

# Henry A. Kautz, Ph.D.

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## Employment

*Professor*                      *Department of Computer Science*                      *2024-Present*  
*University of Virginia*  
*Charlottesville, VA*

- Carried out research on using online behavior data for healthcare.
- Created course on AI for healthcare.
- Co-PI for multi-investigator, multi-university NSF AI Institute proposal.

*Senior Advisor*                      *Science & Technology Futures*                      *2023*  
*Cambridge, MA*

- Created roadmap for new funding programs to support AI for science.
- Interviewed 50 leading researchers who are using AI to advance biology, chemistry, environmental science, material science, mechanical engineering, neuroscience, or physics.
- Identified common research themes, infrastructure needs, funding gaps, and ways to overcome bottlenecks to progress created by traditional academic culture.

*Advisor*                      *AIM Intelligent Machines*                      *July 2022–Present*  
*Seattle, WA*

- Advise autonomous earthmover startup on automated planning technology.

*Director*                      *Division of Information & Intelligent*                      *June 2018–2022*  
*Systems, National Science Foundation*

- Directed the division of NSF Computer and Information Science (CISE) that funds research in artificial intelligence, human-computer interaction, and data science. Appointment to NSF through the Intergovernmental Personnel Act while retaining rank as professor at the University of Rochester.
- Managed a \$230 million budget and 36 scientific and administrative employees.
- Led of the National AI Research Institutes program, which is funding a series of \$20 million centers in foundational and applied artificial intelligence. Work includes developing partnerships with industry and other government agencies. Partners to date include Google, Amazon, IBM, Intel, Accenture, and the federal departments of Agriculture, Homeland Security, and Education.
- Led creation of joint core program between CISE and the Directorate for Engineering on Foundational Research in Robotics.
- Co-chaired the Interagency Working Group on Artificial Intelligence at the Networking and Information Technology Research and Development program.

Co-edited *The National Artificial Intelligence Research and Development Strategic Plan: 2019 Update* and *2016–2019 Progress Report: Advancing Artificial Intelligence R&D*.

- Gave talks and briefings on the state and future directions of AI research to the National Security Commission, US Army Cybercommand, NASA, Federal Trade Commission, Food & Drug Agency, and other agencies.

*Advisor*                      *Verneek*    *2021–Present*  
*New York, NY*

- Advise on technology and strategy for consumer natural language dialog systems.

*Director*                      *Goergen Institute for Data Science*                      *Oct 2014–May 2018*  
*University of Rochester*  
*Rochester, NY*

- Established structure of the Institute, including staffing and formation of Faculty Steering Committee and External Advisory Board.
- Designed curriculum for MS and BS in Data Science, working with departments across the university that teach data science courses. Won NY State approval for and administered both degree programs.
- Led initiatives to grow collaborative interdisciplinary research at the University, including internal workshops, university seed funding competitions, and Distinguished Faculty Fellows program.
- Led interdepartmental faculty searches in Data Science, with the goal of hiring faculty who would bridge disciplines and hold appointments in multiple departments. Hired faculty in network science, human-robot interaction, computational linguistics, and digital media studies.
- Co-led efforts to establish industry partnerships, resulting in funding, industry participation in data science capstone projects, and student internships.
- Worked with University Advancement on fundraising for data science initiatives, including meetings with donors, trustees, and alumni.
- Led a successful \$3 million NSF National Research Training proposal on interdisciplinary PhD training crossing cognitive science and artificial intelligence.
- Led a successful NSF Research Experience for Undergraduates site proposal on computational models of music, media, and the mind. Participating faculty are from Computer Science, Electrical & Computer Engineering, English, Brain & Cognitive Science, and English.

*Chair*                      *Department of Computer Science,*                      *Jan 2008–June 2015*  
*University of Rochester*  
*Rochester, NY*

- Hired first faculty members in department in human-computer interaction.
- Served on University Strategic Planning Committee, which led to the University's Data Science initiative, the Goergen Institute for Data Science, and a new building for Computer Science.

