Larry D. Pyeatt, PhD
Curriculum Vitae

Education

Doctor of Philosophy in Computer Science
Colorado State University, 1999
Dissertation: *Integration of Partially Observable Markov Decision Processes and Reinforcement Learning for Simulated Robot Navigation*
Committee: Adele Howe (Chair), Charles Anderson, Darrell Whitley, Wade Troxell

Master of Science in Computer Science
Texas Tech University, 1991
Thesis: *Application of the Neural Ring Pattern Classifier to Speech Recognition*

Bachelor of Science in Computer Science
Texas Tech University, 1988

Research Interests

Probabilistic Artificial Intelligence, Robotics, Reinforcement Learning, Agent Architectures, Real-time and Embedded Systems, Digital Forensic Analysis

Honors and Awards

Academic
Upsilon Pi Epsilon (computer science honor society), Texas Tech University, 1989
Third Place Team, ACM International Programming Competition, Louisville, Kentucky, 1989
Engineering Academic Scholarship, Texas Tech University, 1983

Texaco
Patent Letter, August 30, 1995
Patent Application Award, July 19, 1993
Exploration & Production Technology Department Award for Outstanding Supplier, February 23, 1993
Individual Outstanding Contribution (IOC) Award for Innovation, August 5, 1992

Professional Experience

Associate Professor
South Dakata School of Mines and Technology, Rapid City, South Dakota, 8/2012–present.

Associate Professor
Texas Tech University, Lubbock, 1/2006–7/2012.

Associate Department Chair
Texas Tech University at Abilene, 8/2007 – 8/2010.

Visiting Associate Professor
University of Missouri, Rolla, 1/2005–12/2005.

Assistant Professor
Texas Tech University, Lubbock, 9/99–12/2004.

Lecturer
Colorado State University, Fort Collins, 9/1998–9/1999.

Graduate Research Assistant
Colorado State University, Fort Collins, multiple appointments, 9/1993–9/1998.

Senior Information Systems Programmer
Texaco Inc., Houston, Texas 9/1991–9/1993.

Graduate Research Assistant
Texas Tech University, Lubbock, 8/1988–9/1991.

Embedded Control Systems Engineer
Applied Hydraulics, Lubbock, Texas, 1/87–7/88.

Recent Publications

Arisoa Randrianasolo and Larry D. Pyeatt. An artificial immune system based on Holland's classifier as network intrusion detection. In *Proceedings of the 4th International Conference on Agents and Artificial Intelligence (ICAART)*, Valamoura, Algarve, Portugal, February 2012. Institute for Systems and Technologies of Information, Control and Communication (INSTICC).

Arisoa Randrianasolo and Larry D. Pyeatt. Using local regression in Monte Carlo search tree. In *Proceedings of the 4th International Conference on Agents and Artificial Intelligence (ICAART)*, Valamoura, Algarve, Portugal, February 2012. Institute for Systems and Technologies of Information, Control and Communication (INSTICC).

Eddy C. Borera and Larry D. Pyeatt. Offline policy optimization: Using online Monte Carlo simulation-based techniques to deal with changes in dynamic environments. In *Proceedings on the IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS)*, Guangzhou, China, November 18–20 2011.

Eddy C. Borera, Brett L. Moore, Anthony G. Doufas, and Larry D. Pyeatt. An adaptive neural network filter for improved patient state estimation in closed-loop anesthesia control. In *Proceedings of the IEEE International Conference on Tools with Artificial Inteligence (ICTAI)*, Boca Raton, Florida, USA, November 7–9 2011.

Arisoa Randrianasolo and Larry D. Pyeatt. Applying context-based prediction in adversarial Watkins' $Q(\lambda)$ learning. In *Proceedings of the 2011 International Conference on Artificial Intelligence, ICAI 2011*, Las Vegas, Nevada, July 2011. CSREA Press.

Shubham Shukla and Larry D. Pyeatt. A guided learning algorithm for solving traveling salesman problem. In *Proceedings of the 2011 International Conference on Artificial Intelligence, ICAI 2011*, Las Vegas, Nevada, July 2011. CSREA Press.

