

# Henry A. Kautz, Ph.D.

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## Employment

*Director*            *Goergen Institute for Data Science,*            *Oct 2014–Present*  
*University of Rochester*  
*(585) 275-2121*

- 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. Search committees included faculty from departments across Arts, Sciences, Engineering and Medicine. Hires to date include faculty in network science, human-robot interaction, computational linguistics, and digital media studies.
- Co-led the New York State Center of Excellence in Data Science (housed in the Goergen Institute) to win \$1.2 million in annual state support.
- Co-led efforts with CoE 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.
- Supervised staff of 6 people.

*Chair*                    *Computer Science, University of Rochester*            *Jan 2008–Jun 2015*

- 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.
- Introduced introductory course sequence in Python in order to attract more non-traditional majors.
- During my tenure, 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 Computer Science, University of Rochester Sep 2007–Present*

- Led research on social media analytics to improve public health, including tracking worldwide contagious disease spread and locating sources of food poisoning.
- Led research on grounded language learning by unsupervised alignment of text and video.

*University of Washington, Seattle, WA Jul 2004–Aug 2006*

*Professor*

*Assoc. Prof. University of Washington, Seattle, WA Sep 2000–Jun 2004  
(206) 543-1695*

- Led the Assisted Cognition Project, which developed prompting and wayfinding systems for persons with cognitive impairments.
- Led research on proof-theoretic complexity of clause learning based and decision-theoretic methods to improve the performance of randomized satisfiability solvers.
- Graduated 6 UW PhD students.

*Technology Leader AT&T Laboratories, Florham Park, NJ Jul 1997–Aug 2000  
(973) 360-8005*

- Led research on automated planning, knowledge representation, and satisfying testing.

*Department Head AT&T Bell Laboratories, Murray Hill, NJ Jul 1994–Jun 1997*

- Led the Principles of Artificial Intelligence Research Department.

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

- Carried out research on the complexity of default logic, knowledge compilation, and local search algorithms for satisfiability testing,

*Systems Analyst Nanodata Corporation, Buffalo, NY Jul 1978–Jun 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
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**Honors**

Incoming Chair, Chair, & Outgoing Chair	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

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: GE Digital, San Ramon, CA	2016
Anna Loparev	<i>The Impact of Collaborative Scaffolding in Educational Video Games on the Collaborative Support Skills of Middle School Students</i> . Postdoc: Wellesley College	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: Nuance, 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 employer: Google, Mountainside, CA	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</i>	2005

*Human Activity*. Current position: Assoc. Prof., University of California at Irvine, Irvine, CA

Yongshao Ruan      *Efficient Inference: A Machine Learning Approach*.      2004  
 Current employer: SourceLabs, Seattle, WA

## 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, Monitoring and Planning – Phase I. SBIR with Attention Control Systems. PI.	\$98,996	2008
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:

Citation indices	All
Citations	26479
h-index	72
i10-index	141

### 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.
- Iftekhhar 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, Iftekhar 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.

## **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.

Iftekhar 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.



Iftekhar 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 Pápai, 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.

A.L. Liu, H. Hile, G. Borriello, P.A. Brown, M. Harniss, H. Kautz, K. Johnson (2009). Customizing Directions in an Automated Wayfinding System for Individuals with Cognitive Impairments. International Conference on Computers and Accessibility (ASSETS 2009), Pittsburgh, PA, October 2009. Slides.

A.L. Liu, H. Hile, G. Borriello, H. Kautz, P.A. Brown, M. Harniss, K. Johnson (2009). Evaluating a Wayfinding System for Individuals with Cognitive Impairment. CHI Workshop on Evaluating New Interactions in Healthcare: Challenges and Approaches, Boston, MA, April 2009.

Liangliang Cao, Jiebo Luo, Henry Kautz, and Thomas S. Huang (2009). Image Annotation Within the Context of Personal Photo Collections Using Hierarchical Event and Scene Models ACM Transactions on Multimedia, 11 (2) February 2009.

