

## PEDRITO MAYNARD-ZHANG

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### EDUCATION:

- 2001      **PhD**, Computer Science      **Stanford University, CA**  
Dissertation: *Pedigreed Belief Change*  
Advisor: Professor Yoav Shoham
- 1999      **MS**, Computer Science      **Stanford University, CA**
- 1994      **BSE**, Electrical Engineering, *summa cum laude*      **Walla Walla College, WA**  
Minor, Mathematics

### WORK EXPERIENCE:

- 2008 - present      **Software Development Engineer**, Bing Local Search, *Microsoft Corporation*, WA  
Designed and developed machine learning-based software for Bing Local Search, particularly in the areas of relevance, measurement, and data-processing. Implementation primarily in C#, C++, .NET, and SQL Server.
- 2006 - 2008      **Software Development Engineer**, Customer Behavior, *Amazon.com*, WA  
Designed, implemented, and deployed high-impact machine learning-based customer-targeting tools used by retail and advertising customers in the company. Targeting features included geography, gender, and historical purchase behavior. Implementation primarily in Java, but included substantial work in shell script, Perl, Javascript, JSP, etc.
- 2002 - 2005      **Assistant Professor**, Department of Computer Science, *Miami University*, OH  
Taught highly-rated undergraduate and graduate Computer Science courses, including machine learning, artificial intelligence, and data abstraction & data structures. Designed course content, delivered lectures, created and graded problem sets and exams, and assisted students during and outside of office hours. Advised graduate students in their thesis research. Formed a group to conduct research in multi-agent problems. Co-initiated a project to develop a RoboCup Soccer Simulator lab for multi-agent research. Published finished work in peer-reviewed journals and conferences. Co-PI'd a \$225,000 research grant from NASA. Developed software in Java, C++, C, and Matlab to support courses and research. Participated in service committees at the department, school, and university levels.
- 2002 (Spring)      **Visiting Assistant Professor**, Department of Computer Science, *Miami University*, OH  
Taught "Data Abstraction and Data Structures" graduate course in C++. Delivered lectures, created and graded problem sets and exams, and assisted students during office hours.
- 1995 - 2001      **Research Assistant**, Computer Science Department, *Stanford University*, CA  
Investigated and designed methods for combining information from sources of varying expertise, credibility, etc. Co-developed a logic-based architecture for controlling a mobile robot. Published and presented results in peer-reviewed conferences.

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- 1997 - 1999 **Teaching Assistant**, Computer Science Department, *Stanford University*, CA  
Assisted in teaching “Logic and Automated Reasoning” and “Artificial Intelligence: Principles and Techniques” courses to undergraduate and graduate students. Assisted in course design. Graded problem sets and exams. Lead review and problem sessions. Helped students individually during office hours.
- 1997 (Summer) **Research Assistant**, Ames Research Center, *NASA*, CA  
Investigated the use of common representations and abstraction in the Remote Agent automated spacecraft-control system. (*Supervisor*: Dr. P. Pandurang Nayak)
- 1996 (Summer) **Research Assistant**, Goddard Space Flight Center, *NASA*, MD  
Examined the role of knowledge representation issues in the AFLOAT multi-agent system and recommended design improvements. (*Supervisor*: Dr. Walter Truszkowski)
- 1994 - 1995 **Teacher**, English Department, *Zhanjiang Teachers' College*, Zhanjiang, P.R. of China  
Taught oral and written English courses to college English majors.
- 1992 - 1994 **Electronics Technician**, Technical Support Services, *Walla Walla College*, WA  
Fabricated and serviced campus laboratory instruments and computers.
- 1991 - 1992 **Product Support Engineer (Co-op)**, Product Support, *Microsoft Corporation*, WA  
Provided technical support to customers via telephone and letters.

### RESEARCH INTERESTS:

Artificial intelligence, multi-agent systems & social computing, machine learning, probabilistic and logical formalisms (e.g., Bayesian networks), cognitive robotics.

### SKILLS:

- **Software Development Skills:**  
*Programming languages*: Java, C++, C#, C, shell script (e.g., ZSH), Perl, Javascript, JSP, MATLAB, Prolog  
*Platforms*: Linux/UNIX, Windows  
*Tools*: SQL Server, MySQL, Berkeley Database (BDB), Perforce, JUnit, Log4j, etc.
- **Leadership Experience:**  
Mentor – Interns, Amazon.com (2006, 2008)  
Advisor – Black Data Processing Association, Miami University (2002-2005)  
Coach – Adam Hsu Kung Fu School System (1998-present)  
Co-organizer – Caribbean Student Association, Stanford University (1999)
- **Communication Skills:**  
*Writing* includes technical publications in refereed journals and conferences.  
*Speaking* includes technical conference presentations and classroom lectures.
- **Languages:**  
Proficient in Spanish, beginner in Mandarin Chinese.

