

LUCY LU WANG

Curriculum vitae

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APPOINTMENTS

University of Washington, Seattle, WA, USA

Sep 2022– Assistant Professor, Information School
Sep 2022– Adjunct Assistant Professor, Paul G. Allen School of Computer Science & Engineering
Dec 2022– Adjunct Assistant Professor, Biomedical Informatics & Medical Education, School of Medicine

The Allen Institute for Artificial Intelligence (AI2), Seattle, WA, USA

Sep 2022– Visiting Research Scientist, Semantic Scholar Research
Apr 2019–Aug 2022 Young Investigator, Semantic Scholar Research

EDUCATION

2019 PhD, Biomedical Informatics and Medical Education
University of Washington, Seattle, WA, USA
2013 MS, Applied Biomedical Engineering
The Johns Hopkins University, Baltimore, MD, USA
2009 BS, Physics
Massachusetts Institute of Technology, Cambridge, MA, USA

PUBLICATIONS

Note re: publication norms: In *computer science* and *information science*, publishing mostly occurs in conference and workshop proceedings, and occasionally in journals. Within the subfield of natural language processing, the ACL conferences (ACL, EMNLP, NAACL etc) are high-impact venues, with acceptance rates around 25%. In *health informatics*, publishing primarily occurs in journals, e.g., Briefings in Bioinformatics (impact factor: 8.99), Journal of Biomedical Informatics (impact factor: 6.32), Journal of the American Medical Informatics Association (impact factor: 4.11).

* Indicates equal contribution

Conference & Journal Papers

- 2023 Tal August, **Lucy Lu Wang**, Jonathan Bragg, Marti Hearst, Andrew Head, Kyle Lo. Paper Plain: Making medical research papers approachable to healthcare consumers with natural language processing. *arXiv: 2203.00130*. To appear in *ACM Transactions on Computer-Human Interaction (TOCHI)*.
- 2022 David Wadden, Kyle Lo, Bailey Kuehl, Arman Cohan, Iz Beltagy, **Lucy Lu Wang**, Hannah Hajishirzi. SciFact-OPEN: Towards Open-domain Scientific Claim Verification. *arXiv: 2210.13777*. *EMNLP Findings 2022*.
- 2022 Sanjana Chintalapati, Jonathan Bragg, **Lucy Lu Wang**. A Dataset of Alt Texts from HCI Publications: Analyses and Uses Towards Producing More Descriptive Alt Texts of Data Visualizations in Scientific Papers. *arXiv: 2209.13718*. *ASSETS 2022*.
- 2022 Travis Goodwin, Dina Demner-Fushman, Kyle Lo, **Lucy Lu Wang**, Hoa Dang, and Ian Soboroff. Automatic Question Answering for Multiple Stakeholders: the Epidemic Question Answering Dataset. *Nature Scientific Data*.
- 2022 David Wadden, Kyle Lo, **Lucy Lu Wang**, Arman Cohan, Iz Beltagy, Hannah Hajishirzi. MultiVerS: Improving scientific claim verification with weak supervision and full-document context. *arXiv: 2112.01640*. *NAACL Findings 2022*.

