

Amber C. Stubbs

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EDUCATION

Brandeis University, Waltham, Massachusetts USA

Ph.D., Computer Science, February 2013

Dissertation: "A Methodology for Using Professional Knowledge in Corpus Annotation"

Adviser: James Pustejovsky

M.A., Computer Science, May 2008

Simmons University (formerly Simmons College), Boston, Massachusetts USA

B.S., Computer Science and English, May 2005

ACADEMIC APPOINTMENTS

Simmons University

July 2014 - present

Boston, Massachusetts, USA

Division of Mathematics, Statistics, and Computer Science, 2018-present

School of Library and Information Science, 2014-2018

Director, Division of Mathematics, Computing, and Statistics, Jan 2021 - present

Associate Professor, July 2020 - present

Assistant Professor, 2014-2020

Simmons University

September 2013-May 2014

Boston, Massachusetts, USA

Graduate School of Library and Information Science

Adjunct Professor

State University of New York at Albany

October 2012 - August 2014

Albany, New York, USA

Department of Information Studies

Postdoctoral Associate

Massachusetts Institute of Technology

October 2012 - October 2018

Cambridge, Massachusetts, USA

Computer Science and Artificial Intelligence Laboratory

Research Affiliate

Brandeis University

August, 2005 - August, 2012

Waltham, Massachusetts, USA

Department of Computer Science

Doctoral Student

TEACHING EXPERIENCE

Adjunct/Assistant Professor, Simmons College

- CS 110 - Foundations of Information Technology (designed and developed)
- CS 112-LC - Introduction to Programming (class and lab)
- CS 214/LIS487 - Data Interoperability (class and lab)
- CS 232 - Data Structures (class and lab)
- CS 330 - Structure and Organization of Programming Languages (class and lab)

- LCIS 201 - Coding and Digital Storytelling (designed and developed with Kris Erikson)
- LIS 469 - eXtensible Markup Language
- LIS 487 - Data Interoperability (designed and developed)
- LIS 488 - Technology for Information Professionals

Teaching Fellow, Brandeis University

- COSI 216 - Corpus Linguistics and Language Annotation (Spring 2011)
- COSI 11a - Programming in Java and C (Fall 2009, Fall 2008)
- COSI 135b - Computational Semantics (Spring 2009)
- Ling 120b - Syntactic Theory (Spring 2008)
- Ling 100 - Introduction to Linguistics (Fall 2007, Fall 2006)
- COSI 216 - Introduction to Computational Linguistics (Spring 2007)
- COSI 21a - Data Structures and the Fundamentals of Computing (Spring 2006)

PUBLICATIONS
AND
PRESENTATIONS

Books

James Pustejovsky and Amber Stubbs. *Natural Language Annotation for Machine Learning*. O'Reilly Media, November 2012.

Peer-Reviewed Book Chapters

Amber Stubbs, Özlem Uzuner, Christopher Kotfila, Ira Goldstein, Peter Szolovits. "Challenges in Synthesizing Surrogate PHI in Narrative EMRs". Chapter in *Medical Data Privacy Handbook*. Aris Gkoulalas-Divanis and Grigorios Loukides, eds. Springer, November 2015. doi:10.1007/978-3-319-23633-9

Amber Stubbs and Özlem Uzuner. "Biomedical Annotations: i2b2 de-identification", chapter in *Handbook of Linguistic Annotation*. Nancy Ide and James Pustejovsky, eds. Springer, 2017. doi:10.1007/978-94-024-0881-2

Anna Rumshisky and Amber Stubbs. "Machine Learning for Higher-Level Linguistic Tasks", chapter in *Handbook of Linguistic Annotation*. Nancy Ide and James Pustejovsky, eds. Springer, 2017. doi:10.1007/978-94-024-0881-2

Peer-Reviewed Journal Articles

Amber Stubbs, Michele Filannino, Ergin Soysal, Samuel Henry, Özlem Uzuner. "Cohort Selection for Clinical Trials: n2c2 2018 shared task track 1." *Journal of the American Medical Informatics Association*, Special Focus Issue on Cohort Selection for Clinical Trials. 2019;26(11):1163-1171. doi:10.1093/jamia/ocz163

