

MALEK ADJOUADI

EDUCATION

Ph.D. Electrical Engineering, University of Florida, August 1985

Dissertation Title: Computer Vision Techniques to Help the Blind.

M.S. Electrical Engineering, University of Florida, June 1981

Thesis Title: A Novel Adaptive Sense of Touch in Robots.

B.S. Electrical Engineering, Oklahoma State University, June 1978.

Baccalaureat Degree in Experimental Sciences, University of Algiers, 1974 (Came to the US in August 1975)

FULL-TIME ACADEMIC EXPERIENCE

- Full Professor, Dept. of Electrical and Computer Engineering, Florida International Univ. Aug. 07-Present
- Acting Chair, Dept. of Electrical and Computer Engineering, Florida International Univ. August 97- Feb-2001.
- Member of the New York Academy of Sciences February 1998- January 1999
- Associate Professor, Dept. of Electrical and Computer Engineering, Florida International Univ. Aug. 95- July 07.
- Director, NSF Center for Advanced Technology and Education, Spring 1993 - Present.
- Assistant Prof., Dept. of Electrical and Computer Engineering, Florida International Univ., Aug. 90- Aug. 95.
- Assist. Prof., Dept. of Electrical Engineering, Univ. of Hawaii at Manoa, Aug. 85 to Sept. 88.

PART-TIME ACADEMIC EXPERIENCE

- Research Professor, Pacific International Center for High Technology Research, Univ. of Hawaii, 1/ 86 – 10/ 88.
- Member of the Board of Directors, Southeastern Center for Electrical Engineering Education, 11/ 97-10/ 99.

NON-ACADEMIC EXPERIENCE

- Consultant to Coulter Corporation, March 1995 – March 1997.
- Invited for Short-Time Assignments with the World Health Organization, Geneva, Switzerland, June 1990.
- Mandatory Military Service: Served as Lieutenant with the Service Informatique, Computer Information Science Group, Algiers, Algeria Oct. 88 - Jan. 90.
- Engineer in Hardware Diagnostics for Television Switching Boards, VITAL Industries, Inc., Gainesville, Florida, June 1981 to August 1982.

PUBLICATIONS IN DISCIPLINE

ARTICLES APPEARING IN BOOKS

1. M. Cabrerizo, M. Adjouadi, M. Ayala, and P. Jayakar “Subdural Interictal EEG Analysis for Extracting Discriminating Features Towards Electrode Classification Using Artificial Neural Networks” , Book Title: **Brain Mapping Research Progress**, Editors: Ines C. Girard and Jade S. Andre JS, pp. 87-108, **Pub. Date:** May 2009, ISBN: 1604567848: 9781604567847.

2. M. Mourad, M. Adjouadi, M. Ayala, and I. Yaylali, **Chapter 9**: Registration of Optical Topographic Maps to Magnetic Resonance Imaging (MRI), pp. 175-199, Book Title: **New Trends in Brain Research** NOVA Science, ISBN 1-59454-834-X, 2006.
3. M. Cabrerizo, M. Adjouadi, M. Ayala, **Chapter 5**: An Application of Eigensystem and Frequency Analysis in Brain Functional Mapping, pp. 177-204, Book Title: **Progress in Brain Mapping Research**, , NOVA Science, ISBN 1-59454-580-4, 2006.
4. J. Tou and M. Adjouadi, "Computer Vision for the Blind", in D.H.Warren and E.R. Strelow (Eds.), **Electronic Spatial Sensing for the Blind**, Martinus Nijhoff, Dordrecht, pp. 83-124. For U.S. and Canada, Kluwer Academic Publishers, xvi, 521 p., 1985. **ISBN: 9024732387. LC Control Number: 85021453.**

REFEREED ARTICLES

Select Journals where Published

Behaviour & Information Technology
 Brain Topography
 Computer Applications in Engineering Education
 Computers in Biology and Medicine
 Computers in Education
 Computers in Human Behavior
 Journal of Clinical Neurophysiology
 Cytometry
 Genie Biologique et Medical
 Journal of Rehabilitation Research and Development
 IEEE Transactions on Pattern Analysis and Machine Intelligence
 IEEE Transactions on Image Processing
 IEEE Transactions on Signal processing
 IEEE Transactions on Biomedical Engineering
 Image and Vision Computing
 International Journal on Artificial Intelligence Tools
 International Journal of Image and Graphics
 Inverse Problems in Science and Engineering
 Neurocomputing
 Particle and Particle Systems Characterization

1. J. Wang, A. Barreto, L. Wang, Y. Chen, N. Rishe, J. Andrian, M. Adjouadi, Multilinear Principal Component Analysis for Face Recognition with Fewer Features, **Neurocomputing**, No. NEUCOM-D-09-00277R1, in press, 2009.
2. Tito M, Cabrerizo M, Ayala M, Jayakar P, Adjouadi M, Seizure Detection: An Assessment of Time- and Frequency-Based Features in a Unified 2-D Decisional Space using Nonlinear Decision Functions, **Journal of Clinical Neurophysiology**, in press, 2009.
3. M. Ayala, M. Cabrerizo, M. Tito, A. Barreto, M. Adjouadi "A Spreadsheet Application for Processing Long-Term EEG Recordings", **Computers in Biology and Medicine**, Vol. 39, Issue 9, pp. 844 – 851, 2009.
4. Y. Gao, A. Barreto, M. Adjouadi, "Monitoring and Processing of the Pupil Diameter Signal for Affective Assessment of a Computer User", J.A. Jacko (Ed.): **Human-Computer Interaction**, Part I, HCII 2009, LNCS 5610, pp. 49–58, 2009. Springer-Verlag Berlin Heidelberg 2009.
5. C. A. Chin, A. Barreto and M. Adjouadi, "Integration of EMG and EGT Modalities for the Development of an Enhanced Cursor Control System" **International Journal on Artificial Intelligence Tools**, Vol. 18, No. 3, pp. 399- 414, 2009.

6. M. Tito, M. Cabrerizo, M. Ayala, A. Barreto, I. Miller, P. Jayakar, and M. Adjouadi "Classification of electroencephalographic seizure recordings into ictal and interictal files using correlation sum", **Computers in Biology and Medicine**, Vol. 39 (7), pp. 604-614, Jul 2009.
7. Yu Chen, Malek Adjouadi, Changan Han, Jin Wang, Armando Barreto, Naphtali Rishe and Jean Andrian, "A Highly Accurate and Computationally Efficient Approach for Unconstrained Iris Segmentation", doi:10.1016/j.imavis.2009.04.017, **Image and Vision Computing**, Copyright © 2009, Elsevier.
8. Y. Gao, A. Barreto, M. Adjouadi, "H-infinity time-varying adaptive filtering of pupil diameter for affective sensing", **Biomedical Science Instrumentation**, 45:322-7, 2009.
9. M. Ayala, M. Adjouadi, and A. Barreto, "A Windows-Based Interface for Teaching Image Processing", to appear in **Computer Applications in Engineering Education Journal**, Published Online: Feb 17 2009, DOI: 10.1002/cae.20171.
10. M. Alonso, A. Barreto and M. Adjouadi, "Digital image inverse filtering for improving visual acuity for computer users with visual aberrations", **Inverse Problems in Science and Engineering**, Vol. 16, No. 8, pp. 957-966, December 2008.
11. A. Sestin, M. Adjouadi, M. Ayala, M. Cabrerizo and A. Barreto, "An Adaptive Eye Gaze Tracking Using Neural Network- Based User Profiles to Assist People with Motor Disability", **Journal of Rehabilitation Research and Development**, Vol. 45 (6), pp. 801-817, 2008.
12. A. Sestin, M. Adjouadi, M. Ayala, M. Cabrerizo and A. Barreto, "Eyeing a Real-Time Human-Computer Interface to Assist those with Motor Disabilities", **IEEE Potentials**, Vol. 27 No. 3, pp. 19-26, 2008.
13. Y. Gao, A. Barreto, K. J. Faller and M. Adjouadi, "System Identification for the Contribution of Light Variations to Pupil Diameter Change", **Biomedical Sciences Instrumentation**, Vol. 44, pp. 398-403, 2008.
14. A. Sestin, M. Adjouadi, M. Ayala, M. Cabrerizo and A. Barreto, "An Eye Gaze Tracking System Using Customized User Profiles to Help Persons with Motor Challenges Access Computers", *Computers Helping People with Special Needs*, K. Miesenberger et al., Eds.: ICCHP 2008, Linz, Austria, July 9-11, **Lecture Notes in Computer Science**, LNCS-5105, pp. 1161-1168, Springer-Verlag, Berlin Heidelberg, 2008.
15. L. Wang and M. Adjouadi, "Automated Book Reader Design for Persons with Blindness", *Computers Helping People with Special Needs*, K. Miesenberger et al., Eds.: ICCHP 2008, Linz, Austria, July 9-11, **Lecture Notes in Computer Science**, LNCS-5105, pp. 318-325, Springer-Verlag, Berlin Heidelberg, 2008.
16. C. A. Chin, A. Barreto, J. G. Cremades, and M. Adjouadi, "Integrated Electromyogram and Eye-gaze Tracking Cursor Control System for Computer Users with Motor Disabilities" **Journal of Rehabilitation Research and Development**, Vol. 45 (1), pp. 161-174, 2008.
17. D. Sanchez, M. Adjouadi, N. Altman, D. Sanchez, B. Bernal "Comprehensive 3-D Fiber Tracking as a New Visualization System in Brain Studies", **International Journal of Image and Graphics**, Vol. 7, No. 4, pp. 749-766, October 2007.
18. A. Barreto, J. Zhai, and M. Adjouadi M., "Non-intrusive Physiological Monitoring for Automated Stress Detection in Human-Computer Interaction", **Lecture Notes in Computer Science**, Vol. 4796, pp. 29-38, Springer-Verlag, 2007.
19. M. Cabrerizo, M. Adjouadi, M. Ayala, I. Yaylali, A. Barreto, N. Rishe, "Classification of Interictal EEG Data Based on Subdural Recordings", **WSEAS Transactions on Signal Processing**, Issue 2, Vol. 3, ISSN 1790-5022, pp. 147-154, February 2007.