- 2022 Aakanksha Naik, Sravanthi Parasa, Sergey Feldman, **Lucy Lu Wang**, Tom Hope. Literature-Augmented Clinical Outcome Prediction. *arXiv: 2111.08374. NAACL Findings 2022*.
- 2022 Michael Cafarella, Michael Anderson, Iz Beltagy, Arie Cattan, Sarah Chasins, Ido Dagan, Doug Downey, Oren Etzioni, Sergey Feldman, Tian Gao, Tom Hope, Kexin Huang, Sophie Johnson, Daniel King, Kyle Lo, Yuze Lou, Matthew Shapiro, Dinghao Shen, Shivashankar Subramanian, **Lucy Lu Wang**, Yuning Wang, Yitong Wang, Daniel S. Weld, Jenny Vo-Phamhi, Anna Zeng, Jiayun Zou. Infrastructure for rapid open knowledge network development. *AI Magazine*.
- 2022 Dustin Wright, David Wadden, Kyle Lo, Bailey Kuehl, Arman Cohan, Isabelle Augenstein, **Lucy Lu Wang**. Generating scientific claims for automated scientific fact checking. *arXiv: 2203.12990. ACL 2022*.
- 2022 Zejiang Shen, Kyle Lo, **Lucy Lu Wang**, Bailey Kuehl, Daniel S Weld, Doug Downey. VILA: Improving structured content extraction from scientific PDF using visual layout groups. *arXiv: 2106.00676. Transactions of the ACL (TACL)*.
- 2021 Jay DeYoung, Iz Beltagy, Madeleine van Zuylen, Bailey Kuehl, **Lucy Lu Wang**. MS²: Multi-document summarization of medical studies. *arXiv: 2104.06486. EMNLP 2021*.
- 2021 Kirk Roberts, Tasmee Alam, Steven Bedrick, Dina Demner-Fushman, Kyle Lo, Ian Soboroff, Ellen Voorhees, **Lucy Lu Wang**, William R Hersh. Searching for scientific evidence in a pandemic: an overview of TREC-COVID. *arXiv: 2104.09632. Journal of Biomedical Informatics*.
- 2021 Kelly Mack, Emma McDonnell, Dhruv Jain, **Lucy Lu Wang**, Jon E. Froehlich, Leah Findlater. What do we mean by 'Accessibility Research'? A literature survey of accessibility papers in CHI and ASSETS from 1994 to 2019. *arXiv: 2101.04271. CHI 2021*. ****Best Paper Honorable Mention**
- 2021 Farshad Firouzi, Bahar Farahani, Mahmoud Daneshmand, Kathy Grise, Jaeseung Song, Roberto Saracco, **Lucy Lu Wang**, Kyle Lo, Plamen Angelov, Eduardo Soares et al. Harnessing the Power of Smart and Connected Health to Tackle COVID-19: IoT, AI, Robotics, and Blockchain for a Better World. *IEEE Internet of Things*.
- 2021 **Lucy Lu Wang**, Gabriel Stanovsky, Luca Weihs, Oren Etzioni. Gender trends in computer science authorship. *arXiv:1906.07883. Communications of the ACM*.
- 2020 **Lucy Lu Wang** and Kyle Lo. Text mining approaches for dealing with the rapidly expanding literature on COVID-19. *Briefings in Bioinformatics*.
- 2020 Anshul Kanakia, Kuansan Wang, Yuxiao Dong, Boya Xie, Kyle Lo, Zhihong Shen, **Lucy Lu Wang**, Chiyuan Huang, Darrin Eide, Sebastian Kohlmeier, Chieh-Han Wu. Mitigating biases in COVID-19 for analyzing COVID-19 literature. *Frontiers in Research Metrics and Analytics*.
- 2020 David Wadden, Shanchuan Lin, Kyle Lo, **Lucy Lu Wang**, Madeleine van Zuylen, Arman Cohan, Hannaneh Hajishirzi. Fact or fiction: verifying scientific claims. *arXiv: 2004.14974. EMNLP 2020*.
- 2020 Sanjay Subramanian, **Lucy Lu Wang**, Ben Bogin, Sachin Mehta, Madeleine van Zuylen, Sravanthi Parasa, Sameer Singh, Matt Gardner, Hannaneh Hajishirzi. MedICaT: a dataset of medical images, captions, and textual references. *arXiv: 2010.06000. EMNLP Findings 2020*.
- 2020 Edison Ong*, **Lucy Lu Wang***, Jennifer Schaub, John F. O'Toole, Becky Steck, ..., Jonathan Himmelfarb, Ravi Iyengar, Matthias Kretzler, Sean Mooney, Yongqun He & Kidney Precision Medicine Project. Modelling kidney disease using ontology: insights from the Kidney Precision Medicine Project. *Nature Reviews Nephrology*.
- 2020 Kirk Roberts, Tasmee Alam, Steven Bedrick, Dina Demner-Fushman, Kyle Lo, Ian Soboroff, Ellen Voorhees, **Lucy Lu Wang**, William R Hersh. TREC-COVID: rationale and structure of an information retrieval shared task for COVID-19. *Journal of the American Medical Informatics Association*.
- 2020 Kyle Lo*, **Lucy Lu Wang***, Mark Neumann, Rodney Kinney, Daniel S Weld. S2ORC: the Semantic Scholar open research corpus. *arXiv: 1911.02782. ACL 2020*.
- 2019 **Lucy Lu Wang**, G. Thomas Hayman, Jennifer R. Smith, Monika Tutaj, Mary E. Shimoyama, John H. Gennari. Predicting instances of Pathway Ontology classes for pathway integration. *Journal of Biomedical Semantics*.
- 2018 Waleed Ammar, Dirk Groeneveld, Chandra Bhagavatula, Iz Beltagy, Miles Crawford, Doug Downey, Jason Dunkelberger, Ahmed Elgohary, Sergey Feldman, Vu Ha, Rodney Kinney, Sebastian Kohlmeier, Kyle Lo, Tyler Murray, Hsu-Han Ooi, Matthew Peters, Joanna Power, Sam Skjonsberg, **Lucy**

- Lu Wang**, Chris Wilhelm, Zheng Yuan, Madeleine van Zuylen, Oren Etzioni. Construction of the literature graph in Semantic Scholar. *arXiv: 1805.02262. NAACL Industry 2018*.
- 2017 David A Kaminsky, **Lucy Lu Wang**, Jason HT Bates, Cindy Thamrin, David M Shade, Anne E Dixon, Robert A Wise, Stephen Peters, Charles G Irvin. Fluctuation analysis of peak expiratory flow and its associations with treatment failure in asthma. *American Journal of Respiratory and Critical Care Medicine*.
- 2017 **Lucy Lu Wang**, John H Gennari. Similarity metrics for determining overlap among biological pathways. *ICBO 2017*.
- 2016 Hyunggu Jung, Anthony Law, Eli Grunblatt, **Lucy Lu Wang**, Aaron Kusano, Jose LV Mejino Jr, Mark E Whipple. Development of a novel Markov chain model for the prediction of head and neck squamous cell carcinoma dissemination. *AMIA 2016*.
- 2016 **Lucy Lu Wang**, John H Gennari, Neil F Abernethy. An analysis of differences in biological pathway resources. *ICBO and BioCreative 2016*.
- 2015 **Lucy Lu Wang**, Eli Grunblatt, Hyunggu Jung, Ira J Kalet, Mark E Whipple. Biological model development as an opportunity to provide content auditing for the Foundational Model of Anatomy ontology. *AMIA 2015*.
- 2015 Craig M Zaidman, **Lucy Lu Wang**, Anne M Connolly, Julaine Florence, Brenda L Wong, Julie A Parsons, Susan Apkon, Namita Goyal, Eugene Williams, Diana Escolar, Seward B Rutkove, Jose L Bohorquez, DART-EIM Clinical Evaluators Consortium. Electrical impedance myography in Duchenne muscular dystrophy and health controls: a multi-center study of reliability and validity. *Muscle & Nerve*, 2015.
- 2011 **Lucy Lu Wang**, Andrew J Spieker, Jia Li, Seward B Rutkove. Electrical impedance myography for monitoring motor neuron loss in the SOD1 G93A amyotrophic lateral sclerosis rat. *Clinical Neurophysiology*, 2011.
- 2011 **Lucy Lu Wang**, Mohammad Ahad, Alistair McEwan, Jia Li, Mina Jafarpoor, Seward B Rutkove. Assessment of alterations in the electrical impedance of muscle after experimental nerve injury via finite-element analysis. *IEEE Transactions on Biomedical Engineering*, 2011.