Sam Henry, Kevin Buchan, Michele Filannino, Amber Stubbs, Özlem Uzuner. "2018 N2C2 Shared Task on Adverse Drug Events and Medication Extraction in Electronic Health Records." *Journal of the American Medical Informatics Association*, Special Issue: Special Focus Issue on 2018 n2c2 Shared-Task and Workshop on Adverse Drug Event Extraction. 2020;27(1):3-12. doi:10.1093/jamia/ocz166

Amber Stubbs, Michele Filannino, Özlem Uzuner. "De-identification of psychiatric intake records: Overview of 2016 CEGS N-GRID Shared Tasks Track 1." *Journal of Biomedical Informatics*, Supplement: 2016 CEGS/N-GRID. Natural Language Processing Challenge in Clinical Data. 2017. doi:

10.1016/j.jbi.2017.06.011.

Michele Filannino, Amber Stubbs, Özlem Uzuner. “Symptom severity prediction from neuropsychiatric clinical records: Overview of 2016 CEGS N-GRID Shared Tasks Track 2.” *Journal of Biomedical Informatics, Supplement: 2016 CEGS/N-GRID. Natural Language Processing Challenge in Clinical Data.* 2017. doi: 10.1016/j.jbi.2017.04.017.

Amber Stubbs, Özlem Uzuner. “Annotating longitudinal clinical narratives for de-identification: The 2014 i2b2/UTHealth corpus.” *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.07.020

Amber Stubbs and Özlem Uzuner. “Annotating Risk Factors for Heart Disease in Clinical Narratives for Diabetic Patients”. *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.05.009

Amber Stubbs, Christopher Kotfila, and Özlem Uzuner. “Automated systems for the de-identification of longitudinal clinical narratives: Overview of 2014 i2b2/UTHealth shared task Track 1.” *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.06.007

Amber Stubbs, Christopher Kotfila, Hua Xu, and Özlem Uzuner. “Identifying risk factors for heart disease over time: Overview of 2014 i2b2/UTHealth shared task Track 2.” *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.07.001

Vishesh Kumar, Amber Stubbs, Stanley Shaw, Özlem Uzuner. “Creation of a new longitudinal corpus of clinical narratives.” *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.09.018

Kai Zheng, V.G.Vinod Vydiswaran, Yang Liu, Yue Wang, Amber Stubbs, Özlem Uzuner, Anupama E. Gururaj, Samuel Bayer, John Aberdeen, Anna Rumshisky, Serguei Pakhomov, Hongfang Liu, Hua Xu. “Ease of Adoption of Clinical Natural Language Processing Software: An Evaluation of Five Systems.” *Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data.* 2015. doi:10.1016/j.jbi.2015.07.008

Peer-Reviewed Conference Presentations

Jessica M. Parr and Amber Stubbs. “Digitizing Incarceration: A Database of Unfreedoms.” Plenary presentation, 2019 Lapidus Center Conference: Enduring Slavery: Resistance, Public Memory, & Transatlantic Archives. Schomburg Center, New York City October 12, 2019.

Amber Stubbs. “Developing Specifications for Light Annotation Tasks in the Biomedical Domain.” In 2012 Proceedings of the Third Workshop on Building and Evaluating Resources for Biomedical Text Mining, Istanbul, Turkey, May 26, 2012.

James Pustejovsky and Amber Stubbs. “Increasing Informativeness in Temporal Annotation.” In 2011 Proceedings of the Linguistic Annotation Workshop V, Association of Computational Linguistics, Portland, Oregon, July 23-24, 2011.

Marc Verhagen, Amber Stubbs, and James Pustejovsky. “Combining Independent Syntactic and Semantic Annotation Schemes.” In Proceedings of the Linguistic Annotation Workshop, ACL, Prague, Czech Republic. June, 2007.

