Miyao

## WORKSHOPS WITH STUDENT WORK

**Denoising word embeddings for post-processing gender bias mitigation** 2023
*Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL)* *Washington, DC*

Catherine Lin* (Bryn Mawr, presenter) and Alvin Grissom II

**Assessing the Ability of Neural Machine Translation Models to Perform Syntactic Rewriting** 2019
*Workshop on Widening NLP (WiNLP@ACL)* *Florence, Italy*

Jahkel Robin**, Alvin Grissom II, and Matthew Roselli**

**Assessing the Ability of Neural Machine Translation Models to Perform Syntactic Rewriting** 2017
*Black in AI@NeurIPS* *Long Beach, CA, USA*

Jahkel Robin** (presenter) and Alvin Grissom II

## BOOK CHAPTERS

**Inclusion in Linguistics** Edited by Anne H. Charity Hudley, Christine Mallinson, and Mary Bucholtz
*Oxford University Press* *2024*

Power Shift: Towards Inclusive Natural Language Processing, Emily M. Bender and Alvin Grissom II

## GRANTS

$296,325 National Science Foundation EAGER: DCL: SaTC: Enabling Interdisciplinary Collaboration: Evaluating Bias In The Creation and Perception of GAN-Generated Faces (2022-2024), PI with Ryan Lei

Mozilla Responsible Computing Grant (2021) (with others)

$5500 Pennsylvania Consortium for the Liberal Arts (PCLA) Opportunity Grant (2017)

$150 Amazon EC2 Credit Course Grant (2017)

$600 Google Cloud Credit Course Grant (2017, 2018, 2019)

$1000 Ursinus Small Research Grant (2017, 2018, 2019)

NVIDIA GPU Seed Grant (2017, 1 Titan XP GPU)

## TEACHING

**Haverford College** July 2020-Present
*Assistant (2020-2024)/Associate Professor of Computer Science* *Haverford, PA, USA*

CMSC H260 Foundations of Data Science (F-22)
CMSC 360 Machine Learning (S-22, S-23)
CMSC/LING 325 Computational Linguistics (F-20, F-21)
Independent Study: Machine Translation (S-23)

**Ursinus College** August 2017 - May 2020
*Assistant Professor of Computer Science (Tenure-track)* *Collegeville, PA, USA*

CS-173 Introduction to Computer Science (F-17)
CS-477 Artificial Intelligence (F-17, F-19)
CS-174 Object-Oriented Programming (S-18, S-19, S-20)
CS-474 Human-Computer Interaction (S-18, S-20)
CS-471 CS Seminar: Deep Computer Vision and Language (F-18)
CS-373 Theory of Computation (F-18)
CS-374 Principles of Programming Languages (S-19)
CS 371W Data Structures and Algorithms (S-19, S-20)
Independent Research (F-18, S-18, F-19, S-19)
Independent Study: Computational Linguistics (S-18, S-19, S-20)

**University of Colorado** August 2016 - December 2016
*Instructor of Record, Special Topics: Machine Learning* *Boulder, CO, USA*

Primary instructor for machine learning course for undergraduates, requiring adaptation of fast-paced graduate course.

**University of Colorado** August 2014 - December 2014
*Teaching Assistant, Computer Science I* *Boulder, CO, USA*

Responsible for four recitations per week, or approximately 100 students. Graded held office hours, and tutored students, and planned curricula.

**Duke University Talent Identification Program** June 2010 - July 2010
*Instructor, Web Application Development* *San Antonio, TX, USA*

Created and taught summer course for middle and high school students to learn computer programming and web development.

**Emory University** September 2008 - May 2009
*Teaching Assistant, Computer Science I* *Atlanta, GA, USA*

Held office hours and graded assignments introductory computer science course.

**Duke University Talent Identification Program** June 2008 - July 2008
*Instructor, Computer Programming* *College Station, TX, USA*

Designed and taught two summer sessions for high school students to learn computer science concepts and programming. Was asked to return.

**Hendrix College** August 2003 - May 2006
*Tutor, Math Help Center* *Conway, AR, USA*

Held weekly paid office hours to help calculus and pre-calculus students. Graded assignments.

**Hendrix College** September 2002 - May 2003
*Volunteer Tutor, Menifee School District* *Menifee, AR, USA*

Volunteered to tutor grade school students weekly in nearby school district.

## CURRICULUM DEVELOPMENT

**Haverford College** 2021
*Co-developed new gateway course on Foundations of Data Science*

First taught in Fall 2022.