- Created new BA track to allow students to combine computer science with other disciplines.
- While Chair, the size of the faculty grew 25%, the number of majors grew 300%, and the number of female majors rose from 5% to 30%.

*Professor*                      *Department of Computer Science*                      *2007–2022*  
    *University of Rochester*  
    *Rochester, NY*

- Performed research on social media analytics to improve public health, including using online behavior data to support mental health therapy, tracking worldwide contagious disease spread, and locating sources of food poisoning.
- Performed research on computational models for creative language analysis and generation and grounded language learning.
- Performed research on inferring socio-economic indicators from global-scale human mobility data.

*Professor*                      *University of Washington, Seattle*                      *2004–2007*  
*Assoc. Prof.*                      *2000–2004*

- Led the Assisted Cognition Project, which developed prompting and wayfinding systems for persons with cognitive impairments.
- Performed research on proof-theoretic complexity of clause learning based and decision-theoretic methods to improve the performance of randomized satisfiability solvers.

*Technology Leader*    *AT&T Laboratories, Florham Park, NJ*                      *July 1997–Aug 2000*

- Performed research on automated planning, knowledge representation and reasoning, and satisfiability testing.

*Department Head*    *AT&T Bell Laboratories, Murray Hill, NJ*                      *July 1994–June 1997*

- Led the Principles of Artificial Intelligence Research Department.

*Scientist*                      *AT&T Bell Laboratories, Murray Hill, NY*                      *July 1987– June 1994*

- Performed research on the complexity of knowledge representation languages, knowledge compilation, and practical algorithms for satisfiability testing.

*Systems Analyst*                      *Nanodata Corporation, Buffalo, NY*                      *July 1978–June 1979*

- Designed and implemented microprocessor operating system.

## **Education**

University of Rochester	Ph.D., Computer Science	1987
University of Toronto	M.S., Computer Science	1982
The Johns Hopkins University	M.A., Writing Seminars	1980
Cornell University	A.B., Mathematics	1978

## Honors

Test of Time Paper Award	International Conference on Theory and Applications of Satisfiability Testing	2024
Most Impactful Paper	ACM Intelligent User Interfaces	2022
Distinguished Service Award	Association for the Advancement of Artificial Intelligence	2020
Robert S. Engelmores Memorial Lecture Award	Association for the Advancement of Artificial Intelligence	2020
ACM-AAAI Alan Newell Award	Association for Computing Machinery and the Association for the Advancement of Artificial Intelligence	2019
Incoming Chair, Chair, & Outgoing Chair	American Association for the Advancement of Science (AAAS) Section on Information, Computing and Communication	2016-2019
Classic Paper Award	Association for the Advancement of Artificial Intelligence	2016
Deployed Application Award	Conference on Innovative Applications of Artificial Intelligence (IAAI)	2016
Robin & Tim Wentworth Directorship	University of Rochester	2015
Fellow	Association for Computing Machinery	2014
10-Year Impact Award	ACM International Joint Conference on Pervasive and Ubiquitous Computing	2013
President-Elect, President, & Past President	Association for Advancement of Artificial Intelligence (AAAI)	2009-2014
Fellow	American Association for the Advancement of Science (AAAS)	2007
Fellow	Association for Advancement of Artificial Intelligence (AAAI)	1997
Computers & Thought Award	International Joint Conference on Artificial Intelligence (IJCAI)	1989
Notable Paper	First AAAI Conference on Human Computation and Crowdsourcing (HCOMP)	2013
Best Paper	Fifth ACM International Conference on Web Search and Data Mining (WSDM)	2012

Notable Paper	Conference on Artificial Intelligence (AAAI)	2012
Best Paper	IEEE International Symposium on Wearable Computers (ISWC)	2005
Best Paper	Conference on Artificial Intelligence (AAAI)	2004
Best Paper	Conference on Artificial Intelligence (AAAI)	1996
Notable Paper	Conference on Artificial Intelligence (AAAI)	1993
Best Paper	International Conference on Knowledge Representation & Reasoning (KRR)	1989
Best Paper	Canadian Society for Computational Studies of Intelligence (CSCSI)	1988
1st Place	ICAPS Planning Competition (Optimal Track)	2004 & 2006