Henry Kautz, Ashish Sabharwal, and Bart Selman (2009). Incomplete Algorithms. Chapter 6 of *The Handbook of Satisfiability*. Editors: Armin Biere, Marijn Heule, Hans van Maaren, and Toby Walsh. IOS Press, 2009.

## 2008

Sangho Park and Henry Kautz (2008). Privacy-preserving Recognition of Activities in Daily Living from Multi-view Silhouettes and RFID-based Training. AAAI Fall 2008 Symposium on AI in Eldercare: New Solutions to Old Problems, Washington, DC, November 7 - 9, 2008.

Joseph Modayil, Rich Levinson, Craig Harman, David Halper, and Henry Kautz (2008). Integrating Sensing and Cueing for More Effective Activity Reminders. AAAI Fall 2008 Symposium on AI in Eldercare: New Solutions to Old Problems, Washington, DC, Nov. 7-9, 2008.

Junsong Yuan, Jiebo Luo, Henry Kautz, and Ying Wu (2008). Mining GPS Traces and Visual Words for Event Classification. ACM Multimedia Information Retrieval (MIR) Conference, Brave New Topics Session, Vancouver, BC, October 2008.

Joseph Modayil, Tongxin Bai, and Henry Kautz (2008). Improving the Recognition of Interleaved Activities. 10th International Conference on Ubiquitous Computing (UBICOMP08), Seoul, South Korea, Sept. 21-24, 2008.

Sangho Park and Henry Kautz (2008). Hierarchical Recognition of Activities of Daily Living using Multi-Scale, Multi-Perspective Vision and RFID. Fourth IET International Conference on Intelligent Environments, Seattle, WA, July 2008.

Parag Singla, Henry Kautz, Jiebo Luo, Andrew Gallagher (2008). Discovery of Social Relationships in Consumer Photo Collections using Markov Logic. Third International Workshop on Semantic Learning and Applications in Multimedia Applications (in association with IEEE International Conference on Computer Vision and Pattern Recognition), Anchorage, Alaska, 2008.

Carla P. Gomes, Henry Kautz, Ashish Sabharwal, and Bart Selman (2008). Satisfiability Solvers. *Handbook of Knowledge Representation, in the series Foundations of Artificial Intelligence*, vol. 3. Editors: Frank van Harmelen, Vladimir Lifschitz, and Bruce Porter. Elsevier, pp 89-134, 2008.

A. Mihailidis, J. Boger, H. Kautz, and L. Normie, Eds. (2008) *Technology and Aging: Selected Papers from the 2007 International Conference on Technology and Aging*. IOS Press, Amsterdam, 2008.

A.L. Liu, H. Hile, H. Kautz, G. Borriello, P.A. Brown, M. Harniss, and K. Johnson (2008). Indoor wayfinding: Developing a functional interface for individuals with

cognitive impairments. *Disability and Rehabilitation: Assistive Technology*, 3(1-2) 2008, pp. 69-81.

## **2007**

- L. Liao, D. J. Patterson, D. Fox, and H. Kautz (2007). Learning and Inferring Transportation Routines. *Artificial Intelligence* 171(5-6) 2007, 311-331.
- Lin Liao, Tanzeem Choudhury, Dieter Fox, and Henry Kautz (2007). Training Conditional Random Fields using Virtual Evidence Boosting. 20th International Joint Conference on Artificial Intelligence (IJCAI-07), Hyderabad, India, 2007. [Click here for a poster.](#)
- J. Hoffmann, H. Kautz, C. Gomes, and B. Selman (2007). SAT Encodings of State-Space Reachability Problems in Numeric Domains. 20th International Joint Conference on Artificial Intelligence (IJCAI-07), Hyderabad, India, 2007.
- Tian Sang, Paul Beame, and Henry Kautz (2007). A Dynamic Approach to MPE and Weighted MAX-SAT. 20th International Joint Conference on Artificial Intelligence (IJCAI-07), Hyderabad, India, 2007.
- L. Liao, D. Fox, and H. Kautz (2007). Extracting Places and Activities from GPS Traces Using Hierarchical Conditional Random Fields. *International Journal of Robotics Research*, 26(1) 2007, pp. 119-134.
- William Pentney, Matthai Philipose, Jeff Bilmes and Henry Kautz (2007). Learning Large Scale Common Sense Models of Everyday Life. 27th Conference on Artificial Intelligence (AAAI-2007), Vancouver, Canada, 2007.
- D. Wyatt, T. Choudhury, and H. Kautz (2007). Capturing Spontaneous Conversation and Social Dynamics: A Privacy Sensitive Data Collection Effort. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2007), Honolulu, Hawaii, 2007.
- D. Wyatt, T. Choudhury, J. Bilmes, and H. Kautz (2007). A Privacy-Sensitive Approach to Modeling Multi-Person Conversations. 20th International Joint Conference on Artificial Intelligence (IJCAI-07), Hyderabad, India, 2007.