Peer-Reviewed Conference Panels

Keith O'Hara, Sven Anderson, David Musicant, Amber Stubbs, Thomas Way. "Team-Teaching with Colleagues in the Arts and Humanities" SIGCSE 2018, Baltimore, MD. <https://sigcse2018.sigcse.org/attendees/accepted.html>

Peer-Reviewed Poster Presentations

Rebecca Haralson, Katherine Sittig-Boyd, Stephanie Worobey, Amber Stubbs. "Analyzing Health Data in Longitudinal Clinical Narratives." TAPIA 2016.

Jennifer A. Roecklein-Canfield, Deborah Tobiason, Margaret Menzin, Mark Mahoney, Nanette Veilleux, and Amber Stubbs. "Using Synthetic Biology to teach undergraduates the cross-disciplinary and collaborative nature of scientific research." 2015 American Society for Cell Biology (ASCB) Annual Meeting in San Diego, CA, December 12-16, 2015.

Amber Stubbs. "MAE and MAI: Lightweight Annotation and Adjudication Tools". In 2011 Proceedings of the Linguistic Annotation Workshop V, Association of Computational Linguistics, Portland, Oregon, July 23-24, 2011.

Amber Stubbs and James Pustejovsky. "Annotation of Discharge Summaries Based on Selection Criteria." In 2011 Proceedings of AMIA Summit on Clinical Research Informatics, San Francisco, March 9-11, 2011.

Amber Stubbs and Benjamin Harshfield. "Applying the TARSQI toolkit to augment text mining of EHRs." BioNLP '10: Proceedings of the 2010 Workshop on Biomedical Natural Language Processing. July 2010.

Other Presentations

Teriyana Cohens, Michelle Medici, Patrice Miller, Peizhu Qian. (Amber Stubbs, advisor) "Digitizing Court Records: Creating an Interactive History of Enslaved People's Incarceration" Keynote presentation in 2019 Simmons University Undergraduate Research Symposium.

Amal Saeed and Jazzmine White. "Identifying and Analyzing Security Vulnerabilities in Brain-Computer Interfaces (BCIs)" Keynote presentation in "From Poetry to Pipettes: The Simmons Undergraduate Symposium". April 25, 2017

Emma Ambrosini, Karina Bercan, et al. "SQL Board game." Poster presentation in "From Poetry to Pipettes: The Simmons Undergraduate Symposium". April 25, 2017

Shayla Fitzpatrick, Elizabeth Johnson, Hannah Reading, Amber Stubbs. "Analyzing Trends in Young Adult Book Covers." Poster presentation in "From Poetry to Pipettes: The Simmons Undergraduate Symposium". April 27, 2016

Rebecca Haralson, Katherine Sittig-Boyd, Stephanie Worobey, Amber Stubbs. "Analyzing Health Data in Longitudinal Clinical Narratives". Poster presentation in "From Poetry to Pipettes: The Simmons Undergraduate Symposium". April 27, 2016

Editorials

Özlem Uzuner, Amber Stubbs, Leslie Lenert. "Advancing the state of the art in automatic extraction of adverse drug events from narratives" *J Am Med Inform Assoc.* 2020;27(1):1-2. doi:10.1093/jamia/ocz206

Amber Stubbs and Özlem Uzuner. "New Approaches to Cohort Selection" *Journal of the American Medical Informatics Association* 2019;26(11):1161-1162. doi:10.1093/jamia/ocz174

Özlem Uzuner, Amber Stubbs, and Michele Filannino. “A natural language processing challenge for clinical records: Research Domains Criteria (RDoC) for psychiatry” *Journal of Biomedical Informatics*, Supplement: 2016 CEGS/N-GRID Natural Language Processing Challenge in Clinical Data. October 2017 DOI: 10.1016/j.jbi.2017.10.005.

Özlem Uzuner and Amber Stubbs. “Practical Applications for Natural Language Processing in Clinical Research: The 2014 i2b2/UTHealth Shared Tasks.” *Journal of Biomedical Informatics*, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data. December 2015.