### HONORS AND AWARDS:

- Amazon.com Inventor Award (2007)
- National Physical Science Consortium Fellowship (1995-2001)
- GTE Fellowship (1995-1997)
- Engineer-in-Training Certification (1994)
- National Dean's List Award (1993-1994)
- IEEE Scholarship (1993)

### ADDITIONAL INFORMATION:

- **Foreign Countries of Residence:**  
Jamaica, Puerto Rico, P.R. of China
- **Interests:**  
Traditional Chinese kung fu, hiking, volleyball, raquetball, jigsaw puzzles

## PEDRITO MAYNARD-ZHANG

### REFEREED PUBLICATIONS:

#### Journal Publications:

- Eyal Amir and Pedrito Maynard-Zhang. Logic-Based Subsumption Architecture. *Artificial Intelligence (AIJ)*, 153(1-2): 167-237, 2004.
- Mouin Hourani, Mufit Ozden, Frank Moore, and Pedrito Maynard-Zhang. Genetic Algorithm Application to Clustering Problems, *WSEAS Transactions on Systems*, 3(3): 1045-1053, May 2004.
- Pedrito Maynard-Zhang and Daniel Lehmann. Representing and Aggregating Conflicting Beliefs. *Journal of Artificial Intelligence Research (JAIR)*, 19:155-203, 2003.
- Pedrito Maynard-Reid II and Yoav Shoham. Belief Fusion: Aggregating Pedigreed Belief States. *Journal of Logic, Language, and Information*, 10(2): 183-209, 2001.

#### Conference Publications and Presentations: (# indicates I presented at the corresponding conference)

- Bradford J. Snow, Pedrito Maynard-Zhang, and Eric Bachmann. A WiFi Based Personal Place Awareness System using Bayesian Learning. *Proceedings of the 16th Midwest Artificial Intelligence and Cognitive Sciences Conference (MAICS'05)*, Dayton, Ohio, 116-123, 2005.
- Mouin Hourani, Mufit Ozden, Frank Moore, and Pedrito Maynard-Zhang. Genetic Algorithm Application to Clustering Problems, *Proceedings of the 4th WSEAS International Conference on Soft Computing, Optimization, Simulation, & Manufacturing Systems (SOSM'04)* in Miami, Florida, 2004. An earlier version appeared in *Proceedings of the 15th Midwest Artificial Intelligence and Cognitive Sciences Conference (MAICS'04)*, Chicago, Illinois, 138-147, 2004.
- #Pedrito Maynard-Reid II and Urszula Chajewska. Aggregating Learned Probabilistic Beliefs. *Proceedings of the Seventeenth Conference on Uncertainty in Artificial Intelligence (UAI'01)*, Seattle, WA, 354-361, 2001.
- #Pedrito Maynard-Reid II and Daniel Lehmann. Representing and Aggregating Conflicting Beliefs. *Proceedings of the Seventh International Conference on Principles of Knowledge Representation and Reasoning (KR'00)*, Breckenridge, CO, 153-164, 2000.
- #David M. Pennock, Pedrito Maynard-Reid II, C. Lee Giles, and Eric Horvitz. A Normative Examination of Ensemble Learning Algorithms. *Proceedings of the Seventh International Conference on Machine Learning (ICML'00)*, Stanford, CA, 735-742, 2000.
- Eyal Amir and Pedrito Maynard-Reid II. Logic-Based Subsumption Architecture. *Proceedings of the Sixteenth International Joint Conference of Artificial Intelligence (IJCAI'99)*, Stockholm, Sweden, 147-152, 1999.
- #Pedrito Maynard-Reid II and Yoav Shoham. From Belief Revision to Belief Fusion. *Proceedings of the Third Conference on Logic and the Foundations of Game and Decision Theory (LOFT3)*, Torino, Italy, 1998.
- #Alvaro del Val, Pedrito Maynard-Reid II, and Yoav Shoham. Qualitative Reasoning about Perception and Belief. *Proceedings of the Fifteenth International Joint Conference on Artificial Intelligence (IJCAI'97)*, Nagoya, Japan, 508-513, 1997.

#### Symposia Publications:

- Eyal Amir and Pedrito Maynard-Reid II. LiSA: A Robot Driven by Logical Subsumption. *Proceedings of the Fifth Symposium on Logical Formalizations of Commonsense Reasoning (Common Sense 2001)*, New York, NY, 2001.

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- Eyal Amir and Pedrito Maynard-Reid II. Logic-Based Subsumption Architecture. *Proceedings of the 1998 AAAI Fall Symposium of Cognitive Robotics*, Orlando, FL, 1-12, 1998.