

Harley R. Myler

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Professional Preparation

New Mexico State University	1985	Ph.D., Electrical Engineering
	1981	M.S., Electrical Engineering
Virginia Military Institute	1975	B.S., Chemistry & Electrical Engineering (double-major)

Academic Appointments

2001- Professor & Chair, Lamar University Drayer Electrical Engineering
William B. and Mary G. Mitchell Endowed Chair in Engineering

1997-2001 Professor, University of Central Florida

1991-1997 Associate Professor, University of Central Florida

1986-1991 Assistant Professor, University of Central Florida

1985-1986 Adjunct Professor, Florida Institute of Technology

1984-1985 Instructor, New Mexico State University

Industrial Experience

President, I-Math Associates, Orlando, FL.

Staff Engineer, Martin Marietta Orlando Aerospace, Orlando, FL.

Digital Systems Engineer, Space Communications Company, Las Cruces, NM.

Digital Systems Engineer, General Instrument Corporation, El Paso, TX.

CPT, US Army Air Defense Artillery, Missile Systems Officer.

Administrative Summary

In August of 2001 I accepted the position of Chair of the Department of Electrical Engineering at Lamar University. During my tenure at Lamar, the department has hired three full-time faculty members and research and teaching productivity has increased substantially. The enrollment has grown to the point that Electrical Engineering has the largest student population in an accredited engineering program at Lamar. I have participated in three ABET accreditation cycles in my career, all of which resulted in the maximum six year accreditation. At Lamar, I prepared the Self-Study Report for the department and also established the publication of the department ABET data online. The undergraduate department scholarship endowment has tripled since I became chair. Also during my tenure, Phillip and Karen Drayer named the department with a five million dollar estate gift endowment.

Committee Work

Multicultural Enhancement Committee, 2008-present
Council of Instructional Departments, President, 2003-2004
Academic Council, 2003-2004
Campus Survey of Needs, 2003-2004
Goldwater Scholarship Representative, 2002-present
Budget Development Committee, 2003-2004
Council on Scholarships and Fellowships Advisement, 2002-present
Honors Council/Honors Faculty, 2001-present
Doctor of Engineering Funding Allocation Committee, Chair, 2004-2004
Minimal Core Coalition, Chair, 2004-present
HEAF Policy Committee, Chair, 2002-2003
Mathematics Curriculum Development Committee, 2003-2003
College of Engineering Strategic Planning Committee, 2001-2002
College of Engineering Long Range Planning, 2001-2002
Patent Committee, 2001-present
Academic Master Planning, 2001-2002

Administrative Training

Accreditation Board of Engineering and Technology (ABET) EAC 2000
Workshop, Electrical & Computer Engineering Department Heads Association,
New Orleans, LA, March 2005.

Thirty-eighth Annual Summer Seminar on Academic Administration: The New Administrator in Higher Education: Building Leadership Capacity, Texas A&M University, College Station, TX, July 2005.

Agents of Change workshop on Achieving Diversity in Electrical and Computer Engineering Research and Education, National Science Foundation, Washington, D.C., June 2003.

Academic/Research/Creative Summary

I have been active in research since the beginning of my graduate education at the New Mexico State University. I worked as an Instructor and Research Assistant in the Department of Electrical & Computer Engineering and was funded through the Electronic Vision Analysis Laboratory (EVAL) under a grant from the U.S. Army Atmospheric Sciences Lab at White Sands, New Mexico. My dissertation, Knowledge-Based Intelligent Tracking (1985), was researched at the lab and was an early exploration into knowledge-based control and fuzzy-logic systems. Since then, I have authored or co-authored over thirty refereed journal and special collection articles, four books that have been enthusiastically received by the engineering and scientific communities and have been granted two patents. My books are in distribution internationally with over ten thousand volumes in print. I supervised six doctorates while at the University of Central Florida and one Doctor of Engineering at Lamar University. I have been PI or Co-PI for over \$1.4M in federally funded grants and was named "Researcher of the Year" four times by my colleagues at the University of Central Florida. At Lamar University I have been given the distinguished honor of being named the inaugural holder of the William B. and Mary G. Mitchell Endowed Chair in Engineering.

Patents and Software Copyrights

Method for Measuring and Analyzing Digital Video Quality, 2003, U.S. Patent #6577764.

Trophorometer, 1991, U.S. Patent #5,094,521.

Automated Knowledge Generation©1989, University of Central Florida.

UCFImage©1998, University of Central Florida.

simANNs©1989, ANNview© 1991, parsimANNs© 1991, University of Central Florida.

