



- Chair of Graduate Council
- Manage financial aid budget. Wrote competitive grant that increased financial aid across disciplines by 7%.

Institutional level responsibility for research

- Oversight of grants administration office
- Restructured research review boards (animal care and humans subjects) to insure compliance and better response time.
- Oversight for unaffiliated research institutes: Institute of Behavioral Research, Ranch Management Institute, and Institute on Women and Gender
- Published *TCU Endeavors* to highlight faculty research at TCU. The online magazine is now in its second year ([www.endeavors.tcu.edu](http://www.endeavors.tcu.edu)).
- Developed Undergraduate Research and Creative Activities Initiative to fund student research projects and encourage mentoring. Coordinated the campus-wide Festival of Student Scholarship and Creativity to encourage greater participation by undergraduate students in scholarly activities.
- Administer two internal grant programs for faculty research and instructional development.

International studies programs oversight

- Instituted new pricing model for Intensive English Program that enabled balanced budget
- Established new financial model for study abroad that is contributing to increased numbers for summer and regular semester programs.
- Made numerous visits to international study sites and to international partner institutions.

Dean responsibilities for university programs

- Work with TCU Advancement Office to seek funding for Ranch Management and Women's Studies Programs.
- Oversight for program of study and student progress in Ranch Management, Women's Studies, and Master of Liberal Arts Programs.
- Deliver yearly orientation and graduation messages to certificate students in Ranch Management Program.
- Renegotiated staffing assignments for Writing Center, increasing contact hours by 50%.

Associate Dean for Science and Engineering 2000-2004  
Texas Christian University

Advisor to all General Studies majors.  
Responsible for all academic issues related to students studying in the nine departments of the college  
Administered college graduate financial aid awards.

Associate Dean for Arts and Sciences 1999-2000  
Texas Christian University

Administered graduate programs and financial aid awards for programs in 26 departments/programs of the college.

Faculty in Computer Science Department 1990-present  
Texas Christian University

Assistant Professor, 1990; Associate Professor, 1996; Tenured 1996.

## Consulting

System World Inc., East Norwich, New York, 1997.

Motorola Cellular Division, Fort Worth, 1996.

Office of Personnel Management of the U.S. Department of Defense, 1991-1992.

## OTHER ADMINISTRATIVE EXPERIENCE

Chair of TCU Leadership Team for Study of Status of Women Faculty 2007-2008  
Texas Christian University

At the request of the Provost, put together diverse, cross-campus leadership team to work with consultant to formulate and carry out the study.

Raised funding from University constituents for year long study.

Chair of Conference Activities Committee and Vice-Chair of Technical and Conference Activities (T&C) Board of the IEEE Computer Society 2008

Current projects include complete overhaul of T&C Board Handbook and strategic planning for the T&C Board

Director of Self-Study and Reaffirmation Project 2002-2004  
Texas Christian University

Led University-wide team to complete self-study report and prepare campus participants for site visit by Southern Association of Colleges and Schools (SACS) IN 2003.

Made numerous presentations to all University constituents, include the Board of Trustees.

Worked with constituents across campus and wrote follow up reports to clear all recommendations from the visiting team.

Conference Chair for Engineering of Computer Based Systems (ECBS) 1995, 1997  
IEEE Technical Committee for ECBS

Chair of technical program for conference and workshop in 1995.

Co-chair of overall conference and workshop in 1997.

## SELECTED SCHOLARLY PUBLICATIONS

Newton, Melhart, "Implementation of Object-Oriented Protocol Agents in Communication Devices," *Proceedings of the 8<sup>th</sup> IEEE International Conference on Engineering of Computer-Based Systems*, April 2001.

Melhart, White, "Issues in Defining, Analyzing, Refining, and Specifying System Dependability Requirements," *Proceedings of the 7<sup>th</sup> IEEE International Conference on the Engineering of Computer-Based Systems*, March 2000.

Melhart, "Software Engineering," *Encyclopedia of Computer Science*, 4<sup>th</sup> edition, International Macmillan Publishing Group, 2000. (not peer reviewed)

Chance, Melhart, "How to Develop Better System Requirements," *IEEE IT Professional*, 1(3), 1999. (not peer reviewed)

Chance, Melhart, "A Taxonomy for Scenario Use in Requirements Elicitation and Analysis of Software Systems," in *Proceedings of the IEEE International Conference on Engineering of Computer-Based Systems*, March 1999.

