

Scott P. Sanner

CONTACT INFORMATION	Industrial Engineering University of Toronto 5 King's College Rd., MC 105 Toronto, ON M5S 3G8, Canada	<i>Home:</i> +1 (416) 286-8040 <i>Office:</i> +1 (416) 978-4871 <i>Fax:</i> +1 (647) 978-7753 <i>E-mail:</i> ssanner@mie.utoronto.ca
OBJECTIVE	Research and education in areas related to Machine Learning and Large-scale Data Analysis, Artificial Intelligence (AI), Social Media, Information Retrieval, and Operations Research.	
EDUCATION	University of Toronto , Toronto, ON, Canada Ph.D., Computer Science (Mar. 2008) <ul style="list-style-type: none">• Research Field: <i>Artificial Intelligence</i>• Research Supervisor: Craig Boutilier Stanford University , Stanford, CA, USA M.S., Computer Science (Jun. 2002) <ul style="list-style-type: none">• Research Field: <i>Artificial Intelligence</i>• Research Supervisor: Richard Fikes Carnegie Mellon University , Pittsburgh, PA, USA B.S. (University Honors), Computer Science (Dec. 1999) B.S. (University Honors), Electrical and Computer Engineering (Dec. 1999) <ul style="list-style-type: none">• Research Field: <i>Cognitive Science and Artificial Intelligence</i>• Research Supervisor: John R. Anderson	
EMPLOYMENT	University of Toronto , Toronto, ON, Canada <i>Assistant Professor</i> , Industrial Engineering	Apr. 2016 – present
	Oregon State University , Corvallis, OR, USA <i>Assistant Professor</i> , Electrical Eng. and Computer Science	Mar. 2015 – Mar. 2016
	NICTA , Canberra, ACT, Australia <i>Principal Researcher</i> , Machine Learning Group	Jul. 2013 – Mar. 2015
	<i>Senior Researcher</i> , Machine Learning Group	Jul. 2010 – Jul. 2013
	<i>Researcher</i> , Machine Learning Group	Jul. 2007 – Jul. 2010
	The Australian National University , Canberra, ACT, Australia <i>Adjunct Research Fellow</i> , Computer Science	Jul. 2007 – present
	Microsoft Research, Cambridge , Cambridge, UK <i>Intern</i> , Supervisors: Thore Graepel, Ralf Herbrich	Sep. 2006 – Dec. 2006
	Toyota Technological Institute at Chicago , Chicago, IL, USA <i>Intern</i> , Supervisor: David McAllester	May 2004 – Aug. 2004
	Sun Microsystems Research Labs , Burlington, MA, USA <i>Intern</i> , Supervisor: William A. Woods	May 2002 – Aug. 2002 May 2001 – Aug. 2001 May 1999 – Aug. 1999
	Lawrence Livermore National Labs , US Dept. of Energy, Livermore, CA, USA <i>Research Programmer</i>	Jan. 2000 – Sep. 2000
	Lockheed Martin , Gaithersburg, MD, USA <i>Intern</i>	May 1998 – Aug. 1998
	National Cancer Institute , Frederick, MD, USA <i>Intern</i>	May 1997 – Aug. 1997

PROFESSIONAL **Proposal Reviewing**

- ACTIVITIES
- US National Science Foundation (NSF) (2016)

Journal Editorial Roles

- Artificial Intelligence Journal (AIJ), Editorial Board (2015 – 2018)
- Journal of AI Research (JAIR), Electronic Publishing Editor (2014 – 2017)
- Journal of AI Research (JAIR), Editorial Board (2011 – 2014)
- Machine Learning Journal (MLJ), Editorial Board (2010 – 2016)

Journal Reviewing

- Journal of Machine Learning Research (JMLR)
- Machine Learning Journal (MLJ)
- Journal of AI Research (JAIR)
- AI Journal (AIJ)
- Annals of Mathematics and AI (AMAI)
- Computational Intelligence (CI)
- Information Sciences (IS)
- Journal of Algorithms