20. M. Tito, M. Adjouadi, M. Cabrerizo, M. Ayala, I. Yaylali, A. Barreto, N. Rishe, "A New Algorithm for Seizure Detection Using Orthogonal Transformations", **WSEAS Transactions on Signal Processing**, Issue 2, Vol. 3, ISSN 1790-5022, pp. 155-162, February 2007.
21. Sesin, M. Adjouadi, M. Ayala, A. Barreto, N. Rishe, "A Real-Time Vision Based Human Computer Interface as an Assistive Technology for Persons with Motor Disability", **WSEAS Transactions on Computer Research**, Issue 2, Vol. 2, ISSN 1991-8755, pp. 115-121, February 2007.
22. A. Simon and M. Adjouadi, "A Programming Tool for Enhancing the Teaching of Image Processing", **Computers in Education**, Vol. XVII (1), pp. 85-94, Jan-March, 2007.
23. C. Weiting and M. Adjouadi, "Design and Implementation of Wavelet-Domain Video Compression using Multiresolution Motion Estimation and Compensation", **International Journal of Image and Graphics**, Vol. 6, No. 4, pp. 533-549, October 2006.
24. A. Herrera, M. Adjouadi and M. Ayala, "An Integrated Design for a Myoelectrically-Based Writing Module for a Controlled Prosthesis", **Springer's Lecture Notes on Computer Science (LNCS) series, K. Miesenberger et al. (Eds.): LNCS 4061**, pp. 926 –934, 2006. Also presented at the 10th International Conference on Computers Helping People with Special Needs, July 12-14, 2006, Linz, Austria
25. M. Adjouadi, E. Ruiz, and L. Wang, "Automated Document Reader for Visually Impaired Persons", **Springer's Lecture Notes on Computer Science (LNCS) series, K. Miesenberger et al. (Eds.): LNCS 4061**, pp. 1094 – 1101, 2006.. Also presented at the 10th International Conference on Computers Helping People with Special Needs, July 12-14, 2006, Linz, Austria
26. Alonso, M., Barreto, A., Adjouadi M, and Jacko J., "HOWARD: High-Order Wavefront Aberration Regularized Deconvolution for Enhancing Graphic Displays for Visually Impaired Computer Users", **Springer's Lecture Notes in Computer Science**, Vol. LNCS 4061, pp. 1163-1170, Springer-Verlag, 2006. Also presented at the 10th International Conference on Computers Helping People with Special Needs, July 12-14, 2006, Linz, Austria.
27. M. Cabrerizo, M. Adjouadi, M. Ayala, and K. Nunez, "An Inverse Solution To Functional Brain Mapping of the Auditory Process Using an Eigensystem Study", **Inverse Problems in Science & Engineering**, Taylor and Francis, Vol. 14 (4), pp. 437-452, June 2006.
28. D. Sanchez, B. Bernal, N. Altman, M. Adjouadi, D. Sanchez, "3D Brain Segmentation towards the Integration of DTI and MRI Modalities", **Biomedical Sciences Instrumentation**, Vol. 42, pp. 326-331. Also presented at the Rocky Mountain Bioengineering Symposium, Terre Haute, Indiana, April 7-9, 2006.
29. A. Zong, M. Adjouadi and M. Ayala, "Optimizing the Classification of Acute Lymphoblastic Leukemia and Acute Myeloid Leukemia Samples Using Artificial Neural Networks", **Biomedical Sciences Instrumentation**, Vol. 42, pp. 261-266. Also presented at the Rocky Mountain Bioengineering Symposium, Terre Haute, Indiana, April 7-9, 2006.
30. M. Cabrerizo, M. Adjouadi, Melvin Ayala, Maria Tito, "Pattern Extraction in Interictal EEG Recordings towards Detection of Electrodes Leading To Seizures", **Biomedical Sciences Instrumentation**, Vol. 42, pp. 243-248. Alo Presented at the Rocky Mountain Bioengineering Symposium, Terre Haute, Indiana, April 7-9, 2006.
31. A. Simon, M. Adjouadi, and M. Ayala, "A .NET Solution for Distributed Computing Applications", **IEEE Potentials**, Vol. 25 (2), pp.24-28, March/April 2006.

32. Craig A. Chin, A. Barreto, M. Adjouadi, "Enhanced Real-Time Cursor Control Algorithm, Based on the Spectral Analysis of Electromyograms, **Biomedical Sciences Instrumentation**, Vol. 42, pp. 249-254. Also presented at the Rocky Mountain Bioengineering Symposium, Terre Haute, Indiana, April 7-9, 2006.
33. M. Rossman, M. Adjouadi, M. Ayala and I.Yaylali, "An Interactive Interface for Seizure Focus Localization Using SPECT Image Analysis", **Computers in Biology and Medicine**. Volume 36, Issue 1 , pp. 70-88 January 2006.
34. S. Lingala, M. Adjouadi, M. Mourad, and N. Rische "Modified Watershed Transform", **WSEAS Transactions on Signal Processing**, Issue 3, Vol. 1, pp. 398-403, December 2005.
35. M. Mourad, M. Adjouadi, I. Yaylali, Melvin Ayala and N. Rische "An Interface for Analyzing and Integrating Different Imaging Modalities", **WSEAS Transactions on Signal Processing**, Issue 3, Vol. 1, pp. 392-397, December 2005.
36. F. Gui, N. Zong, M. Adjouadi, "Dynamic Neural Network Based Algorithm for Context Awareness in Mobile Computing", **WSEAS Transactions on Communications**, Vol. 4 (8), pp. 629-636, August 2005.
37. N. Zong, M. Adjouadi, M. Ayala, "Artificial Neural Networks Approaches for Multidimensional Classification of Acute Lymphoblastic Leukemia Gene Expression Samples ", **WSEAS Transactions on Information Science and Applications**, Vol. 2 (8), pp. 1071-1078, August 2005.
38. M. Adjouadi, M. Cabrerizo, M. Ayala, and N. Mirkovic "Seizing lesions in 3-D", **IEEE Potentials**, Vol. 24, Issue 5, pp. 11-17, December 2005.
39. D. Sanchez, M. Adjouadi, B. Bernal, N. Altman, "Three-Dimensional Technique for Automatic Brain Segmentation of the Ventricles Based on Optimal Histogram Thresholds of MRI ", **WSEAS Transactions on Computers**, Vol. 4 (7), pp. 744-749, July 2005.
40. M. Cabrerizo, M. Adjouadi, M. Ayala, A. Sesin, "Source Localization of Brain Activity Related to Epileptic Seizure", **WSEAS Transactions on Information Science and Applications**, Vol. 2 (7), pp. 987-995, July 2005.
41. M. C. Zabawa, M. Adjouadi, and N. Rische, "SystemC Co-Design for Image Compression: Fast Discrete Cosine Transform using Distributed Arithmetic, **WSEAS Transactions on Computers**, Vol. 4, No. 6, pp. 477-484, June 2005.
42. Alonso, M., Barreto, A., Cremades, J. G., Jacko, J., and Adjouadi, M., "Image Pre-compensation to facilitate computer access for users with refractive errors", **Behaviour & Information Technology**, May-June 2005, vol. 24, no. 3, pp. 161-173.
43. Alonso, M., Barreto, A., Choudhury, M., Jacko, J., and Adjouadi, M., "Software-Based Compensation of Visual Refractive Errors of Computer Users", **Biomedical Sciences Instrumentation**, Vol. 41, pp. 229-234, April 2005. * Also Presented at the Rocky Mountain Bioengineering Symposium.
44. M. Cabrerizo, M. Adjouadi, M. Ayala, Kirenia Nunez, Jayakar and I. Yaylali "Integrated Study of Topographical Functional Based on an Auditory-Comprehension Paradigm Using an Eigensystem Study and Spectrum Analysis", **Brain Topography**, Vol. 17 (3), pp. 151-163, March 2005.

45. M. Adjouadi, M. Cabrerizo, M. Ayala, D. Sanchez, P. Jayakar, I. Yaylali, and A. Barreto "Detection of Interictal Spikes and Artifactual Data through Orthogonal Transformations", **Journal of Clinical Neurophysiology**, Vol. 22(1), pp. 53-64, January/February 2005.
46. M. Adjouadi and A. Zong, "Multidimensional Pattern Recognition and Classification of White Blood Cells Using Support Vector Machines", **Journal of Particle and Particle Systems Characterization, Wiley-VCH**, Volume 22, Issue 2, pp. 107-118, September 2005.
47. M. Adjouadi, D. Landestoy, M. Ayala, and W. Tischer, "A Real-Time Voice Controlled Human Computer Interface to Help persons with Motor Disability", pp. 804-812, Springer-Verlag Lecture Notes in Computer Science, in **Computers Helping People with Special Needs**, LNCS 3118, K. Miesenberger et al., Eds., 1191 pages, ISBN: 3540223347, LC Control Number: 96221428. June 2004. Also presented at the ICCPH- 2004 Conference, Paris, France, July 7-9 2004.
48. M. Adjouadi, A. Sestin, M. Ayala, and M. Cabrerizo, "Remote Eye Gaze Tracking System as a Computer Interface for Persons with Severe Motor Disability", pp. 761-769, Springer-Verlag Lecture Notes in Computer Science, Book Title: **Computers Helping People with Special Needs**, LNCS 3118, K. Miesenberger et al., Eds., 1191 pages, July 2004; ISBN: 3540223347, LC Control Number: 96221428. Also presented at the ICCPH 2004 Conference N°9, Paris, France, 7-9 July 2004.
49. C. Weiting and M. Adjouadi, "Boundary Artifact Minimization on Best Matching Blocks in Wavelet-Based Video Compression", **WSEAS Transactions on Computers**, Issue 5, Vol. 3, pp. 1361-1366, 2004.
50. M. Adjouadi, M. Cabrerizo, I. Yaylali, and P. Jayakar, "Interpreting EEG Functional Brain Activity", **IEEE Potentials**, Vol. 23, Issue 1, pp. 8-13, Feb/March Issue 2004.
51. A. Sestin, M. Ayala, M. Cabrerizo, and M. Adjouadi, "Jitter Reduction in Eye Gaze Tracking System and Conception of a Metric for Performance Evaluation", **WSEAS Transactions on Computers**, Issue 5, Vol. 3, pp. 1268-1273, Nov. 2004.
52. M. Rossman, M. Adjouadi, M. Ayala, I. Yaylali, and P. Jayakar, "A Technique for Automated Localization of Epileptic Foci Using SPECT Image Subtraction", **WSEAS Transactions on Computers**, Issue 5, Vol. 3, pp. 1274-1280, Nov. 2004.
53. D. Landestoy, M. Adjouadi, Melvin Ayala, and W. Tischer, "Hands-off Use of Computer towards Universal Access through Voice Controlled Human-Computer Interface", **WSEAS Transactions on Computers**, Issue 5, Vol. 3, pp. 1598-1604, Nov. 2004.
54. M. Adjouadi and M. Ayala, "Introducing Neural Studio: An Artificial Neural Networks Simulator for Educational Purposes", **Computers in Education Journal**, Vol. 14, No. 3, pp. 33-40, July-Sept. 2004.
55. G. Cremades, D. Sanchez, M. Adjouadi, and A. Barreto, "Human-computer interfaces with regional lower and upper alpha frequencies as on-line indexes of mental activity", **Computers in Human Behavior**, Volume 20, Issue 4, pp. 569-579, July 2004.
56. M. Adjouadi, D. Sanchez, M. Cabrerizo, M. Ayala, P. Jayakar, I. Yaylali, and A. Barreto, "Interictal Spike Detection Using the Walsh Transform", **IEEE Transactions on Biomedical Engineering**, Vol. 51, No. 5, pp.868-873, May 2004.
57. M. Adjouadi, M. Cabrerizo, D. Sanchez, M. Ayala, P. Jayakar, and A. Barreto, "A New Mathematical Approach based on Orthogonal Operators for the Detection of Interictal Spikes in

