

Curriculum Vitae

Melanie J. Martin

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RESEARCH INTERESTS

Artificial Intelligence
Information Retrieval
Data Mining
Health Informatics
Machine Learning
Computational Linguistics/Natural Language Processing

EDUCATION

Degrees

Ph.D.	Computer Science	New Mexico State University	Expected: May 2005
M.A.	Mathematics	University of Oregon	December 1993
B.S.	Mathematics	University of Texas at Austin	December 1990

Educational Experience

New Mexico State University, Las Cruces, NM 8/94--present
Ph.D. Student (Computer Science), 1/98 to present
Advisor: Roget T. Hartley
Dissertation Title:
Reliability and Verification of Natural Language Text on the World Wide Web
Expected Graduation: May 2005

Ph.D. Student (Mathematics), 8/94 to 12/97
Advisor: Susan M. Hermiller

University of Oregon, Eugene, OR 9/91--6/94
M.A. (Mathematics), December 1993

University of Texas at Austin, Austin, TX 1/89--12/90
B.S. (Mathematics), December 1990
Advisor: Karen K. Uhlenbeck
Senior Thesis:
Two and Three Manifold Topology: Advanced Mathematics from an Elementary Standpoint

Austin Community College, Austin, TX 8/88--12/88
Mathematics

California State University, Hayward, Hayward, CA 6/85--3/88
Art and Mathematics

University of California, Berkeley, Extension, Berkeley, CA 2/84--12/84
Financial Planning

California State University, Chico, Chico, CA 8/77--5/78
Latin American Studies 1/75--5/75

Advisor: Beverly Chinas

In 1978, designed and worked on a research project in Anthropology:

Indigena vs. Ladina and Religious Differences between Woman in Cunen, Quiche, Guatemala

University of California, Berkeley, Berkeley, CA 6/75--8/75
Art History

Butte College, Oroville, CA 1/75--6/75

ACADEMIC WORK EXPERIENCE

Computing Research Laboratory, New Mexico State University 1/02--present
Programmer (8/04 to present)
Research Assistant (1/02--8/04)

Dept. of Computer Science, New Mexico State University 1/98--12/03
Undergraduate Pathways Coordinator (1/03--12/03)
Teaching Assistant (8/98--12/01, 8/02--12/02)
Research Assistant (1/99--5/00)

Dept. of Mathematics, New Mexico State University 8/94--5/97
Teaching Assistant (8/94--5/97)

Dept. of Mathematics, University of Oregon 9/91--6/94
Graduate Teaching Fellow (9/91--6/94)

Dept. of Mathematics, University of Texas at Austin 9/89--12/90
Geometry Grader (9/89--12/90)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Association for Computational Linguistics (ACL)
American Association for Artificial Intelligence (AAAI)
Association for Computing Machinery (ACM)
Association for Women in Computing (AWC)

Association for Women in Mathematics (AWM)
Member, Spring 1992 through 1998

AWARDS AND HONORS

ACM SIGIR Travel Grant to attend Doctoral Consortium in Sheffield England, July 2004.

Recognized for service to the NMSU Graduate Student Council at the Graduate Research and Arts Symposium Banquet, April 2004.

Appointed to President's Commission on the Status of Women at NMSU, October 2003.

Acting Director, NMSU Women's Studies Program, October-November 2002.

Social Justice Scholarship. Recipient of a NMSU Department of Government Social Justice Scholarship for work in health service, LGBT rights, women's issues and documenting harassment, February 2002.

GAANN Fellow. Awarded GAANN Fellowship by NMSU Department of Computer Science, January 1998 through December 2001.

Keeper of the Flame Award. Recipient of Keeper of the Flame Award from Coalition for Equality in New Mexico, September 1998.

State of New Mexico Commission on Higher Education Graduate Fellowship. September 1994 through May 1997.

Institute for Advanced Study (IAS) - Park City Summer School. Selected as a participant and awarded a scholarship to participate in summer school on Four-Manifold Topology and Geometry and the **Women's Program** at IAS in Princeton in 1994.

Scholarship from the University of Texas at Austin, based on academic achievement, 1989-1990 academic year.

Dean's List for 1985-1986 academic year, California State University, Hayward.

Lithograph "Reflections" in 1986 juried student art show, CSU Hayward.

Scored in top 20, nationwide, on 1983 Special Enrollment Examination given by the Internal Revenue Service.

PUBLICATIONS

Journal Articles

Janyce Wiebe, Theresa Wilson, Rebecca Bruce, Matthew Bell, and **Melanie Martin** (2004). Learning subjective language. *Computational Linguistics* 30 (3), September 2004, pp. 277-308.

Refereed Conference and Workshop Papers

Melanie J. Martin (2004). Reliability and Verification of Natural Language Text on the World Wide Web. Paper at *ACM-SIGIR Doctoral Consortium*, July 25, 2004, Sheffield, England.

Melanie J. Martin and Peter W. Foltz (2004). Automated Team Discourse Annotation and Performance Prediction using LSA. *Proceedings of the Human Language Technology and North American Association for Computational Linguistics Conference (HLT/NAACL)*, May 2-7, 2004, Boston, Massachusetts. Short Paper.