Conference Senior Program Committees

- Association for the Advancement of Artificial Intelligence (AAAI) (2013, 2015, 2016)
- Intern. Joint Conf. on Artificial Intelligence (IJCAI) (2011, 2013, 2015, 2016)
- Intern. Conf. on Automated Planning and Scheduling (ICAPS) (2013, 2014)

Conference Program Committees

- Association for the Advancement of Artificial Intelligence (AAAI) (2010 – 2012, 2014)
- Intern. Joint Conf. on Artificial Intelligence (IJCAI) (2009)
- Intern. Conf. on Machine Learning (ICML) (2009 – 2016)
- Neural Information Processing Systems (NIPS) (2009 – 2016)
- Intern. Conf. on Automated Planning and Scheduling (ICAPS) (2008 – 2012, 2015)
- Uncertainty in Artificial Intelligence (UAI) (2010 – 2015)
- European Conference on Machine Learning (ECML) (2012 – 2014)
- European Conference on Artificial Intelligence (ECAI) (2010 – 2013)
- Asian Conference on Machine Learning (ACML) (2011 – 2013)
- Conf. on Information and Knowledge Management (CIKM) (2012 – 2013)

Conference Reviewing

- Constraint Programming (CP) (2013)

EXTERNAL
GRANT
FUNDING

- **PI, Discovery Grant (2016)**
Title: *Continuous Decision Diagrams for Machine Learning and Decision-theoretic AI Planning*
Budget: CAD \$215,000 for graduate student funding
- **CI, Australian Research Council Discovery Project Grant (2014)**
Title: *Robust AI Planning for Hybrid Systems*
Budget: AUD \$480,000 for post-doc and co-PI salaries
- **PI, Australia-China Science and Research Fund (2013)**
Title: *Machine Learning for Social Media*
Budget: AUD \$45,000 for collaboration with Tsinghua University, Beijing
- **PI, DSTO-NICTA Joint Research Project (2011-2012)**
Title: *Collaborative Text Analysis and Visualization*
Budget: AUD \$140,000 for research engineer and co-PI salaries
- **PI, Google Research Award (2011)**
Title: *Preference Elicitation for Social Recommendation*
Budget: USD \$76,000 for research engineer and travel

EXTERNAL
LICENSING
INCOME

- **Project Lead, NICTA EventWatch Twitter Monitoring Software (2013)**
License type: Non-exclusive, single seat user licenses
Income: Undisclosed under terms of confidential licensing agreements