- Epileptogenic Data”, **Biomedical Sciences Instrumentation**, Vol. 40, pp. 175-180, April 2004. Also presented at the 41st Annual Rocky Mountain Bioengineering Symposium.
58. M. Ayala and M. Adjouadi, I. Yaylali, and P. Jayakar, “An Optimization Approach to Recognition of Epileptogenic Data Using Neural Networks with Simplified Input Layers”, **Biomedical Sciences Instrumentation**, Vol. 40, pp. 181-186, April 2004. Also presented at the 41st Annual Rocky Mountain Bioengineering Symposium.
 59. M. Cabrerizo, M. Adjouadi, K. Nunez, I. Yaylali, and P. Jayakar, “An Integrated Auditory-Comprehension Process Augmented through Topographical Maps and a New Eigensystem Study”, **Biomedical Sciences Instrumentation**, Vol. 40, pp. 187-192, April 2004. Also presented at the 41st Annual Rocky Mountain Bioengineering Symposium.
 60. N. Mirkovic, M. Adjouadi, I. Yaylali, and P. Jayakar “3-D Source Localization of Epileptic Interictal Spikes”, **Brain Topography**, Vol. 16, No.2, pp. 111-119, Jan. 2003.
 61. M. Adjouadi and M. Ayala, "Making Waves Useful", **IEEE Potentials**, pp. 6-11, Vol. 22, No. 1, Feb./March 2003.
 62. M. Adjouadi, and N. Fernandez, “An Orientation-Independent Imaging Technique for the Classification of Blood Cells”, **Journal of Particle and Particle Systems Characterization**, Vol. 18 No. 2, pp. 91–98, Wiley-VCH-Interscience, July 2001.
 63. M. Adjouadi, C. Reyes, J. Riley, P. Vidal, “Adaptive Filtering for Flow-Cytometric Particles”, **Journal of Particle and Particle Systems Characterization**, Vol. 17, No.3, pp. 126-133 Wiley-VCH-Inter-Science, October 2000.
 64. Suarez E., Viegas, M., Adjouadi M., Barreto A., “Relating Induced Changes in EEG Signals to Orientation of Visual Stimuli Using the ESI-256 Machine.” **Biomedical Science Instrumentation**, Vol. 36, pp. 33-38, April 2000. * **Award Winning Publication.**
 65. Grafals O., Gupta N., Cremades G., Barreto A., Adjouadi M., “Decreased 3D-Sound Spatialization Accuracy Caused by Speech Bandwidth Limitation Over Commodity Audio Components.” **Biomedical Science Instrumentation**, Vol. 36, April 2000, pp. 245-250.
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 67. A. Barreto, S. Scargle and M. Adjouadi, “A Practical EMG-Based Human-Computer Interface for Users with Motor Disabilities”, **Journal of Rehabilitation Research and Development**, Vol. 37, No. 1, pp. 53-63, Jan-Feb 2000.
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PUBLISHED JOURNAL ABSTRACTS

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5. P. Vidal, M. Adjouadi M, and J. Riley, "Optimal accumulation of log-transformed data", **International Journal of Laboratory Hematology** 29: 66-66 153 Suppl. 1 Jun 2007.
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ARTICLES IN CONFERENCE PROCEEDINGS

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2. C. Han, M. Adjouadi, A. Barreto, N. Rische, and J. Andrian, "Improved Pyramidal Neural Network for Segmented Handwritten Characters Recognition", The 2009 International Conference

on Image Processing, Computer Vision, and Pattern Recognition (IPCV 09), Vol. II, pp. 695-699, Las Vegas, Nevada, USA, July 13-16, 2009.

3. Y. Chen and M. Adjouadi, "A New Noise Tolerant Segmentation Approach to Non-ideal Iris Image with Optimized Computational Speed", The 2009 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV 09), Vol. II, pp. 547-553, Las Vegas, Nevada, USA, July 13-16, 2009.
4. J. Wang and M. Adjouadi, "Modified fast Principal Component Analysis", The 2009 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV 09), Vol. I, pp. 374-377, Las Vegas, Nevada, USA, July 13-16, 2009.
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6. X. You, M. Guillen, W. D. Gaillard, M. Adjouadi, "Application of Nonlinear Classifiers with the Principal Component Analysis in fMRI Language Activation Pattern Recognition in a Multisite Study for Pediatric Epilepsy", The 2009 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV 09), Vol. II, pp. 754-758, Las Vegas, Nevada, USA, July 13-16, 2009.
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94. A. Valdivieso, M. Adjouadi, and J. Riley, "Clustering Analysis of Blood Cells Using Multidimensional Parametric Signatures" in **Visualization, Imaging, and Image Processing**, 703 pages, ISBN:0889863091 (Paper cover book) Hamza, M. H. (Ed.) /Publisher: Acta Press, Published 2001/09 .
95. D. Sanchez, M. Adjouadi, A. Barreto, P., Jayakar, and I. Yaylali "Application of the Walsh Transform in an Integrated Algorithm for the Detection of Interictal Spikes", Proceedings of the 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Istanbul, Turkey, pp. 939 - 942 Vol.1, October 25-28, 2001.
96. E. Lyons, B. Barreto and M. Adjouadi, "Development of a Hybrid Hands-off Human-Computer Interface Based on Electromyogram Signals and Eye-Gaze Tracking", Proceedings of the 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Istanbul, Turkey, pp. 1423 – 1426, Vol.2, October 2001.
97. G. Cremades, D. Sanchez, M. Adjouadi, and A. Barreto, "An empirical study in human-computer interface research using EEG signals recorded with an ESI-256 machine", Proceedings of the International Conference on Signal Processing Applications & Technology (ICSPAT), Dallas, Texas, Proceedings in CD-ROM format, paper No. 142.October 2000.
98. A. Barreto, S. Scargle, and M. Adjouadi, "Hands-off Human-Computer Interface for Individuals with Severe Motor Disabilities", in **Human-Computer Interaction: Communication, Cooperation and Application Design**, Hans-Jorg Bullinger and Jurgen Ziegler, Eds., Lawrence Erlbaum Associates, Inc., London, ISBN 0-8058-3392-7, pp. 970 – 974. Also Presented at the 8th International Conference on Human-Computer Interaction), Munich, Germany, August 1999.
99. A. Barreto, S. Scargle, S, and M. Adjouadi, "Real-Time Digital EMG/EEG Signal Processing in a Human-Computer Interface for Users with Severe Motor Disabilities", Proc. of the International Conference on Signal Processing Applications & Technology (ICSPAT), Orlando, Florida, November 1-4, 1999. [Paper Won the 1999 ICSPAT Best Paper Award.](#)
- 100.A. Barreto, P. Hugh, J. Jacko, and M. Adjouadi, "Enhanced Human-Computer Interface for Partially Sighted Users Through Real-Time Spatial Auditory Icons", International Conference on Signal Processing Applications & Technology (ICSPAT), Orlando, Florida, November 1-4, 1999.
- 101.O. Grafals, N. Gupta, G. Cremades, A. Barreto, and M. Adjouadi, "Evaluation of Digital Sound Spatialization Accuracy Over Commodity Audio Channels in a Personal Computer," 1999 Computing Research Conference, University of Puerto Rico - Mayaguez Campus, pp. 5 - 8, December 4, 1999
- 102.D. Sanchez, K. Fatema, G. Cremades, M. Adjouadi, and A. Barreto, "The Effects of Human-Computer Interfaces in Mental Effort, as Measured by Alpha Activity," 1999 Computing Research Conference, University of Puerto Rico - Mayaguez Campus, pp. 17 - 20, December 4, 1999.
- 103.M. Adjouadi and F. Candocia "Pattern Matching for Object Recognition and Depth Reconstruction", Florida Conference on Recent Advances in Robotics, pp. 61-67, Miami, Florida April 1997.