Özlem Uzuner, Amber Stubbs, and Weiyi Sun “Chronology of your health events: Approaches to extracting temporal relations from medical narratives.” *Journal of Biomedical Informatics*, Vol. 46, December 2013.

Tutorials

Özlem Uzuner, Meliha Yetisgen and Amber Stubbs. “Biomedical/clinical NLP”. International Conference on Computational Linguistics (COLING). Dublin, Ireland. August 23rd, 2014

Invited Talks

Amber Stubbs and Lotus Goldberg, “Building a Syntactic Corpus of English VP Ellipsis”. Brandeis Language Technologies Seminar Series, Brandeis University, May 1, 2020.

Amber Stubbs and Jessica Parr. “Introduction to Web APIs”. Workshop at the 2019 Social Science Librarians Boot Camp, Tufts University, June 7, 2019. <https://sites.tufts.edu/sslbc2019/>

Marie DesJardins, Ann Graf, Amber Stubbs. “Data Analytics and Society”. COCIS Brownbag talks. College of Computational, Organizational, and Information Sciences, Simmons University, November 7, 2018.

Amber Stubbs. “Getting Started with APIs”. Keynote. Understanding and Using APIs NEASIS&T Winter Conference, Simmons College, January 8, 2018. <https://neasist.asist.org/2018/01/05/understanding-and-using-apis-neasist-winter-conference-schedule/>

Cathryn Mercier, Laura Saunders, Amber Stubbs, Kathy Wisser. “School of Library and Information Science Faculty Research: A Catalyst for Community Change”. Graduate Alumnae/I Professional Day, Simmons College, March 21, 2015.

Amber Stubbs. “Annotating Heart Disease Risk Factors in Longitudinal Clinical Narratives”. Brandeis Language Technologies Seminar Series, Brandeis University, March 6, 2015.

Amber Stubbs. “PC, MD? Can computers learn to diagnose medical problems?” Lunchtime Lecture Series, School of Library and Information Science, Simmons College, October 28, 2014.

Amber Stubbs. “Innovation Series – Lunch and Learn – Computers and Coding: What’s it all about” Earl Center, Wheelock College, April 23, 2014.

James Pustejovsky and Amber Stubbs “How to Develop Language Annotations for Machine Learning Algorithms.” O’Reilly Webcast, October 16, 2012. <http://www.oreillynet.com/pub/e/2361>.

Amber Stubbs. “An Introduction to Corpus Linguistics.” New Media Consortium (NMC) Horizon Connect webinar series, December 15, 2011.

<http://itunes.apple.com/itunes-u/nmc-horizon-connect-learning/id489707147>

GRANTS
AND
AWARDS

National Endowment for the Humanities, Humanities Collections and Reference Resources. “Digitizing Incarceration: A Database of Unfreedoms”. Jessica Parr and Amber Stubbs, PIs. Under review; submitted July 2019. Proposed budget: \$349,693 direct costs.

Computing Research Association for Women (CRA-W) Collaborative Research Experience for Undergraduates (CREU) and Institute for African-American Mentoring in Computing Sciences (iAAMCS). “If you build it, will they come? A case study on API user involvement and usability for MIT Museum’s API”, September 2018 - May 2019. \$10,500

Simmons School of Library and Information Science Dole award, July 2016-June 2017. \$3,000

Computing Research Association for Women (CRA-W) Collaborative Research Experience for Undergraduates (CREU) “Identifying and Analyzing Security Vulnerabilities in Brain-Computer Interfaces (BCIs)”, September 2016 - May 2017. \$7,500

Computing Research Association for Women (CRA-W) Collaborative Research Experience for Undergraduates (CREU) “Analyzing Health Data in Longitudinal Clinical Narratives”, September 2015 - May 2016. \$10,500.00

PROFESSIONAL
AFFILIATIONS
AND SERVICE

Editor

Book Editor (with Enrico Santus, MIT)
Language Resources and Evaluation, November 2018 - present

Guest Editor

Journal of the American Medical Informatics Association, Special Issue: Special Focus Issue on 2018 n2c2 Shared-Task and Workshop on Adverse Drug Event Extraction In progress, November 2018 - present.