- EVENT ORGANIZATION
- **ICAPS 2016 Program Chair; London, UK**
 - **AAAI 2016 Workshop on Planning in Hybrid Systems; Phoenix, USA**
 - **ICAPS 2015 Workshop on Planning and Learning; Jerusalem, Israel**
 - **ICAPS 2015 Tutorials Chair; Jerusalem, Israel**
 - **AAAI 2014 Student Abstracts Program Chair; Quebec City, Canada**
 - **Dagstuhl 2014 Coordinator for Seminar 14101 on Preference Learning; Wadern, Germany**
 - **ICAPS 2014 Organizer for the Intern. Prob. Planning Competition (IPPC)**
Budget: USD \$2,500; Amazon EC2 Educational Grant
 - **AAAI 2013 Student Abstracts Program Chair; Bellevue, USA**
 - **ICAPS 2012 Workshop on the Intern. Planning Competition; Atibaia, Brazil**
 - **NIPS 2011 Workshop on Choice Models and Pref. Learning; Granada, Spain**
 - **9th Euro. Workshop on Reinforcement Learning (EWRL9); Athens, Greece**
Budget: AUD \$23,000; AI Journal, PASCAL2, ANU, and NICTA funded
 - **ICAPS 2011 Organizer for the Intern. Prob. Planning Competition (IPPC)**
Budget: USD \$1,000; Amazon EC2 Educational Grant
Designed language: Relational Dynamic Influence Diagram Language (RDDL)
 - **Machine Learning Summer School (MLSS-10); Canberra, Australia**
Budget: AUD \$59,000; PASCAL2, ANU, and NICTA funded
 - **ICAPS 2010 Workshop on Prob. Planning and Scheduling; Toronto, Canada**
 - **ICAPS 2010 Doctoral Consortium; Toronto, Canada**
Budget: USD \$30,000; NSF, AI Journal, and NICTA funded
- INTERNATIONAL TUTORIALS
- **Assoc. for the Adv. of Artificial Intelligence (AAAI-16)** Feb 12, 2016
Title: **Symbolic Methods for Hybrid Inf., Optimization, and Decision-making**
 - **International Conference on Automated Planning and Scheduling (ICAPS-14)** June 22, 2014
 - **(ICAPS-12)** June 26, 2012
 - **(ICAPS-11)** June 13, 2011
Title: **Introduction to Planning Domain Modeling in RDDL**
 - **International Conference on Automated Planning and Scheduling (ICAPS-15)** June 8, 2015
 - **(ICAPS-14)** June 22, 2014
 - **(ICAPS-12)** June 26, 2012
 - **(ICAPS-11)** June 12, 2011
Title: **Decision Diagrams in Automated Planning and Scheduling**
 - **Assoc. for the Adv. of Artificial Intelligence (AAAI-13)** July 14, 2013
Title: **Symbolic Methods for Prob. Inf., Optimization, and Decision-making**
 - **Invited Tutorial, Brazilian AI Conference (SBIA-12)** Oct 21, 2012
Title: **Discrete and Continuous Planning Domain Modeling in RDDL**
 - **Invited Tutorial, ICAPS-12 Planning Summer School** June 25, 2012
Title: **Recent Advances in Continuous Planning**
 - **Machine Learning Summer School (MLSS-10)** Sep. 27, 2010
Title: **Graphical Models**
 - **International Conference on Automated Planning and Scheduling (ICAPS-10)** May 13, 2010
Title: **Planning and Scheduling for Traffic Control**
 - **Machine Learning Summer School (MLSS-09)** Jan. 27, 2009
Title: **Reinforcement Learning**
 - **International Conference on Automated Planning and Scheduling (ICAPS-08)** Sep. 15, 2008
Title: **First-order Planning Techniques**
- INTERNATIONAL TALKS
- **Research Symposium, Google Mountain View** Apr 18, 2016
 - **Research Seminar, Stanford University** Feb 5, 2016
 - **Informatics Department Seminar, King's College London** Jun 3, 2015
 - **Research Seminar, Microsoft Bing, London** Jun 2, 2015
 - **Research Seminar, Microsoft Research, Redmond** Mar 26, 2014
 - **ML Seminar, Xerox Research Centre Europe** Aug 2, 2013
 - **Research Seminar, Microsoft Research, Cambridge** Jul 26, 2013

- AI Seminar, **U.C. Irvine** Nov 30, 2012
- Automated Reasoning Group Seminar, **U.C.L.A.** Nov 29, 2012
- **Invited Speaker**, **Brazilian AI Conference (SBIA)** Oct 21, 2012
- AI Group Seminar, **University of Waterloo** Jun 20, 2012
- KR Seminar, **University of Toronto** May 23, 2012
- CSAIL Talk, **M.I.T.** May 17, 2012
- CS Department Seminar, **University of Mass., Amherst** May 16, 2012
- AI Seminar, **Cornell University** May 15, 2012
- URCS Department Seminar Series, **University of Rochester** May 14, 2012
- SELECT Lab Talk, **Carnegie Mellon University** May 1, 2012
- Google Tech Talk, **Google Sydney** Mar 30, 2012
- ML Seminar, **University of Edinburgh** Oct 26, 2011
- Invited Talk, **University College London (UCL)** Oct 24, 2011
- Research Presentation, **Google Zürich** May 18, 2010
- **Invited Speaker**, **Statistical Relational Learning (SRL-09)** Jul. 2, 2009
- Invited Presentation, **N.U.S./M.I.T. POMDP Workshop** Jan. 21, 2009
- Research Seminar, **Microsoft Research, Redmond** Dec. 3, 2008
- AI Seminar, **U.C. Berkeley** Dec. 2, 2008
- AI Seminar, **University of Waterloo** Sep. 20, 2007
- Learning in Intelligent Systems Seminar, **M.I.T.** May 24, 2007
- Reinforcement Learning/AI Seminar, **University of Alberta** Jul. 4, 2006
- Description Logic Seminar, **University of Manchester** Jun. 6, 2006
- Learning and Adaptation Seminar, **Stanford University** Jan. 18, 2001