- 104.N. Fernandez and M. Adjouadi, "An Orientation-Independent Imaging Technique for the Recognition and Classification of Objects", Florida Conference on Recent Advances in Robotics, pp. 35-42, Miami, Florida, April 1997.
- 105.M. Midon , M. Adjouadi, N. Fernandez, S. Duranza, G. Roig, "Computer Applications and Information for the Visually Impaired" in **Interdisciplinary Aspects on Computers Helping People with Special Needs**, Joachim Klaus, Eduard Auff, Willibald Kremser, Wolfgang L. Zagler, Eds., ISBN: 3-486-23797-7 , ISBN: 3702904131, 800 Pages (in 2 Volumes), in English. LC Control Number: 96221428. Also presented at the 5th International Conference, ICCHP '96, Linz, Austria, 1996.
- 106.C. Reyes and M. Adjouadi " A Clustering Technique for Random Data Classification", IEEE International Conference on Systems, Man and Cybernetics, Vancouver, British Columbia, pp. 316 – 321, Vol.1, October 22-25, 1995.
- 107.M. Adjouadi, F. Candocia, "A Stereo Matching Technique Using Orthogonal Transformations", Sixth Annual Conference on Recent Advances in Robotics", Gainesville, Florida, April 1993.
- 108.Adjouadi M., Candocia F. M. and Sumargo H., "A Linear, Orthogonal Transformation Model for Stereo Vision," 2nd International Conf. on Modeling and Simulation, MS '93, Melbourne, Australia, June 1993
- 109.M. Adjouadi, F. Candocia, and H. Sumargo, "Statistical and Morphological Analysis of Visual Features", COMPUMAG Conference, pp. 456-457, ISBN 1-884342-01-9, Miami, Florida, October 1993.
- 110.M. Adjouadi, Xiobe Zhang and D. Park, "A Stereo Matching Process for the Recovery of Depth Information", Proceedings of the IEEE Southeastcon'92, Birmingham, Alabama, Vol. 1, pp. 118-123, April 1992.
- 111.K. Wreder, S. Gonzalez-Arias, D. Park, and M. Adjouadi, "Stereotactic Surgical Planning Using 3-D Reconstruction and Artificial Neural Networks", The 5th IEEE symposium on Computer-Based Medical Systems, Durham, North Carolina, CBMS 92, pp. 612-615, June 1992.
- 112.D. Park and M. Adjouadi, "A New Approach to an Inverse Problem", Proceedings of the IEEE Southcon, Conference, pp. 242-246, Orlando Florida March 1992.
- 113.M Adjouadi, X Zhang, DC Park, "Stereo Matching Analysis", Proceedings of the IEEE Southcon Conference, pp. 320-325, Orlando Florida March 1992.
- 114.M. Adjouadi, F. Candocia, J. Andrian, and H. Sumargo, "Application of Wavelet Transforms to Stereo Vision", 2nd International Conference on Automation, Robotics and Computer Vision, Singapore, 1992.
- 115.M. Adjouadi and H. Sumargo, "Domain of Orthogonal Transforms and the Understanding of Image Features", International Association for Pattern Recognition (IAPR), Machine Vision Applications 92 (IAPR-MVA'92), Tokyo, Japan, 1992.
- 116.M. Adjouadi, "Discrimination on Upright objects from flat-lying objects in Automated Guidance of Roving Robots", SPIE Vol. 635, in Applications of Artificial Intelligence III, pp. 591- 598, 1986., Vol. 0635, John F. Gilmore, Editor, ISBN 0-89252-670-X., 698 pages; Pub. Jan 1986.
- 117.M. Adjouadi "Image Analysis of Shadows, Depressions, and Upright Objects in the Interpretation of Real-World Scenes", Proceedings 8th. Intl. Conference on Pattern Recognition, Paris, France, October 1986.
- 118.M. Adjouadi, "Image Techniques for the Detection of Depressions and Other Obstacles in Automated Guidance of Roving Robots", Proceedings of the Vision Interface '86, Vancouver, Canada, May 1986.
- 119.J. T. Tou and M. Adjouadi "Computer Vision for Roving Robots", Image Processing Symposium, Cannes, France, November 1985.
- 120.M. Adjouadi, "Shadow Analysis in Scene Interpretation", Proceedings of the 4th Scandinavian Conference on Image Analysis, Trondheim, Norway, June 1985.

121. M. Adjouadi and J. Tou "An Image Processing Technique for Computer-Based Autonomous Guidance", Proc. of the Conf. on Computer Vision and Pattern Recognition, San Francisco, California, June 1985.
122. M. Adjouadi and J.T. Tou, "A new approach to guiding the Blind via Computer Vision Techniques", 7th International Conference on Pattern Recognition ICPR, pp. 723-726, 1984.

PUBLISHED CONFERENCE ABSTRACTS

1. X. You, M. Adjouadi, M. R. Guillen, B. Bernal, M. Ayala, A. Barreto, N. Rishe and W. D. Gaillard, "Automatic Decision Making Process For Classification of fMRI Patterns Integrating the Principal Component Analysis and the Laterality Index in Pediatric Epilepsy", Poster Session III, 30th Annual Meeting of the Society for Medical Decision Making-SMDM, Philadelphia, Pennsylvania, p. 154, Oct.19-22, 2008.
2. M. Ayala, M. Adjouadi, M. Cabrerizo, A. Zong, A. Barreto, "A Neural Network-Based Decision Making Process to Classify Leukemia Blood Samples", Poster Session V, 30th Annual Meeting of the Society for Medical Decision Making - SMDM, Philadelphia, Pennsylvania, p. 210, Oct.19-22, 2008.
3. M. R Guillen, M. Adjouadi, W. Gaillard, X. You, N. Rishe, and A. Barreto "Brain Activation Map Analysis in Multisite Data repository for Pediatric Epilepsy", Enterprise Development Corp. of South Florida (EDC) Biotech Conference, Abstract and Poster Presentation, FIU Graham Center, Miami, Florida, April 24, 2008.
4. X. You, M. Adjouadi, M. R. Guillen, W. D. Gaillard, N. Rishe, and A. Barreto, "Application of the Principal Component Analysis to Brain Activation Maps in Pediatric Epilepsy", Enterprise Development Corp. of South Florida (EDC) Biotech Conference, Abstract and Poster Presentation, FIU Graham Center, Miami, Florida, April 24, 2008.
5. M. Tito, M. Adjouadi, M. Cabrerizo, M. Ayala, P. Jayakar, W. D. Gaillard, "An Inter-Patient Analysis for Seizure Detection", Enterprise Development Corp. of South Florida (EDC) Biotech Conference, Abstract and Poster Presentation, FIU Graham Center, Miami, Florida, April 24, 2008.
6. Melvin Ayala and Malek Adjouadi, "NeuralStudio: An Artificial Neural Networks Simulator for Research and Education", 13-15, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
7. M. Cabrerizo and M. Adjouadi, "3D Epileptic Seizure Focus Localization Using an Integrated Multimodal Neuro-Imaging Approach", pp.16-18, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
8. J. Delgado and M. Adjouadi, "A Novel Grid-based Data Storage Paradigm", pp. 27-28, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
9. M. R. Guillen and Malek Adjouadi, "A Web-Based Repository Site of fMRI Medical Images and Clinical Data for Childhood Epilepsy", pp. 38-40, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
10. A. Guzman and M. Adjouadi, "Inline Spectrometer For Photon Counting Detectors", pp. 41-43, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
11. M. Lahlou and M. Adjouadi, "Human-Computer Interface Design for Cognitive Workload Detection Using Pupillary Response", pp. 46-48, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.

12. A. Sesin and M. Adjouadi, "Human-Computer Interface for Person with Severe Motor Disability", pp. 72-74, Proceedings of the 2nd Annual CAHSI Workshop, Miami, Florida, December 15-18, 2007.
13. M. Mourad and M. Adjouadi "3-D Integration of Optical Topographic Maps to Anatomical Magnetic Resonance Imaging", Published Abstract, Published Abstract and Poster Presentation, Biotech 2004, Graham Center, FIU, Miami, Florida March 2004.
14. A. Zong and M. Adjouadi "Integrating SVM-based Machines to Neural Networks for Optimized Classification of Flow Cytometry Data", Published Abstract and Poster Presentation, Biotech 2004, Graham Center, FIU Miami, Florida March 2004.
15. I. Yaylali, M. Adjouadi, and P. Jayakar, J. Ragheb, G. Morrison, J. Lafitte, and R. David, "Intraoperative Real-Time High-resolution Infrared Imaging", Published Abstract and Poster Presentation, BMES Annual Fall Meeting, Biomedical Eng. Society, Philadelphia, PA, Oct. 13-16, 2004.
http://www.biomed.drexel.edu/new04/Content/News_Events/bmes2004/ShortProgram.pdf
16. M. Mourad, M. Adjouadi, and I. Yaylali, "Integration of Optical Topography and MRI for 3-D Functional Brain Mapping", BMES 2004 Annual Fall Meeting, Biomedical Eng. Society, Philadelphia, PA, Oct.13-16, 2004.
http://www.biomed.drexel.edu/new04/Content/News_Events/bmes2004/ShortProgram.pdf

OTHER: TALKS AND PANNELS

1. M. Adjouadi, R. Alo, M. Beheshti, J. Fernandez, D. Novick and N. Santiago, Panel Session - The Computing Alliance of Hispanic-Serving Institutions: Interventions To Increase Hispanic Participation In Computing, Frontiers in Education, San-Diego, California, Oct. 28-31, 2006.
2. M. Adjouadi, Moderator "Undergraduate Research", Broadening Participation in Computing Information Meeting, Baltimore, MD. , April 2005.
3. M. Adjouadi, Moderator with Dr. Bryant York "Commonalty of Problems Inhibiting Persons with Disability in Computing", NSF BPC Workshop for Persons with Disabilities, Tampa, Florida, April 2005.
4. M. Adjouadi, Committee member, Hispanic Serving Institutions Subcommittee, "Broadening Participation in Computing Research & Education", CRA Workshop, Sponsored by the National Science Foundation and the Computing Research Association, Washington D.C. , Oct. 20-21, 2004
5. M. Adjouadi and A. Barreto, "Annual Progress Report of the NSF-CATE Center", PI Presentation and Speaker, Proceedings of the NSF Institutional Infrastructure Workshop and PI Meetings, pp. 50-55, Snowbird, Salt lake City, Utah, July 9-11, 2004.
6. M. Adjouadi, and A. Armando "Development of an Institutional Infrastructure with Special Focus on Human-Computer Interfaces and Information Processing", PI Presentation and Speaker, Proc. of the NSF Institutional Infrastructure Workshop and PI Meeting, pp. 50-55, Snowbird, Utah, July 7-9, 2000.
7. M. Adjouadi and A. Barreto, "Annual Progress Report of the CATE Center", PI Presentation and Speaker, Proceedings of the NSF Institutional Infrastructure Workshop and PI Meetings, pp. 47-52, University of New Mexico, Las Cruces, New Mexico, August 7-9, 1999.
8. M. Adjouadi, " Multidimensional and Multispectral Information Processing and Computational Aspects", PI Presentation and Speaker, Proceedings of the NSF Institutional Infrastructure Workshop and PI Meeting, pp. 49-53, University of Kentucky, Lexington, Kentucky, May 11-12, 1997.

9. M. Adjouadi, "Increasing the Number of Minority Computer Scientists and Engineers", Panel Member, NSF Institutional Infrastructure Workshop and PI Meeting, Snowbird, Utah, July 1994.
10. M. Adjouadi, "A Novel Computer Vision Approach to Help the Blind", Invited Speaker, Technology to Help the Blind and the Visually Impaired, Taipei, Taipei, Taiwan, June 1987.
11. M. Adjouadi, "Importance of Fellowships for undergraduates and graduates to pursue research in critical technology areas", Keynote speaker for the Achievement Rewards for College Scientists (ARCS), Honolulu, Hawaii, September 1987.