Books

1. Myler, H. R., *Fundamentals of Engineering Programming with C and Fortran*, Cambridge University Press, 1998.
2. Myler, H. R., *Fundamentals of Machine Vision: Theory and Application*, SPIE Press, 1998.

3. Myler, H. R. and Weeks, A. R., *Computer Imaging Recipes in C*, Prentice-Hall, 1993.
4. Myler, H. R. and Weeks, A.R., *The Pocket Handbook of Image Processing Algorithms in C*, Prentice-Hall, 1993.

Refereed and Special Collection Articles

1. Myler, H. R., "Video and Bandwidth: the promise of profitability," *International Engineering Consortium Annual Review of Communications*, Volume 60, December 2007.
2. Myler, H. R., "The Convergence of IPTV and HTPC" in Delivering the Promise of IPTV, *International Engineering Consortium Comprehensive Report*, 2006.
3. Myler, H. R., Bagasrawala, S. A., Narayana, N. V. "OFDM and GSM Protocol Optimization on a Software Defined Radio Parallel Processing Architecture," *International Engineering Consortium Annual Review of Communications*, Volume 58, September 2005.
4. Guo, J., Van Dyke-Lewis, M. and Myler, H. R., "Gabor Difference Analysis of Digital Video Quality," *IEEE Transactions on Broadcasting*, 50:3, September 2004, pp. 302-311.
5. Myler, H. R., Guo, J., and Van Dyke-Lewis, M. "No-Reference Digital Video Quality Analysis," *International Engineering Consortium Annual Review of Communications*, Volume 57, September 2004.
6. Liviu I. Voicu, Mosleh Uddin, Harley R. Myler, Anthony Gallagher, Julien Schuler, "Clutter modeling in infrared images using genetic programming," *Optical Engineering* 39(09) pp. 2359-2371, Sep 2000.
7. Weeks, A. R., Sartor, L. J. and Myler, H. R., "Histogram specification of 24-bit color images in the color difference (C-Y) color space," *Journal of Electronic Imaging*, Volume 8, Issue 3, July 1999, pp. 290-300.
8. Myler, H. R., "Teaching C & Fortran Simultaneously to Beginning Engineering Students," Southeastern Section ASEE Annual Conference, Clemson University, April 1999.
9. Voicu, L. I. and Myler, H. R., "Function support retrieval using a genetic algorithm cloning operator," *Electronic Imaging Technical Working Group Newsletter*, 8:1, January 1998, Invited.
10. Rabadi, W. A. and Myler, H. R., "A fast wavelet based algorithm for signal recovery from partial Fourier domain information," *IEEE Trans. on Circuits and Systems*, 45:8, August 1998.
11. Rabadi, W. A. and Myler, H. R., "Iterative Image Reconstruction: A Wavelet Approach," *IEEE Signal Processing Letters*, 5:1, January 1998.
12. Voicu, L. I., Rabadi, W. A. and Myler, H. R., "Object Support Reconstruction from the support of its autocorrelation using genetic algorithms," *Optical Engineering*, 36:10, October 1997.

13. Voicu, L. I., Myler, H. R. and Weeks, A. R. "Practical considerations on color image enhancement using homomorphic filtering," *Journal of Electronic Imaging*, Volume 6, Issue 1, January 1997, pp. 108-113.
14. Rabadi, W. A., Myler, H. R., Weeks, A. R., "Iterative multiresolution algorithm for image reconstruction from the magnitude of its Fourier transform," *Optical Engineering*, 35:4, March 1996, pp. 1015-1024.
15. Weeks, A. R., Hague, G. E. and Myler, H. R., "Histogram equalization of 24-bit color images in the color difference (C-Y) color space," *Journal of Electronic Imaging*, Volume 4, Issue 1, January 1995, pp. 15-22.
16. Weeks, A.R., Myler, H. R., and Emery, J.D., "Nonlinear Image Transformations Implemented with Spatial Light Modulators," *Optical Engineering*, 33:3, 1994.
17. Gonzalez, A. J., Myler, H. R. , McKenzie, F.D., Towhidnejad, M. and Kladke, R.R., "Representation of Process System Knowledge through Constraint Description," *IEEE Transactions on Knowledge and Data Engineering*, 6:4, 1994.
18. Myler, H. R., "A Project Oriented Approach to the Teaching of Machine Perception," *IEEE Transactions on Education*, 36:4, 1993.
19. Towhidnejad, M., Myler, H. R. and Gonzalez, A.J., "Constraint Mechanism in Automated Knowledge Acquisition," *Applied Artificial Intelligence*, 7,1993.
20. Gonzalez, A. J., Myler, H. R. and McKenzie, F.D., "Representation of Process System Knowledge through Component Constraint Descriptions," *Engineering Applications of Artificial Intelligence*, 6:3, 1993.
21. Weeks, A.R., Myler, H. R., and Lewis, M. D., "An Adaptive Thresholding Algorithm that Maximizes Edge-Features," *Journal of Electronic Imaging*, November, 1993.
22. Weeks, A.R., Myler, H. R., and Weenas, H.G., "Computer-generated Noise Images for the Evaluation of Image Processing Algorithms," *Optical Engineering*, 32:5, 1993.
23. Myler, H. R., Weeks, A.R., Gillis, R. K. and Hall, G. W., "Object-oriented Neural Simulation Tools for a Hypercube Parallel Machine," *Neurocomputing*, 4, 1992.
24. Weeks, A.R., Myler, H. R., and Emery, J.D., "The Implementation of a Hybrid Optical Homomorphic Filter Using an LCTV as a Spatial Light Modulator," *Optical Engineering*, 31:9, 1992.
25. Myler, H. R., "A Neural Computer for Memory-Based Reasoning in Spacecraft Launch Operations," *Journal of Neural Network Computing*, 2:4, Spring 1991.
26. Gonzalez, A. J., Myler, H. R. and Kladke, R.R., "Identification of Unconstrained Item Descriptions Using String-Match Heuristics," *International Journal of Expert Systems: Research and Applications*, 4:3, 1991.
27. Gonzalez, A.J. and Myler, H. R., "Issues in Automating the Extraction of a System Model from CAD Databases for Use in Model-Based Reasoning," *International Journal of Expert Systems: Research and Applications*, 4:1, 1991.