Demo Papers

- 2021 **Lucy Lu Wang***, Isabel Cachola*, Jonathan Bragg, Evie Cheng, Chelsea Haupt, Matt Latzke, Bailey Kuehl, Madeleine van Zuylen, Linda Wagner, Daniel S Weld. SciA11y: Converting scientific papers to accessible HTML. *ASSETS 2021*. ****Best Artifact Award**
- 2020 **Lucy Lu Wang**, Oyvind Tafjord, Arman Cohan, Sarthak Jain, Sam Skjonsberg, Carissa Schoenick, Nick Botner, Waleed Ammar. SUPP.AI: finding evidence for supplement-drug interactions. *arXiv: 1909.08135. ACL Demo 2020*.

Workshop Papers

- 2020 **Lucy Lu Wang***, Kyle Lo*, Yoganand Chandrasekhar, Russell Reas, Jiangjiang Yang, Doug Burdick, Darrin Eide, Kathryn Funk, Yannis Katsis, Rodney Michael Kinney, Yunyao Li, Ziyang Liu, William Merrill, Paul Mooney, Dewey A. Murdick, Devvret Rishi, Jerry Sheehan, Zhihong Shen, Brandon Stilson, Alex D. Wade, Kuansan Wang, Nancy Xin Ru Wang, Christopher Wilhelm, Boya Xie, Douglas M. Raymond, Daniel S. Weld, Oren Etzioni, Sebastian Kohlmeier. *CORD-19: the COVID-19 open research dataset. arXiv: 2004.10706. NLP-COVID at ACL 2020*.
- 2018 **Lucy Lu Wang**, Chandra Bhagavatula, Mark Neumann, Kyle Lo, Chris Wilhelm, Waleed Ammar. Ontology alignment in the biomedical domain using entity definitions and context. *arXiv: 1806.07976. BioNLP at ACL 2018*.

Extended Abstracts

- 2022 Aakanksha Naik, Sravanthi Parasa, Sergey Feldman, **Lucy Lu Wang**, Tom Hope. Literature-Augmented Clinical Outcome Prediction. *Machine Learning for Health (ML4H) at NeurIPS 2022*.
- 2021 **Lucy Lu Wang**, Kelly Mack, Emma J McDonnell, Dhruv Jain, Leah Findlater, Jon E Froehlich. A bibliometric analysis of citation diversity in accessibility and HCI research. *arXiv: 2103.06989. CHI Extended Abstracts 2021*.

- 2019 **Lucy Lu Wang**, Oyvind Tafjord, Arman Cohan, Sarthak Jain, Sam Skjonsberg, Carissa Schoenick, Nick Botner, Waleed Ammar. Extracting evidence of supplement-drug interactions from literature. *Machine Learning for Health (ML4H) at NeurIPS 2019*.

Preprints

- 2022 John Giorgi, Luca Soldaini, Bo Wang, Gary Bader, Kyle Lo, **Lucy Lu Wang**, Arman Cohan. Exploring the challenges of open domain multi-document summarization. *arXiv: 2212.10526. In submission*.
- 2021 **Lucy Lu Wang***, Isabel Cachola*, Jonathan Bragg, Evie Cheng, Chelsea Haupt, Matt Latzke, Bailey Kuehl, Madeleine van Zuylen, Linda Wagner, Daniel S Weld. Improving the accessibility of scientific documents: current state, user needs, and a system solution to enhance scientific PDF accessibility for blind and low vision users. *arXiv: 2105.00076*.
- 2018 **Lucy Lu Wang**, Huaiying Lin, Xiaojun Bao, Subhajit Sengupta, Ben Busby, Robert R Butler III. PhenotypeXpression: sub-classification of disease states using public gene expression data and literature. *bioRxiv: 10.1101/461301*.

Book Contributions

- 2023 **Lucy Lu Wang**. "Using Machine Learning to Verify Scientific Claims." AI and the Productivity of Science. OECD. *Forthcoming*.

