

# Hadi Amiri

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## RESEARCH INTERESTS

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Natural Language Processing and Health Informatics.

## EDUCATION

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**Harvard University** 2016 – 2020

Postdoctoral Research Fellow; DBMI and CHIP; Isaac S. Kohane, Kenneth D. Mandl

**University of Maryland, College Park** 2014 – 2016

Postdoctoral Research Associate; UMIACS; Hal Daumé III, Philip Resnik

**National University of Singapore** 2009 – 2013

Ph.D. in Computer Science (GPA: 4.2/5.0); Tat-Seng Chua

**University of Tehran** 2005 – 2008

M.Eng. in Electrical and Computer Engineering (GPA: 4.5/5.0); Farhad Oroumchian, Masoud Rahgozar

## PUBLICATIONS

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### Conference Publications

- Nidhi Vakil, Hadi Amiri. Generic and Trend-aware Curriculum Learning for Relation Extraction in Graph Neural Networks. In Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL'22).
- Hadi Amiri, Mitra Mohtarami, Isaac S. Kohane. 2021. Attentive Multiview Text Representation for Differential Diagnosis. In Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (ACL'21).
- Nazanin Dehghani, Hassan Hajipoor, Hadi Amiri. Embedding Time Differences in Context-sensitive Neural Networks for Learning Time to Event. In Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (ACL'21).
- Hadi Amiri, Andrew L. Beam, Isaac S. Kohane. 2019. Learning to Estimate Nutrition Facts from Food Descriptions. In American Medical Informatics Association (AMIA'19). Washington, DC, USA.
- Hadi Amiri. 2019. Neural Self-Training through Spaced Repetition. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL'19). Minneapolis, MN, USA.
- Hadi Amiri, Mitra Mohtarami. 2019. Vector of Locally Aggregated Embeddings for Text Representation. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL'19). Minneapolis, MN, USA.
- Hassan Hajipoor, Hadi Amiri, Maseud Rahgozar, Farhad Oroumchian. 2019. Serial Recall Effects in Neural Language Modeling. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL'19). Minneapolis, MN, USA.
- Hadi Amiri, Kara Magane, Lauren Wisk, Guergana Savova, Elissa Weitzman. 2018. Toward Large-scale and Multi-facet Analysis of First-person Alcohol Drinking. In American Medical Informatics Association (AMIA'18). San Francisco, CA, USA.
- Hadi Amiri, Timothy Miller, Guergana Savova. 2018. Spotting Spurious Data with Neural Networks. In Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL'18). New Orleans, LA, USA.
- Hadi Amiri, Timothy Miller, Guergana Savova. 2017. Repeat before Forgetting: Spaced Repetition for Efficient and Effective Training of Neural Networks. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP'17). Copenhagen, Denmark.

- Hadi Amiri, Philip Resnik, Jordan Boyd-Graber, and Hal Daumé III. 2016. Learning Text Pair Similarity with Context-sensitive Autoencoders. In Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (ACL'16). Berlin, Germany.
- Hadi Amiri and Hall Daumé III. 2016. Short Text Representation for Detecting Churn in Microblogs. In Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI'16). Phoenix, AZ, USA.
- Hadi Amiri and Hall Daumé III. 2015. Target-dependent Churn Classification in Microblogs. In Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI'15). Austin, TA, USA.
- Chen Yan, Hadi Amiri, Zhojun Li, Tat-Seng Chua. 2013. Emerging Topic Detection for Organizations from Social Media. In Proceedings of the 36th international ACM SIGIR conference (SIGIR'13). Dublin, Ireland.
- Hadi Amiri, Zheng-Jun Zha, Tat-Seng Chua. 2013. A Pattern Matching Based Model for Implicit Opinion Question Identification. In Proceedings of 27th AAAI Conference on Artificial Intelligence (AAAI'13). Bellevue, WA, USA.
- Hadi Amiri, Tat-Seng Chua. 2012. Mining Sentiment Terminology through Time. In Proceedings of the 21st ACM international conference on Information and knowledge management (CIKM'12). Maui, Hawaii, USA.
- Hadi Amiri, Tat-Seng Chua. 2012. Mining Slang and Urban Opinion Words and Phrases from cQA Services: An Optimization Approach. In Proceedings of the 5th ACM international conference on Web search and data mining (WSDM'12). Seattle, WA, USA.
- Mitra Mohtarami, Hadi Amiri, Man Lan, Thanh P. Tran, Chew Lim Tan. 2012. Sense Sentiment Similarity: An Analysis. In Proceedings of the 26th AAAI Conference on Artificial Intelligence (AAAI'12). Toronto, Canada.
- Mitra Mohtarami, Hadi Amiri, Man Lan, Chew Lim Tan. 2011. Predicting the Uncertainty of Sentiment Adjectives in Indirect Answers. Proceedings of the 20th ACM international conference on Information and knowledge management. (CIKM'11). Glasgow, Scotland, UK.

