

FACUNDO BROMBERG

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<u>EDUCATION</u>	<i>Ph.D., Computer Science– Artificial Intelligence</i> Iowa State University <ul style="list-style-type: none">• GPA 3.97/4.00• Member of the Preparing Future Faculty Program (PFF). <i>B.S. and M.S., in Physics – Neural Networks Dynamic</i> Instituto Balseiro – University of Cuyo <ul style="list-style-type: none">• GPA 7.23/10.00	Spring 2007 Ames, Iowa December 1998 Bariloche - Argentina
<u>RESEARCH INTERESTS</u>	Machine learning; graphical models; classification; inductive, and semi-supervised (reinforcement) learning. Multi-agent systems. Inductive learning in systems of self-interested and cooperative agents. Game Theory. Decision Theory. Agent-based computational societies.	
<u>RESEARCH EXPERIENCE</u>	<i>Research Assistant</i> Iowa State University – Department of Computer Science- Artificial Intelligence Laboratory <ul style="list-style-type: none">• Conduct research on the areas of Multi-agent Learning from Data and learning in sensor networks. <i>Research Assistant</i> University of Buenos Aires, School of Medicine, Cardiac Energetic and Metabdisim Lab <ul style="list-style-type: none">• Modeled, and implemented (in C++) a simulation of miothermic experimental responses of cardiac muscles. <i>Research Assistant</i> Universidad Nacional de Cuyo, Centro Atomico Bariloche- Instituto Balseiro <ul style="list-style-type: none">• Conducted research on Theoretical and Computational Neural Network Dynamics.	Fall 2003, Summer 2004 Feb 1999 – Jan 2001 Argentina Aug 1999 – Dec 1998 Bariloche - Argentina

SELECTED PUBLICATIONS:

- Bromberg, F. Margaritis, D. and V.Honavar. "Efficient Markov Network Structure Discovery from Independence Tests". SIAM Data Mining 2006 (SDM06).
- Bromberg, F. and Honavar, V.. "Multi Agent Learning from Data". Intl. Symposium on Modern Computing. Iowa State U. 2003.
- Bromberg F. and Ponce-Hornos, J.E. "Computational Modeling and Simulation of Miothermic Responses of Cardiac Musde Cells". 28th Annual Meeting of the Argentine Biophysical Society. Argentina. Nov 1999.
- Bromberg, F. M.S. Thesis: "Noise Induced Phase Transition in Globally Coupled Neural Oscillators." Statistical Physics Department. CAB, S.C. de Bariloche, Argentina.
- Bromberg, F. and Mato, G.. "Noise Induced Phase Transition in Globally Coupled Neural oscillators". 83th National Meeting of the Argentine Physical Society. La Plata. Buenos Aires. Argentina. September 1998.

ACADEMIC ACTIVITIES

- Invited reviewer, ICDM'05 Workshop on Knowledge Acquisition from Semantically Heterogeneous Data.
- Attended International Joint Conference on Autonomous Agents and Multiagent Systems, Jul 2004, NYC.
- Attended the Americas's School on Agents and Multiagent Systems– July 2004.
- Attended the International Joint Conference of Artificial Intelligence, Acapulco, Mexico, Aug 2003.