Other Scholarly Publications

- 2022 **Lucy Lu Wang**, Jonathan Bragg, Daniel S. Weld. Paper to HTML: A publicly available web tool for converting scientific PDFs into accessible HTML. *SIGACCESS Newsletter*, Issue 134.
- 2022 **Lucy Lu Wang**, Jay DeYoung, Byron Wallace. Overview of MSLR2022: A shared task on multi-document summarization for literature reviews. *SDP at COLING 2022*.
- 2022 Arman Cohan, Guy Feigenblat, Dayne Freitag, Tirthankar Ghosal, Drahomira Herrmannova, Petr Knoth, Kyle Lo, Philipp Mayr, Michal Shmueli-Scheuer, Anita de Waard, **Lucy Lu Wang**. Overview of the Third Workshop on Scholarly Document Processing at COLING 2022. *SDP at COLING 2022*.
- 2021 Iz Beltagy, Arman Cohan, Guy Feigenblat, Dayne Freitag, Tirthankar Ghosal, Keith Hall, Drahomira Herrmannova, Petr Knoth, Kyle Lo, Philipp Mayr, Robert M. Patton, Michal Shmueli-Scheuer, Anita de Waard, Kuansan Wang, **Lucy Lu Wang**. Overview of the Second Workshop on Scholarly Document Processing at NAACL 2021. *SDP at NAACL 2021*.
- 2020 Travis R Goodwin, Dina Demner-Fushman, Kyle Lo, **Lucy Lu Wang**, William R Hersh, Hao T Dang, Ian M Soboroff. Overview of the 2020 Epidemic Question Answering Track. *TAC 2020*.
- 2020 Ellen Voorhees, Tasmee Alam, Steven Bedrick, Dina Demner-Fushman, William R Hersh, Kyle Lo, Kirk Roberts, Ian Soboroff, **Lucy Lu Wang**. TREC-COVID: Constructing a Pandemic Information Retrieval Test Collection. *arXiv: 2104.09632. SIGIR Forum*.

Theses

- 2019 **Lucy Lu Wang**. Ontology-driven pathway data integration. PhD Dissertation: Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA.
- 2013 **Lucy Lu Wang**. Matching Pursuit for Detecting Epileptic Response in EEG Following Photoc Stimulation. Masters Thesis: Department of Biomedical Engineering, The Johns Hopkins University, Baltimore, MD.

FELLOWSHIPS & AWARDS

- | | |
|-----------|--------------------------------------------------------------|
| 2021 | ASSETS Best Artifact Award |
| 2021 | AI2 Hackathon Common Good Award |
| 2021 | CHI Best Paper: Honorable Mention |
| 2019 | AI2 Hackathon Overall Winner and Audience Choice Award |
| 2014–2018 | National Library of Medicine Informatics Training Fellowship |
| 2016 | BioCreative/ICBO Travel Fellowship |

GRANTS & GIFTS

- 2022 iSchool Strategic Research Fund, \$18,118
“AI-assisted clinical trial risk of bias assessment”
- 2022 Research Gift, Allen Institute for AI, \$100,000
“Synthesizing evidence for personalized biomedical information seeking”
- 2018 UW Student Technology Grant, \$88,426
University of Washington Student Technology Fee Committee
“Secure student computing environments for translational health and data science”

INVITED TALKS & PANELS

- 2023 [Invited Talk] *TBD*. The Sixth Workshop on Fact Extraction and Verification (FEVER) at EACL. Dubrovnik, Croatia. 2023 May 6.
- 2023 [Invited Talk] *TBD*. The Center for Informatics Research in Science and Scholarship (CIRSS) Seminar Series, School of Information Sciences, UIUC. 2023 April 7.
- 2023 [Invited Talk] *TBD*. UW Medical Data Science Seminar. Seattle, WA, USA. 2023 April 3.
- 2022 [Panelist] “How AI Can Make PDF Useful Again.” PageBreak Conference. San Francisco, CA, USA. 2022 October 28.
- 2022 [Panelist] “AI and Scholarly Publishing.” Society for Scholarly Publishing ‘Ask the Experts’ Webinar. Online. 2022 October 6.
- 2022 [Panel Moderator] “Knowledge Representation and Semantics for Biomedical Knowledge Synthesis.” SeBiLAn Workshop at TheWebConf (WWW). Online. 2022 April 25.
- 2022 [Invited Talk] “Unlocking Biomedical Knowledge: NLP Systems for Automating Systematic Literature Review.” Information School, University of Washington. Online. 2022 March 14.
- 2022 [Invited Talk] “Unlocking Biomedical Knowledge: NLP Systems for Automating Systematic Literature Review.” School of Data Science, University of Virginia. Charlottesville, VA, USA. 2022 March 9.
- 2022 [Invited Talk] “Unlocking Biomedical Knowledge: NLP Systems for Automating Systematic Literature Review.” Department of Informatics, Luddy School of Informatics, Indiana University-Bloomington. Online. 2022 February 28.
- 2022 [Invited Talk] “Unlocking Biomedical Knowledge: NLP Systems for Synthesizing Biomedical Evidence.” Computer Science Research Seminar, Emory University. Online. 2022 January 31.
- 2022 [Panelist] “The Machine Element: Signals and Noise: How AI and ML Techniques are Being Deployed to Track a Global Pandemic.” Friends of the NLM Virtual Workshop. Online. 2022 January 26.
- 2021 [Invited Talk] “Using Machine Learning to Verify Scientific Claims.” OECD Workshop on AI and the Productivity of Science. Online. 2021 November 2.
- 2021 [Invited Talk] “Mathematics in the Scholarly Literature.” Conference on Artificial Intelligence and Theorem Proving (AITP). Aussois, France and Online. 2021 September 7.
- 2021 [Panelist] “The Power of AI: A Discussion on COVID-19 & the Future of Industries.” Legalweek. Online. 2021 July 13.
- 2021 [Invited Talk] “NLP and Text Mining Resources for COVID-19 and Beyond.” Machine Learning for Preventing and Combating Pandemics Workshop at ICLR 2021. Online. 2021 May 7.
- 2021 [Panelist] “The Power of AI: A Discussion on COVID-19 & the Future of Industries.” Relativity Media Pandemic short film discussion panel. Online. 2021 April 22.
- 2021 [Keynote] “Text Mining Insights from the COVID-19 Pandemic.” Bibliometric-enhanced Information Retrieval (BIR) Workshop at ECIR 2021. Online. 2021 April 1.
- 2021 [Invited Talk] “Practical NLP for Biomedicine: Synthesizing Knowledge from Scientific Literature.” CS Colloquium, Northwestern University. Online. 2021 March 8.

