

Vadim Bulitko

Associate Professor
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ACADEMIC INTERESTS

Heuristic search, particularly real-time heuristic search, learning in search; applications to video games
Player modeling in video games
Cognitive processes and models in humans, animals and computers

EDUCATION

Ph.D. in Computer Science, University of Illinois at Urbana-Champaign	1999
M.Sc. in Computer Science, University of Illinois at Urbana-Champaign	1998
B.Sc. in Mathematics, Odessa State University	1995

EMPLOYMENT

Visiting Associate Professor, Computer Science, University of British Columbia	2009
Associate Professor, Computing Science, University of Alberta	2008 - present
Assistant Professor, Computing Science, University of Alberta	2001 - 2008
Research Scientist, Alberta Research Council	2000 - 2001
Sessional Instructor, Computing Science, University of Alberta	2000
Research Associate, Computing Science, University of Alberta	2000

STUDENTS SUPERVISED

awards held

Current Ph.D. students

1. David Thue (2007 - present) NSERC PGS-D, iCORE
2. Greg Lee (2003 - present) NSERC PGS-D, iCORE, Ralph Steinhauer, Alberta Ingenuity

Graduated M.Sc. students

1. Stephen Hladky (2006 - 2009) NSERC PGS-M, iCORE, Queen Elizabeth II award
2. Jieshan "Shanny" Lu (co-supervised with R. Greiner) (2005 - 2009)
3. D. Chris Rayner (2005 - 2008) M.Sc. Academic achievement award
4. David Thue (2005 - 2007) NSERC PGS-M, iCORE, FGSR Entrance Bursary, Walter Johns
5. Cosmin Paduraru (co-supervised with R. Sutton) (2004 - 2006) iCORE, Alberta Ingenuity
6. Lihong Li (co-supervised with R. Greiner) (2001 - 2003) Graduate Teaching award
7. Greg Lee (2001 - 2003) NSERC PGS-M
8. Ilya Levner (2001 - 2003) NSERC PGS-M

Current and past summer students

Since 2001 I have supervised 16 summer students including five winners of NSERC USRA scholarship.

Degree examinations

Since 2002 I have served on 10 degree examinations including a M.Sc. defense at Reykjavik University.

COURSES TAUGHT (UNIVERSITY OF ALBERTA)

CMPUT 651, "Topics in AI with Applications to Video Games"***	F09
CMPUT 250, "Computer and Games"*	F09, W10
COSC 419D, "Computer and Games"***	W09
CMPUT 651, "Decision Making in AI: From Foundations to the State of the Art"***	F04, F05, F06
CMPUT 650, "Topics in AI: Learning To Make Decisions"***	F01, F02
CMPUT 605, "Individual Studies in Quantum Computing"***	W02
CMPUT 272, "Formal Systems and Logic in Computing Science"*	W02, W03, W04
CMPUT 115, "Programming With Data Structures"	F05, W06, W07, W08
CMPUT 114, "Introduction to Computing Science"	F03, F04, F07
Quantum Computing Summer School**	S02
CMPUT 101, "Introduction to Computing"	F00

** *designed from ground up*

* *substantially redesigned*

FUNDING

NSERC discovery grant, 2009 - 2013	\$35,000/year
NSERC discovery grant, 2004 - 2008	\$15,000/year
NSERC research tools & instruments grant, 2004	\$8,397
NSERC discovery grant, 2002 - 2003	\$10,000/year
University of Alberta international work study program grant, 2005	\$2,448
University of Alberta summer temporary employment program grant, 2002	\$2,082
University of Alberta start-up grant, 2001 - 2003	\$26,667/year

AWARDS

Nominated for NSERC Discovery Accelerator Supplement	2009
"Top echelon teacher" mention by Faculty of Science Dean, University of Alberta	2006, 2007
IAAI Innovative Application Award by AAAI	1999

PUBLIC OUTREACH

Interviewed by Gateway University of Alberta periodical	2009
Interviewed by Canwest News Service	2009
Interviewed by Express News University of Alberta periodical	2009, 2003
Supervised grade-12 student under the Women In Scholarship, Eng., Science and Technology program	2003

COLLABORATION

Psychiatry Department, University of Alberta	2009 - present
University of British Columbia Okanagan	2009 - present