AWARDS

- Artificial Intelligence Journal (2014)
Prominent Paper Award for Sanner and Boutilier (AIJ 2009)
- ANU Research School of Computer Science (2012)
Top-rated Course in SELS Student Evaluations, Sem. 2 – Document Analysis
- ANU Research and Research-training Awards (2012)
Top Supervisor Award
- AAAI Conference (2012)
Outstanding Program Committee Member Award
- ANU College of Engineering and Computer Science (2010)
College Award for Teaching – Supervision
- ICAPS 2006 International Probabilistic Planning Competition (2006)
2nd place for FOALP Planner
- Armed Forces Communications Electronics Association – Washington Chapter
AFCEA Undergraduate Scholarship Recipient
- Carnegie Mellon University
Undergraduate Presidential Scholarship Recipient
Tau Beta Pi Engineering Honor Society Inductee

COURSES

TAUGHT

- **Probabilistic Graphical Models**, Oregon State University Winter 2016
- **Document Analysis**, Oregon State University Fall 2015
- **Document Analysis**, ANU Spring 2011-2014
- **Artificial Intelligence**, ANU Fall 2009-2013
- **Reinforcement Learning and Planning**, ANU Spring 2008
- **Introduction to Statistical Machine Learning**, ANU Fall 2008

SUPERVISION

Postdoctoral Researchers

- Harold Soh, *Adaptive User Interfaces*
(post-doc at University of Toronto; Oct 2015-Dec 2016)
- M. Reda Bouadjenek, *Information Retrieval and Social Media*
(visiting researcher from INRIA, France; Aug-Dec 2013, Jun-Aug 2015)
- Zhenyu Yu, *Modeling and Planning for Epidemic Control*
(visiting researcher from Tongji University, China; Mar-May 2015)

PhD Students

- Robby Goetschalckx, *Reinforcement Learning with Domain Knowledge*
(K.U. Leuven, Belgium, graduated 2009; visiting student)

- Karina Valdivia Delgado, *Factored MDPs with Transition Uncertainty* (Univ. of Sao Paulo, Brazil, graduated 2010; visiting student)
Recipient of **Best Brazilian PhD Dissertation on AI, 2008 – 2010**
- Shengbo Guo, *Bayesian Recommender Systems: Models and Algorithms* (ANU, graduated 2011; primary supervisor)
- Matthew Robards, *Kernelized Reinforcement Learning* (ANU, graduated 2012; co-supervised)
- Zahra Zamani, *Symbolic Dynamic Programming for Hybrid MDPs and POMDPs* (ANU, graduated 2014; primary supervisor)
- M. Ehsan Abbasnejad, *Scalable Bayesian Decision-theoretic Preference Learning* (ANU, graduates 2015+; primary supervisor)
- Hadi Afshar, *Symbolic Inference in Hybrid Graphical Models* (ANU, graduates 2015+; primary supervisor)
- Suvash Sedhain, *Large-scale Social Recommender Systems* (ANU, graduates 2015+; primary supervisor)
- Shamin Kinathil, *Sequential Decision-making for Markets* (ANU, graduates 2016+; primary supervisor)
- Ga Wu, *Spatiotemporal Machine Learning for Smart Cities* (Oregon State University, graduates 2018+)
- Zahra Iman, *Learning Large-scale Social Media Sensors* (Oregon State University, graduates 2018+)
- Iain Guilliard, *Learning and Optimization for Traffic Signal Control* (ANU, graduates 2019)