28. Myler, H. R. and Gilson, R.D., "Taxonomic Selection of Computer-Driven Visual Display Systems," *Computer Standards and Interfaces*, 12, 1991.
29. Myler, H. R., Jolson, A.S. and Weeks, A.R., "Automated Evaluation of Ocular Deviation," *Binocular Vision*, 6:3, 1991.
30. Myler, H. R., Gonzalez, A.J. and Towhidnejad, M., "Constraint Mechanisms for Model-Based Knowledge Acquisition from Computer Aided Design Data," *AI EDAM*, 4:3,1993.
31. Gonzalez, A. J., Myler, H. R., Towhidnejad, M., McKenzie, F. and Kladke, R., "Automated Knowledge Generation from a CAD Database," Knowledge Discovery in Databases, G. Pietetsky-Shapiro and W. J. Frawley, eds., AAAI Press, 1991.
32. Heileman, G.L., Myler, H. R. and Georgiopoulos, M., "Incorporating Concurrent Processes into the Object-Oriented Simulation of Neural Networks," Proceedings of the 3rd Annual Florida AI Research Symposium, April 1990. Selected for inclusion in the text *Advances in Artificial Intelligence Research*, Vol. 2, JAI Press, 1991.
33. Heileman, G.L., Myler, H. R., Georgepoulos, M., and Papadourakis, G., "Comparison of Learning Algorithms for Multi-layer Neural Networks," Proceedings of the Second Annual Florida AI Research Symposium, April 1989. Note: This paper was selected for inclusion in the book *Advances in Artificial Intelligence Research*, Vol. 2, JAI Press, 1991.
34. Myler, H. R., A.J. Gonzalez, Towhidnejad, M., McKenzie, F.D. and Kladke, R.R., "Automated Knowledge Generation from Incomplete CAD Data: Research Results," Proceedings of the 2nd Annual Florida Artificial Intelligence Symposium, April 1989. Note: This paper was selected for inclusion in the book *Advances in Artificial Intelligence Research*, Vol. 2, JAI Press, 1991.
35. Gonzalez, A.J., Myler, H. R., Owen, B.C. and Towhidnejad, M., "Automated Generation of Knowledge from CAD Design Data Bases," Proceedings of the 1st Florida Artificial Intelligence Research Symposium, May 1988. Note: This paper was selected for inclusion in the book *Advances in Artificial Intelligence Research*, Vol. 1, JAI Press, 1989.
36. Karshmer, A.I., Myler, H. R. and Davis, R., "The Architecture of an Inexpensive and Portable Talking-Tactile Terminal to Aid the Visually Handicapped," *Computer Standards and Interfaces*, Vol. 4, North-Holland, 1986.

Conference and Proceedings Articles and Presentations

1. Myler, H. R., "Network and Media Convergence: Issues, Challenges and Trends," Keynote Speech, *IEEE International Conference on Information and Communications Technology*, Cairo, Egypt, December 2007.