REPORTS OF INTEREST

1. **SUS Digital Media Group**, Final Report, State University System of Florida: Curriculum & Articulation Subcommittee). www.fldcu.org/asa/DigitalMediaEdGroup/DMECGFinalReport.pdf, January 2001
2. **FIU-Industry Partnership** (Subcommittee Chair) on Industry/Business Partnership with the Florida and Local Economic Development, 2002. <http://www.fiu.edu/~pie/docs/crossfcn/reports/econ.doc>.

BOOK REVIEW

- Fundamentals of Computer Engineering: Logic Design and Microprocessors by Herman Lam and John O'Malley, John Wiley and Sons, New York, 1985.

EXTERNALLY-FUNDED PROJECTS

\$ 100,000	Veterans Administration: Computer Vision to Help People with Visual Impairment and Blindness, VA-Washington D.C. M. Adjouadi, C. Chemtob, and E. Weldon August 1986-September 1987
\$ 30,164	Baptist Hospital of Miami: 3-D MRI Workstation for Stereo-tactic Surgery, FY 1992 M. Adjouadi and S. Gonzalez-Arias May 1991 - April 1992
\$ 49,977	National Science Foundation: Planning of Computer Vision and Computer Engineering Laboratories M Adjouadi, G. Ray, J. Story and D Barton September 1991 - August 1992
\$ 900,044	National Science Foundation: CISE-EIA: Establishment of an Institutional Infrastructure: Center for Advanced Technology and Education - CATE, (includes \$ 100,000 for Research Experience for Undergraduates (Sept.95- Present) M. Adjouadi, G. Roig, J. Story, M. Evangelist, F Arefi, D. Holmes, Y. Deng September 1993 - August 1996
\$ 36,000	Coulter Corporation: Imaging Algorithms for Enhanced Pattern Classification of Blood Cells, M. Adjouadi April 1, 1994 - March 31, 1995
\$ 5,000	Coulter Corporation: Cell Probe Internet Web Design M. Adjouadi April 1, 1996 - March 31, 1997
\$ 18,000	Coulter Corporation: Multivariate Data Analysis M. Adjouadi April 1, 1996 - March 31, 1997

\$ 221,065 **National Science Foundation:** Multidimensional and Multispectral Information Processing and Computational Aspects,
M. Adjouadi
September 1996 - August 1999

\$ 267,000 **National Science Foundation:** Integrated Sensing Towards Real-Time Vision, Cognition, and Three-Dimensional Modeling,
M. Adjouadi, P. Schmidt, G. Larkins, J. Andrian
September 1995 - August 1997.

\$ 208,750 **National Science Foundation:** Acquisition of EEG-Based System for HCI Research,
M. Adjouadi, A. Barreto, J. Jacko, A. Pasztor, G. Roig
September 1, 1998 – August 31, 1999

\$1,437,770 **National Science Foundation: CISE-EIA:** Development of an Institutional Infrastructure with Special Focus on Human-Computer Interfaces and Information Processing,
M. Adjouadi, A. Barreto, M. Martinez, A. Pasztor, G. Roig, M. Weiss, R. Coatie
Sep 1999 – Aug 2006.

\$1,006,000 **Office of Naval Research: Science, Engineering and Mathematics Education Program:** Educational Innovations in Engineering – Promoting Academic Excellence in Areas of Critical Technology Needs -- M. Adjouadi, G. Roig, A. Barreto, R. Coatie, N. Rishe, Y. Darici, M. Leckband, R. Mezziani, A. Pasztor, M. Martinez
August 1999 – June 2004.

\$ 24,000 **Beckman-Coulter Corporation – 2000-2001:** University Partnership in Research
M. Adjouadi -April 1, 2000 - March 30, 2002

\$ 10,000 **Beckman-Coulter:** University Partnership in Research
M. Adjouadi
August 2, 2000 - November 30, 2000

\$1,000,000 **National Science Foundation: CISE-CNS:** Hardware-Software Integration for the Design of Real-Time Prototypes Merging Assistive Technologies to Neuroscience,
M. Adjouadi, A. Barreto, P. Jayakar, A. Pasztor, and G. Roig.
Sep 2004 – Aug 2009.

\$4,500,000 **National Science Foundation: NSF-HRD:** CREST: Center of Emerging Technologies for Advanced Information Processing and High-Confidence Systems-- Director Yi Deng
Co-PIs M. Adjouadi (also Co-Director), N. Rishe, A. Barreto, X. He
September 2003 - August 2008

\$ 210,000 **USAF-Wright Peterson Laboratory:** Time Frequency Analysis and Noise Filtering of Non-Stationary Signals, May 1996 - April 1999 [PI: Dr. Jean Andrian] Co-PI: M. Adjouadi.

\$ 333,973 **NSF-CISE:** A Software-Hardware Integrated Approach for Real-Time Information Processing and Computer Design, July 1998 – June 2001 [PI: Dr. Armando Barreto], Co-PIs: M. Adjouadi, J. Jacko, G. Roig, and A. Pasztor.

\$ 745,563 **NSF – CISE- IIS: Universal Access Program:** “On-Screen Deconvolution to Facilitate Access for Users with Visual Impairments Involving Higher-Order Wavefront Aberrations”
[PI: Dr. Armando Barreto], Co-PIs: M. Adjouadi and J. Jacko (Georgia Tech)

August 2003- August 2006.

- \$ 349,460 **NSF-CNS:** MRI: Development of a Highly Integrated Instrumentation Setup For Affective Sensing Research, 08/01/2005 – 07/30/2008 [PI: Dr. Armando Barreto], Co-PI: M. Adjouadi.
- \$ 2,197,000 **NSF-BPC:** BPC-A: Computing Alliance for Hispanic-Serving Institutions, February 2006 – January 2009 [PI: Dr. Ann Gates - UTEP], Co-PIs: M. Adjouadi - FIU, Mohsen Beheshti CSUDH, Desh Ranjan-NMSU, and Nestor Rodriguez -UPRM.
- \$ 49,900 **AMERICAN EPILEPSY ASSOCIATION:** Multi-Site Pediatric Network for fMRI Mapping in Childhood Epilepsy. [PI: William Gaillard, the George Washington University School of Medicine & Health Sciences], Dec 2006-Dec 2007.
- \$1,000,000 \$1 million paid in six annual installments of \$167,000 with the last one of \$165,000. PIs: M. Adjouadi, P. Jayakar, R. Schoepfoerster, A. Barreto, was secured to establish joint Neuro-Engineering Program between Miami Children’s Hospital (MCH) and the BME department at FIU. The event was celebrated both at the FIU-President University House and at the Torch Society Gold Flame Induction Ceremony.
- \$5,000,000 **National Science Foundation: NSF-HRD:** CREST: Center of Emerging Technologies for Advanced Information Processing and High-Confidence Systems-- Director Yi Deng Co-PIs, N. Rishe, X. He, M. Adjouadi, A. Barreto. Awarded to date: \$2,000,000. September 2008 - August 2013

NATIONAL SCIENCE FOUNDATION GRADUATE FELLOWSHIPS TO CATE STUDENTS

National Science Foundation Graduate Fellowships Secured over Full Tenure

571830300 -- Ms. Sonia Duranza: Time Varying Images Using Confocal Microscopy, Sept. 1996 – Aug. 1999

National Science Foundation Graduate Fellowships Secured over Full Tenure

571851900 -- Ms. Erica Suarez: Image Interpretation based on Edge Information, Sept.1998 - August 2001

National Science Foundation Graduate Fellowships Secured over Full Tenure

541824100 -- Ms. Danmary Sanchez: Functional Brain Mapping
Sept. 1999– July 2002.

National Science Foundation Graduate Fellowships Secured over Full Tenure

541828800 -- Ms. Mercedes Cabrerizo: EEG brain research for Auditory Processing, Sep 2002-August 2005.

National Science Foundation Graduate Fellowships Secured over Full Tenure

541828800-Ms. Anaelis Sesin: Assistive Technology to Help People with Motor Disability, Sep 2004-August 2007.

National Science Foundation Graduate Fellowships Secured over Full Tenure

541828800-Mr. Daniel Sanchez, “Computational Neuroscience and Signal Processing Towards 3 Localization of Brain Disorders”
Sep 2005-August 2008.

Note: These three- year fellowships averaged anywhere between 27.5K in the early years to 40.5K for the last couple year. NSF gives a small increase each year for each fellowship.

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

SPECIAL HONOR

- Testimony to the **US Senate** committee of Veterans Affairs of the State of Hawaii: Oversight Hearing on Veterans' Health Care in Hawaii, date of hearing: April 14, 1987.

HONORS AND AWARDS

- Outstanding Faculty in research and scholarship, April 2008.- Faculty Scholarship Recognition Reception honoring achievements and outstanding efforts as one of FIU's top scholars, April 2, 2008
- Recognition by President Maidique: Cientificos hispanos de FIU sobresalen a nivel nacional, El Nuevo Herald, February 2005-This on the subject of our students obtaining the National Science Foundation fellowships.
- Featured in the FIU Magazine Winter 2005 .
- Award for Selfless Dedication as Advisor to HKN Honor Society, 2004.
- Certificate of Appreciation in recognition of outstanding service and contributions to the trends in Emerging. Technologies and Education Workshop, November 2004.
- Certificate of Appreciation from the Division of Student Affairs, April 2002.
- Herbert Wertheim Excellence in Teaching Award 2001-2002.
- Appreciation and Dedicated Service Award, as faculty Advisor, Eta Kappa Nu, 2001-2002.
- Appointed SUS Member for the State University System of Florida Digital Media Education, January 2001.
- Appreciation and Dedicated Service Award, as faculty Advisor, Eta Kappa Nu, 2000-2001.
- Featured in the 2000-2001 Annual Report from Sponsored Research Magazine
- Cited as Top 20 Principal Investigators for 1999-2000 by FIU MAGAZINE
- Featured in the FIU MAGAZINE Fall 2000
- Exemplary Service Award as faculty Advisor, Eta Kappa Nu, 1998-1999.
- Featured in the 1998-1999 Annual Report from Sponsored Research Magazine
- Certificate of Recognition from the Honors Council, November 1998.
- Certificate of Appreciation from the Florida-Georgia Alliance for Minority Participation, 1998.
- Appreciation Award, as faculty Advisor, Eta Kappa Nu, 1997-1998
- FIU Excellence in Teaching Award, September 1997.
- Teaching Incentive Award, a State University System award, June 1997.
- Certificate in Recognition of Outstanding Participation, National Engineers Week, 1997
- Herbert Wertheim Excellence in Teaching Award 1996-1997.
- Award for Outstanding Performance Enhancing the Research Capabilities of FIU, October 1996.
- Who's who Among America's Teachers, March 1996.
- FIU Representative for the SUS Board of Regents meeting, July 1996.
- FIU Excellence in Research Award, July 1995.
- Certificate in Recognition and Appreciation of Valued Services and Contributions as Section Chairman, Florida Council, FCIEEE 1995.
- Teaching Incentive Award, a State University System award, April 1994.
- Certificate of Appreciation for Serving as IEEE Chair for the Miami Section 1993-1994.
- Certificate of Appreciation from the Society of Women Engineers, April 1992.
- Certificate of Appreciation from the Society of Women Engineers, 1992.
- Certificate of Appreciation for Serving as IEEE vice Chair for the Miami Section 1991-1993.