Masters Students

- Neil Bacon, *Continuous MDPs* (ANU, graduated 2008)
- Yue Sun, *Visual Search Interfaces* (ANU, graduated 2008)
- Martins Zalcamis, *Multiagent Reinforcement Learning* (T.U. Vienna, graduated 2009)
- Lachlan Henderson, *Text Classification* (ANU, graduated 2009)
- Lois Vanhee, *Multiagent Coalitional Planning* (University of Rennes, France, graduated 2010)
- Oulin Yang, *Automated Time and Event Extraction* (ANU, graduated 2011)
- Paul Rivera, *Bayesian Hierarchical Reinforcement Learning* (ANU, graduated 2011)
- Mostafa Moghadam, *Kernel Bandits* (ANU, graduated 2011)
- Mahmoud Elborawi, *Query Expansion* (ANU, graduated 2011)
- Joseph Noel, *Social Collaborative Filtering (2010)*
Social Collaborative Filtering (2011) (ANU, graduated 2011)
- Hendra Gunadi, *Nearest Neighbor Methods for High-dimensional Data* (ANU, graduated 2011)
- John You, *Bayesian Monte Carlo Tree Search* (ANU, graduated 2012)
- Jiecheng Zhao, *Distance Metric Learning* (ANU, graduates 2013)
- Rishabh Mehrotra, *Topic Modeling for Microblogs* (BITS Pilani, India, graduates 2013)
- Alina Petrova, *Social Media Recommendation* (T.U. Dresden, Germany, graduates 2013)
- Xianghui Kong, *Decision-theoretic Planning via Boolean Satisfiability* (Peking University, graduates 2013)
- Gary Ge, *Natural Language Understanding of Spatial Descriptions* (ANU, graduates 2013)
- Mona Golestan Far, *Patent Citation Segmentation*

- (ANU, graduates 2013)
- Yong Boon Lim, *ZDD-based Nearest Neighbor Search* (ANU, graduates 2013)
- Luis Gustavo Rocha Vianna, *Efficient Approximation in Decision Diagrams* (University of Sao Paulo, Brazil, graduates 2013)
- Ga Wu, *Bayesian Model Averaging Naive Bayes* (ANU, graduated 2014)
- Iain Guilliard, *Mixed Integer Linear Programming for Traffic Signal Control* (ANU, graduated 2015)

Undergraduate Students

- Alex Davies, *Lifted Inference in Markov Logic Networks* (ANU, graduated 2009)
- Ian Kilpatrick, *Reinforcement Learning with CRFs* (Univ. Melbourne, graduated 2010)
- Sarah Bull, *Parody Identification in Text* (ANU, graduated 2010)
- Sotirios Diamand, *Factored UCT for MDPs* (ANU, graduated 2010)
- Alex O'Neill, *Sentiment Analysis* (ANU, graduated 2010)
- Aaron Defazio, *Triple-based Query Answering* (ANU, graduated 2010)
- Daniel Visentin, *Auto-relevance Kernel Reinforcement Learning* (ANU, graduated 2011)
- Cheng (Simon) Fang, *Factored Real-time Dynamic Programming* (University of Sydney, graduated 2011)
- Carlton Downey, *Temporal Difference Bayesian Model Averaging* (Victoria University of Wellington, New Zealand, graduated 2011)
- Arun Neelicattu, *Fraud Detection in Financial Time Series* (ANU, graduated 2011)
- Kar Wai Lim, *Diversity in Information Retrieval* (ANU, graduated 2011)
- Kin-Hon Chan, *Concurrent Factored Planning* (ANU, graduated 2012)
- Aaron Li, *GPU-based Algorithms for Topic Modeling* (ANU, graduated 2012)
- Riley Kidd, *Affinity-based Social Collaborative Filtering* (ANU, graduated 2012)
- Tan Nguyen, *Learning with Piecewise Convex Losses* (ANU, graduated 2012)
- Alan Lee, *Efficient XADD Approximation* (U. of Auckland, New Zealand, graduates 2013)
- Rodrigo Santa Cruz, *Feature Selection for High Precision and Recall* (U. of Pernambuco, Brazil, graduated 2014)
- Libo Yin, *Combinatorial Algorithms for Feature Selection* (ANU, graduates 2015)