2. Myler, H. R., "Bandwidth Issues in Advanced Video Quality and Delivery," *Proceedings of the IEEE International Conference on Information and Communications Technology, invited*, Cairo, Egypt, December 2007.
3. Myler, H. R., "Intellectual Property Issues," Southwest Electrical and Computer Engineering Department Heads Association (SWECEDHA) Annual Meeting, Sante Fe, New Mexico, November 2007.
4. Myler, H. R., Bagasrawala, S. A., Narayana, N. V., "A Concurrent Processing Approach for Software Defined Radio Baseband Design," *2005 IEEE Region V Technical Conference*, Denver, Colorado, April 2005.
5. Myler, H. R., "Early Electrical Engineering Concepts Engagement in a Freshman Level Introductory Course," *Gulf Southwest Section ASEE Annual Conference*, Texas Tech University, Lubbock Texas, March 2004.
6. Osmanovic, N., Hrustemovic, N. and Myler, H. R., "A Testbed for Auralization of Graphic Art," *IEEE Region V 2003 Annual Technical Conference*, New Orleans, Louisiana, April 2003.
7. Myler, H. R., "An Analysis of Programming Aptitude of Engineering Undergraduates," *Southeastern Section ASEE Annual Conference*, Virginia Polytechnic and State University, April 2000.
8. Myler, H. R., "Characterization of disagreement in multiplatform and multisensor fusion analysis," *Signal Processing, Sensor Fusion, and Target Recognition IX*, SPIE Aerosense 2000, Orlando, Florida, April 2000.
9. Voicu, L. I., Patton, R. and Myler, H. "Detection performance prediction on IR images assisted by evolutionary learning," *Proceedings of the SPIE International Symposium on Aerospace Sensing*, Orlando, April 1999.
10. Patton, R., Voicu, L. I., Smith, S. P. and Myler, H. R., "Computationally intelligent approach to SAR-ATR," *Proc. SPIE Vol. 3721*, p. 543-553, *Algorithms for Synthetic Aperture Radar Imagery VI*, Orlando, April 1999.
11. Voicu, L. I., Patton, R. and Myler, H. R., "Multi-criterion vehicle pose estimation for SAR-ATR," *Proc. SPIE Vol. 3721*, p. 497-506, *Algorithms for Synthetic Aperture Radar Imagery VI*, Orlando, April 1999.
12. Weeks, A.R., Sartor, L. J. and Myler, H. R., "Histogram Specification of 24-bit Color Images in the Color Difference (C-Y) Space," *Proceedings of the Symposium on Electronic Imaging Science and Technology*, San Jose, February 1999.
13. Voicu, L. I. and Myler, H. R., "Cloning Operator and its Applications," *Proceedings of the SPIE Conference on Applications and Science of Computational Intelligence*, Orlando, Florida, April 1998.
14. M. Uddin and Myler, H. R., "Parallel Algorithm for Target Recognition using a Multiclass Hash Database," *Proceedings of the SPIE Conference on Signal Processing, Sensor Fusion and Target Recognition VII*, Orlando, Florida, April 1998.

15. Myler, H. R., "Semiotic Foundation for Multisensor/Multilook Fusion," *Proceedings of the SPIE Conference on SPIE Conference on Signal Processing, Sensor Fusion and Target Recognition VII*, Orlando, Florida, April 1998.
16. Myler, H. R., Patton, R., "Approach to multisensor/multilook information fusion," Proc. SPIE Vol. 3068, p. 2-7, *Signal Processing, Sensor Fusion, and Target Recognition VI*, July 1997.
17. Myler, H. R., "Application of the Neocognitron to target identification," Proc. SPIE Vol. 3077, p. 282-290, *Applications and Science of Artificial Neural Networks III*, April 1997.
18. Rabadi, W. A., Myler, H. R., "Image reconstruction using wavelets," Proc. SPIE Vol. 2751, p. 153-158, *Hybrid Image and Signal Processing V*, June 1996.
19. Rabadi, W. A., Myler, H. R., Weeks, A. R., Gamble, K. J., "Pyramid framework for image reconstruction from nonimaged laser speckle," Proc. SPIE Vol. 2484, p. 309320, *Signal Processing, Sensor Fusion, and Target Recognition IV*, July 1995.
20. Gamble, K. J., Weeks, A. R., Myler, H. R., Rabadi, W. A., "Results of two-dimensional time-evolved phase screen computer simulations," Proc. SPIE Vol. 2471, p. 170-180, *Atmospheric Propagation and Remote Sensing IV*, July 1995.
21. Weeks, A. R., Felix, C. E., Myler, H. R., "Edge detection of color images using the HSL color space," Proc. SPIE Vol. 2424, p. 291-301, *Nonlinear Image Processing VI*, March 1995.
22. Myler, H. R., Weeks, A. R., Voicu, L., "RGB color enhancement using homomorphic filtering," Proc. SPIE Vol. 2421, p. 43-50, *Image and Video Processing III*, March 1995.
23. Yoo, H. J., Crevier, D., Lepage, R., Myler, H. R., "Line drawing extraction from gray level images by feature integration," Proc. SPIE Vol. 2353, p. 96-107, *Intelligent Robots and Computer Vision XIII: Algorithms and Computer Vision*, October 1994.
24. Clifton, D.B., Myler, H. R., Weeks, A.R., "An Approach to the Acquisition of a World Frame using a Visual Associative Memory," *Proceedings of IEEE International conference on Neural networks, IEEE World Congress on Computational Intelligence*, Vol. 2, June 1994, Orlando.
25. Rabadi, W., Myler, H. R. and Weeks, A.R., "Large-Scale Image Transforms on a Hypercube Supercomputer," *Proceedings of the Second Congress of the Network of Arab Scientists and Technologists Abroad*, Amman, Jordan, July 1994.
26. Myler, H. R., Weeks, A.R. and Yoo, H. J., "Grayscale Image Preprocessing for Viewpoint Independent 3-D Extraction of Objects," *Proceedings of the SPIE International Symposium on Optics, Imaging and Instrumentation*, San Diego, 1994.
27. Myler, H. R., Weeks, A.R. and Rabadi, W., "Speckle Simulation Movies for Analysis and Evaluation of Laser Systems," *Proceedings of the SPIE International Symposium on Aerospace Sensing*, Orlando, 1994.

