

CURRICULUM VITAE

Ping Xuan

Assistant Professor
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EDUCATION

Ph. D. Computer Science,
University of Massachusetts at Amherst, 2002

M. S. Computer Science,
University of Massachusetts at Amherst, 1998

B. S. Physics,
Beijing University, Beijing, 1994

EXPERIENCE

- **Assistant Professor** at Clark University Department of Mathematics and Computer Science. Teach computer science courses and conduct research on artificial intelligence, autonomous agents, and multi-agent systems (August 2003 - present).
- **Technical Lead** at Quantum Leap Innovations, Inc., an intelligent software company in Newark, Delaware (www.quantumleap.us). Serve as the resident expert on agent architecture and software development, multi-agent systems, data mining/fusion, AI planning and decision support systems. Conduct basic and applied AI software R&D; write research grant proposals (August 2002 - August 2003).
- **Research Assistant** in the Multi-Agent Systems Laboratory, Department of Computer Science, University of Massachusetts at Amherst. Advised by Professor Victor Lesser. Research on distributed problem solving; multi-agent planning, cooperation, coordination, and communication; control, simulation, and implementation of distributed intelligent agents; reasoning and acting under uncertainty, and modeling of multi-agent systems (June 1997 - July 2002)
- **Research Assistant** in the Real-time Systems and Databases Systems Research Laboratory, Department of Computer Science, University of Massachusetts at Amherst. Supervised by Professors Krithi Ramamritham and Jack Stankovic.

Research on real-time operating systems scheduling, fault-tolerance, distributed systems, and mobile (wireless) computing (September 1995 - June 1997)

TEACHING AT CLARK UNIVERSITY

Fall 2008

CS 100: First Year Seminar: Think Like Computers
CS 160: Algorithms + CS 160 Lab
CS 299: Directed Study

Spring 2008

CS 111: Diving into Computer Science Research: Design Your Own Computer Games
CS 170: Programming Languages + CS 170 Lab

Fall 2007

CS 110: Diving into Computer Science Research: Design Your Own Computer Games
CS 160: Algorithms + CS 160 Lab
CS 220: Database Systems

Summer 2007

Research Project for Carlson Scholars

Spring 2007

CS 170: Programming Languages + CS 170 Lab
CS 210: Artificial Intelligence
CS 297: Internship

Spring 2006

CS 170: Programming Languages + CS 170 Lab

CS 111: Diving into Computer Science Research: Trading Agents
CS 297: Internship
CS 299: Directed Study

Fall 2005

CS 220: Database Systems
CS 102: Computer Programming II + CS 102 Lab
CS 110: Diving into Computer Science Research: Trading Agents
CS 297: Internship

Spring 2005

CS 101: Computer Programming I
CS 102: Computer Programming II + CS 102 Lab

Fall 2004

CS 210: Artificial Intelligence
CS 297: Internship
CS 160: Algorithms + CS 160 Lab

Spring 2004

CS 102: Computer Programming II + CS 102 Lab

Fall 2003

CS 102: Computer Programming II + CS 102 Lab

New Courses Proposed at Clark Univeristy

CS 110-111: Diving into Computer Science Research Series: Design Your Own Computer Games
CS 110-111: Diving into Computer Science Research Series: Trading Agents
CS 100: First Year Seminar: Think like Computers

Course changes Proposed at Clark Univeristy

CS 220: Database Systems
CS 102: Computer Programming II

AWARDS

- Best Student Paper Award for the paper titled "Incorporating Uncertainty in Agent Commitments", ATAL-99 (Agent Theories, Architectures, and Languages), Orlando, 1999.
- Travel Scholarship Award, The First International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-02), Bologna, Italy, 2002
- Travel Scholarship Award, The Fourth International Conference on Multi-Agent Systems (ICMAS-00), Boston, 2000.
- Travel Scholarship Award, The Fifth International Conference on Autonomous Agents (AGENTS-01), Montreal, Canada, 2001.

REFEREED PUBLICATIONS

- Ping Xuan, *Modeling Plan Coordination in Multiagent Decision Processes*. Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07). Poster session. May, 2007.
- Ping Xuan. Techniques for Robust Planning in Degradable Multiagent Systems. Book chapter. In Challenges in Coordination of Large Scale MultiAgent Systems, P. Scerri, editor. Springer. 2005.
- Ping Xuan. A Mechanism for Robust Plan Adaptation in Large Scale Multiagent Operations. In AAMAS-04 Workshop on Challenges in Coordination of Large Scale Multiagent Systems. July 2004.
- Ping Xuan, An MDP Approach for Agent Self Monitoring. In AAAI-04 Workshop on Agent Organizations: Theory and Practice (AOTP'04). July 2004.
- Lesser, V.; Decker, K.; Wagner, T.; Carver, N.; Garvey, A.; Horling, B.; Neiman, D.; Podorozhny, R.; NagendraPrasad, M.; Raja, A.; Vincent, R.; Xuan, P.; Zhang, X.Q.. [Evolution of the GPGP/TAEMS Domain-Independent Coordination Framework](#). In *Autonomous Agents and Multi-Agent Systems*, Volume 9, Number 1, pp. 87-143. July, 2004.
- Ping Xuan and Victor Lesser. *Multi-Agent Policies: from centralized ones to decentralized ones*. In Proceedings of the First International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-02), Bologna, Italy, July 2002. Acceptance rate 26%.
- Ping Xuan and Victor Lesser. *Incorporating uncertainty in agent commitments*. In N.R. Jennings and Y. Lesperance, editors, Intelligent Agents VI --- Proceedings of the Sixth International Workshop on Agent Theories, Architectures, and Languages (ATAL-99), Lecture Notes in Artificial Intelligence. Springer-Verlag, Berlin, 2000. **This paper won the Best Student Paper Award at ATAL-99.** Acceptance rate 26%.
- Ping Xuan, Victor Lesser, and Shlomo Zilberstein. *Communication Decisions in Multi-agent Cooperation: Model and Experiments*. In Proceedings of the Fifth International Conference on Autonomous Agents (Agents 2001), Montreal, Canada, 2001. Acceptance rate 26%.
- Ping Xuan, Victor Lesser, and Shlomo Zilberstein. *Formal Modeling of Communication Decisions in Cooperative Multi-agent Systems*. In Proceedings of the