Also, as Faculty Advisor of Eta Kappa Nu Electrical Engineering Honor Society, Dec. 91- Present

- Eta Kappa Nu-Kappa Delta Chapter at FIU received the OUTSTANDING CHAPTER AWARD for its excellent program: 2004-2005
- Certificate of Merit , 1999

PATENTS

1. Statistical Probability Distribution-Preserving Accumulation of Log Transformed Data
US Patent #: 6,778,910
Issue Date: 08/17/2004
Inventors: Patricio Vidal, John S. Riley, and Malek Adjouadi
2. Artificial neural network design and evaluation tool
US Patent #: 7,502,763
Issue Date: 03/10/2009
Inventors: Melvin Ayala and Malek Adjouadi

PATENT APPLICATION

3. Configurable, Multimodal Human-Computer Interface System and Method
US Patent Application: 20070011609
Inventors: Malek Adjouadi, Anaelis Sesin, Melvin Ayala, and Mercedes Cabrerizo).
Filed: **July 7, 2005**

DISCLOSURE

4. An Automated Book for Persons with Blindness
US Provisional Patent Application Serial No: 60/987,673
Inventors: Malek Adjouadi and Lu Wang
Date Filed: Nov 13, 2007

OFFICES HELD IN PROFESSIONAL SOCIETIES

- International Program Committee Member , The 4th International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2007
- International Program Committee Member, the 9th IASTED International Conference on Computer Graphics and Imaging, CGIM 2007.
- International Program Committee, the IASTED International Conference on Graphics and Visualization In Engineering, GVE-2007
- Scientific Committee, World Scientific and Engineering Academy and Society, 2006.
- Organizing Committee, Florida Conference on Recent Advances in Robotics, 2006.
- Program Committee, the 3rd International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA, 2006.
- Organized the Computing Research Infrastructure CRI workshop with the NATIONAL SCIENCE FOUNDATION Division of Computer and Network Systems CISE, involving 42 Universities Nationwide, June 2006.
- International Program Committee, Wireless Networks & Emerging Tech. WNET-2004
- International Program Committee Member, the 7th IASTED International Conference on Computer Graphics and Imaging, CGIM 2004.
- International Program Committee Member, the 6th IASTED International Conference on Computer Graphics and Imaging, CGIM 2003.
- Technical Committee, Florida Conference on Recent Advances in Robotics, 1997.
- IEEE Chairman, Miami Section, July 1993 - August 1995
- Faculty Advisor of the Kappa Delta Chapter of HKN at FIU, Dec. 1991- Present.
- IEEE Vice Chairman, Miami Section, 1991-1993.

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

DEPARTMENT

- Served as Acting Chair for the ECE department for 3 and ½ years.
- Finalized the ABET comprehensive report that successfully extended ABET (Accreditation Board for Engineering and Technology) accreditation from January 31st 2000 to September 30th 2003.
- Lead with the ECE Chair efforts in putting together the Computer Engineering ABET file for accreditation in 2003.
- Serves as Faculty Advisor for the Eta Kappa Nu Honor Society since its inception in 1992 to Present.

FIU-WIDE

- Limited Proposal Submissions Review Committee, 2006-2009 (3-year term)
- Academic Graduate Grievance Committee, 2005
- Subcommittee Chair on Industry/Business Partnership, Florida and Local Economic Development, 2002.
- Member of the Search and Screen Committee for Vice President for Research- This was the search that named Thomas Breslin as first VP for Research and Graduate Studies, 1998.
- FIU Representative for the SUS research meeting exposing research at FIU 1996. (see **STATE** section).

COLLEGE

- Undergraduate Enrollment Task Force, 2006
- Dean's Award Committee, 2005
- Chair of the Search Screen Committee for two faculty lines with Biomedical Engineering Dept., 2003.
- COE Strategic Planning Committee, 2003
- ABET Preparation Committee, 2002

NOTE: The CATE Center is involved in giving demos practically with almost all industry visits that we have with the College of Engineering and Computing, and is always involved with the yearly Engineering fair where hundreds of high school kids come and visit the Center for demos as means to recruit them.

STATE

- Appointed SUS Member, and Graduate Curriculum and Research Subcommittee, State University System of Florida, Digital Media Education Coordination Group, Report to the Florida Legislature, January 1, 2001.
- The CATE Center represented FIU to the Board of Regents meeting, July 11-12, 1996.

OTHER

- Panelist, Frontiers in Education, October 2006
- Member, Institute of Electrical and Electronics Engineers (IEEE) since 1985
- Member Eta Kappa Nu (HKN) Electrical Engineering Honor Society since 1992
- Member of Tau Beta Pi Engineering Honor Society, since 1997.
- Member of the Southeastern Center for Electrical Engineering Education SCEE- 1998-2000
- Member of the New York Academy of Sciences, 1998-1999
- Session Chair and Moderator for Frontiers in Education Conference FIE 2006.
- Member of the Consortium of CISE-MII Funded Institutions for Initial Recommendations on Broadening Participation of Hispanics, 2005.

- Member, Broadening Participation in Computing Research and Education NSF-Workshop, Oct 2004.
- Session Chair, Signal Processing, IEEE Southeast conference, 1994.
- Session Chair, Robot Sensing, 6th Annual Conference on Recent Advances in Robotics, 1993
- Organizer/ Session Chair, Digital Imaging, IEEE Southcon 1992.

REVIEWER

FEDERAL AGENCIES

NATIONAL SCIENCE FOUNDATION: - *Committee of Visitors*

- **National Science Foundation:** Committee of Visitors Meeting, CNS-CISE, Computer and Information Science Directorate, Computer and Network Systems Division. The committee was charged with performing two forms of evaluations: 1. Assessment of the Division's operation for quality and integrity, and 2. Outputs and strategic outcome goals. See attached letter from Assistant Director, Dr. Peter Freeman. June 2006.
- **National Science Foundation:** Committee of Visitors Meeting, CNS-CISE-1998. The committee of visitors was charged with evaluating the effectiveness of the CNS-CISE Division consisting of four clusters: Computer Systems, Network Systems, Research Infrastructure, and Education and Workforce. The committee was charged with performing two forms of evaluations. The first was an evaluation of the process and procedures relating to the solicitation, review and administration of awards in this program. The second was an evaluation of the program in terms of the new National Science Foundation Government Performance and Results Act (GPRA) goals. See attached letter Program Director, Dr. Rita Rodriguez, May 1999.

NATIONAL SCIENCE FOUNDATION: *Panel Participation*

Please note that although these are listed chronologically with the most recent last; however on the advice of NSF, the year served is not shown:

1. **National Science Foundation:** Panel review committee for the Instrumentation Grants for Research in NSF/CISE/IIS.
2. **National Science Foundation:** Panel review committee for the Professional Opportunities for Women in Research and Education (POWRE) program at NSF in Arlington, VA.
3. **National Science Foundation:** coordinating committee for the Integrative Graduate Education and Research Training (IGERT) program. Pre-proposal panel review for the IGERT program at NSF in Arlington, VA.
4. **National Science Foundation:** coordinating committee for the Integrative Graduate Education and Research Training (IGERT) program. Final Proposal panel review for the IGERT program at NSF Arlington, VA.
5. **National Science Foundation:** Panel review committee for the NSF-EHR-LT Experimental Program to Stimulate Competitive Research (EPSCoR) program at NSF in Arlington, VA.
6. **National Science Foundation:** Reviewer for the National Science Foundation Office of Cross Disciplinary Activities, CISE/CDA – Room 1160 Arlington Virginia 22230.
7. **National Science Foundation:** Panel review committee for the ADVANCE program, NSF, Arlington, VA.
8. **National Science Foundation:** Panel review committee for the SBIR program, NSF, Arlington, VA.
9. **National Science Foundation:** Panel review committee for the Major Research Instrumentation Program Instrumentation Grants for Research in NSF/MRI.

10. **National Science Foundation:** Panel review committee for the Universal Access Program NSF/UA.
11. **National Science Foundation:** Reviewer for the National Science Foundation Office of Cross Disciplinary Activities, CISE/CDA, Arlington Virginia 22230.
12. **National Science Foundation:** Reviewer for the National Science Foundation: Division of Computer & Network Systems (CNS) CISE Directorate.
13. **National Science Foundation** Office of Cross Disciplinary Activities, CISE/CDA, Arlington Virginia 22230.
14. **National Science Foundation:** Panel review committee for the SBIR program (2nd time), NSF, Arlington, VA.
15. **National Science Foundation:** mail review committee for the SBIR program (3rd time), NSF, Arlington, VA.
16. **National Science Foundation:** Panel review committee for the IUCRC Planning Grants, NSF, Arlington, VA.
17. **National Science Foundation:** Panel review committee for the Universal Access Program NSF/UA.
18. **National Science Foundation:** Panel review, SBIR Second Phase.
19. **National Science Foundation:** Major Research Instrumentation

DEPARTMENT OF HOMELAND SECURITY: *Panel Participation*

- This was to serve on a panel that evaluates Graduate Fellowships
20. **Homeland Security Program:** Panel review committee, Crystal City, Washington D.C

JOURNALS

- IEEE Transactions on Image Processing
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Biomedical Engineering
- IEEE Engineering in Medicine and Biology Magazine
- IEEE Communications Magazine
- IEEE Transactions on Industrial Electronics
- Clinical Neurophysiology
- Journal of Optical Engineering
- Journal of Rehabilitation Research and Development
- International Journal of Image and Graphics

CONFERENCES

- Intl. Conf. on Signal Processing, Pattern Recognition, and Applications-SPPRA 2007.
- International Conference on Graphics and Visualization in Engineering –GVE 2007
- CITSA International Conf. on Cybernetics and Information Tech., Systems and Applications, 2005
- International Conference on Computing, Communications and Control Technologies -CCCT 2004.
- Computer Graphics and Imaging-CGIM-2004
- CITSA International Conf. on Cybernetics and Information Tech., Systems and Applications, 2004
- Computer Graphics and Imaging-CGIM-2003
- International Conf. on Internet and Multimedia Systems and Applications-IMSA-2003

- Computer and Science Technology-CST-2003
- Signal and Image Processing – SIP-2003
- Artificial Intelligence and Applications –AIA-2003
- Artificial and Computational Intelligence, ACI-2002

INFRASTRUCTURE DEVELOPMENT

These labs are ongoing

1. Center for Advanced Technology and Education (CATE) - *Funded by NSF*
2. The Brain Functional Laboratory, *Funded by NSF*, Housed within the Brain Institute at Miami Children's Hospital.