**Haverford College** 2020
*Designed new course on computational linguistics, adapted to online setting during pandemic*

Created extensive lecture notes and assignments for course.

**Ursinus College** 2018
*Special Topics: Deep Computer Vision and Language*

Designed special topics course on deep learning for undergraduates with no background in the subject.

**Ursinus College** 2017-2020
*Other Courses*

Created new curriculum/assignments for introductory computer science, Data Structures and Algorithms, Artificial Intelligence, Human-Computer Interaction, and Principles of Programming Languages. Incorporated issues of ethics into HCI, AI, and Algorithms courses.

**Ursinus College** 2018
*Digital Humanities Python Workshop*

Designed and led one-day Python programming workshop for humanities faculty.

**University of Colorado Boulder** 2016
*Special Topics: Machine Learning*

Designed undergraduate machine learning course.

**University of Maryland, College Park** 2013
*"Winter Storm" workshop*

Planning Committee

Designed and led week-long workshop ("Computational Linguistics for Everyone") designed for people with potentially no background in computational linguistics.
Designed and ran week-long Python course for language scientists at student-run workshop.
Gave lecture on machine translation to high school students.

**Duke University Talent Identification Program** 2010
*Computer Programming*

Designed and ran programming curriculum for summer program for "gifted" students.

**Duke University Talent Identification Program** 2008
*Web Application Development*

Designed programming curriculum for summer program for "gifted" students.

## GUEST LECTURES

**Tufts University** 2022, 2023
*Introduction to Cognitive and Brain Science (PSY 9)*

Introduction to Natural Language Processing (March, 2022)

Computational Linguistics and Large Language Models (March, 2023)

**University of Maryland, College Park** 2014
*Computational Linguistics I*

· Introduction to Formal Semantics

**University of Maryland, College Park** 2014
*Computational Linguistics I*

Viterbi Algorithm

**Emory University** 2008
*The Web*

CSS and Javascript

## ACADEMIC ADVISING

**Pre-major advisees** Haverford College

*2022-2023:* Will Cope, Bella Gattsuo, Ben Jiang, Emely Polanco

*2021-2022:* Kayla Patton, Xavier DeVore, Ankith Suhas Pinnamaneni, Dylan Soemitro, Alexander Reichard, Isaac Wasserman, Jade Rousseau

**Major advisees** Haverford College

*Class of 2024:* Joel Torres, Michael Rabayda, Oluwaseun Eisape

*Class of 2023:* Sharon Wang, Laney Modlin

## BACHELOR'S THESIS ADVISING

**Haverford College** Haverford, PA, USA

*2022-2023*

Caroline Gihlstorf, Topic on Large Language Models and Linguistics (title hidden while paper under anonymous peer review)

Ryan Trotter, Evaluating the Effect of Training Data Bias on Generative Adversarial Networks

Bailey Lin, Inductive Biases in Generative Adversarial Networks

Catherine Lin (Bryn Mawr), Denoising word embeddings for post-processing gender bias mitigation

Keith Mburu, Joint Learning to Improve Generalization: Automatic Music Transcription and Music Source Separation (Lit. Review)

Jordan Shand, Game Theoretical Investigation into Convergence Instability of Generative Adversarial Nets (Lit. Review)

Zach Crampton, The Application of Reinforcement Learning for National Football League Sports Gambling (Lit. Review)

Albert Dahlberg, The Propagation of Media in Text (Lit. Review)

*2021-2022*

Duc Trinh, Negation Learning in Transformer-based Machine Translation Models, with Jane Chandlee

Carter Langen, Analyzing the Aeneid and its Translations with Topic Models and Word Embeddings

Simon Babb, Word Order in Machine Translation

William Harris-Braun, Augmenting Neural Machine Translation Training Data for Low-resource Languages with Morphological Transducers (Lit. Review)

Asia Belt, Racial Bias in NLP Models (Lit. Review)

*2020-2021*

Benjamin Goldman, Verb Prediction in Japanese with Transformers

Ruikang Shi, Hallucinations in Machine Translation

Blien Habtu, 1-D TV: A Computational Investigation into the Lexical Representation of Black Womanhood In Reality Television News

Amberley Su (Bryn Mawr), Improving Sentence-final Verb Prediction in Japanese using Recurrent Neural Networks and Sentence Shuffling

Tomas Paris, Learning Hierarchical Structure in LSTMs (Lit. Review)

## OTHER WORK EXPERIENCE

**IBM Research–Tokyo** February 2016 - July 2016
*Intern* *Tokyo, Japan*

Researched incremental question answering and performed software engineering tasks.