## PhDs Supervised

Anis Zaman	<i>Combining traditional and non-traditional data streams for understanding mental health.</i> Current employer: eBay, San Jose, CA	2021
Nabil Hossain	<i>Creative Natural Language Generation.</i> Current employer: Roku, Austin, TX	2020
Brian Dickinson	<i>Improving our Understanding of Society through Global Patterns of Human Mobility.</i> Current position: Assistant Professor, Grove City College, PA	2020
Tim Kopp	<i>Symmetry Exploitation for Inference in Relational Theories.</i> Current employer: Pivotal, New York, NY	2017
Young Song Chol	<i>Fine Grained Activity Recognition Using Multimodal Data Sets.</i> Current employer: Noodle AI, San Francisco, CA	2016
Anna Loparev	<i>The Impact of Collaborative Scaffolding in Educational Video Games on the Collaborative Support Skills of Middle School Students.</i> Current employer: Waters, Milford, MA	2016

Iftekhhar Naim	<i>Unsupervised Alignment of Natural Language with Video.</i> Current employer: Google, Mountainside, CA	2015
Yi Chu	<i>Intelligent Prompting Systems for People with Cognitive Disabilities.</i> Current employer: WorkHuman, Boston, MA	2013
Tivadar Papai	<i>Exploiting Constraints, Sequential Structure, and Knowledge in Markov Logic Networks.</i> Current employer: Google, Mountainside, CA	2013
Chetan Bhole	<i>Image Segmentation Using Conditional Random Fields.</i> Current employer: A9, Seattle, WA	2012
Adam Sadilek	<i>Modeling Human Behavior at a Large Scale.</i> Current position: CEO, AIM Intelligent Machines, Seattle, WA	2012
Alan Liu	<i>Design of an Adaptive Wayfinding System for Individuals with Cognitive Impairments.</i> Current employer: Kiha, Seattle, WA	2010
Tian Sang	<i>Combining Caching and Clause Learning in Weighted Model Counting.</i> Current employer: Microsoft, Seattle, WA	2007
Lin Liao	<i>Location-Based Activity Recognition.</i> Current employer: Google Labs, Seattle, WA	2006
Ashish Sabharwal	<i>Propositional Proof Complexity and its Applications to Satisfiability Algorithms.</i> Current employer: Paul J. Allen Institute for Artificial Intelligence, Seattle, WA	2005
Don Patterson	<i>Learning Predictive Models of Large and Small Scale Human Activity.</i> Current position: Professor, Westmont College, Santa Barbara, CA	2005
Yongshao Ruan	<i>Efficient Inference: A Machine Learning Approach.</i> Current employer: SourceLabs, Seattle, WA	2004

## Grants Received

NSF	NSF-REU: Computational Models for Understanding Music, Media, & the Mind. PI.	\$324,000	2017-2019
NSF	NRT-DESE: Graduate Training in Data-Enabled Research into Human Behavior and its Cognitive and Neural Mechanisms. PI.	\$3,000,000	2015-2020
NSF	TwitterHealth: Learning Fine-Grained Models of Health Influences and Interactions from Social Media. PI.	\$481,939	2013-2016
Intel	Intel Science and Technology Center for Pervasive Computing (ISTCPC). PI.	\$700,000	2011-2016
DOD	Automated Scene Understanding – Phase II. Subcontract from ObjectVideo. Joint with J. Luo.	\$254,644	2012-2013
NIH	Diffusion-based Sampling Processes Study: Health-risk Behavior in Hidden Online Communities. Joint with V. Silenzio. Co-PI.	\$76,051	2011-2014
ONR	Language as Action and Natural Reasoning. Joint with J. Allen. Co-PI.	\$1,499,999	2011-2014
DOD	Automated Scene Understanding – Phase I. Subcontract from ObjectVideo.	\$24,669	2011
NSF	Integrating Teaching and Learning in a Cognitive Assistant. Joint with J. Allen. Co-PI.	\$749,986	2010-2013
ARO	MURI: A Unified Approach to Abductive Inference. Co-PI.	\$630,449	2008-2013
DARPA	Increasing Independence for Individuals with Brain Injury with Integrated Cueing, Monitoring and Planning – Phase II. SBIR with Attention Control Systems. PI.	\$294,408	2009-2010
OSD	A Conversational Independent Living Assistant for Cognitive Impairment – Phase II. SBIR with Attention Control Systems. PI.	\$226,801	2009-2011
Kodak	Gift.	\$165,000	2006-2010
OSD	Cognitive Assistive Technology for Individuals with TBI. SBIR with Sendero Inc. and University of Washington. PI.	\$100,000	2008
DARPA	Increasing Independence for Individuals with Brain Injury with Integrated Cueing,	\$98,996	2008