Eddy C. Borera, Mahdi Naser-Moghadasi, Arisoa S. Randrianasolo, and Larry D. Pyeatt. POMDP filter: Pruning POMDP value functions with the Kaczmarz iterative method. In *Proceedings of the 9th Mexican International Conference on Artificial Intelligence (MICAI)*, pages 254–265, Pachuca, Mexico, November 2010. Springer.

Brett L. Moore, Periklis Panousis, Vivek Kulkarni, Larry D. Pyeatt, and Anthony G. Doufas. Reinforcement learning for closed-loop propofol anesthesia: A human volunteer study. In *Proceedings of the 22nd IAAI Conference*, Atlanta, GA, July 2010. AAAI Press.

Brett L. Moore, Larry D. Pyeatt, and Anthony G. Doufas. Fuzzy control for closed-loop, patient-specific hypnosis in intraoperative patients: a simulation study. In *Proceedings of the International Society of Anaesthetic Pharmacology Conference*, New Orleans, LA, October 2009.

Recent Funding

Larry D. Pyeatt. *Improved POMDP Solution Method*. Texas Tech Seed Grant, October 2008–2009. Award amount: $21,000.

Sunanda Mitra and Larry Pyeatt. *Supplemental REU: CRCD: Machine Learning: A Multidisciplinary Computer Engineering Graduate Program*. NSF, February 2003-2004. Award amount: $12,000.

Michael Parten, Larry Pyeatt, et al. *Plant Research in the EDU, Water Reuse/Recycling, Locomotion in Simulated Partial Gravity, and Human Centered Computing*. NASA, October 2003-2004. Award amount: $2,250,000.

Michael Parten, Larry Pyeatt, et al. *Plant Research in the EDU (Engineering Development Unit)*. NASA - Johnson Space center, October 2002-2003. Award amount: $1,675,000.

Professional Service

Reviewer
2012 Journal of Machine Learning Research
2011 Journal of Machine Learning Research
2010 Journal of Machine Learning Research

Program Committees
2004 International Conference on Machine Learning
2001 Third International Symposium on Adaptive Systems

International Service

External Examiner PhD defense of Adam Milstein, "Improved Particle Filter Based Localization and Mapping," University of Waterloo, Waterloo, CA, March 5, 2008.

Courses Taught

Undergraduate

Introduction to Systems Programming
Introduction to Digital Logic
Advanced Digital Projects
Operating Systems
Introduction to AI Robotics
Programming Languages
Senior Projects
Introduction to Computer Science

Graduate

Digital Forensics
Computer Architecture
Markov Decision Processes
Reinforcement Learning
Advanced Operating Systems
Intelligent Systems
Introduction to AI Robotics
All-terrain Robotics

Graduate Students Advised

Doctoral Students

Brett Moore, Graduated April, 2010
Arisoa Randrianasolo, expected gradutation in May 2012
Eddy Borera, expected gradutation December 2012

Master's Students

Amit Yadav, expected gradutation in May 2012
Shubham Shukla, graduated in May, 2011
Mahdi Naser-Moghadasi, graduated in May, 2010
Arisoa Randrianasolo, graduated in May, 2010
Eddy Borera, graduated in May, 2010
Nguyen Bach, graduated in May, 2010
ChengCheng Li, graduated in May, 2005
Srividya Kona, graduated in May, 2002
Ajay Bansal, graduated in May, 2002
Bharani Ellore, graduated in December, 2002
Todd Quasny, graduated in December, 2003
Julian Hooker, graduated in May, 2004
Krishnan Pazhayanoor,graduated in December, 2004
Karan Gupta, graduated in May, 2005
Roger Coffey, expected graduation in May, 2009
Derik Dalton, expected graduation in December, 2009

References

William M. Marcy, Department Chair and Former Provost, Texas Tech University, Department of Computer Science, Box 43104, Lubbock, TX 79409, Telephone: (806)742–3970, Email: william.marcy@ttu.edu

Susan Mengel, Associate Chair, Department of Computer Science, Texas Tech University, Box 43104, Lubbock, TX 79409. Telephone: (806) 742–3527 Email: susan.mengel@ttu.edu

Henry Hexmoor, Department of Computer Science, Southern Illinois University at Carbondale, Faner Hall, Room 2130, Carbondale, IL 62901, Telephone: (618)453–6047, Email: Hexmoor@gmail.com