- 2021 [Panelist] “Fast-track Learning: Growing Insights from Text-mining COVID-19 Data.” 1st GTM2021 Virtual Forum. Online. 2021 February 18.
- 2020 [Panelist] “Open Publishing and Open Data.” Neuro-Gairdner Open Science in Action Symposium. Online. 2020 November 11.
- 2020 [Panelist] “Building Community and Data Ecosystem for Data Discovery and Reuse.” Artificial Intelligence for Data Discovery and Reuse (AIDR) Symposium. Online. 2020 October 19.
- 2020 [Invited Talk] “Mining the COVID-19 Scientific Literature with the COVID-19 Open Research Dataset.” Artificial Intelligence for Data Discovery and Reuse (AIDR) Symposium. Online. 2020 October 19.
- 2020 [Panelist] “Rapid Fire Session: Showcasing What is Here!” Gastroenterology and Artificial Intelligence: 2nd Annual Artificial Intelligence Summit. Online. 2020 October 17.
- 2020 [Invited Talk] “COVID-19 Search: Using Machine Learning to Explore COVID-19 Scientific Literature.” AWS Education: Research Seminar Series. Online. 2020 July 29.
- 2020 [Panel Moderator] “The Role of Scientific NLP During an Epidemic.” 1st SciNLP Workshop on Natural Language Processing and Data Mining for Scientific Text. Online. 2020 June 25.
- 2020 [Invited Talk] “Improving Access to Scientific Literature for NLP.” Microsoft Research Hanover Group. Online. 2020 June 18.
- 2020 [Invited Talk] “The COVID-19 Open Research Dataset.” Connected Health and COVID-19: Now and Beyond the Great Lockdown. Online. 2020 June 12.
- 2020 [Invited Talk] “The COVID-19 Open Research Dataset.” Centre for Science and Technology Studies, Leiden University. Online. 2020 May 27.
- 2020 [Invited Talk] “COVID-19: The COVID-19 Open Research Dataset.” NLP Meetup (NY-NLP, A2D-NLP, DC-NLP, Hungarian NLP, London Text Analytics). Online. 2020 April 27.
- 2020 [Keynote] “The COVID-19 Open Research Dataset.” Semantic Indexing and Information Retrieval for Health (SIIRH) Workshop at ECIR. Online. 2020 April 14.
- 2019 [Invited Talk] “Ontology-based Integration of Biological Pathway Data.” Scientific Literature Knowledge Bases Workshop at Automated Knowledge Base Construction (AKBC). Amherst, MA, USA. 2019 May 22.
- 2018 [Invited Talk] “Ontologies and Algorithms for Integrating Biological Pathway Data.” BIME 590 Seminar, Department of Biomedical Informatics and Medical Education, University of Washington. Seattle, WA, USA. 2018 October 11.
- 2018 [Invited Talk] “Learning from Biomedical Knowledge.” The Allen Institute for Artificial Intelligence (AI2). Seattle, WA, USA. 2018 October 10.

CONFERENCE ACTIVITY

** Indicates presenting author(s)*

- 2022 [Poster] Naik A*, Parasa S, Feldman S, Wang LL, Hope T. Literature-Augmented Clinical Outcome Prediction. ML4H Workshop at NeurIPS. New Orleans, LA, USA. 2022 November 28.
- 2022 [Poster] Wadden D*, Lo K, Wang LL, Cohan A, Beltagy I, Hajishirzi H. MultiVerS: Improving scientific claim verification with weak supervision and full-document context. NAACL. Seattle, WA, USA. 2022 July 13.
- 2022 [Poster] Naik A*, Parasa S, Feldman S, Wang LL, Hope T. Literature-Augmented Clinical Outcome Prediction. NAACL. Seattle, WA, USA. 2022 July 13.
- 2022 [Poster] Wright D*, Wadden D, Lo K, Kuehl B, Cohan A, Augenstein I, Wang LL. Generating scientific claims for automated scientific fact checking. ACL. Dublin, Ireland. 2022 May 24.
- 2022 [Talk and Poster] Shen Z, Lo K, Wang LL*, Kuehl B, Weld DS, Downey D. VILA: Improving Structured Content Extraction from Scientific PDFs Using Visual Layout Groups. ACL. Dublin, Ireland. 2022 May 23.
- 2021 [Talk and Poster] DeYoung J*, Beltagy I, van Zuylen M, Kuehl B, Wang LL. MS²: Multi-document summarization of medical studies. EMNLP. Punta Cana, Dominican Republic. 2021 Nov 8.

