Aarati Parmar

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Education

Ph.D. (Computer Science)
Stanford University, Spring 2003.
Dissertation: *Formalizing Elaboration Tolerance*
Advisor: Professor John McCarthy
Ph.D. Minor in Mathematics

Master of Science. (Computer Science)
Stanford University, Spring 2003.

Master of Engineering (Electrical Engineering and Computer Science)
Massachusetts Institute of Technology, Spring 1997.
Thesis title: *A Semi-Automatic System for the Syllabification and Stress Assignment of Large Lexicons.*
Advisors: Dr. Stephanie Seneff and Dr. Helen Meng.

Bachelor of Science (Computer Science)
Massachusetts Institute of Technology, Spring 1996.

Research and Professional Experience

(1997 – present) Research Assistant
Formal Reasoning Group
Department of Computer Science
Stanford University, Stanford, California.

Intensive research into various aspects of the logical AI program and common sense reasoning, including planning, reasoning about action and change, as well as general issues of knowledge representation, including nonmonotonic reasoning, the notion of approximation/vagueness, and elaboration tolerance. Also co-authored grant proposals and constructed budgets.

(1997 – 1995) Research Assistant
Spoken Language Systems Group
Laboratory for Computer Science
Massachusetts Institute of Technology, Cambridge, Massachusetts.

Researched ANGIE, a system that can parse both spellings and phonetics of words into a hierarchical, probabilistic framework. Augmented ANGIE with morphological constraints. Created a Tcl/Tk tool to transcribe words to phonemic sequences, and implemented the Viterbi algorithm to align them. Wrote programs to tabulate phonemic and phonetic probabilities. Hand parsed ~6000 word lexicon.

Refereed Conference and Workshop Publications

Parmar, A. Some Mathematical Structures Underlying Planning[1]. **Best Student Paper Award.** In *Proceedings of the Spring Symposium on Logical Formalization of Commonsense Reasoning*, 2003.

Parmar, A. A Logical Measure of Progress for Planning[2]. In *AAAI/IAAI*, pages 498–505. AAAI Press, July 2002.

Parmar, A. Formalizing Approximate Objects and Theories: Some Initial Results[3]. In Sven Koenig and Robert C. Holte, editors, *Abstraction, Reformulation, and Approximation: Fifth International Symposium, SARA 2002*, volume 2371 of *LNAI*, pages 178–195. Springer, August 2002.

Parmar, A. Preliminary Insights on Temporal Approximation[4]. In *Proceedings of CogRob2002: The Third International Cognitive Robotics Workshop*, pages 73–79. AAAI Press, 2002. Technical Report WS-02-05.

Parmar, A. A Declarative Implementation of Planning with Control[5]. In *Proceedings of the AAAI 2001 Spring Symposium Series*, 2001.

Technical Reports

Parmar, A. A Logical Measure of Progress for Planning (Technical Report)[6]. Technical report, FRG, April 2002.

Parmar, A. The Representation of Actions in KM and Cyc.[7]. Technical report, FRG, May 2001.

Invited Talks

MUGS Group Meeting, Stanford University. April 8, 2003. *Measures of Progress for Efficient Planning.*

Logical Workshop in the Humanities, Stanford University. April 4, 2003. *A Logical Measure of Progress for Planning.*

Professional Activities

Conference and Workshop Reviewing

CommonSense (2003)
AAAI (National Conference on Artificial Intelligence) (2002)

Seminars & Colloquia

Co-Organizer, Stanford Broad Area Colloquium on AI, Geometry, Graphics, Robotics, and Vision (1999-2000).
Coordinator, Stanford Virtual Worldwide Seminar on Context (1998–1999).

[1] http://www-formal.Stanford.EDU/aarati/papers/SS603AParmar.pdf
[2] http://www-formal.Stanford.edu/aarati/papers/aaai-2002.ps
[3] http://www-formal.stanford.edu/aarati/papers/parmar-sara2002-revised.ps
[4] http://www-formal.stanford.edu/aarati/papers/WS07-02AParmar.ps
[5] http://www-formal.stanford.edu/aarati/papers/asp-final.ps
[6] http://www-formal.Stanford.edu/aarati/techreports/aaai-2002-tr.ps
[7] http://www-formal.Stanford.edu/aarati/techreports/action-reps-frg-techreport.ps

Editorial Service

Co-Editor, Eta Kappa Nu MIT EECS Course Evaluation Guide (1996-1997).

University Service

Social Committee Chair, Department of Computer Science, Stanford University, (1997-1998).

Memberships

AAAI (1997–present).
Eta Kappa Nu (1995-1997).

Teaching and Student Supervision

Teaching Experience

(1998 – 2000) Teaching Assistant
Stanford University, Stanford, California.

Taught graduate level as well as introductory courses in artificial intelligence. Led recitation sections, created and graded homework problems, and held office hours. Occasionally gave special lectures. Courses included:

(Fall 2000) CS323: Common Sense Reasoning in Logic. Graduate level course taught by Professor John McCarthy.

(Fall 1999) CS323: Common Sense Reasoning in Logic. Graduate level course taught by Professor John McCarthy.

(Fall 1998) CS221: Artificial Intelligence: Principles & Techniques. Graduate level course taught by Professor Daphne Koller.

(Spring 1998) CS121: Introduction to Artificial Intelligence, Introductory level course taught by Professor Nils Nilsson.

(Winter 1998) CS109: Introduction to Computer Science. Introductory level course taught by Maggie Johnson.

(1994-1995) Recitation Instructor
Experimental Study Group
Massachusetts Institute of Technology, Cambridge, Massachusetts.

Calculus I and II recitation instructor at the Experimental Study Group, an alternative program for freshmen at MIT.

(1993-1994) Seminar Leader
Experimental Study Group
Massachusetts Institute of Technology, Cambridge, Massachusetts.

Co-taught a freshman-level lego robotics seminar. Implemented autonomous robots using microprocessors and sensors. Explored concepts of sensory feedback, control, and design methods such as modularization.

Awards

2003 Best Student Paper Award, Commonsense 2003.

1997–2000 National Science Foundation Graduate Research Fellowship.