Melanie J. Martin (2004). A Holistic Approach to Improving Undergraduate Performance in Gateway Computer Science Courses. *The Sun Conference on Teaching and Learning. Cooperative, Collaborative, and Team-Based Learning*. March 5-6, 2004, The University of Texas, El Paso.

Melanie J. Martin and Enrico Pontelli (2004). A holistic approach to improving undergraduate performance in gateway computer science courses using discrete mathematics as a case study. *Science, Engineering, & Technology Education Conference (SETE) 2004* at NMSU, January 9, 2004.

Jamie C. Gorman, Nancy J. Cooke, Peter W. Foltz, Preston A. Kiekel, and **Melanie J. Martin** (2003). Evaluation of Latent Semantic Analysis-Based Measures of Team Communications Content. *Proceedings of the Human Factors and Ergonomic Society 47th Annual Meeting*, HFES 2003.

Preston A. Kiekel, Nancy J. Cooke, Peter W. Foltz, Jamie C. Gorman, and **Melanie J. Martin** (2002). Some Promising Results of Communication-Based Automatic Measures of Team Cognition. *Proceedings of the Human Factors and Ergonomic Society 46th Annual Meeting*, 298-302. Baltimore, MD, September 30-October 4, 2002.

Janyce Wiebe, Rebecca Bruce, Matthew Bell, **Melanie Martin** and Theresa Wilson. (2001). A Corpus Study of Evaluative and Speculative Language. *2nd SIGdial Workshop on Discourse and Dialogue*, Aalborg, Denmark, September 1-2, 2001.

Other

Janyce Wiebe, Theresa Wilson, Rebecca Bruce, Matthew Bell, and **Melanie Martin**. (2002). Learning subjective language. (Extended version of a journal article.) Department of Computer Science Technical Report TR-02-100. University of Pittsburgh, Pittsburgh, PA.

Melanie J. Martin, Nemecio Chavez Jr. (2002). Computer Science Teaching Assistant Handbook. Presented at NMSU CS Department TA Meeting August, 21, 2002. Published at <http://www.cs.nmsu.edu/~gradrep/>

Susan Hermiller, **Melanie Martin**, and Eric York (1995). Learning Calculus. Written for NMSU calculus students, currently available several places on the web, including: <http://www.cs.nmsu.edu/~mmartin/pubd/calcl.html>

Posters

Melanie J. Martin, Peter W. Foltz (2003). Automatic Modeling of Team Discourse with Latent Semantic Analysis. *NM-AGEP Third Annual Conference*: New Mexico Tech, Socorro, NM, September 11-13, 2003.

Melanie J. Martin, Peter W. Foltz (2003). Team Discourse Modeling and Performance Prediction with Latent Semantic Analysis. *NMSU Graduate Research and Arts Symposium*, April 15, 2003.

Peter W. Foltz, **Melanie J. Martin** (2003). Automated Techniques for Measuring Team Communication. *ARL CMC Meeting*, February 2003.

Peter Foltz, **Melanie Martin** (2002). Automated Techniques for Measuring Team Cognition. *ARL CMC Meeting*, Virginia, September 26, 2002.

Melanie J. Martin (2002). Artificial Intelligence Seminar: 2001-2002 Schedule. For *NSF Minority Institution Infrastructure Grant Site Visit to NMSU CS Department*, June 6, 2002.

Melanie J. Martin (2002). Annotating Flames in Usenet Newsgroups: A Corpus Study. For *NSF Minority Institution Infrastructure Grant Site Visit to NMSU CS Department*, June 6, 2002.

PRESENTATIONS

Computer Science

Report on Grace Hopper Conference (2004). NMSU CS Department Seminar, October 20, 2004.

Discussion: Language Understanding: Recognition or Construction (2003). NMSU CS Department AI Seminar, February 24, 2003 with Nemecio Chavez.

Introduction to Latent Semantic Analysis (2002). NMSU CS Department AI Seminar, October 14, 2002.

Identifying Ideological Point of View (2001). NMSU CS Department AI Seminar, two talks: August 29 and September 5, 2001.

Groups and Automata (1996). Invited talk: Mathematics Department Colloquium at Sul Ross State University, Alpine, Texas. February 16, 1996.

Mathematics

Computers (1996). NMSU Mathematics Graduate Student Seminar with John Pierce, February 12, 1996

Matroids (1995). NMSU Mathematics Friday Afternoon Seminar, June 30, 1995 and July 7, 1995.

Classification of Closed Two-Manifolds (1995). NMSU Mathematics Graduate Student Seminar, March 27, 1995.

Not Knot (1994-1995). NMSU Mathematics Graduate Student Seminar, January 23, 1995. NMSU Mathematics Topology Seminar, December 7, 1994.

Knot Colorings (1994). Invited talk: Mathematics Department Colloquium at Sul Ross State University, Alpine, Texas. September 29, 1994.

Knot Crystals (1994). NMSU Mathematics Topology Seminar, November 2, 9, and 16, 1994.