Reykjavik University	2007 - present
Psychology Department, University of Alberta	2006 - present
Valve Corp.	2007
USC Institute for Creative Technologies (ICT)	2007
Bioware Corp.	2006
Jožef Stefan Institute	2005 - 2008
Queensland University of Technology (QUT)	2005
Institut d'Investigació en Intel·ligència Artificial (IIIA)	2005
Synchrude Research, Ltd.	2004 - 2006
Cross Cancer Institute	2003
Canadian Forestry Service, Pacific Forestry Centre	2002
Alberta Research Council	2001

SERVICE

Co-chair, AAAI workshop on AI and fun: research directions	2010
Member, faculty of extension council, University of Alberta	2009 - present
Member, steering committee, symposium on abstraction, refinement and approximation (SARA)	2009 - present
Member, graduate program committee, University of Alberta	2009 - present
Organizing committee member, artificial intelligence in interactive digital entertainment (AIIDE)	2009
Co-chair, the 8th international symposium on abstraction, refinement and approximation (SARA)	2009
Member, undergraduate program committee, University of Alberta	2008 - 2009
Organizing committee member, workshop at European conference on artificial intelligence (ECAI)	2006
Tutorials & workshops chair, International conference on machine learning (ICML)	2006
Co-chair, workshop at the International joint conference on artificial intelligence (IJCAI)	2005
Chair, University of Alberta quantum computing summer school	2002

REVIEWING

Reviewer, IEEE Transactions on Transactions on Computational Intelligence and AI in Games	2009
Guest editor, Computational intelligence journal	2004
Program committee member, Artificial intelligence in interactive digital entertainment (AIIDE)	2008
Program committee member, National conference on artificial intelligence (AAAI)	2008, 2007, 2006
Program committee member, International joint conference on artificial intelligence (IJCAI)	2009, 2007, 2005
Program committee member, International conference on machine learning (ICML)	2008, 2004
Program committee member, FLAIRS-21	2008
Program committee member, IEEE International Conference on Robotics and Automation (ICRA)	2007
Program committee member, Computer and Games (CG)	2002
Program committee member, Image and vision computing conference of New Zealand (IVCNZ)	2005
Program committee member, IEEE int. symposium on comp. intel. in robotics and automation (CIRA)	2003
Program committee member, Australian conference on artificial intelligence (AI)	2001
Reviewer, Artificial intelligence journal (AIJ)	2009, 2006, 2005
Reviewer, Journal of artificial intelligence research (JAIR)	2008, 2007
Reviewer, Machine learning journal	2001

Reviewer, Computational intelligence journal	2001
Reviewer, Morgan Kaufmann publishers, Elsevier	2006
Reviewer, Springer-Verlag	2004
Reviewer, Wiley	2001
Reviewer, National science and engineering research council (NSERC)	2006, 2004
Reviewer, IEEE transactions on systems, man, and cybernetics, Part A	2004
Reviewer, IEEE transactions on systems, man, and cybernetics, Part B	2004

PROFESSIONAL MEMBERSHIP

Association for the Advancement of Artificial Intelligence	AAAI
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PUBLICATIONS

Journal papers (refereed)

1. Katherine J. Talbot and Eric L.G. Legge and Vadim Bulitko and Marcia L. Spetch. Hiding and Searching Strategies of Adult Humans in a Virtual and a Real-Space Room. 2009. Learning and Motivation. Volume 40, issue 2 (May 2009), pages 221-233. Elsevier.
2. Vadim Bulitko and Mitja Luštrek and Jonathan Schaeffer and Yngvi Björnsson and Sverrir Sigmundarson. Dynamic Control in Real-Time Heuristic Search. 2008. Journal of Artificial Intelligence Research (JAIR). 32: 419 - 452. AAAI Press.
3. Vadim Bulitko and Nathan Sturtevant and Jieshan Lu and Timothy Yau. Graph Abstraction in Real-time Heuristic Search. 2007. Journal of Artificial Intelligence Research (JAIR), 30:51 - 100.
4. Greg Lee and Vadim Bulitko and Ilya Levner. HSMM: Heuristic Search with Meta-Models for Image Interpretation. 2007. Journal of Multiple-Valued Logic and Soft Computing, 14(1-2):129-144.
5. Lihong Li and Vadim Bulitko and Russell Greiner. Focus of Attention in Reinforcement Learning. 2007. Journal of Universal Computer Science (J.UCS), 13(9):1246-1269.
6. Vadim Bulitko and Greg Lee. Learning in Real Time Search: A Unifying Framework. 2006. Journal of Artificial Intelligence Research (JAIR), 25:119 - 157.
7. Vadim Bulitko and David C. Wilkins. ML-TIPN: An Algorithm for Automated Acquisition of Domain Models based on Time Interval Petri Nets. 2006. Journal of Multiple-Valued Logic and Soft Computing, pages 17, 12:391 - 407.
8. Valeriy K. Bulitko and Burton Voorhees and Vadim Bulitko. Discrete Baker Transformations for Linear Cellular Automata Analysis. 2006. Journal of Cellular Automata, 1(1):41 - 70.
9. Vadim Bulitko and David C. Wilkins. Qualitative Simulation of Temporal Concurrent Processes Using Time Interval Petri Nets. 2003. Artificial Intelligence (AIJ), 144(1-2):95 - 124.
10. Valeriy K. Bulitko and Vadim Bulitko. On Existence of Complete Sets for Bounded Reducibilities. 2003. Mathematical Logic Quarterly, 6(49):567-575.
11. Valeriy K. Bulitko and Vadim Bulitko. On A Criterion For NP-completeness. 1998. Ukrainian Mathematical Journal, 50(12):1686-1691.
12. Vadim Bulitko. On Completeness of Pseudosimple Sets. 1995. Journal of Universal Computer Science (J.UCS), 1(2):151-154.
13. Vadim Bulitko. Pseudoparallel Program Execution on BK-0010. 1992. INFO, volume 2.