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| BOOKS | S. Sanner and M. Hutter, editors. <i>Proceedings of the 9th European Workshop on Reinforcement Learning (EWRL) 2011, Athens, Greece, September 9-11, 2011</i> , volume 7188 of <i>Lecture Notes in Computer Science</i> . Springer, 2012 |
| BOOK CHAPTERS | S. Sanner and K. Kersting. Symbolic dynamic programming. In Encyclopedia of Machine Learning , pages 946–954. Springer-Verlag, 2010 |
| JOURNAL ARTICLES | I. Guilliard, S. Sanner, F. Trevizan, and B. Williams. A non-homogenous time mixed integer lp formulation for traffic signal control. <i>Transport Research Record (TRR): Journal of the Transport Research Board</i> , 2016 |
| | K. V. Delgado, L. N. de Barros, D. B. Dias, and S. Sanner. Real-time dynamic programming for markov decision processes with imprecise probabilities. <i>Artificial Intelligence Journal (AIJ)</i> , 230:192–223, 2016 |

- M. Vallati, L. Chrpa, M. Grzes, T. L. McCluskey, M. Roberts, and S. Sanner. The 2014 international planning competition: Progress and trends. *Artificial Intelligence Magazine (AI Magazine)*, 36(3):90–98, 2015
- J. Fürnkranz, E. Hüllermeier, C. Rudin, R. Slowinski, and S. Sanner. Preference Learning (Dagstuhl Seminar 14101). **Dagstuhl Reports**, 4(3):1–27, 2014
- A. Coles, A. Coles, A. García Olaya, S. Jiménez, C. Linares López, S. Sanner, and S. Yoon. A survey of the seventh international planning competition. *Artificial Intelligence Magazine (AI Magazine)*, 33(1):83–88, 2012
- K. V. Delgado, S. Sanner, and L. Nunes de Barros. Efficient solutions to factored MDPs with imprecise transition probabilities. *Artificial Intelligence Journal (AIJ)*, 175:1498–1527, 2011
- K. Valdivia Delgado, L. Nunes de Barros, F. G. Cozman, and S. Sanner. Using mathematical programming to solve factored Markov decision processes with imprecise probabilities. *International Journal of Approximate Reasoning (IJAR)*, 52(7):1000–1017, 2011
- S. Sanner and C. Boutilier. Practical solution techniques for first-order MDPs. *Artificial Intelligence Journal (AIJ)*, pages 748–788, April 2009. **Recipient of the 2014 Artificial Intelligence Journal (AIJ) Prominent Paper Award.**
- REFEREED CONFERENCE PAPERS
- S. Sedhain, H. Bui, J. Kawale, N. Vlassis, B. Kveton, A. Menon, T. Bui, and S. Sanner. Practical linear models for large-scale one-class collaborative filtering. In *In Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI-16)*, New York, USA, 2016
- S. Kinathil, S. Sanner, S. Das, and N. Della-Penna. A symbolic closed-form solution to sequential market making with inventory. In *In Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI-16)*, New York, USA, 2016
- H. Afshar, S. Sanner, and C. Webers. Closed-form gibbs sampling for graphical models with algebraic constraints. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI-16)*, Phoenix, USA, 2016
- S. Sedhain, A. Menon, S. Sanner, and D. Braziunas. On the effectiveness of linear models for one-class collaborative filtering. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI-16)*, Phoenix, USA, 2016
- S. Sedhain, A. Menon, S. Sanner, and L. Xie. Autorec: Autoencoders meet collaborative filtering. In *Proceedings of the 24th International Conference on the World Wide Web (WWW-15)*, Florence, Italy, 2015
- H. Yu, L. Xie, and S. Sanner. The lifecycle of a youtube video: Phases, content and popularity. In *Proceedings of the 9th International Conference on Web and Social Media (ICWSM-15)*, Oxford, UK, 2015
- H. Afshar, S. Sanner, and E. Abbasnejad. Linear-time Gibbs sampling in piecewise graphical models. In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, Austin, USA, 2015
- E. Abbasnejad, J. Domke, and S. Sanner. Loss-calibrated Monte Carlo action selection. In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, Austin, USA, 2015
- L. G. Rocha Vianna, L. N. de Barros, and S. Sanner. Real-time symbolic dynamic programming for hybrid MDPs. In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, Austin, USA, 2015
- G. Wu, S. Sanner, and Rodrigo F.S.C. Oliveira. Bayesian model averaging naive Bayes: Averaging over an exponential number of feature models in linear time. In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, Austin, USA, 2015
- M. Golestan Far, S. Sanner, M. R. Bouadjenek, G. Ferraro, and D. Hawking. On term selection techniques for patent prior art search. In *Proceedings of the 38th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR-15)*, pages 803–806, Santiago, Chile, 2015