Coloring Knots (1994). NMSU Mathematics Topology Seminar, October 26, 1994.

State Sum Invariants of Three-Manifolds and the Quantum 6J-Symbols (1993). Three talks in the University of Oregon Topology/Geometry Seminar, Spring 1993.

Knot Coloring (1992). University of Oregon Topology/Geometry Seminar, Spring 1992.

Applying Group Theory to Groups of People (1991). Lecture to Honors Mathematics Course, Fall 1991.

Other

Everything you wanted to know but were afraid to ask, panel at NMSU Graduate School Professional Development Workshop 2004, moderated by Dr. Elba Serrano, August 18, 2004.

Panel of Graduate Studies in Mathematics (1993). Symposium on Graduate Study for Undergraduate Women, Oregon State University, April 16, 1993.

Health Care in Rural Guatemala: A Personal Perspective (1979). Pacific Coast Council on Latin American Studies, October 1979.

TEACHING

PROGRAM COORDINATION

NMSU CS Undergraduate Pathways Program

Goals: Under-represented minority recruitment and retention,
emphasis on Native Americans and Hispanics

Provide support, challenge and opportunity for all undergraduate CS majors

Program: I Designed, implemented and coordinated:

Student-centered support and challenge in gateway courses through

Focus groups

Peer mentoring

Web-based support

Training TAs

Teaching teams for each gateway course

Student tracking database

Networking with other NMSU student service and support organizations

Social events to build cohesion

COURSES TAUGHT

New Mexico State University

C Programming

Calculus I

Calculus II

Calculus for Engineering Technology

University of Oregon

College Algebra

Math Symmetry

University Math 1

University Math 2

TA FOR COURSES

New Mexico State University

Introduction to Data Structures

Automata, Languages, Computability (Graduate Course)

Computer Literacy

LANGUAGE FLUENCY

Native English speaker

Fluent in Spanish

Good reading skills in French

SERVICE

New Mexico State University

Departmental

Organized a group of 5 students and 3 faculty members from the NMSU Computer Science Department to attend the Grace Hopper Celebration of Women in Computing in Chicago, October 6-9, 2004.

Computer Science Graduate Student Organization

President, Fall 1998 through Summer 1999 and Summer 2002 through Summer 2003

Treasurer, Fall 1999 through Spring 2002 and Fall 2003 through Spring 2004

NMSU CS AI Seminar, founder and organizer, Fall 2001 through Spring 2003.

Organized student participation in NSF Site Visit for Minority Institution Infrastructure Grant (received). Included a student meeting with site visitors and a poster session with 22 research posters. June 2002.

NMSU Mathematics Friday Afternoon Seminar, founder and organizer, June 1995 through May 1996.

NMSU Mathematics Department Graduate Student Liaison

Fall 1994 through Spring 1996

University

President's Commission on the Status of Women

Member January 2004 to present

Member of Subcommittee on Monitoring Trends and Policies

Attended National NSF-ADVANCE conference in April 2004

Selection Committee for NMSU Government Department Social Justice Award

Member April 2004

NMSU Women's Studies Steering Committee

Acting Director, October-November 2002

Member, November 2001 through July 2003

Gay and Lesbian Faculty and Staff at NMSU

Member, Fall 1994 to present

Co-Facilitator, Spring 1996 through Spring 1998

Student Health Center Advisory Committee

Graduate Student Representative, April 2001 through May 2004

Corbett Center Student Union Advisory Board

Graduate Student Representative, November 1999 through May 2001

NMSU Differential Tuition Committee

Graduate Student Representative, October 2000

ASNMSU Elections Board

Graduate Student Representative, Fall 1998 through Spring 2000

Student Organizations

Associated Students of NMSU (ASNMSU) Graduate Student Council
Webmaster and listserv manager, Fall 2001 through October 2003
Vice-President and Treasurer, Fall 1998 through Spring 2000
Judge for Graduate Research and Arts Symposium 2001, 2003
Organizing Committee for Graduate Research and Arts Symposium 2002, 2003

University of Oregon

Served on Graduate Affairs Committee, University of Oregon Mathematics Department, for 1992 calendar year.

Course Coordinator, University Math 2, Spring 1994

Served on the committee to design and implement University Math courses, which were taught for the first time in Fall 1992. These courses constitute a year-long sequence in Mathematics, primarily for students in the Humanities and Social Sciences. The committee met during the Spring and Summer, 1992.

University of Texas at Austin

Department of Mathematics, Undergraduate Curriculum Committee.
Member, Fall 1990.

Department of Mathematics, Undergraduate Program Review Committee,
Member, Fall 1990.

College of Natural Sciences, Undergraduate Program Review Committee,
Member, Fall 1990.

Pi Mu Epsilon, Mathematics Honor Society
President, Summer and Fall 1990
Vice-President, Spring 1990

REFERENCES

Dr. Roger T. Hartley

Advisor
Department of Computer Science
MSC CS
New Mexico State University
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Dr. Peter Foltz

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Department of Psychology
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Dr. Enrico Pontelli

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Dr. Lisa Frehill

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