	Monitoring and Planning – Phase I. SBIR with Attention Control Systems. PI.		
NYSTAR	Probabilistic Models of Human Activity and their Applications to Assistive Technologies.	\$336,738	2006-2009
DARPA	CALO: Cognitive Agent that Learns and Observes. Subcontract from SRI. Co-PI.	\$149,878	2006-2007
NSF	Building High-Level Models of Human Behavior from Low-Level Sensor Data. PI.	\$ 220,000	2005-2009
DARPA	CALO: Cognitive Agent that Learns and Observes. Subcontract from SRI. Joint with P. Domingos and D. Fox.	\$553,000	2005-2006
DARPA	ASSIST: Situation Assessment & Activity Recognition. Joint with D. Fox, G. Borriello, J. Bilmes, and D. Weld.	\$649,000	2005-2006
DARPA	CALO: Situation Awareness. Joint with D. Weld and D. Fox.	\$400,000	2004-2005
DARPA	Usability Study of a Personal Guidance System for the Cognitively Disabled.	\$50,000	2005-2006
NIDRR	Assisted Cognition in Community, Employment, and Support Settings (ACCESS). Joint with K. Johnson, G. Borriello, P. Brown, M. Harniss, and B. Dudgeon.	\$1,495,000	2004-2007
NSF	ITR: Creating Dynamic Social Network Models from Sensor Data. Joint with D. Fox, J. Kitts, T. Choudhury, and J. Rehg.	\$795,400	2002-2005
NSF	ITR: Inference in AI, Verification, and Theory: A Unified Approach. Joint with P. Beam.	\$490,000	2001-2004
ONR	Beowulf Cluster Supercomputing for AI, Data Mining, and Database Research. Joint with D.Weld, D.Fox, P. Domingos, and O. Etzioni.	\$134,700	2002
Intel	Assisted Cognition. PI.	\$270,000	2002-2005
NSF	Principles of Efficient Inference. PI.	\$420,000	2001-2004

## Patents



- No. 5636328      Methods and apparatus for constraint satisfaction.      June 3, 1997  
Henry Kautz, Bart Selman
- No. 5619648      Message filtering techniques.      Leonard M. Canale,      April 8, 1997  
Henry A. Kautz, Allen E. Milewski, Bart Selman

## **Publications**

Google Scholar statistics:

Citations	35,764
h-index	81
i10-index	177

### **2023**

Henry Kautz (2023). Review: Machines Like Us: Toward AI with Common Sense, by Ronald J. Brachman and Hector J. Levesque. Preprint. Prometheus: Critical Studies in Innovation, 39: 2.

### **2022**

Henry Kautz (2022). The Third AI Summer. AI Magazine, Volume 43, Issue 1, Spring 2022, Pages 105-125.

Henry Kautz (2022). Unlocking Government Data to Support and Evaluate Scientific Research: An Overview of Selected Papers from the Value of Science Conference Harvard Data Science Review, Issue 4.2, Spring 2022.

### **2021**

Samuel Lerman, Charles Venuto, Henry Kautz, and Chenliang Xu. Explaining Local, Global, and Higher-Order Interactions in Deep Learning. Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2021, pp. 1224-1233.