Fully refereed conference papers [acceptance rate %]

1. David Thue and Vadim Bulitko and Marcia Spetch and Michael Webb. 2009. Exaggerated Claims for Interactive Stories. In Proceedings of the International Conference on Interactive Digital Storytelling (ICIDS). Guimarães, Portugal. Pages 6. [33%]. (In press, accepted on September 6, 2009).
2. Vadim Bulitko and Yngvi Björnsson. 2009. kNN LRTA*: Simple Subgoaling for Real-time Search. In Proceedings of the Artificial Intelligence and Interactive Digital Entertainment conference (AIIDE). Stanford, California. Pages 6. [44%] (In press, accepted on June 3, 2009).
3. Yngvi Björnsson and Vadim Bulitko and Nathan Sturtevant. 2009. TBA*: Time-Bounded A*. In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI). Pasadena, California. 431-436. [26%]
4. Stephen Hladky and Vadim Bulitko. 2008. An Evaluation of Models for Predicting Opponent Positions in First-Person Shooter Video Games. In Proceedings of IEEE Symposium on Computational Intelligence and Games (CIG), pages 39 - 46. Perth, Australia. [50%]
5. David Thue and Vadim Bulitko and Marcia Spetch. 2008. Making Stories Player-Specific: Delayed Authoring in Interactive Storytelling. In Proceedings of the First Joint International Conference on Interactive Digital Storytelling (ICIDS), pages 230 - 241. Erfurt, Germany. [30%]
6. Alejandro Isaza and Jieshan Lu and Vadim Bulitko and Russell Greiner. 2008. A Cover-Based Approach to Multi-Agent Moving Target Pursuit. In Proceedings of the Artificial Intelligence and Interactive Digital Entertainment conference (AIIDE), pages 54 - 59. Stanford, California. [40%]
7. Vadim Bulitko and Steven Solomon and Jonathan Gratch and Michael van Lent. 2008. Modeling Culturally and Emotionally Affected Behavior. In Proceedings of the Artificial Intelligence and Interactive Digital Entertainment conference (AIIDE), pages 10 - 15. Stanford, California. [40%]
8. Alejandro Isaza and Csaba Szepesvári and Vadim Bulitko and Russell Greiner. Speeding Up Planning in Markov Decision Processes via Automatically Constructed Abstractions. 2008. In Proceedings of the 24th Conference on Uncertainty in Artificial Intelligence (UAI), pages 306 - 314, Helsinki, Finland. [28%]
9. Vadim Bulitko and Yngvi Björnsson and Mitja Luštrek and Jonathan Schaeffer and Sverrir Sigmundarson. Dynamic Control in Path-Planning with Real-Time Heuristic Search. 2007. In Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), pages 49 - 56, Providence, Rhode Island. [32%]
10. David Thue and Vadim Bulitko and Marcia Spetch and Eric Wasylishen. Interactive Storytelling: A Player Modelling Approach. 2007. In Proceedings of the Artificial Intelligence and Interactive Digital Entertainment conference (AIIDE), pages 43 - 48, Stanford, California. [38%]
11. Brian Tanner and Vadim Bulitko and Anna Koop and Cosmin Paduraru. Grounding Abstractions in Predictive State Representations. 2007. In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1077-1082, Hyderabad, India. [35%]
12. D. Chris Rayner and Katherine Davison and Vadim Bulitko and Kenneth Anderson and Jieshan Lu. Real-Time Heuristic Search with a Priority Queue. 2007. In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 2372 - 2377, Hyderabad, India. [35%]
13. David Thue and Vadim Bulitko. Modelling Goal-directed Players in Digital Games. 2006. In Proceedings of the Artificial Intelligence and Interactive Digital Entertainment conference (AIIDE), pages 86-91, Marina del Rey, California. [41%]
14. Greg Lee and Vadim Bulitko. Genetic Algorithms for Action Set Selection Across Domains: A Demonstration. 2006. In Proceedings of the Genetic and Evolutionary Computation Conference (GECCO), pages 1697-1704, Seattle, Washington. [46%]
15. Vadim Bulitko and Nathan Sturtevant and Maryia Kazakevich. Speeding Up Learning in Real-time Search via Automatic State Abstraction. 2005. In Proceedings of the National Conference on Artificial Intelligence (AAAI), pages 1349 - 1354. Pittsburgh, Pennsylvania. [18%]