## **2006**

- Alan L. Liu, Harlan Hile, Henry Kautz, Gaetano Borriello, Pat A. Brown, Mark Harniss, Kurt Johnson (2006). Indoor Wayfinding: Developing a Functional Interface for Individuals with Cognitive Impairments. 8th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2006), Portland, OR, 2006.

Henry Kautz (2006). Deconstructing Planning as Satisfiability. 21st Conference on Artificial Intelligence (AAAI-06), Boston, MA, 2006.

Henry Kautz, Bart Selman, and Joerg Hoffmann (2006). SatPlan: Planning as Satisfiability. Working Notes of the 5th International Planning Competition, Cumbria, UK, 2006.

Henry Kautz (2006). Understanding Human Experience. Position paper for the article, "Artificial Intelligence: The Next Twenty-Five Years", Matthew Stone and Haym Hirsh, eds., AI Magazine, 26(4): Winter 2005, pp. 85–97.

William Pentney, Henry Kautz, Matthai Philipose, Ana-Maria Popescu, and Shiaokai Wang (2006). Sensor-Based Understanding of Daily Life via Large-Scale Use of Common Sense. 21st Conference on Artificial Intelligence (AAAI-06), Boston, MA, 2006.

## **2005**

Henry Kautz (2005). Report on the DARPA Workshop on Advancing Assisted Cognition Technology for Persons with Traumatic Brain Injury, November 7-8, 2005, Bethesda, MD.

Lin Liao, Dieter Fox, and Henry Kautz (2005). Location-Based Activity Recognition using Relational Markov Networks. 19th International Joint Conference on Artificial Intelligence (IJCAI-2005), Edinburgh, Scotland, 2005.

L. Liao, D. Fox, and H. Kautz (2005). Location-Based Activity Recognition. 19th Annual Conference on Neural Information Processing Systems (NIPS-2005), Whistler, BC, 2005.

Karthik Gopalratnam, Henry Kautz, and Daniel S. Weld (2005). Extending Continuous Time Bayesian Networks. 20th National Conference on Artificial Intelligence (AAAI-05), Pittsburgh, PA, 2005.

Tian Sang, Paul Beame, and Henry Kautz (2005). Heuristics for Fast Exact Model Counting. Eighth International Conference on Theory and Applications of Satisfiability Testing, Edinburgh, Scotland, 2005.

Tian Sang, Paul Beame, and Henry Kautz (2005). Solving Bayesian Networks by Weighted Model Counting. 20th Conference on Artificial Intelligence (AAAI-05), Pittsburgh, PA, 2005.

A. Nareyek, E. Freuder, R. Fourer, E. Giunchiglia, R. Goldman, H. Kautz, J. Rintanen, and A. Tate (2005). Constraints and AI Planning. IEEE Intelligent Systems, 20(2) 2005, pp. 62-72.

Donald Patterson, Dieter Fox, Henry Kautz, and Matthai Philipose (2005). Fine-Grained Activity Recognition by Aggregating Object Usage. IEEE International Symposium on Wearable Computers, Osaka, Japan, Oct. 2005. Best Paper Award. Data Set.

## 2004

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