- 2021 [Talk and Demo] Wang LL*, Cachola I, Bragg J, Cheng E, Haupt C, Latzke M, Keuhl B, van Zuylen M, Wagner L, Weld D. SciA11y: Converting scientific papers to accessible HTML. ASSETS. Online. 2021 Oct 20.
- 2021 [Poster] Wang LL, Mack K*, McDonnell EJ*, Jain D, Findlater L, Froehlich JE. A bibliometric analysis of citation diversity in accessibility and HCI research. CHI. Online. 2021 May 12.
- 2021 [Talk] Mack K*, McDonnell EJ, Jain D, Wang LL, Froehlich JE, Findlater L. What do we mean by 'Accessibility Research'? A literature survey of accessibility papers in CHI and ASSETS from 1994 to 2019. CHI. Online. 2021 May 10.
- 2020 [Talk and Poster] Subramanian S*, Wang LL, Mehta S, Bogin B, van Zuylen M, Parasa S, Singh S, Gardner M, Hajishirzi H. MedICaT: a dataset of medical images, captions, and textual references. SDP Workshop at EMNLP. Online. 2020 November 19.
- 2020 [Talk and Poster] Wadden D*, Lin S, Lo K, Wang LL, van Zuylen M, Cohan A, Hajishirzi H. Fact or fiction: verifying scientific claims. EMNLP. Online. 2020 November 18.
- 2020 [Talk] Roberts K*, Bedrick S, Demner-Fushman D, Lo K, Soboroff I, Voorhees E, Wang LL, Hersh WR. TREC-COVID: information retrieval for supporting COVID-19 research. AMIA Natural Language Processing Working Group Pre-Symposium. Online. 2020 November 14.
- 2020 [Talk] Wang LL* and Lo K. COVID-19: The COVID-19 Open Research Dataset. Global Tech Mining Conference. Online. 2020 November 13.
- 2020 [Talk] Wang LL*, Lo K*, Chandrasekhar Y, Reas R, Yang J, Burdick D, Eide D, Funk K, Katsis Y, Kinney R, Li Y, Liu Z, Merrill W, Mooney P, Murdick D, Rishi D, Sheehan J, Shen Z, Stilson B, Wade AD, Wang K, Wang NX, Wilhelm C, Xie B, Raymond D, Weld DS, Etzioni O, Kohlmeier S. COVID-19: the COVID-19 open research dataset. NLP-COVID Workshop at ACL. Online. 2020 July 9.
- 2020 [Talk] Lo K*, Wang LL, Neumann M, Kinney R, Weld DS. S2ORC: the Semantic Scholar open research corpus. ACL. Online. 2020 July 8.
- 2020 [Talk and Demo] Wang LL*, Tafjord O, Cohan A, Jain S, Skjonsberg S, Schoenick C, Botner N, Ammar W. SUPP.AI: finding evidence for supplement-drug interactions. ACL Demo. Online. 2020 July 7.
- 2019 [Poster] Wang LL*, Tafjord O, Cohan A, Jain S, Skjonsberg S, Schoenick C, Botner N, Ammar W. Extracting evidence of supplement-drug interactions from literature. ML4H Workshop at NeurIPS. Vancouver, BC, Canada. 2019 December 13.
- 2019 [Poster] Wang LL*, Wang Y, Oztek MA, Mayr N, Lo S, Yuh W, Mossa-Basha M. Automated Identification of Noise Signal in Spinal DCE-MRI using Independent Component Analysis and Unsupervised Machine Learning. ISMRM. Montréal, QC, Canada. 2019 May 16.
- 2018 [Poster] Wang LL* and Gennari JH. Quantifying the effects of gene entity disambiguation for GSEA. AMIA Symposium. San Francisco, CA, USA. 2018 November 5.
- 2018 [Doctoral Consortium] Wang LL*. Semi-automated integration of pathway data for pathway analysis. Knowledge Representation and Semantics Working Group Pre-Symposium Doctoral Consortium, AMIA Symposium. San Francisco, CA, USA. 2018 November 3.
- 2018 [Talk] Wang LL*, Bhagavatula C, Neumann M, Lo K, Wilhelm C, Ammar W. Ontology alignment in the biomedical domain using entity definitions and context. Bio-NLP Workshop at ACL. Melbourne, Australia. 2018 July 19.
- 2018 [Talk] Wang LL*, Shimoyama M, Hayman GT, Smith JR, Tutaj M, Gennari JH. Ontology-based integration of pathway databases using Pathway Ontology annotations. Bio-Ontologies at ISMB. Chicago, IL, USA. 2018 July 9.
- 2017 [Poster] Wang LL* and Gennari JH. Similarity metrics for determining overlap among biological pathways. ICBO. Newcastle upon Tyne, United Kingdom. 2017 September 15.
- 2017 [Poster] Hood TR*, Wang LL, Abernethy N. Detection and Functional Classification of Fusion Genes Using Pathway Expression Profiles. AMIA Joint Summits on Translational Science. San Francisco, CA, USA. 2017 March 28.
- 2016 [Poster] Wang LL*, Gennari JH, Abernethy N. Discovering representational differences between pathway knowledge bases for pathway resource merging. AMIA Symposium. Chicago, IL, USA. 2016 November 15.