- M. R. Bouadjenek, S. Sanner, and G. Ferraro. A study of query reformulation for patent prior art search with partial patent applications. In *Proceedings of the 15th International Conference on Artificial Intelligence and Law (ICAIL-15)*, pages 23–32, San Diego, USA, 2015
- K.-N. Tran, P. Christen, S. Sanner, and L. Xie. Context-aware detection of sneaky vandalism on wikipedia across multiple languages. In *Advances in Knowledge Discovery and Data Mining - 19th Pacific-Asia Conference (PAKDD-15)*, pages 380–391, Ho Chi Minh City, Vietnam, 2015
- S. Sedhain, S. Sanner, D. Braziunas, L. Xie, and J. Christensen. Social collaborative filtering for cold-start recommendations. In *Proceedings of the 8th ACM Conference on Recommender Systems (RecSys-14)*, Foster City, USA, 2014
- H. Yu, L. Xie, and S. Sanner. Twitter-driven youtube views: Beyond individual influencers. In *Proceedings of the 22nd ACM International Conference on Multimedia (ACM MM-14)*, Orlando, USA, 2014
- R. Marchant, F. Ramos, and S. Sanner. Sequential bayesian optimisation for spatial-temporal monitoring. In *Proceedings of the 30th Conference on Uncertainty in Artificial Intelligence (UAI-14)*, Quebec City, Canada, 2014
- S. Kinathil, S. Sanner, and N. Della Penna. Closed-form solutions to a subclass of continuous stochastic games via symbolic dynamic programming. In *Proceedings of the 30th Conference on Uncertainty in Artificial Intelligence (UAI-14)*, Quebec City, Canada, 2014
- S. Sedhain, S. Sanner, L. Xie, R. Kidd, K.-N. Tran, and P. Christen. Social affinity filtering: Recommendation through fine-grained analysis of user interactions and activities. In *Proceedings of the ACM Conference on Online Social Networks (COSN-13)*, Boston, USA, 2013
- E. Abbasnejad, S. Sanner, E. V. Bonilla, and P. Poupart. Learning community-based preferences via dirichlet process mixtures of gaussian processes. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)*, Beijing, China, 2013
- T. Nguyen and S. Sanner. Algorithms for direct 0-1 loss optimization in binary classification. In *Proceedings of the 30th International Conference on Machine Learning (ICML-13)*, Atlanta, USA, 2013
- R. Mehrotra, S. Sanner, W. Buntine, and L. Xie. Improving LDA topic models for microblogs via automatic tweet labeling and pooling. In *Proceedings of the 36th Annual ACM SIG Information Retrieval Conference (SIGIR-13)*, Dublin, Ireland, 2013
- L. G. Rocha Vianna, S. Sanner, and L. N. de Barros. Bounded approximate symbolic dynamic programming for hybrid MDPs. In *Proceedings of the 29th Conference on Uncertainty in Artificial Intelligence (UAI-13)*, Bellevue, USA, 2013
- Z. Zamani, S. Sanner, K. V. Delgado, and L. Nunes de Barros. Robust optimization for hybrid MDPs with state-dependent noise. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)*, Beijing, China, 2013
- J. Noel, S. Sanner, K.-N. Tran, P. Christen, L. Xie, E. Bonilla, E. Abbasnejad, and N. Della Penna. New objectives for social collaborative filtering. In *Proceedings of the 21st International Conference on the World Wide Web (WWW-12)*, Lyon, France, 2012
- S. Guo, S. Sanner, T. Graepel, and W. Buntine. Score-based bayesian skill learning. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD-12)*, Bristol, UK, 2012
- K.-W. Lim, S. Sanner, and S. Guo. On the mathematical relationship between expected n-call@k and the relevance vs. diversity trade-off. In *Proceedings of the 35th Annual ACM SIG Information Retrieval Conference (SIGIR-12)*, Portland, USA, 2012
- Z. Zamani, S. Sanner, P. Poupart, and K. Kersting. Symbolic dynamic programming for continuous state and observation pomdps. In *Proceedings of the 26th Annual Conference on Advances in Neural Information Processing Systems (NIPS-12)*, Lake Tahoe, Nevada, 2012