RELEVANT COURSES	Agent-based Computational Economics (2004); Semantic models of programming languages: Communicating and mobile systems (2004); Theory of Games, Knowledge and Uncertainty (2003); Principles of Database Systems graduate level (2003); Randomness in Computation (2003); Theory of Computing (2002); Machine Learning (2002); Design and Analysis of Algorithms (2002); Principles of Artificial Intelligence (2002); Brains, Minds and Computers, a course in philosophy of mind (2002). Systems Control (1997); Finite Elements Method (1997); Artificial Neural Networks (1997); Computational Physics (1998); Statistics and Introduction Computation C-Language (1995); Technical Statistics (10/10, 1994)	
SKILLS	<p>PROGRAMMING LANGUAGES:</p> <ul style="list-style-type: none"> • C/C++, Java,. Several years of pactice in commercial and scientific applications. • Basic knowledge of: Scheme-LISP, Prolog, Visual Basic, Cobol, FORTRAN, PHP, PERL, ASP, JSP, .NET, SQL • Others: XML, RDF, RDF-scheme, DAML, Windows API and MFC, HTML, JavaScript, UNIX-Linux, MATLAB, LaTeX, R, AutoLISP for AutoCAD. <p>COMPUTING AND OTHER SKILLS:</p> <ul style="list-style-type: none"> • Programming environment: Eclipse , Borland (JBuilder), Microsoft Visual, Emacs. • Agent oriented programming ABLE (IBM), COUGAAR, Jade, Zeus (BT). • Analytic, Numerical and Statistical Data analysis Microcal Origin, Mathematica, Matlab, R. • Productivity tools: Microsoft Office applications. • 3D Modding and graphic design: AutoCAD, 3DStudio, Photoshop, Illustrator, Flash, others. <p>FOREIGN LANGUAGES:</p> <ul style="list-style-type: none"> • Spanish (mother tongue), English (fluent) and Italian. 	
CAREER RELATED EXPERIENCE	<p><i>Physics Instructor</i> Des Moines Area Community College</p> <ul style="list-style-type: none"> • Class preparation and lecturing, homework and test preparation and grading, laboratories preparation and supervision. <p><i>Teaching assistant</i> Computer Science Dept, Iowa State University</p> <ul style="list-style-type: none"> • Game Theory, Machine Learning, Pples of Programming Languages, Design&Analysis of Algs • Administered course's site webmaster, held recitations, taught some lectures, and graded hws. <p><i>Designer and programmer</i> Lanús University, Interactive Science Museum</p> <ul style="list-style-type: none"> • Developed Interactive Planetary System software w/Lingo for Macromedia Director and C. <p><i>Lab assistant</i> Dept of Agronomy, Iowa State University Agricultural ecology group</p> <ul style="list-style-type: none"> • Assisted researchers in several lab and field activities. <p><i>Independent Entrepreneurship Project: emusic</i></p> <ul style="list-style-type: none"> • Registered software for administration, navigation, playing of huge collection of audio files. • Commercialized, created, designed and implemented in C++. <p><i>AutoCAD Trainer</i> Environmental Ministry of the Province of Mendoza</p> <ul style="list-style-type: none"> • Taught AutoCAD courses to mainly architects and civil engineers 	<p>Summer and Fall 2005 Ankeny, Iowa</p> <p>2001 - 2006 Ames, Iowa</p> <p>Feb 2001 – Jun 2001 Buenos Aires - Argentina</p> <p>Summer 2002 Ames, Iowa</p> <p>1997-2000</p> <p>1992-1995 Mendoza - Argentina</p>
SERVICE AND ACTIVITIES	<ul style="list-style-type: none"> • Mentor, CS Dept at ISU, Mentoring program for incoming students, Fall 2003 and Fall 2004. • Volunteer, AAI Volunteer Program, Acapulco – Mexico. International Joint Conference Of Artificial Intelligence 2003 (IJCAI 2003), Aug 2003 • Co-Founder, "Argentinean and Uruguayan Student Association- MATES", Jul 2002 • Volunteer and photographer, International Friendship Fair, Iowa State University, Nov 2001 • Student representative, Academic council, Instituto Balseiro, 1997. 	

HONORS

Awards

- Recipient of the Teaching Excellence Award, Iowa State University, 2005.
- Recipient of the Upsilon Pi Epsilon Honorary Society Scholarship, 2005.

Scientific and Honorary Societies

- Member of the American Association of Artificial Intelligence (AAAI) since 2003.
- Member of the Association for Computing Machinery (ACM) since 2004
- Member of Upsilon Pi Epsilon Honorary Society for Computer Scientist since 2004.

Fellowships

- CNEA (National Council of Nuclear Energy). Duration: 42 months.
- FONCyT (National Fund for Science and Technology). Duration: 12 months.