28. Weeks, A.R., Myler, H. R., and Apley, L. F., "An adaptive thresholding algorithm which maximizes the contour features within the thresholded image," *Proceedings of the Symposium on Electronic Imaging Science and Technology*, San Jose, February 1994.
29. Hague, G. E., Weeks, A. R., Myler, H. R., "Histogram equalization of the saturation component for true-color images using the C-Y color space," Proc. SPIE Vol. 2298,
30. p. 236-247, *Applications of Digital Image Processing XVII*, September 1994.
31. Weeks, A. R., Myler, H. R., Cinci, L. D., "Interpretive programming language for image algebra," Proc. SPIE Vol. 2300, p. 180-191, *Image Algebra and Morphological Image Processing V*, June 1994.
32. Lewis, M. D., Weeks, A. R., Myler, H. R., "Maximization of contour edge detection using adaptive thresholding," Proc. SPIE Vol. 1955, p. 400-407, *Signal Processing, Sensor Fusion, and Target Recognition II*, September 1993.
33. Yoo, H. J., Myler, H. R., Weeks, A. R., "Surface extraction using spatial position from line drawings," Proc. SPIE Vol. 1955, p. 388-399, *Signal Processing, Sensor Fusion, and Target Recognition II*, September 1993.
34. Weeks, A. R., Myler, H. R., Jolson, A. S., "Calibration issues in the measurement of ocular movement and position using computer image processing," Proc. SPIE Vol. 1567, p. 77-87, *Applications of Digital Image Processing XIV*, December 1991.
35. Myler, H. R., Weeks, A. R., Van Dyke-Lewis, M., "Decision-directed entropy-based adaptive filtering," Proc. SPIE Vol. 1565, p. 57-68, *Adaptive Signal Processing*, December 1991.
36. Wenaas, H., Weeks, A. R., Myler, H. R., "Computer-generated correlated noise images for various statistical distributions," Proc. SPIE Vol. 1569, p. 410-421,
37. *Stochastic and Neural Methods in Signal Processing, Image Processing, and Computer Vision*, October 1991.
38. Myler, H. R., Weeks, A.R. and Hooper-Giles, J., "A Novel Approach to Aircraft Silhouette Recognition Using Genetic Algorithms," *Proceedings of the SPIE International Symposium on Optical Engineering and Photonics*, 1992.
39. Weeks, A.R., Myler, H. R., and Hinnerschitz, S., "Aspects of Real-Time Video Tracker Design," *Proceedings of the SPIE International Symposium on Optical Engineering and Photonics*, 1992.
40. Myler, H. R., "Experiments in Computer Vision Instructional Development," *Proceedings of the 21st Annual Pittsburgh Conference on Modeling and Simulation*, May 1990.
41. Gilson, R.D., Myler, H. R. and Gibbons, S.C., "Taxonomic Transformations of Visual Media Selections into Display Specifications," *Proceedings of the Image V Conference*, June 1990.