### Journal Publications and Book Chapters

- Hadi Amiri, Isaac S. Kohane. 2021. Learning Patient Characteristics to Accelerate Admission to the Undiagnosed Diseases Network. In The Journal of the American Medical Association (JAMA 2021).
- Elissa R. Weitzman, Kara M. Magane, Po-Hua Chen, Hadi Amiri, Timothy S. Naimi, Lauren E. Wisk. 2020. Online Searching and Social Media Detect Alcohol Use Risk at Population Scale. American Journal of Preventive Medicine (AJPM 2020).
- Abolfazl AleAhmad, Hadi Amiri, Ehsan Darrudi, Masoud Rahgozar, Farhad Oroumchian. 2009. Hamshahri: A Standard Persian Text Collection. Knowl.-Based Syst. 22(5): 382-387.
- R. Karimpour, A. Ghorbani, A. Pishdad, M. Mohtarami, A. AleAhmad, Hadi Amiri, F. Oroumchian. 2009. Improving Persian IR Systems Using Stemming and Part of Speech Tagging. In Evaluating Systems for Multilingual and Multimodal Information Access. Springer Berlin Heidelberg.
- Zahra Aghazade, N. Dehghani, L. Farzinvash, R. Rahimi, A. AleAhmad, Hadi Amiri, F. Oroumchian. 2009. Fusion of Retrieval Models at CLEF 2008 Ad Hoc Persian Track. In Evaluating Systems for Multilingual and Multimodal Information Access. Springer Berlin Heidelberg.

### Workshop Publications

- Hadi Amiri, Timothy Miller, Guergana Savova. 2018. Spaced Repetition for Training Artificial Neural Networks. National Aeronautics and Space Administration (NASA) Goddard Workshop on Artificial Intelligence. MD, USA.
- Chen Lin, Timothy Miller, Dmitriy Dligach, Hadi Amiri, Steven Bethard, Guergana Savova. 2018. Self-training Improves Recurrent Neural Networks Performance for Temporal Relation Extraction. Health Text Mining and Information Analysis Workshop (LOUHI'18), EMNLP'18. Brussels, Belgium.

- Chen Lin, Timothy Miller, Hadi Amiri, David Harris, Samuel Rubinstein, Jeremy Warner, Guergana Savova. 2018. Classification of Electronic Medical Records of Breast Cancer and Melanoma Patients to Clinical Episodes. Artificial Intelligence, Big Data and Prediction in Cancer Workshop. American Association for Cancer Research. RI, USA.
- Timothy Miller, Steven Bethard, Hadi Amiri, Guergana Savova. 2017. Unsupervised Domain Adaptation for Clinical Negation Detection. BioNLP Workshop, ACL'17. Vancouver, Canada.
- Meir Friedenberg, Hadi Amiri, Hal Daumé III, Philip Resnik. 2016. Text Representation for Predicting Triage of Forum Posts about Mental Health. CLPsych workshop, NAACL'16, San Diego, USA.
- Hadi Amiri, Abolfazl AleAhmad, Farhad Oroumchian, Masoud Rahgozar. 2008. Keyword Suggestion Using Concept Graph Construction from Wikipedia Rich Documents. ESAIR workshop. In Proceedings of the European Conference on Information Retrieval (ECIR'08). Glasgow, UK.
- Abolfazl AleAhmad, Hadi Amiri, Masoud Rahgozar, Farhad Oroumchian. 2008. Experiments with English-Persian Text Retrieval. The 2nd ACM workshop on Improving Non English Web Searching, iNEWS'08. In Proceedings of the 17th ACM international conference on Information and knowledge management (CIKM'08). Napa, CA, USA.
- Hadi Amiri, Abolfazl AleAhmad, Farhad Oroumchian, Caro Lucas, Masoud Rahgozar. 2007. Using OWA Fuzzy Operator to Merge Retrieval System Results. CAASL workshop. Stanford University, CA, USA.

## TEACHING

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<b>Natural Language Processing</b> (COMP.5420): UMASS Lowell	2023 – present
<b>Graph Machine Learning</b> (COMP.5455): UMASS Lowell	2020 – present
<b>Social Computing</b> (COMP.5415): UMASS Lowell	2020 – present
<b>Social Computing</b> (CMSC.498J): UMD, College Park	2015–2016

## SERVICE

### Conference Area Chair

- Association for Computational Linguistics ACL'23

### Conference Reviewer

- International Conference on Learning Representations ICLR'21,22  
 - Association for the Advancement of Artificial Intelligence AAAI'16,17,18,19,21,22  
 - Neural Information Processing Systems NeurIPS'18,19,20,21,22  
 - American Medical Informatics Association AMIA'18,19,20,21  
 - Empirical Methods in Natural Language Processing EMNLP'15,16,17,20  
 - Association for Computational Linguistics ACL'17,19  
 - Special Interest Group on Information Retrieval SIGIR'18,19  
 - North American Chapter of the Association for Computational Linguistics NAACL'19  
 - International Conference on Machine Learning ICML'19  
 - Language Resources and Evaluation LREC'18  
 - European Chapter of the Association for Computational Linguistics EACL'16  
 - International Joint Conference on Natural Language Processing IJCNLP'13  
 - Recent Advances in Natural Language Processing RANLP'13  
 - Asia Information Retrieval Societies Conference AIRS'11

### Journal Reviewer

- Transactions of the Association for Computational Linguistics (TACL)  
 - Computational Linguistics (CL)  
 - The Journal of the American Medical Association (JAMA)  
 - IEEE Transactions on Knowledge and Data Engineering (TKDE)  
 - Information Processing and Management (IPM)  
 - Journal of Natural Language Engineering (JNLE)

## HONORS & AWARDS

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**PhD Scholarship:** NUS Graduate School for Integrative Sciences and Engineering (NGS) 2009 – 2013  
**Iran National Graduate Exam:** Ranked 33rd among more than 11K applicants April 2005  
**Iran National Undergraduate Exam:** Ranked 978th among more than 400K applicants April 2000

## APPOINTMENTS

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**Assistant Professor:** University of Massachusetts 2020 – present  
**Assistant Professor (Adjunct):** Harvard University 2020 – present  
**Research Scientist:** Institute for Infocomm Research 2013 – 2014  
**Research Intern:** National University of Singapore Jun 2008 – Aug 2008  
**Research Assistant:** University of Tehran 2007 – 2008