* These labs have been upgraded and are currently serving a different purpose

3. Interactive Design Laboratory for Undergraduates (ECE)- *Funded by NSF and Matching funds from DSRT**
4. The Computer Training Laboratory for Undergraduate Recruitment –Housed in Graham Center with the Office of Multicultural Services *
5. The Web-Design and Development Laboratory, Housed within EIC, *Funded jointly by ONR and NSF**

STUDENT SUPERVISOR

PH.D. GRADUATES

1. Patricio Vidal Ph.D. Dissertation: **A Mathematical Resolution to Log Transformations and the Binning Effect in Applied Processing of Data in Flow Cytometry.** Department of Electrical and Computer Engineering, FIU. Graduated fall 2003. Graduated: Spring 2003. Outstanding Ph.D. graduate award, Spring 2003, College of Engineering
2. John Riley Ph.D. Dissertation: **Statistical Analysis and Optimal Classification of Blood Cell Populations Using Gaussian Distributions.** Department of Electrical and Computer Engineering, FIU. Spring 2003.
3. Cai Weiting Ph.D. Dissertation: **Shift Decomposition Method in Wavelet Domain Motion Estimation and Compensation for Video Compression,** Department of Electrical and Computer Engineering, FIU. Fall 2003.
4. Monica Dezulueta Ph.D. Dissertation Topic: **Security Issues and Risk Modeling when Architecting a Healthcare System,** Department of Electrical and Computer Engineering, FIU. Fall 2004. Outstanding Ph.D. graduate award, Fall 2004, College of Engineering
5. Danmary Sanchez: Ph.D. Dissertation Topic: **“Three-Dimensional Brain Fiber Tracking Modeling in Diffusion Tensor Imaging”**, Department of Electrical and Computer Engineering, FIU Graduated Spring 2006. Outstanding Ph.D. graduate award, Spring 2006, College of Engineering and Computing
6. Mercedes Cabrerizo Ph.D. Dissertation Topic: **“Subdural EEG Analysis for Extracting Discriminating Measures in Epileptogenic Data”**, Department of Electrical and Computer Engineering, FIU, Summer 2006.

7. Ann Zong Ph.D. Dissertation Topic: “**Multidimensional Pattern Recognition and Classification of White Blood Cells Using Support Vector Machine**”, Dept. of Electrical and Computer Engineering, FIU. Summer 2006.
8. Mourad Michel Ph.D. Dissertation Topic: “**An Integrated Functional Mapping and Source Localization Platform for Brain Research**”, Department of Electrical and Computer Engineering, FIU, Spring 2007.
9. Anaelis Sestin Ph.D. Dissertation Topic: “**A Multimodal and Adaptive Real-Time Human-Computer Interface for Persons with Severe Motor Disability**”, Department of Electrical and Computer Engineering, FIU, Spring 2007.
10. Lu Wang Ph.D. Dissertation Topic: “**An Automated Book Reader Design as an Assistive Technology Tool for Persons with Blindness**”, Department of Electrical and Computer Engineering, FIU, Fall 2007.
11. Maria Tito Ph.D. Dissertation Topic: “**Seizure Detection in Subdural Recordings Using Nonlinear Decision Functions**”, Department of Electrical and Computer Engineering, FIU, Spring 2008.
12. Magno R. Guillen Ph.D. Dissertation Topic: **Design and Implementation of a Multisite Data Repository for Pediatric Epilepsy**. Department of Electrical and Computer Engineering, FIU, Fall 2008.
13. Feng Gui Ph.D. Dissertation Topic: “**Development Of A New Client-Server Architecture For Context Aware Mobile Computing**”, Department of Electrical and Computer Engineering, FIU, Spring 2009.
14. Melvin Ayala Potential Ph.D. Dissertation Topic: “**A Research Platform for Artificial neural Networks with Applications in Pediatric Epilepsy**”, Department of Electrical and Computer Engineering, Summer 2009, FIU.

Ph.D. STUDENTS WHO HAVE ALREADY PASSED THEIR QUALIFYING EXAM

2. Mildred Zabawa Ph.D. Dissertation: “**Real-Time Architecture for Video Compression using SystemC Register Transfer Level Modeling and ARM processor Co-Design Environment**”, Department of Electrical and Computer Engineering, FIU, (Currently on leave).
3. Yu Chen Potential Ph.D. work: Image Processing of Iris data
4. Mark Rossman Ph.D. Dissertation Topic: “**Automated Disease State Determination Using Multi-Dimensional Analysis of Flow Cytometric Data**”, Department of Electrical and Computer Engineering, FIU. (Currently on leave).
5. Jin Wang Potential Ph.D. work: Image Processing for tracking and face recognition.
6. Mouncef Lahlou Potential Ph.D. Dissertation Topic: Real-Time Data Mining in a Web-Based Design
7. Changan Han Potential Ph.D. work: Neural Network –based pattern recognition of handwritten characters

8. Xiaozhen You Potential Ph.D. Dissertation Topic: Nonlinear classification of fMRI data in pediatric epilepsy. **** FIU Presidential Awardee**
9. Ana Guzman Ph.D. Dissertation Topic: Near Infrared Imaging for Assessing Emotional State during Eye-Gaze tracking in Human-Computer Interface

Ph.D. Students in the Pipeline

1. Javier Delgado Potential Ph.D. work: Grid Computing with Medical Databases
2. Mohammed Goryawala Potential Ph.D. work: 3-D PET-CT Integration in Liver Cancer Studies

MS THESIS SUPERVISION

a. MS Graduates

1. Fernando Gonzalez MS. Thesis: **Imaging Techniques for the Verification of Signatures**. Department of Electrical and Computer Engineering, FIU, Aug. 1992. (Co-Chair with Dr. W. Subbarao as Chair).
2. Habibie Sumargo MS Thesis: **Orthogonal Transformations and Their Application to Image Features Understanding**. Department of Electrical and Computer Engineering, FIU, September 1994.
3. Frank Candocia MS Thesis: **A New Stereo Matching Paradigm for the Recovery of the Third Dimension in Two-Dimensional Images**". Department of Electrical and Computer Engineering, FIU, September 1994.
4. John Riley MS Thesis: **Multi-resolution Analysis and Its Application to Enhanced Image Understanding**. Department of Electrical and Computer Engineering, FIU, September 1994.
5. Carlos Reyes MS Thesis: **Directional Clustering Techniques for Random Data Classification**. Department of Electrical and Computer Engineering, FIU, September 1995.
6. Patricio Vidal MS Thesis: **Estimation of 3-D Structure of Scenes Using Optical Flow and Stereo Vision**. Supervision at Simon Bolivar University, Venezuela by Prof. German Gonzalez (Major Professor). Supervision at FIU Department of Electrical and Computer Engineering, by Malek Adjouadi. January 1996.
7. Noemi Fernandez MS Thesis: **Statistical Information Processing for Data Classification** Department of Electrical and Computer Engineering, FIU, September 1996.
8. Sonia Duranza MS Thesis: **Three-Dimensional Image Analysis using Confocal Microscopy**, Department of Electrical and Computer Engineering, FIU, May 1998.
9. Ana Rodriguez MS Thesis: **Modular Design for Test Reuse Strategy for Automotive Micro-controllers Integrating Hardware and Software Designs**, Department of Electrical and Computer Engineering, FIU, April 1999.
10. Christophe Godefroy MS Thesis: **Hardware-Software Integration for Particle Light Scatter Imaging**, Department of Electrical and Computer Engineering, FIU, June 1999.

11. Julio Blandon MS Thesis: **A Novel Lossless Compression Technique for Text Data**, Department of Electrical and Computer Engineering, FIU, November 1999.
12. Alison Valdivieso MS Thesis: **Statistical Analysis of Parametric Signatures for Data Classification in Flow Cytometry**, Department of Electrical and Computer Engineering, FIU, September 1999.
13. Danmary Sanchez MS Thesis: **EEG Analysis Using the ESI-256 Machine Focusing on the Detection of Interictal Spikes**, Department of Electrical and Computer Engineering, FIU, May 1998.
14. Erika Suarez MS Project: **An Approach to Understanding EEG Activities Using Visual Stimuli With The ESI-256 Machine**, Department of Electrical and Computer Engineering, FIU, April 1999.
15. Daniela Viegas MS Thesis: **Electronic Pulse Design for Neural Stimulation**. Department of Electrical and Computer Engineering, FIU, June 1999.
16. Wei Yao MS Thesis: **Dynamic Studies in Hematology for 2-dimensional and 3-dimensional Data Analysis**, Department of Electrical and Computer Engineering, FIU, December 2001.
17. Mark Rossman MS Thesis: **Using Single Photon Emission Computed Tomography Brain Images to Localize epileptic foci**, Department of Electrical and Computer Engineering, FIU, October 2002.
18. Manuel Docurro MS Thesis: **Three-Dimensional Autostereoscopic Imaging by Computer Based Holography Techniques**. Department of Electrical and Computer Engineering, FIU, March 2003.
19. Mercedes Cabrerizo MS Thesis: **A Topographic Methodology to Interpret Activity Changes In The Human Brain as a Function of an Auditory- Comprehension Process**.
Department of Electrical and Computer Engineering, FIU, July 2003.
20. Natasa Mirkovic MS Thesis: **3-D Source Localization of Epileptic Foci Integrating EEG and MRI Modalities**. Department of Electrical and Computer Engineering, FIU, February 2003.
21. Nuannuan Zong MS Thesis: **Multidimensional Pattern Recognition and Classification of White Blood Cells Using Support Vector Machines**. Department of Electrical and Computer Engineering, FIU, July 2003.
22. Craig Mackay MS Project: **Real-Time Motion Tracking of Objects in a Human-Computer Interface**. Department of Electrical and Computer Engineering, FIU, August 2003.
23. Kirenia Nunez MS Thesis: **Analysis of EEG Signals in Time Domain for the Understanding of Auditory and Comprehension Activities**. Department of Electrical and Computer Engineering, FIU, July 2003.
24. Maria Tito MS Project: **Parametric Analysis for Key Observations in Seizure Prediction**,
Department of Electrical and Computer Engineering, FIU, May 2004.