- S. Sanner and E. Abbasnejad. Symbolic variable elimination for discrete and continuous graphical models. In *Proceedings of the 26th AAAI Conference on Artificial Intelligence (AAAI-12)*, Toronto, Canada, 2012
- Z. Zamani, S. Sanner, and C. Fang. Symbolic dynamic programming for continuous state and action mdps. In *Proceedings of the 26th AAAI Conference on Artificial Intelligence (AAAI-12)*, Toronto, Canada, 2012
- S. Sanner, S. Guo, T. Graepel, S. Kharazmi, and S. Karimi. Diverse retrieval via greedy optimization of expected 1-call@k in a latent subtopic relevance model. In *20th ACM Conference on Information and Knowledge Management (CIKM-11)*, Glasgow, UK, 2011
- S. Sanner, K. V. Delgado, and L. Nunes de Barros. Symbolic dynamic programming for discrete and continuous state MDPs. In *Proceedings of the 27th Conference on Uncertainty in Artificial Intelligence (UAI-11)*, Barcelona, Spain, 2011
- B. Ahmadi, K. Kersting, and S. Sanner. Multi-evidence lifted message passing with application to pagerank and the kalman filter. In *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI-11)*, 2011
- M. Robards, P. Sunehag, S. Sanner, and B. Marthi. Sparse kernel-SARSA(lambda) with an eligibility trace. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD-11)*, 2011
- E. Bonilla, S. Guo, and S. Sanner. Gaussian process preference elicitation. In *Advances in Neural Information Processing Systems 24 (NIPS-10)*, Vancouver, Canada, 2010. MIT Press
- S. Sanner and K. Kersting. Symbolic dynamic programming for first-order POMDPs. In *Proceedings of the 24th AAAI Conference on Artificial Intelligence (AAAI-10)*, Atlanta, Georgia, July 19-23 2010. AAAI Press
- C. Downey and S. Sanner. Temporal difference Bayesian model averaging: A Bayesian perspective on adapting lambda. In *Proceedings of the 27th International Conference on Machine Learning (ICML-10)*, Haifa, Israel, June 21-24 2010
- S. Guo and S. Sanner. Probabilistic latent maximal marginal relevance. In *Proceedings of the 33rd Annual ACM SIG Information Retrieval Conference (SIGIR-10)*, Geneva, Switzerland, July 11-15 2010. ACM
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