- 2016 [Poster] Wang LL*, Grunblatt E, Whipple ME. Auditing tree-like organ systems in the FMA using network motifs. AMIA Symposium. Chicago, IL, USA. 2016 November 15.
- 2016 [Talk] Jung H*, Law AB, Grunblatt E, Wang LL, Kusano A, Mejino JLV Jr, Whipple ME. Development of a novel Markov chain model for the prediction of head and neck squamous cell carcinoma dissemination. AMIA Symposium. Chicago, IL, USA. 2016 November 16.
- 2016 [Talk] Wang LL*, Gennari JH, Abernethy N. An analysis of differences in biological pathway resources. ICBO & BioCreative. Corvallis, OR, USA. 2016 August 3.
- 2016 [Poster] Wang LL. Identifying and resolving inconsistencies in biological pathway resources. NLM Informatics Training Conference. Columbus, OH, USA. 2016 June 27.
- 2015 [Talk] Wang LL*, Grunblatt E, Jung H, Kalet IJ, Whipple ME. Biological model development as an opportunity to provide content auditing for the foundational model of anatomy ontology. AMIA Symposium. San Francisco, CA, USA. 2015 November 16.
- 2015 [Poster] Wang LL* and Choi Y. Development of a discharge ontology to support postanesthesia discharge decision making. ICBO. Lisbon, Portugal. 2015 July 29.
- 2015 [Poster] Wang LL*. Ontological content auditing during model creation using the foundational model of anatomy. NLM Informatics Training Conference. Bethesda, MD, USA. 2015 June 23.
- 2014 [Poster] Kaminsky DA*, Wang LL, Shade DM, Dixon AE, Bates JHT, Irvin CG, Wise RA, Peters SP. Detrended fluctuation analysis of peak expiratory flow and its association with destabilization of asthma control. International Conference of the American Thoracic Society (ATS). San Diego, CA, USA. 2014 May 16.
- 2013 [Poster] Zaidman C*, Bohorquez J, Wang LL, Florence J, Connolly AM, Escolar DM, Williams G. Electrical impedance myography in DMD: a multi-center study of reliability and relationships to strength and function. The 18th International Congress of the World Muscle Society. Asilomar, CA, USA. 2013 October 2.

TEACHING

Courses

- WIN 2023 INFO 330, Databases & Data Modeling
Information School, University of Washington, Seattle, WA, USA
- SPR 2017 BIME 591, Biological Pathway Analysis: Trends and Applications
Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA, USA.

Tutorials

- 2021 Science of Science Summer School (S4). "Practical NLP for scientific text mining: extracting and synthesizing knowledge from the literature." Online. 2021 July 29.
- 2018 Kidney Precision Medicine Project Ontology Webinar. A Brief Introduction to Ontology. Online. 2018 December 19.

Guest lectures

- 2022 Artificial Intelligence Law: Practice and Theory, "Identifying and Mitigating Algorithmic Biases." School of Law, Seattle University, Seattle, WA, USA. June 29, 2022.
- 2022 BIME 550, Knowledge Representation, "Ontology and NLP: Bridging the 'Structural Chasm.'" Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA, USA. February 7, 2022.
- 2018 BIME 550, Knowledge Representation, "A SPARQL Tutorial." Department of Biomedical Informatics and Medical Education, University of Washington, Seattle, WA, USA. January 24, 2018.

MENTORSHIP

PhD Students

- 2022— Yue Guo, Biomedical Informatics and Medical Education, University of Washington

- 2022— Bingbing Wen, Information School, University of Washington
2022— Donghoon Shin, Human Centered Design & Engineering, University of Washington

Undergraduate Students

- 2023— Carlos Alvarez, Information School, University of Washington
2023— Max Miles, Information School, University of Washington
2022— Sanjana Chintalapati, Computer Science & Engineering, University of Washington
2022— Jessie Zeng, Linguistics & Information School, University of Washington

AI2 Interns

- 2022— Nayha Auradkar, Undergrad, University of Washington; Research intern, AI2
2022— Hancheng Cao, PhD student, Stanford University; Research intern, AI2
2022— John Giorgi, PhD student, University of Toronto; Research intern, AI2
2021—2022 Sanjana Chintalapati, Undergrad, University of Washington; Research intern, AI2
2021—2022 Tal August, PhD student, University of Washington; Research intern, AI2
2021—2022 Dustin Wright, PhD student, University of Copenhagen; Research intern, AI2
2021—2022 Aakanksha Naik, PhD student, Carnegie Mellon University; Research intern, AI2 → Research Scientist at AI2
2021 Chantal Shaib, Masters student, University of Toronto; Research intern, AI2 → PhD student at Northeastern University
2020—2021 Jay DeYoung, PhD student, Northeastern University; Research intern, AI2
2020—2022 David Wadden, PhD student, University of Washington; Research intern, AI2
2019 Xueqing (Susan) Liu, Postdoctoral intern, AI2 → Assistant Professor of Computer Science at Stevens Institute of Technology

AI2 Predoctoral Young Investigators

- 2020—2021 Zejiang Shen, Predoctoral Young Investigator, AI2 → PhD student at MIT
2020—2021 Isabel Cachola, Predoctoral Young Investigator, AI2 → PhD student at Johns Hopkins University
2020 Sanjay Subramanian, Predoctoral Young Investigator, AI2 → PhD student at UC Berkeley

Other Mentorship

- 2022—2023 Data Science Capstone, UVA School of Data Science
2021—2022 AI for Scientific Research Capstone, NYU Tandon School of Engineering
2020 Mentor, Graduate Student Mentorship Initiative, Científico Latino
2017—2018 Mentor, University of Washington High Performance Computing Club

SERVICE

Editorial Boards

- 2022— Review Editor, Frontiers in Research Metrics and Analytics
2017—2019 Student Member, Journal of the American Medical Informatics Association

Special Issue Editor

- 2022—2023 “Semantics-enabled Biomedical Literature Analytics.” Journal of Biomedical Informatics.