**National Institute of Informatics** June 2013 - August 2013
*Research Intern* *Tokyo, Japan*

Researched final verb prediction in Japanese using statistical language models.

**National Institute of Informatics** May 2011 - August 2011
*Research Intern* *Tokyo, Japan*

Researched textual entailment.

**Oak Ridge National Laboratory** June 2012 - August 2012
*Summer Intern* *Oak Ridge, TN, USA*

Worked on natural language processing-related projects.

**Securboration** November 2011 - May 2012
*Software Engineer* *Washington, DC*

Worked on natural language processing-related projects.

**University of Arizona** April 2010 - December 2010
*Software Developer/Consultant* *Tucson, AZ, USA Remote*

Mobile programmer for psychology research project

**Emory University** February 2010 - March 2010
*Software Developer/Consultant* *Atlanta, GA, USA*

Mobile programmer for psychology research project

**Acxiom Corporation** June 2006 - June 2007
*Software Developer* *Little Rock, AR, USA*

Software developer for user interfaces group.

**Duoshare Software** May 2004 - August 2004
*Software Developer Intern* *Dallas, TX, USA*

Software developer intern, working on multilinguialization of point-of-sale software.

## INVITED TALKS (NON-CONFERENCE)

**University of Pennsylvania Center for Outreach, Research, and Education (MindCORE)**
March, 2022
*Invited Talk* *Philadelphia, PA, USA*

*Incremental Language Processing and What We Can Learn from Errors in NLP Models*

**George Mason University Information Science** September, 2021
*Invited Talk* *Fairfax, VA, USA*

*Examining Racial Bias in Sports Commentary*

**University of Maryland, College Park CLIP Lab** March, 2021
*Invited Talk (Virtual)* *College Park, MD, USA*

*Examining Racial Bias in Sports Commentary*

**University of Washington** December, 2020
*Invited Talk (Virtual)* *Seattle, Washington, USA*

*Examining Racial Bias in Sports Commentary*

**Seoul National University Linguistics** August, 2020
*Invited Talk (Virtual)* *Seoul, South Korea*

*Introspection: Examining Pathologies of Neural NLP Models and Racial Bias in Sports Commentary*

**Tufts University Cognitive and Brain Science Colloquium** March, 2020
*Invited Talk* *Boston, MA, USA*

*Bias and Beyond: AI in the Service of Power*

**Widening NLP (WiNLP) Workshop 2019 @ ACL** July, 2019
*Keynote* *Florence, Italy*

*How NLP is Used to Serve Power: Current and Future Trends*

**University of Tokyo** July, 2019
*Invited Talk* *Tokyo, Japan*

*How NLP is Used to Serve Power: Current and Future Trends*

**Black in AI Workshop 2018** December 2018
*Pathologies of Neural Models Make Interpretations Difficult* *Montreal, BC, Canada*

Oral presentation

**Harvey Mudd College** February, 2018
*Invited Talk* *Claremont, California, USA*

*Reinforcement Learning for Simultaneous Machine Translation*

**University of Aizu** August 2018
*Invited Talk* *Aizuwakamatsu, Japan*

Reinforcement Learning and Verb Prediction for Simultaneous Machine Translation

**University of Pennsylvania** October 2017
*Invited Talk* *Philadelphia, PA, USA*

· Reinforcement Learning and Verb Prediction for Simultaneous Machine Translation

**Google Japan** July 2016
*Reinforcement Learning and Verb Prediction for Simultaneous Machine Translation* *Tokyo, Japan*

Machine Translation Group

**National Institute of Informatics** July 2016
*Reinforcement Learning and Verb Prediction for Simultaneous Machine Translation* *Tokyo, Japan*

Miayo Lab

**Nara Institute of Technology** June 2016
*Reinforcement Learning and Verb Prediction for Simultaneous Machine Translation* *Nara, Japan*

Augmented Human Communication Lab

**Kyoto University** June 2016
*Incremental Prediction of Sentence-final Verbs* *Kyoto, Japan*

Kurohashi-Kawahara Lab

## UNIVERSITY AND DEPARTMENTAL SERVICE

**Haverford College** 2022-
*Honors Committee*

College-wide committee for awarding of honors to seniors.

**Haverford College** 2022, 2023
*Visiting Assistant Professor Search Committee*

Co-chair of Computer Science visitor search.

**Haverford College** 2021
*Chief Diversity Officer's IDEAs Council*

Work on diversity and inclusion issues and initiatives for the college.