16. Greg Lee and Vadim Bulitko. GAMM: Genetic Algorithms with Meta-Models for Vision. 2005. In Proceedings of the Genetic and Evolutionary Computation Conference (GECCO), pages 2029-2036. Washington, DC. [50%]
17. Vadim Bulitko and David C. Wilkins. Machine Learning for Time Interval Petri Nets. 2005. in Lecture Notes in Artificial Intelligence (LNAI), Proceedings of the 18th Australian Joint Conference on Artificial Intelligence, pages 959 - 965. Springer-Verlag, Sydney, Australia. [32%]
18. Ilya Levner and Vadim Bulitko. Machine Learning for Adaptive Image Interpretation. 2004. In Proceedings of the Innovative Applications of Artificial Intelligence Conference (IAAI), pages 870 - 876. San Jose, California. [37%]
19. Ilya Levner and Vadim Bulitko and Lihong Li and Greg Lee and Russell Greiner. Towards Automated Creation of Image Interpretation Systems. 2003. In Proceedings of the 16th Australian Joint Conference on Artificial Intelligence, pages 653-665. Perth, Australia. [45%]
20. Vadim Bulitko and David C. Wilkins. Automated Instructor Assistant for Ship Damage Control. 1999. In Proceedings of the Innovative Applications of Artificial Intelligence Conference (IAAI), pages 778-785. Orlando, Florida. [~35%] **[IAAI Innovative Application Award]**

Book chapters (refereed) [acceptance rate %]

1. David Thue and Vadim Bulitko and Marcia Spetch. Player Modelling for Interactive Storytelling: A Practical Approach. 2008. In S. Rabin (Ed.) AI Game Programming Wisdom, Charles River Media, Inc.: volume 4, pages 633 - 646.[33%]
2. Ilya Levner and Vadim Bulitko and Guohui Lin. Feature Extraction for Classification of Proteomic Mass Spectra: A Comparative Study. 2006. In I. Guyon, S. Gunn, M. Nikravesh and L. Zadeh (Eds.) Feature Extraction, Foundations and Applications: Series Studies in Fuzziness and Soft Computing, Springer Berlin / Heidelberg, Volume 207, pages 607-624. [55%]

Magazine articles (refereed)

1. Jonathan Schaeffer and Vadim Bulitko and Michael Buro. Bots Get Smart. IEEE Spectrum magazine. December 2008, pages 44 - 49.

Lightly refereed conference/workshop papers and extended abstracts [acceptance rate %]