42. Weeks, A.R., Bauer, C.S., Myler, H. R. and Khajenoori, S., "An Innovative Undergraduate Computer Systems Laboratory," *Proceedings of the 1990 ASEE Conference*, June 1990.
43. Gillis, R.K., Heileman, G.L., Myler, H. R., and Georgiopoulos, M., "Software Tools for the Development of Artificial Neural Network Models," *Proceedings of the 1990 ASEE Conference*, June 1990.
44. Weeks, A.R., Khajenoori, S., Bauer, C.S., and Myler, H. R., "Embedded Microprocessors: A Capstone Course in Undergraduate Computer Engineering Education," *Proceedings of the 21st Annual Pittsburgh Conference on Modeling and Simulation*, May 1990.
45. Myler, H. R., "Machine Vision Analysis of Human Eye Movements," *Proceedings of the 20th Annual Pittsburgh Conference on Modeling and Simulation*, May 1989.
46. Myler, H. R., "Design Optimization of a Six-Legged Walking Platform," *Proceedings of the 20th Annual Pittsburgh Conference on Modeling and Simulation*, May 1989. Gonzalez, A.J., and Myler, H. R., "An Intelligent Instructor Support System for Training Simulators," *Proceedings of the 1989 AI and Simulation Conference*, April 1989.
47. Gonzalez, A. J., Myler, H. R., and Towhidnejad, M., "Automated Knowledge Generation in Support of Shuttle Ground Operations," *Proceedings of the Artificial Intelligence in Government Conference*, March 1989.
48. Myler, H. R. and Gonzalez, A. J., "Automated Knowledge Base Generation from CAD Databases Using Relaxation Techniques," *Proceedings of the International Symposium on Intelligent Control*, August 1988.
49. Myler, H. R., "Visual Primitive Recognition," *Proceedings of the 19th Annual Pittsburgh Conference on Modeling and Simulation*, May 1988.
50. Myler, H. R., "Object-Oriented Training Simulation," *Proceedings of the SCS Eastern Simulation Conference*, April 1988.
51. Myler, H. R., "Application of Hopfield Networks to Visual Tracking," *Proceedings of the 18th Annual Pittsburgh Conference on Modeling and Simulation*, 18, 1987.
52. Myler, H. R., Thompson, W. E. and Flachs, G. M., "Knowledge-Based Enhancement of Visual Tracking," *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2, 1985.
53. Myler, H. R., Thompson, W. E. and Flachs, G. M., "Application of Expert System Techniques to a Visual Tracker," *Proceedings of the SPIE Conference on Artificial Intelligence II*, 1985.
54. Myler, H. R. and Thompson, W. E., "Knowledge-Based Intelligent Tracking," *IEEE International Conference on Systems, Man, and Cybernetics*, 1985.

55. Myler, H. R. and Thompson, W. E., "Computer Simulation of Intelligent Tracking," *Proceedings of the 17th Annual Pittsburgh Conference on Modeling and Simulation*, 1986.
56. Karshmer, A. I., Myler, H. R. and Davis, R., "An Inexpensive and Portable Talking Tactile Terminal for the Visually Handicapped," *Proceedings of the 19th Annual Hawaii International Conference on Systems Science*, 3, 1986.

Awards and Honors

Tau Beta Pi (engineering), Eta Kappa Nu (electrical engineering)

Outstanding Participation, IEEE, National Engineers Week, 1993.

Educator of the Year, UCF Department of Electrical & Computer Engineering, 1993.

Researcher of the Year, UCF Department of Computer Engineering, 1988, 1989, 1990, 1992.

Academy Member, Klipsch School of Electrical & Computer Engineering, New Mexico State University.

CRC Freshman Chemistry Award, 1973.

Eagle Scout, 1970, Troop 108, Leetsdale, Pennsylvania, BSA.

Doctoral Field Studies Supervised (Lamar University)

Jing Jane Guo, DE, 2003

Gabor Difference Analysis of Digital Video Quality

Dissertations Supervised (University of Central Florida)

Liviu Voicu, PhD, 1997

Issues in Multiresolution Genetic Algorithms

Wissam Rabadi, PhD, 1995

Multiresolution Image Processing

Hoi Yoo, PhD, 1993

VITREO: Viewpoint Independent Three-dimensional Recognition and Extraction of Objects

Massood Towhidnejad, PhD, 1990

Functional Conflict Resolution in Automated Knowledge Generation

John DeCatrel, PhD, 1990

Recognition by Aspect Constrained Stochastic Optimization

Gregory Heileman, PhD, 1989

Theoretical and Experimental Aspects of Supervised Learning in Artificial Neural Networks.