**Haverford College** 2020-Present
*CS Department Study Abroad Coordinator*

Manage the logistics of study abroad, especially determining the appropriate requirements transferred courses can fill.

**Haverford College** 2021-
*Pre-major advising*

Advising of first-year prospective computer science majors.

**Haverford College** 2022-
*Major advising*

Advising of computer science majors.

**Ursinus College** 2018-2020
*Digital Liberal Arts Working Group*

This committee promoted digital liberal arts initiatives across campus, including designing a Digital Liberal Arts minor.

**Ursinus College** 2018-2020
*Information Technology Committee*

This committee considers plans for the selection and implementation of technology across campus.

**Ursinus College** 2018-2020
*Major Advising*

Computer Science major advisisng

**University of Colorado Graduate Committee** 2016-2017
*Graduate Student Representative*

The Grad Comm reviews all applications to the department and handles petitions from students, as well as curriculum and event planning.

**University of Maryland "Winter Storm" Planning Committee** 2014
*Committee Member*

Planned and took part in language science workshop

Created hour-long lecture on machine translation for high school students.
Created and taught multi-day Python workshop for language scientists.

**Hendrix College** 2002-2003
*Volunteer Tutor*

Volunteered to tutor grad school students in nearby small town on a weekly basis.

## PROFESSIONAL SERVICE

- NeurIPS 2023; EMNLP 2020, 2023; NAACL 2021 Ethics Committee
- ACL Rolling Review Reviewer (2022)
- ACL 2021 Diversity and Inclusion Socicultural Inclusion Chair
- NAACL 2021 Teaching NLP Workshop 2021 Program Committee
- ACL 2021 Area Chair (Ethics in NLP, NLP for Good)
- CoNLL 2020, Area Chair (Multilinguality and Machine Translation)
- Workshop on Automatic Simultaneous Translation (AutoSimTrans) 2020 Program Committee
- EMNLP 2019, 2020 Program Committee
- EACL 2021 Program Committee
- ICLR AI for Social Good Workshop 2019, Area Chair
- AAAI 2019 Reviewer
- NAACL 2020-2021 Program Committee
- ACL 2019 Program Committee
- NAACL 2018, 2019 Student Research Workshop, Program committee
- COLING 2018, Area chair
- Black in AI Workshop 2017-2020 Program Committee
- CoNLL 2017-2019, 2021 Program Committee
- ACL 2017, 2018 Student Research Workshop Committee, Mentor
- Computer Speech and Language, Reviewer (2017)
- Language Resources and Evaluation, Reviewer (2017)
- ACL 2013, Associate Reviewer

## JOURNALISTIC AND OTHER MEDIA APPEARANCES

**Carnegie Mellon University Consequential Podcast** 2020
*Interview: Language, Power, and NLP*

**The Telegraph: Inside Google's struggle to control its 'racist' and 'sexist' AI** 2020
*Quoted in article*

**IEEE Spectrum: Microsofts AI Research Draws Controversy Over Possible Disinformation Use** 2019
*Quoted in article*

**The Undefeated: Can artificial intelligence help us understand racial bias in sports?** 2019
*Sports article about EMNLP paper*

**This Week in Machine Learning Podcast** 2018
*Interview: Pathologies of Neural Models and Interpretability*

## FELLOWSHIPS AND SCHOLARSHIPS

**NSF IGERT Language Science Fellowship** 2013-2014
*University of Maryland, College Park*

Cross-disciplinary fellowship where I took part in language science-related research and activities.

**GEM Fellowship** 2012-2013
*GEM Foundation*

Private tuition fellowship and internship

**Tuition Scholarship** 2007-2009
*Emory University*

Partial tuition scholarship for MS in computer science

**Chairman's Scholarship** 2002-2006
*Hendrix College*

Partial tuition scholarship for undergraduate studies.

## AWARDS

**Arkansas Undergraduate Mathematics Competition** 2006
*First Place Team*

Top ranking team for solving a series of theoretical mathematics problems under time constraints.

**Arkansas Undergraduate Mathematics Competition** 2005
*Third Place Team*

Third place team for solving a series of programming problems under time constraints.

**Acxiom Programming Contest** 2005
*Second Place Team*

Second place team for solving a series of programming problems under time constraints.

**Pi Mu Epsilon** 2003-2006
*Member*

National Mathematics Honor's Society

## LANGUAGES

English (native), Japanese (advanced), Mandarin Chinese (basic)