1. Vadim Bulitko and Steven Solomon and Jonathan Gratch and Michael van Lent. 2008. Modeling Culturally and Emotionally Affected Behavior. In Proceedings of the Tenth International Conference on the Simulation of Adaptive Behavior (SAB), Workshop on the role of emotion in adaptive behavior and cognitive robotics. Osaka, Japan. This is a shortened version of an AIIDE'08 publication by the same authors. Pages 10.
2. David Thue and Vadim Bulitko and Marcia Spetch. Simulating the Adaptive Behaviour of Storytellers in Computer Video Games. 2008. In Proceedings of the Tenth International Conference on the Simulation of Adaptive Behavior (SAB), Last Minute Results track. Osaka, Japan. Pages 2.
3. Mitja Luštrek and Vadim Bulitko. Thinking Too Much: Pathology in Pathfinding. 2008. In Proceedings of the 18th European Conference on Artificial Intelligence (ECAI), pages 899 - 900. Patras, Greece. [40%]
4. David Thue and Vadim Bulitko and Marcia Spetch. PaSSAGE: A Demonstration of Player Modelling in Interactive Storytelling. 2008. In Proceedings of the Fourth Conference on Artificial Intelligence and Interactive Digital Entertainment. AAAI Press. Stanford, California, USA, pages 226 - 227. [100%]
5. David Thue and Vadim Bulitko and Marcia Spetch and Eric Wasylshen. Learning Player Preferences to Inform Delayed Authoring. In Proceedings of the AAAI 2007 Fall Symposium on Intelligent Narrative Technologies, volume Volume FS-07-05, pages 158-161. Arlington, Virginia. [77%]
6. Greg Lee and Vadim Bulitko and Ilya Levner. Automated Selection of Vision Operator Libraries with Evolutionary Algorithms. 2004. In Proceedings of the Congress on Evolutionary Computing (CEC), pages 1127 - 1134. Portland, Oregon. [71%]
7. Ilya Levner and Vadim Bulitko and Lihong Li and Greg Lee and Russell Greiner. Automated Feature Extraction for Object Recognition. 2003. In Proceedings of the Image and Vision Computing New Zealand conference (IVCNZ), pages 309-313. Palmerston North, New Zealand. [85%]
8. Ilya Levner and Vadim Bulitko and Lihong Li and Greg Lee and Russell Greiner. Learning Robust Object Recognition Strategies. 2003. In Proceedings of the 8th Australian and New Zealand Conference on Intelligent Information Systems (ANZIIS), pages 489 - 494. Sydney, Australia. [75%]
9. Lihong Li and Vadim Bulitko and Russell Greiner and Ilya Levner. Improving an Adaptive Image Interpretation System by Leveraging. 2003. In Proceedings of the 8th Australian and New Zealand Conference on Intelligent Information Systems (ANZIIS), pages 501-506. Sydney, Australia. [75%]
10. Vadim Bulitko and Lihong Li and Russell Greiner and Ilya Levner. Lookahead Pathologies for Single Agent Search. 2003. In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1531 - 1533. Acapulco, Mexico. [28%]
11. Vadim Bulitko. Lookahead Pathologies and Meta-level Control in Real-time Heuristic Search. 2003. In Proceedings of the 15th Euromicro Conference on Real-Time Systems, pages 13-16. Porto, Portugal. [70%]
12. Ilya Levner and Vadim Bulitko and Omid Madani and Russell Greiner. Performance of Lookahead Control Policies in the face of Abstractions and Approximations. 2002. in Lecture Notes in Artificial Intelligence (LNAI), Proceedings of the 5th International Symposium on Abstraction, Reformulation and Approximation (SARA), pages 299-308. Springer-Verlag, Berlin, Heidelberg.
13. Gunnar Schrah and Oleksandr Chernyshenko and Michael Baumann and Janet Sniezek and Vadim Bulitko and Scott Borton and David C. Wilkins. A New Approach to Scoring Dynamic Decision Making Performance on High Fidelity Simulators: Reliability and Validity Issues. 2000. In Proceedings of the 15th Annual Conference for the Society for Industrial and Organizational Psychology. New Orleans, Louisiana.
14. Vadim Bulitko. On Recursive Function Classes Including All Fixed Points. 1993. In Proceedings of the Odessa State University Student Conference. Odessa, Ukraine.
15. Vadim Bulitko. A New Method of Constructing Hyper-simple Sets. 1992. In Proceedings of the Ukrainian National Scientific Conference. Odessa, Ukraine.