Anis Zaman, Henry Kautz, Vincent Silenzio, Md. Ehsan Hoque, and Corey Nichols. Discovering Intimate Partner Violence from Web Search History. Smart Health, Vol. 19, 2021.

### **2020**

Jesse Wang, Marc Lavender, Ehsan Hoque, Patrick Brophy, and Henry Kautz (2020). A patient-centered digital scribe for automatic medical documentation. Journal of Medical Artificial Intelligence (JAMIA Open), 2021; ooab003, <https://doi.org/10.1093/jamiaopen/ooab003>.

Anis Zaman, Boyu Zhang, Ehsan Hoque, Vincent Silenzio, Henry Kautz (2020). The Relationship between Deteriorating Mental Health Conditions and Longitudinal Behavioral Changes in Google and YouTube Usages among College Students in the United States during COVID-19: Observational Study. *JMIR Mental Health* 7(11), e24012, 2020.

Boyu Zhang, Anis Zaman, Rupam Acharyya, Ehsan Hoque, Vincent Silenzio, Henry Kautz (2020). Detecting Individuals with Depressive Disorder from Personal Google Search and YouTube History Logs. *NeurIPS 2020 Workshop on Machine Learning in Public Health*, 2020.

Anis Zaman, Vincent Silenzio, and Henry Kautz (2020). MIND: A Tool for Mental Health Screening and Support of Therapy to Improve Clinical and Research Outcomes. *EAI PervasiveHealth 2020 - 14th EAI International Conference on Pervasive Computing Technologies for Healthcare*, 6-8 October 2020.

Nabil Hossain, John Krumm, Michael Gamon and Henry Kautz (2020). SemEval-2020 Task 7: Assessing Humor in Edited News Headlines. *Proceedings of the 14th Workshop on Semantic Evaluation*, 2020.

Nabil Hossain, John Krumm, Tanvir Sajed and Henry Kautz (2020). Stimulating Creativity with Funlines: A Case Study of Humor Generation in Headlines. *ACL 2020: The 58th Annual Meeting of the Association for Computational Linguistics*, 6-8 July 2020.

Nabil Hossain, Minh Tran and Henry Kautz (2020). A Framework for Political Portmanteau Decomposition. *ICWSM 2020: 14TH International Conference on Web and Social Media*, 8-11 June 2020.

Brian Dickinson, Gourab Ghoshal, Xerxes Dotiwalla, Adam Sadilek, and Henry Kautz (2019). Inferring Nighttime Satellite Imagery from Human Mobility. *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI 2020)*, New York, NY, Feb. 2020.

## **2019**

Caroline P. Thirukumaran, Anis Zaman, Paul T. Rubery, Casey Calabria, Yue Li, Benjamin F. Ricciardi, Wajeeh R. Bakhsh, and Henry Kautz (2019). Natural Language Processing for the Identification of Surgical Site Infections in Orthopaedics. *The Journal of Bone and Joint Surgery*, 18 Dec. 2019.

Alex Bassolas, Hugo Barbosa-Filho, Brian Dickinson, Xerxes Dotiwalla, Paul Eastham, Riccardo Gallotti, Gourab Ghoshal, Bryant Gipson, Surendra A. Hazarie, Henry Kautz, Onur Kucuktunc, Allison Lieber, Adam Sadilekm and José J. Ramasco (2019). Hierarchical organization of urban mobility and its connection with city livability. *Nature Communications*, Vol. 10, Article No. 4817, 2019.

Jesse Wang and Henry Kautz (2019). CupQ: A New Clinical Literature Search Engine. Proceedings of the 11th International Conference on Knowledge Discovery and Information Retrieval (KDIR 2019), Vienna, Austria, September 17-19, 2019.

Anis Zaman, Rupam Acharyya, Henry Kautz, and Vincent Silenzio (2019). Detecting Low Self-Esteem in Youths from Web Search Data. The Web Conference (WWW 2019), San Francisco, 2019.