Journal of the American Medical Informatics Association, Special Issue: Special Focus Issue on Cohort Selection for Clinical Trials In progress, November 2018 - present.

Journal of Biomedical Informatics, Supplement: 2016 i2b2 Natural Language Processing Challenge in Clinical Data. December 2017.

Journal of Biomedical Informatics, Supplement: 2014 i2b2 Natural Language Processing Challenge in Clinical Data. December 2015.

Journal of Biomedical Informatics Volume 46, Supplement: 2012 i2b2 Natural Language Processing Challenge on Temporal Relations in Clinical Data. December 2013.

Workshop Co-Chair

2018 n2c2 Shared-Tasks and Workshop on Challenges in Natural Language Processing for Clinical Data. San Francisco, CA., November 2, 2018.

2016 CEGS N-GRID Shared-Tasks and Workshop on Challenges in Natural Language Processing for Clinical Data. Chicago, IL., November 11 2016.

7th i2b2 Shared-Task and Workshop on Challenges in Natural Language Processing for Clinical Data. Washington D.C., November 14 2014.

Reviewer - Journals

International Journal of Medical Informatics. October 2018 - present.
Journal of the American Medical Informatics Association. October 2015 - present.
Language Resources and Evaluation. May 2015 - present.
BMC Bioinformatics. June 2014 - present.
Journal of Biomedical Informatics. February 2013 - present.

Reviewer - Conferences and Workshops

iConference 2020. October 2019.
LOUHI 2018: The Ninth International Workshop on Health Text Mining and Information Analysis. September 2019.
Biomedical NLP and Clinical Text Processing track at NAACL 2019. January 2019.
2019 workshop of the Special Interest Group for Computer Science Education. September 2018.
2018 workshop of the Special Interest Group for Computer Science Education. September 2017.
iConference 2018. October 2017.
2017 Richard Tapia Celebration of Diversity in Computing Conference, poster session. February 2017.
iConference 2016. October 2015.
Workshop on Text Mining for Translational Informatics 2014. September 2014.
Student proposals, IBM/IEEE Smarter Planet Challenge. 2013, 2014.
6th i2b2 Shared-Task and Workshop on Challenges in Natural Language Processing for Clinical Data: Temporal relations. November 2012.
Linguistic Annotation Workshop V. June 2011.

Committees and Academic Service

CS faculty Search Committee, Chair (August 2019 - April 2020)
COCIS ad-hoc technology committee member (September 2020 - present)
COCIS ad-hoc technology committee, Chair (January 2018 - September 2019)
COCIS Faculty Secretary (May 2018 - May 2019)
SLIS assessment committee (July 2017 - December 2018)
SLIS faculty search committee, Chair (June 2017 - May 2018)
Science Club for Girls, Computer Science Week Teacher (July 2017)
Computer Science Advanced Placement Exam grader (June 2016, June 2017, June 2018)
SURPASS committee at Simmons College (February 2016 - present)
Simmons University Academic Technology Committee (December 2015 - present)
SLIS Faculty Secretary (July 2015 - June 2016)
STEM working group at Simmons College (June 2015 - present)
Committee for creating Data Science and Analytics B.S. and M.S. program at Simmons (March 2014 - present)
Information Science & Technology committee at SLIS (July 2014 - May 2018)
SLIS doctoral committee (August 2014 - June 2017)
Computer Science Department (July 2014 - present)
Hiring committee for Student Services Coordinator at SLIS (August 2014 - September 2014)

Professional Memberships

Association for Computational Linguistics
Association for Information Science and Technology
Association for Computing Machinery

Available: <https://github.com/amber-stubbs/mae-annotation>

MAI: Multi-document Adjudication Interface

Available: <https://github.com/amber-stubbs/mai-adjudication>