Organizing Committee

- 2022 Multi-document Summarization for Literature Review (MSLR) Shared Task at SDP
2022 Workshop on Scholarly Document Processing (SDP) at COLING
2022 Workshop on Semantics-Enabled Biomedical Literature Analytics at TheWebConf (WWW)
2021 2nd SciNLP Workshop at AKBC
2021 2nd Scholarly Document Processing (SDP) Workshop at NAACL-HLT

- 2021 Epidemic Question Answering (EPIC-QA) Shared Task at TAC
- 2020 TREC-COVID Shared Task at TREC
- 2020 1st SciNLP Workshop at AKBC

Program Committee

- 2023 Joint Conference on Digital Libraries (JCDL)
- 2023 Clinical NLP Workshop
- 2023 SPC Member, AAAI
- 2022 Area Chair, Document Classification and Information Retrieval Track, COLING
- 2022 Joint Conference on Digital Libraries (JCDL)
- 2022 Workshop on Bibliometric-enhanced Information Retrieval (BIR) at ECIR
- 2021 BioASQ Workshop at CLEF
- 2020 BioASQ Workshop at CLEF

Reviewing

In addition to the above, I review for the following conferences and journals, listed alphabetically:

AAAS (2022), AACL-IJCNLP System Demonstrations (2020), ACL (2023), ACL-IJCNLP (2021), ACL Rolling Review (Oct 2021, Nov 2021, Apr 2022), ACM Transactions on Computing for Healthcare (2020, 2021, 2022), AMIA Annual Symposium (2016, 2017, 2019, 2021), AMIA Informatics Summit (2018, 2019, 2021), AMIA Translational Bioinformatics YIR (2017, 2018), Artificial Intelligence (2022), BMC Bioinformatics (2021, 2022), Data Science (2019), EMNLP (2019), IEEE Transactions on Computational Biology and Bioinformatics (2021), IEEE Transactions on Knowledge and Data Engineering (2020), International Journal on Digital Libraries (2023), Journal of the American Medical Informatics Association (2017, 2018), Journal of Biomedical Informatics (2019, 2020, 2021, 2022, 2023), Machine Learning for Health (ML4H) Workshop (2019), Medical Semantic Indexing in Spanish (MESIESP2) (2021), Nature Scientific Reports (2020, 2021), NAACL-HLT Industry Track (2021), NLP-COVID Workshop (2020), NeurIPS Workshop Proposals (2021), PLOS ONE (2021), Scholarly Document Processing (SDP) Workshop (2020, 2021, 2022), Scientometrics (2022), Transactions on Accessible Computing (TACCESS) (2022).

Service to Profession

- 2021 Member, Governance Task Force, AMIA
- 2019–2020 Member, Kidney Precision Medicine Project Ontology Integration Sub-committee
- 2017–2018 Manager, Journal Club, JAMIA
- 2017 Assistant Editor, MedInfo

Departmental Committees

- 2022–2023 Informatics Program Committee, University of Washington
- 2021–2022 Internal Review Board, Allen Institute for AI
- 2019–2021 Committee on Diversity, Equity, and Inclusion, Allen Institute for AI
- 2015–2016 Curriculum Committee, Department of Biomedical Informatics and Medical Education, University of Washington

Non-Profit Activity

- 2020–2022 Vice President, Board of Directors, Nihon-Kiin Go Institute of the West
- 2018–2022 Elected Member, Board of Directors, Nihon-Kiin Go Institute of the West

PROFESSIONAL MEMBERSHIPS

-
- American Medical Informatics Association (AMIA)
 - Association for Computational Linguistics (ACL)
 - Association for Computing Machinery (ACM)

SELECTED PRESS COVERAGE

- 2021 "A web tool that converts PDF scientific papers into HTML." Written by Clive Thompson for Boing Boing. <https://boingboing.net/2021/09/17/a-web-tool-that-converts-pdf-scientific-papers-into-html.html>
- 2020 "Artificial Intelligence is on track to improve medicine." Written by Paul Bennett for Techonomy. <https://techonomy.com/2020/12/artificial-intelligence-is-on-track-to-improve-medicine/>
- 2020 "Software tools for mining COVID-19 research studies go viral among scientists." Written by Alan Boyle for Geekwire. <https://www.geekwire.com/2020/software-tools-mining-covid-19-research-studies-go-viral-among-scientists/>
- 2020 "AI researchers seeking COVID-19 answers face hurdles." Written by Gopal Ratnam for Roll Call. <https://www.rollcall.com/2020/04/28/ai-researchers-seeking-covid-19-answers-face-hurdles/>
- 2020 "Exploring the COVID-19 Open Research Dataset." Recorded with Chris Benson and Daniel Whitenack at The Changelog's Practical AI. <https://changelog.com/practicalai/86>
- 2019 "How do drugs interact with supplements? Supp.AI search engine tracks down clues." Written by Alan Boyle for Geekwire. <https://www.geekwire.com/2019/drugs-interact-supplements-suppai-search-engine-tracks-clues/>
- 2019 "Supp AI uses machine learning to identify supplement interactions." Written by Kyle Wiggers for VentureBeat. <https://venturebeat.com/2019/09/19/supp-ai-uses-machine-learning-to-model-supplement-interactions/>
- 2019 "Another century of gender inequality in computer science." Written by Kaveh Waddell for Axios. <https://www.axios.com/gender-inequality-computer-science-research-5440357b-6c13-4411-a373-1d3d771dfefc.html>
- 2019 "The Gender Gap in Computer Science Research Won't Close for 100 Years." Written by Cade Metz for The New York Times. <https://www.nytimes.com/2019/06/21/technology/gender-gap-tech-computer-science.html>