## **2018**

Nabil Hossain, Thanh Thuy Trang Tran and Henry Kautz (2018). Discovering Political Slang in Readers' Comments. 12th International AAAI Conference on Web and Social Media (ICWSM-2018), Stanford, CA, 2018.

Ann Marie White, Linxiao Bai, Christopher Homan, Melanie Funchess, Catherine Cerulli, Amen Ptah, Deepak Pandita, and Henry Kautz (2018). Does Reciprocal Gratefulness in Twitter Predict Neighborhood Safety?: Comparing 911 Calls Where Users Reside or Use Social Media. 12th International AAAI Conference on Web and Social Media (ICWSM-2018), Stanford, CA, 2018.

## **2017**

Nabil Hossain, John Krummy, Lucy Vanderwendey, Eric Horvitz and Henry Kautz. Filling the Blanks (hint: plural noun) for Mad Libs (c) Humor. Conference on Empirical Methods in Natural Language Processing (EMNLP 2017), Copenhagen, Denmark, 2017.

Anis Zaman, Nabil Hossain, Henry Kautz. Twitter911: A Cautionary Tale. Proceedings of the 11th International AAAI Conference on Web and Social Media (ICWSM-2017). Montreal, Canada, 2017.

Tianran Hu, Eric Bigelow, Jiebo Luo, Henry A. Kautz. Tales of Two Cities: Using Social Media to Understand Idiosyncratic Lifestyles in Distinctive Metropolitan Areas. IEEE Trans. Big Data 3(1): 55-66, 2017.

Adam Sadilek, Henry A. Kautz, Lauren DiPrete, Brian Labus, Eric Portman, Jack Teitel, Vincent Silenzio. Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media. AI Magazine 38(1): 37-48, 2017.

## **2016**

P. Thiha, A. R. Pisani, K. Gurditta, E. Cherry, D. R. Peterson, H. Kautz, P. Wynman. Efficacy of web-based collection of strength-based testimonials for text message extension of youth suicide prevention program: randomized controlled experiment. JMIR Public Health Surveillance, vol. 2, no. 2, Nov, 2016.

Iftexhar Naim, Abdullah Al Mamun, Young Chol Song, Jiebo Luo, Henry Kautz, Daniel Gildea, Aligning Movies with Scripts by Exploiting Temporal Ordering Constraints, International Conference on Pattern Recognition (ICPR), Cancun, Mexico, December 2016.

Young Chol Song, Iftexhar Naim, Abdullah Al Mamun, Kaustubh Kulkarniy, Parag Singlay, Jiebo Luo, Daniel Gildea, Henry Kautz. Unsupervised Alignment of Actions in Video with Text Descriptions. 25th International Joint Conference on Artificial Intelligence (IJCAI-16), New York, NY, 2016.

Nabil Hossain, Tianran Hu, Roghayeh Feizi, Ann Marie White, Jiebo Luo and Henry Kautz. Precise Localization of Homes and Activities: Detecting Drinking-While-Tweeting Patterns in Communities. 10th International AAAI Conference on Web and Social Media (ICWSM-16), Cologne, Germany, 2016.

Tianran Hu, Jiebo Luo, Henry A. Kautz, Adam Sadilek: Home location inference from sparse and noisy data: models and applications. Information Technology & Electronic Engineering 17(5): 389-402, 2016.

Adam Sadilek, Henry Kautz, Lauren DiPrete, Brian Labus, Eric Portman, Jack Teitel, and Vincent Silenzio. Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media. 28th Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-16), Phoenix, AZ, 2016.

Henry Kautz and Parag Singla. Technical Perspective: Combining Logic and Probability. Communications of the ACM, vol. 59, no. 2, pp. 106, July, 2016.

Tong Liu, Cecilia Ovesdotter Alm, Ann Marie White, Henry Kautz, Megan Lytle, Christopher M. Homan (2016). Understanding Discourse on Work and Job-Related Well-Being in Public Social Media, ACL 2016: Annual meeting of the Association for Computational Linguistics, Berlin, Germany, pages1044-1053, 2016.