Theses (MSEE) Supervised—Lamar University

Chiraq Soni, 2007, *Analysis of Cell Phone Repeaters and Prototype Design of an Economical CDMA Cell Phone Coverage Signal Expander for Indoor Applications*

Hikmet Cenghiz, 2006, *A Biomimetic Approach to Motion Estimation in a SIMD Architecture*

Pramod Varma, 2005, *High Speed Data Transfer Over IEEE 1394 for Software Defined Radio*

Venkata Prabala, 2005, *Analysis of the Infinite Image Window*

Akshat Nanda, 2005, *A Performance Analysis of Micro-Architectures for Mobile Device Communications*

Deepika Shevade, 2005, *Multiple Object Tracking in an Image Sequence*

Shabbir A. Bagasrawala, 2004, *OFDM in a Parallel Architecture Implementation of a Software Defined Radio*

Naresh V. Narayana, 2004, *GSM Baseband Optimization On A Software Defined Radio Parallel Processing Architecture*

Mithun Bannerjee, 2004, *Implementation of ITU-T G.729 Speech Codec*

Samir V. Bansikar, 2003, *Optimization of JPEG Image Compression Using Video Quality Metric*

Ravi Bellapu, 2003, *Steganographic Techniques for No-Reference Digital Video Quality Analysis*

Supriya Kher, 2003, *Object Tracking in Compressed MPEG Video Bitsream*

Prashant. K. Ruparel, 2003, *Auralization Synthesis (Sonification) for Control Room Alerts*

Theses (MSEE) Supervised—University of Central Florida

Mosleh Uddin, 1998, *A Parallel Algorithm for Target Classification Using Geometric Hashing*

Arthur Chang, 1994, *Implementation of the Two-Dimensional Fast Hartley Transform on a Fine-grained SIMD Architecture*

Benito Graniela, 1992, *Visual Primitive Decomposition Using the Pattern Spectrum*

Jill Giles, 1991, *A Medial Axis Transformation Language for Recognizing Aircraft Silhouettes Using a Genetic Search Technique*

Kathleen Meade, 1991, *A Novel Algorithm for Detecting Erroneous Control Points in Geometric Correction of Imagery*

Gary Hall, 1991, *ANNview: A CASE Tool for Development and Evaluation of Artificial Neural Networks*

Randall Gillis, 1991, *A General Object-Oriented Environment for the Development of Artificial Neural Network Models on a Hypercube Multiprocessor Network*

Shuk Fong Lai, 1990, *Algorithms for Fine-Grained Architecture Implementation of 2-Dimensional Fast Walsh-Hadamard Transforms*

Cynthia Johnson, 1990, *Counterpropagation Neural Network Detection of Visual Primitives*

Mitchell Winter, 1989, *VLSI Implementation of a Configurable Neural Node*

Paul Vogt, 1988, *An Adaptive Multi-Scene Correlation Algorithm*

Ronald Bauman, 1988, *GAPP Instruction Simulator*

Eric Grajales, 1987, *Edge Confidence Estimation for Subsequent Image Analysis*

Julie LeBlanc, 1987, *Implementation of a Parallel Ynet Architecture*

Nancy Burrell, 1986, *Adaptive Discrete Cosine Transform Image Compression Applied to Visual Flight Simulators*

Robert Holden, 1986, *Design Considerations in the Development of an Automated Cartographic System*

Research Grants

Entergy Corporation, Power Grid defense for Solar Magnetic Storms, \$30K.

Phillips Electronics, LineDancer Software Radio development system, \$25K.

Launching the Texas Engineering Education Pipeline: Deploying the Infinity Project Statewide, THECB, Austin, Texas, \$71K.

Edison Museum Website, Entergy Corporation, Beaumont, Texas, \$5K.

Adaptive Synthesis of an Objective Image Quality Function, TeraNex, Inc., Orlando, Florida, \$190,469.

Memory-Based Reasoning for Advanced Launch Operations, NASA Grant #NCC-10-0003, Kennedy Space Center, Titusville, Florida. \$147,448.

Automated Knowledge Generation (Co-Pi with A. Gonzalez) NASA Grant #NAG-10-0043, Kennedy Space Center, Titusville, Florida, \$456,095.

Visual Simulation Characteristics as Related to Human Factors and Training Needs (Co-Pi with R. Gilson) Army Research Institute, NTSC, Orlando, Florida. \$75K.

Visual Display Taxonomy (Summer, Co-Pi with R. Gilson). ARI Grant #M67-004/87/M/2227, Naval Training Systems Center, Orlando, Florida, \$22,924.

Investigation of Connectionist Vision Models for Knowledge-Based Intelligent Tracking Systems. Center for Research in Electro-Optics and Lasers, grant #2052033, University of Central Florida, \$44,670.