Lavi, Melhart, Pyle, "Engineering of Computer-Based Systems: A Proposed Curriculum for a Degree Program at Master Level," *Proceedings of the IEEE International Conference on Engineering of Computer-Based Systems*, March 1997.

Lavi, Mannion, Melhart, Pyle, and Svede, "Engineering of Computer-Based Systems – A Proposed Curriculum for a Degree Program at Bachelor Level," *Proceedings of the IEEE International Conference on ECBS*, March 1998.

Lavi, Mannion, Melhart, Pyle, and Svede, "Engineering of computer-Based Systems: Enhancement Courses – Proposed Course Outlines," *Proceedings of IEEE International Conference on ECBS*, March 1998.

## **SELECTED PRESENTATION**

"Legal Issues in Academic Administration" session presented with Patricia Brown, JD, at workshops in Florida and California in 2005 and 2006. The workshops were funded through an NSF Advance Grant to the Women in Engineering Leadership Institute.

## **SERVICE**

### **PROFESSIONAL COMMUNITY**

IEEE Computer Society Technical Activities Board, 2006-2007.

Co-editor of IEEE Computer Special Issue, November 2001.

Reviewer for SWEBOK, IEEE Computer Society, 2000.

Program committee for ECBS 1999-2008.

Steering Committee of 1998 IEEE Conference and Workshop on ECBS.

Vice-chair of IEEE Technical Committee on ECBS, 1995-1999.

Co-chair of computer science judges for 1998 Intel International Science and Engineering Fair, Fort Worth, May 1998.

Co-chair of 1997 IEEE Conference and Workshop on ECBS.

Meeting arrangements for IEEE Computer Society, Fort Worth Section, 1995-1997.

Co-chair of Workshop on ECBS, in conjunction with 8<sup>th</sup> IEEE Symposium on Parallel and Distributed Processing, 1996.

Program committee of 1996 IEEE Symposium and Workshop on ECBS.

Program Committee of 1996 ACM Computer Science Conference.

Reviewer for *IEEE Transactions on Software Engineering*, since 1990-1996.

Computing Advisory Board of the Computing Information Systems Department at Weatherford Junior College, 1990-1996.

Technical Program Chair of 1995 IEEE Symposium and Workshop on ECBS.

Helped draft "IEEE P1228: Standard for Software Safety Plans" as part of IEEE Computer Society Software Safety Working Group, 1991-1992.

## UNIVERSITY COMMUNITY

TCU coordinator for Texas Women in Higher Education.  
Science & Engineering Curriculum Committee chair, 2000-2002.  
Arts & Sciences Curriculum Committee, 1999-2000.  
Task Force on Technology, 1999-2000.  
Chapter advisor for Computer Science Society (CSS), including IEEE Computer Society and ACM student chapters, 1998-1999.  
Organized North-Texas Area Student Conference (N-TASC) '97, TCU, May 1997.  
TCU Graduate Council, since 1996.  
Advisory Board of TCU Women's Studies Program, since 1998.  
TCU Honors Council, 1997-1999.  
TCU Student Publications Committee, 1996-1997.  
Various other ad hoc committees and assignments.

## OTHER COMMUNITY SERVICE

Sister Cities International  
Tarrant Area Community of Churches Board of Directors  
Board of Directors of the TCU Wesley Foundation

## PROFESSIONAL HONORS, AWARDS, AND AFFILIATIONS

IEEE Computer Society Service Recognition Awards, 2006 and 2007.  
Engineering of Computer-Based Systems Service Awards, 1998 and 1999.  
Awarded Senior Member status in IEEE, April 1998.  
Certificate of Appreciation from IEEE Computer Society Technical Committee on ECBS, 1995 & 1997.

Member of:

- Phi Eta Tau Honor Society.
- Upsilon Pi Epsilon Honor Society (Computer Science).
- Pi Mu Epsilon Honor Society (Mathematics).
- National Council of University Research Administrators.
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Computer Society.
- IEEE Technical Committee on Engineering of Computer Based Systems (ECBS).
- Sigma Xi, The Scientific Research Society.
- Women in Engineering Leadership Institute (WELI), charter member