## **2015**

Tim Kopp, Parag Singla, and Henry Kautz. Lifted Symmetry Detection and Breaking for MAP Inference. 29th Annual Conference on Neural Information Processing (NIPS 2015), Montreal, Canada, 2015.

Iftexhar Naim, Young C. Song, Qiguang Liu, Liang Huang, Henry Kautz, Jiebo Luo and Daniel Gildea. Discriminative Unsupervised Alignment of Natural Language Instructions with Corresponding Video Segments, 2015 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT 2015), Denver, Colorado, 2015.

Dawei Zhou, Jiebo Luo, Vincent Silenzio, Yun Zhou, Glenn Currier, and Henry Kautz. Tackling Mental Health by Integrating Unobtrusive Multimodal Sensing. 29th Conference on Artificial Intelligence (AAAI-2015), Austin, TX, 2015.

## 2014

Danning Zheng, Tianran Hu, Quanzeng You, Henry Kautz, and Jiebo Luo. Inferring Home Location from User's Photo Collections based on Visual Content and Mobility Patterns. ACM Multimedia Conference, Workshop on Geotagging in Multimedia (GeoMM), November 2014.

Iftekhhar Naim, Young Chol Song, Qiguang Liu, Henry Kautz, Jiebo Luo, and Daniel Gildea (2014). Unsupervised Alignment of Natural Language Instructions with Video Segments. 29th AAAI Conference on Artificial Intelligence (AAAI-14), Quebec City, Canada, 2014.

Adam Sadilek, Christopher Homan, Walter S. Lasecki, Vincent Silenzio, and Henry Kautz. Modeling Fine-Grained Dynamics of Mood at Scale. WSDM 2014 Workshop on Diffusion Networks and Cascade Analytics, New York City, Feb 24-28, 2014.

## 2013

Young Chol Song, Henry Kautz, James Allen, Mary Swift, Yuncheng Li, Jiebo Luo, and Ce Zhang. A Markov Logic Framework for Recognizing Complex Events from Multimodal Data. 15th ACM International Conference on Multimodal Interaction (ICMI 2013), Sydney, Australia.

Adam Sadilek, Sean Brennan, Henry Kautz, and Vincent Silenzio (2013). nEmesis: Which Restaurants Should You Avoid Today? First AAAI Conference on Human Computation and Crowdsourcing (HCOMP-2013), Palm Springs, CA, 2013.

Sean Brennan, Adam Sadilek, and Henry Kautz (2013). Towards Understanding Global Spread of Disease from Everyday Interpersonal Interactions. 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013), Beijing, China, 2013.

Henry Kautz (2013). Senior Member Presentation: Data Mining Social Media for Public Health Applications. 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013), Beijing, China, 2013.

Walter S. Lasecki, Young Chol Song, Henry Kautz, and Jeffrey P. Bigham (2013). Real-Time Crowd Labeling for Deployable Activity Recognition. 16th ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2013), San Antonio, TX, 2013.

Adam Sadilek and Henry Kautz (2013). Modeling the Impact of Lifestyle on Health at Scale. Sixth ACM International Conference on Web Search and Data Mining (WSDM 2013). Rome, Italy, 2013.

Tivadar Pápai, Henry Kautz, and Daniel Stefankovic (2013). Reasoning Under the Principle of Maximum Entropy for Modal Logics K45, KD45, and S5. 14th Conference on Theoretical Aspects of Rationality and Knowledge (TARK 2013), Chennai, India, 2013.

## 2012

Tivadar Pápai, Henry Kautz, and Daniel Stefankovic (2012). Slice Normalized Dynamic Markov Logic Networks. Neural Information Processing Systems (NIPS 2012), Lake Tahoe, Nevada, 2012.

Tivadar Pápai, Shalini Ghosh, and Henry Kautz (2012). Combining Subjective Probabilities and Data in Training Markov Logic Networks. European Conference on Machine Learning (ECML), Bristol, UK, 2012.