Theses by my students

1. Stephen Hladky. 2009. Predicting Opponent Locations in First-Person Shooter Video Games. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta. **[Nominated for the departmental thesis award.]**
2. Jieshan Lu. 2009. Learning Multi-agent Pursuit of a Moving Target. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.
3. D. Chris Rayner. 2008. Analysing Openings in Tactical Simulations. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.
4. David Thue. 2007. Player-informed Interactive Storytelling. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta. **[Nominated for the departmental thesis award.]**
5. Cosmin Paduraru. 2006. Planning with Approximate and Learned Models of Markov Decision Processes. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.
6. Lihong Li. 2004. Focus of Attention in Reinforcement Learning. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.
7. Greg Lee. 2004. Automated Action Set Selection in Markov Decision Processes. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.
8. Ilya Levner. 2003. Multi-resolution Adaptive Object Recognition: A Step Towards Autonomous Vision Systems. M.Sc. thesis. Department of Computing Science. University of Alberta. Edmonton, Alberta.

PRESENTATIONS (EXCLUDING CONFERENCE ORAL & POSTER PRESENTATIONS)

1. PaSSAGE: Past, Present, and the Road Ahead. Google, Mountain View, California. August 3, 2009.
2. PaSSAGE: Past, Present, and the Road Ahead. Disney Imagineering, Glendale, California. July 31, 2009.
3. How to Avoid Learning. University of Alberta, Edmonton, Alberta. July 20, 2009.
4. Computers and Games. Inaugural "Wired Campus Alberta" broadcast to nine Alberta high schools. Edmonton, Alberta. May 8, 2009.
5. PaSSAGE: Past, Present, and the Road Ahead. Reykjavik University. Reykjavik, Iceland. November 15, 2008.
6. PaSSAGE: Past, Present, and the Road Ahead. Crowd Control Productions. Reykjavik, Iceland. November 12, 2008.
7. Modeling Culturally and Emotionally Affected Behavior. Reykjavik University. Reykjavik, Iceland. October 16, 2008.
8. Dynamic Control in Real-Time Heuristic Search. Reykjavik University. Reykjavik, Iceland. September 3, 2008.
9. Modeling Culturally and Emotionally Affected Behavior. University of British Columbia, Okanagan campus. Kelowna, British Columbia. July 29, 2008.
10. Dynamic Control in Real-Time Heuristic Search. University of British Columbia, Okanagan campus. Kelowna, British Columbia. July 28, 2008.
11. Dynamic Control in Real-Time Heuristic Search. Nara Institute of Science and Technology (NAIST). Nara, Japan. July 18, 2008.
12. Dynamic Control in Real-Time Heuristic Search. Future University. Hakodate, Japan. July 16, 2008.
13. Culturally Affected Behavior (CAB) and Culture, EMotion and Adaptation (CEMA). USC Institute for Creative Technologies (ICT). Marina del Rey, California. August 23, 07.
14. State Abstraction in Real-time Heuristic Search. **Invited talk** at the Seventh International Symposium on Abstraction, Refinement, and Approximation (SARA). Whistler, British Columbia, July 21, 07.
15. State Abstraction in Learning Real-time Heuristic Search. Stanford University, California. June 1, 07.
16. Machine Learning for Pursuit in Computer Games. Université de Montréal, Montreal, Quebec. July 26, 06.
17. Learning to Pursue. McGill University, Montreal, Quebec. July 25, 06.
18. Real-time Search and Learning. Institute for Creative Technologies (ICT), Marina del Rey, CA. June 20, 06.

19. Real-time Search in Game-like Environments. Bioware Corp. Edmonton, Alberta. June 9, 06.
20. Target Modeling in Real-time Moving Target Pursuit. Reykjavik University. Reykjavik, Iceland. June 7, 06.
21. Real-time Learning and Search. University of British Columbia, Vancouver, British Columbia. May 19, 06.
22. Machine Learning for Computer Vision. University of British Columbia, Vancouver, BC. May 18, 06.
23. Recent Developments in Learning Real-time Search and Their Applications to Real-time Path-finding. The Institut d'Investigació en Intel·ligència Artificial (IIIA), Bellaterra, Spain. August 25, 05.
24. Automated Instructor Assistant for Ship Damage Control. Institute for Creative Technologies (ICT), Marina del Rey, California. February 22, 05.
25. Speeding Up Learning via Abstraction. Institute for Creative Technologies (ICT), Marina del Rey; University of California Berkeley, Berkeley; University of California, Los Angeles (UCLA); Information Science Institute (ISI), Marina del Rey; University of Southern California (USC), Los Angeles, CA. Feb 05.
26. Machine Learning for Adaptive Vision. National Aeronautics and Space Administration (NASA), Moffett Field, California. August 27, 04.
27. Lookahead Pathologies and Meta Reasoning in Real-time Decision Making. University of Southern California (USC), Los Angeles, California. August 26, 03.