Second Workshop on Game Theoretic and Decision Theoretic Agents (GTDT 2000), 2000.

- Ping Xuan, Victor Lesser, and Shlomo Zilberstein. *Communication in Multi-agent Markov Decision Processes*. In Proceedings of the Fourth International Conference on Multi-Agent Systems (ICMAS-00), Poster Session, 2000. Acceptance rate 30%.
- Ping Xuan, Suhbo Sen, Oscar Gonzalez, Jesus Fernandez, and Krithi Ramamritham, *Broadcast on Demand - Efficient and Timely Dissemination of Data in Mobile Environments*. IEEE Real-Time Technology and Applications Symposium (RTAS 97), June 1997, pp. 38-48. Acceptance rate 25%.
- Bryan Horling, Victor Lesser, Regis Vincent, Ana Bazzan, and Ping Xuan. *Diagnosis as an Integral Part of Multi-Agent Adaptability*. In Proceedings of DARPA Information Survivability Conference and Exposition (see also UMASS CSTR 1999-03), pp. 211-219, Hilton Head, South Carolina, January, 2000, IEEE Computer Society.
- Thomas Wagner, Brett Benyo, Victor Lesser, and Ping Xuan. *Investigating Interactions Between Agent Conversations and Agent Control Components*. In Frank Dignum and Mark Greaves, editors, *Issues in Agent Communication*, Lecture Notes in Computer Science. Springer-Verlag, Berlin, 2000.
- Thomas Wagner, Jonathan Shapiro, Ping Xuan and Victor Lesser. *Multi-Level Conflict in Multi-Agent Systems*. In Proceedings of the AAI-99 Workshop on Negotiation in MAS, Orlando, FL, April 1999, AAI Press.
- Victor Lesser, Michael Atighetchi, Brett Benyo, Bryan Horling, Anita Raja, Regis Vincent, Thomas Wagner, Ping Xuan, and Selley XQ Zhang. *The Intelligent Home Testbed*. In Proceedings of the Autonomy Control Software Workshop (Autonomous Agent Workshop), 1999.
- Victor Lesser, Michael Atighetchi, Brett Benyo, Bryan Horling, Anita Raja, Regis Vincent, Thomas Wagner, Ping Xuan, and Selley XQ Zhang. *A Multi-Agent System for Intelligent Environment Control*. In Proceedings of the Third International Conference on Autonomous Agents (Agents99), 1999.

WORK IN PROGRESS (OR IN SUBMISSION)

- Ping Xuan, *Dynamic and Robust Agent Organization Formation*.
- Ping Xuan and Victor Lesser, *Decomposing Centralized Multiagent Policies*
- Ping Xuan and Victor Lesser, *Using Agent Commitments as Planning Contexts*
- Shelley XQ Zhang and Ping Xuan, *De-commitments in Virtual Organizations*

PROFESSIONAL ACTIVITIES & REVIEWING

Program Committee Member for the following conferences

- The Eighth International Conference on Autonomous Agents and Multi-Agent Systems 2009 (AAMAS'09)
- International Conference on Autonomous Agents and Multi-Agent Systems 2008 (AAMAS'08)
- AAMAS'07 Workshop on Multi-agent Sequential Decision Making in Uncertain Domains. 2008 (MSDM'08).

- AAMAS'07 Workshop on Multi-agent Sequential Decision Making in Uncertain Domains. 2007 (MSDM'07)
- FLAIRS'06 Special Track on AI Education. 2006
- AAMAS'06 Workshop on Modeling Planning in Uncertain Domains. 2006
- International Conference on Autonomous Agents and Multi-Agent Systems, 2005 (AAMAS'05)

Referee for the following journals:

- Journal of Artificial Intelligence Research (JAIR), 2006
- International Journal on Autonomous Agents and Multi-Agent Systems, 2003
- Referee, IEEE Transactions on Parallel and Distributed Systems, 1999

Reviewer for the following conferences:

- The 2nd Autonomous Agents Workshop on Infrastructure for Agents, Multi-Agent Systems, and Large Scale Multi-Agent Systems, Montreal, 2001.
- The 20th IEEE Real-time Systems Symposium, (RTSS-99), December 1999.
- The 15th International Conference on Data Engineering (ICDE-99), 1999.
- The 23rd International Conference on Very Large Databases (VLDB-99), August 1997.

OTHER PROFESSIONAL ACTIVITIES

- Consultant Scientist for DARPA project, Coordinators (June 2005 – August 2006)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Member of American Association for Artificial Intelligence (AAAI), IEEE Computer Society, Association for Computing Machinery (ACM), and the Honor Society of Phi Kappa Phi.