Adam Sadilek, Henry Kautz, and Vincent Silenzio (2012). Predicting Disease Transmission from Geo-Tagged Micro-Blog Data. 26th Conference on Artificial Intelligence (AAAI-12), Toronto, Canada, 2012.

Young Chol Song and Henry Kautz (2012). A Testbed for Learning by Demonstration from Natural Language and RGB-Depth Video. 26th Conference on Artificial Intelligence (AAAI-12), Toronto, Canada, 2012.

M. Swift, G. Ferguson, L. Galescu, Y. Chu, C. Harman, H. Jung, I. Perera, Y. Song, J. Allen, H. Kautz (2012). A multimodal corpus for integrated language and action. International Workshop on MultiModal Corpora for Machine Learning, Istanbul, Turkey, 2012.

Adam Sadilek, Henry Kautz, and Vincent Silenzio (2012) Modeling Spread of Disease from Social Interactions. Sixth AAAI International Conference on Weblogs and Social Media (ICWSM-2012), Dublin, Ireland, 2012.

Adam Sadilek and Henry Kautz (2012). Modeling Success, Failure, and Intent of Multi-Agent Activities Under Severe Noise. In Tom Lovett and Eamonn O'Neill, Eds., Mobile Context Awareness, Springer-Verlag, 2012, pp. 9-64.

Adam Sadilek, Henry Kautz and Jeffrey P. Bigham (2012). Finding Your Friends and Following Them to Where You Are. Fifth ACM International Conference on Web Search and Data Mining (WSDM 2012). Seattle, WA, 2012. Best Paper Award.

Adam Sadilek and Henry Kautz (2012). Location-Based Reasoning about Complex Multi-Agent Behavior, *Journal of Artificial Intelligence Research (JAIR)*, vol. 42, 2012, pp. 87-133.

Yi Chu, Young Chol Song, Richard Levinson, and Henry Kautz (2012). Interactive Activity Recognition and Prompting to Assist People with Cognitive Disabilities. *Journal of Ambient Intelligence and Smart Environments*, 4(5) 2012, pp. 443-459.

## **2011**

Tivadar Papai, P. Singla, and Henry Kautz (2011). Constraint Propagation for Efficient Inference in Markov Logic. 17th International Conference on Principles and Practice of Constraint Programming (CP 2011), Perugia, Italy, pp. 691-705.

Yi Chu, Young Chol Song, Henry Kautz, and Richard Levinson (2011). When Did You Start Doing That Thing That You Do? Interactive Activity Recognition and Prompting. AAAI 2011 Workshop on Artificial Intelligence and Smarter Living: The Conquest of Complexity, San Francisco, August 2011.

## **2010**

Adam Sadilek and Henry Kautz (2010). Recognizing Multi-Agent Activities from GPS Data. 24th Conference on Artificial Intelligence (AAAI-2010), July 11–15, 2010, Atlanta, Georgia.

Adam Sadilek and Henry Kautz (2010). Modeling and Reasoning about Success, Failure and Intent of Multi-Agent Activities. UbiComp 2010 Workshop on Mobile Context-Awareness, Copenhagen, Denmark, Sept. 2010.

A.L. Liu, G. Borriello, H. Kautz, P.A. Brown, M. Harniss, and K. Johnson (2010). Learning User Models to Improve Wayfinding Assistance for Individuals with Cognitive Impairment. Workshop on Interactive Systems in Healthcare, Atlanta, GA, April 2010.

## **2009**

Ross Messing, Chris Pal, and Henry Kautz (2009). Activity recognition using the velocity histories of tracked keypoints. 12th IEEE International Conference on Computer Vision (ICCV 2009), Kyoto, 2009.

Alan L. Liu, Harlan Hile, Gaetano Borriello, Henry Kautz, Pat A. Brown, Mark Harniss, and Kurt Johnson (2009). Informing the Design of an Automated Wayfinding System for Individuals with Cognitive Impairments. Pervasive Health '09, London UK, April 1-3, 2009.

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