CREOL Support to the Innovative Science & Technology Program II: Array Imaging(2 years, Co-Pi with P. Gatt, M. Stickley, A. Weeks) Office of Naval Research, Boston, Massachusetts, \$140,173.

CREOL Support to the Innovative Science & Technology Program III: Array Imaging(Co-Pi with P. Gatt, M. Stickley, A. Weeks) Office of Naval Research, Boston, Massachusetts, \$94,462+30K for nCUBE.

CREOL Support to the Innovative Science & Technology Program IV: Array Imaging(Co-Pi with P. Gatt, M. Stickley, A. Weeks) Office of Naval Research, Boston, Massachusetts, \$412K.

Software Tools for Neural Network Modelling, (Co-PI with M. Georgiopolous, & G. Heileman), Florida High Technology Council, \$20K.

Parallel Network Modelling Tools, Martin Marietta Orlando Aerospace, \$10K. Florida Space Grant Consortium--Undergraduate Research Participation Program NASA sponsored program for undergraduate research, \$20K.

Design Considerations in Construction of Planetary Walking Vehicles Martin Marietta Astronautics Company, Denver, Colorado, \$3K.

nCUBE Parallel Supercomputer (Equipment Grant w/ A. Weeks) nCUBE, Cupertino, California, \$160K.

Sparcserver 4/280 (Equipment Grant w/ A. Weeks) Sun Microsystems Incorporated, Mountainview, California, \$141K.

Expert Systems Software/Hardware. (Equipment Grant w/ A. Gonzalez) NASA Grant #NAG-10-0043, Kennedy Space Center, Titusville, Florida, \$31,025.

Towerview Workstations (Equipment Grant) NCR Corporation, Engineering & Manufacturing, Lake Mary, Florida, \$6,345.

Motorola Computer Systems (Equipment Grant w/ A. Weeks) Emerge Systems, Inc., Melbourne, Florida, \$30K.

Intellidex Robots (Equipment Grant) Martin Marietta Orlando Aerospace, Orlando, Florida, \$5K.

Consulting Experience

I-Math Associates, Orlando, FL.

Center for Occupational Research and Development (CORD), Waco, TX.

American Academy of Ophthalmology, San Francisco, California.

McDonnell-Douglas Aerospace Co., St. Louis, MO.

Martin-Marietta (now Lockheed), Orlando, Florida and Denver, CO.

Autonomous Technologies, Inc., Orlando, FL.

National Instruments, Austin, TX.

Analog Devices, Norwood, MA.

Leadership/Service Summary

At the University of Central Florida I served on the Faculty Senate for two terms and on the SACs Computer Committee. I was a founding member of the IEEE Orlando Section Systems, Robotics and Controls Society, a Chairman of that society for two years, and the founding advisor of the Student Chapter of the society. After moving to Beaumont Texas, I was elected Chair of the Beaumont Section of the IEEE and served two terms. In 2006 I served as the IEEE Region 5 East Area Chair. I hosted the yearly meeting of the Southwest Electrical and Computer Engineering Department Heads Association (SWCEDHA) meeting at Lamar University in November of 2004. SWCEDHA is a subunit of ECEDHA, the nationally scoped Electrical and Computer Engineering Department Heads Association, which also includes members from Canada, Mexico and Chile. The meeting held at Lamar drew participation from SWCEDHA member schools in Arizona, New Mexico and Texas. I have emphasized professional development in my activities with student organizations and have assisted the public schools in many ways to

include assistance with computer network access, conduct of workshops for the engineering awareness education of High School teachers and students, and in the support of student science fair projects.

Professional Organizations and Licenses

IEEE -Senior Member (1991-present)
East Area Chair, IEEE Region V (2006-2007)
Chair, Beaumont Section (2002-2006)
Florida Professional Engineer (by examination)
Electrical Engineering Lic. 94001152
Texas Professional Engineer
Electrical Engineering Lic. 94458

Student Organizations, Activities and Special Advisement

Advisor (2002-present) Eta Kappa Nu, Delta Beta Chapter (Lamar University)
ELEN4102 EE Seminar (honors), "Rapid Prototyping Technology and the Electrical Engineering Entrepreneur", Erin Tade, Spring 2008.
HNRS 3161 Digital Video (Summer II 2007)
Head Judge, Harmony Science Academy Science Fair (2007)
McNair Scholar, Luis Dominguez, Engineering Design (2007)
ELEN4102 EE Seminar (honors), "Ethics in Engineering", Jace Daigle, (2007)
HNRS 3161 Machine Intelligence (Summer I 2005)
Founding Advisor (1988-1999), UCF IEEE Robotics Society Student Chapter
Advisor (1993-1995) Eta Kappa Nu, Zeta Chi Chapter (UCF)