25. Anaelis Sesin MS Project: **Jitter Reduction in Eye-Gaze Tracking System and Conception of a Metric for Performance Evaluation.** Department of Electrical and Computer Engineering, FIU, May 2004.
26. Michel Mourad MS Project: **3-D Integration of Optical Topographic Maps to Anatomical Magnetic Resonance Imaging.** Department of Electrical and Computer Engineering, FIU, May 2004.
27. David Corrales MS Project: **The ANNimals: An Artificial Neural Networks Creature.** Department of Electrical and Computer Engineering, FIU, May 2004.
28. Dalila Landestoy MS Project: **A Voice-Controlled Human-Computer Interface to Help People with Motor Disability.** Department of Electrical and Computer Engineering, FIU. Spring 2005.
29. Sriman Lingala MS Project: **A Morphological Approach for Medical Image Segmentation with Prior Knowledge based Watersheds.** Department of Electrical and Computer Engineering, FIU. Spring 2005.
30. Andres Herrera MS Thesis: **An Integrated Design for a Myoelectrically-Based Writing Module For a Controlled Prosthesis.** Department of Electrical and Computer Engineering, FIU. Spring 2005.
31. Ana Guzman MS Project: **An Integrated Hardware Design for 3-D Holography.** Department of Electrical and Computer Engineering, FIU, Spring 2006.
32. Celso Duran MS Project: **High Definition Video Display Calibration System Using FPGA,** Department of Electrical and Computer Engineering, FIU, Spring 2006.
33. Mouncef Lahlou MS Project: **MEDIAR: An Online Web-Based Repository site of fMRI Medical Images and clinical data for Childhood Epilepsy.** Department of Electrical and Computer Engineering, FIU, Spring 2006.
34. Alejandro Simon MS Project: **A .NET Solution for Distributed Computing Applications.** Department of Electrical and Computer Engineering, FIU, Summer 2006.
35. Eddy Ruiz MS Project: **A Neural Network Approach for Text Recognition in Automated Book Reader Design.** Department of Electrical and Computer Engineering, FIU, Fall 2006.
36. Javier Delgado MS Thesis: **A Grid Computing Platform for Enhanced Data management and Visualization.** Department of Electrical and Computer Engineering, FIU, Spring 2007.
37. Mathew Whittington MS Thesis: **Design of a Portable Eye Tracking System as an Assistive Technology Tool for Persons with Motor Disabilities.** Department of Biomedical Engineering, FIU, Spring 2007.
38. Daniel Sanchez MS Project: **A Web-Based Application for Data Mining Experimentation On Neurological Datasets”,** Department of Electrical and Computer Engineering, FIU, Spring 2007.
39. Zhicong Huang MS Thesis: **Design and Development of a Testing Mechanism for Quality Assurance in Cyberknife Beam Geometry.** Department of Biomedical Engineering, FIU, Fall 2007.

40. Adrian J. Marrero MS Project: **Implementation and Revitalization of a Data Mining Utility in medical Applications**”, Department of Electrical and Computer Engineering, FIU, Fall 2007.
41. Rahat Khan MS Project: **Converting RS232 to Control Area Network for modern automotive industries, along with its applications and advantages for error-free diagnosis**”, Department of Electrical and Computer Engineering, Florida International Univ. Fall 2007.
42. Nydia Ruiz MS Project: **Wavelet Applications in EEG-based Brain Data**”, Department of Electrical and Computer Engineering, FIU, Fall 2007.
43. Raj Prakash MS Project: “Boeing Project”, Department of Electrical and Computer Engineering, FIU, Fall 2008.
44. Anas Salah Eddin MS Thesis: “**Text Entry Using Language Modeling With Eye Tracking as an Assistive Tool for Persons with Motor Disability**”, Department of Biomedical Engineering, FIU, Spring 2009.

THESIS AND DISSERTATION COMMITTEE MEMBER

(A) DISSERTATION COMMITTEE

From the ECE department

- | | |
|------------------|-------------------|
| 1. Fuat Uler | - Ph.D. graduated |
| 2. Navarun Gupta | - Ph.D. Graduated |
| 3. Jing Zhai | - Ph.D. Graduated |
| 4. Chao Li | - Ph.D. Graduated |
| 5. Miguel Alonso | - Ph.D. Graduated |
| 6. Craig Chin | - Ph.D. Graduated |

From the School of Computer Science

- | | |
|-----------------------|-------------------|
| 1. Li Yang | - Ph.D. Graduated |
| 2. Scott Graham | - Ph.D. Graduated |
| 3. Mario Sanchez | - Ph.D. Graduated |
| 4. Andriy Selivonenko | - Ph.D. Graduated |
| 5. Shu Gao | - Ph.D. Graduated |
| 6. Patricio Chavez | - Ph.D. Graduated |
| 7. Weixiang Sun | - Ph.D. Graduated |
| 8. Onyeka Ezenwoye | - Ph.D. Graduated |

From the BME department

- | | |
|----------------|-------------------|
| 1. Jiajia Ge | - Ph.D. Graduated |
| 2. Zhiqi Zhang | - Ph.D. Candidate |

(B) THESIS COMMITTEE

From the ECE department

- | | |
|----------------------------|----------------|
| 1. Kent Wreder | - MS Graduated |
| 2. Anthony L. Figueras | - MS Graduated |
| 3. Issam J. Dagher | - MS Graduated |
| 4. David Lopez de Quintana | - MS Graduated |

5. Nicholas Chin - MS Graduated
6. Miguel Rosario - MS Graduated
7. Christopher A. Edmonds - MS Graduated
8. Chritz Duncan - MS Graduated
9. Maroof Choudhury - MS Graduated
10. Ovidio Alfanso - MS Graduated
11. PeterJohn Hugh - MS Graduated
12. Euton Lyons - MS Graduated
13. Miguel Alonzo - MS Graduated

From the Biomedical Engineering department

1. Shane Smoleny - MS Graduated
2. Ruta Kanitkar - MS Graduated
3. Niraj Verma - MS Graduated
4. Wayne Benjamin - MS Graduated
5. Sulohita Vadadi - MS Graduated
6. Human Arjomandi - MS Graduated
7. Niravkumar Patel - MS Graduated
8. Bhavani Jayachandran - MS Graduated
9. Jiali Wang - MS Graduated
10. Mohameed Goryawala - MS Graduated
11. Alejandro Fernandez - Pursuing MS degree

UNDERGRADUATE STUDENTS SUPPORT

The CATE Center has provided the following undergraduate student support that is made possible through:

NSF-MII PROGRAM: National Science Foundation- Infrastructure Program

NSF-REU PROGRAM: National Science Foundation – Research Experience for Undergraduates

ONR-EDUCATIONAL PROGRAM: Office of Naval Research- Educational Program

Female Students

- | | |
|-------------------------|------------------------|
| 1. Noemi Fernandez | 18. Tarla Toomer |
| 2. Yudit Fernandez | 19. Christine Bedia |
| 3. Marijke Hallo DeWolf | 20. Claudia Rodriguez |
| 4. Meika Webster | 21. Luz Camacho |
| 5. Maybelline Rivas | 22. Kirinia Nunez |
| 6. Luu Phuong | 23. Lisa Demetrius |
| 7. Erika Suarez | 24. Mercedes Cabrerizo |
| 8. Sonia Duranza | 25. Anaelis Sestin |
| 9. Linda Curtin | 26. Erika Carmenteros |
| 10. Annette Taberner | 27. Dalila Landestoy |
| 11. Paula Guthrie | 28. Grettel Frias |
| 12. Elise Jakubziak | 29. Maria Tito |
| 13. Geydi Lorenzo | 30. Suzie Diaz |
| 14. Susan Danner | 31. Karen Santiago |
| 15. Nydia Ruiz | 32. Yania Arencibia |
| 16. Maria Estrada | 33. Cintia Celi |
| 17. Danmary Sanchez | 34. Melissa Fernandez. |

Male Students

- | | |
|------------------------|--------------------------|
| 1. Marco Midon | 22. Luis Arencibia |
| 2. Richard Lopez | 23. Yusmaykel Valdes |
| 3. Franklin Adams | 24. Walter Tisher |
| 4. Timon Williams | 25. Joseph Elmer |
| 5. Jorge Castellano | 26. Gary Charles |
| 6. Dorian Hernandez | 27. Daniel Rodriguez |
| 7. Marlin Brinson | 28. Leonardo Letourneaut |
| 8. Philip Brown | 29. Christian Cousinet |
| 9. Jesus Lebena | 30. Pedro Pena |
| 10. Ralph Buigas | 31. David Salinas |
| 11. Kerlin Quintyn | 32. Ricardo Valdes |
| 12. Celso Duran | 33. Charles Suero |
| 13. Robert Hazbun | 34. Andres Herrera |
| 14. Alexis Bussiere | 35. Elpidio Dominguez |
| 15. Michael Maximilien | 36. Juan Agudelo |
| 16. Orfirio Sanchez | 37. Daniel Sanchez |
| 17. Alejandro Simon | 38. Jean Flores |
| 18. Herbert Reddick | 39. Alejandro Reyes |
| 19. Helton Lopez | 40. Jean Cherry. |
| 20. Michel Martinez | |
| 21. Eduardo Caballero | |

TEACHING

a. Course, Curriculum Development Activities

Courses Established

EEL 5820: Digital Image Processing
EEL 6821: Computer Vision
EEL 6816: Electronic Neural Systems

Course Enhancement

EEL 4746: Microcomputer I – enhanced from the 8085 (16-bit Microprocessor) to the 80386-DX and 80486 32-bit Microprocessor with a complete new set of laboratory experiments

b. Courses Taught

COURSES TAUGHT AT FIU

EEL 3712: Logic Design
EEL 4502: Introduction to Digital Signal Processing
EEL 4709: Computer Design
EEL 4746: Microcomputer I
EEL 5719: Digital Filters
EEL 5820: Digital Image Processing
EEL 6816: Electronic Neural Systems
EEL 6821: Computer Vision.
EEL 6993: Neural Systems
EEL 6994: Hardware/Software Integration in Engineering Design

OTHER SUPERVISORY COURSES

EEL 4011: Senior Design II
BME 4931: Special Topics/Project
EEL 6905: Individual Work
BME 6905: Independent studies
BME 6910: Supervised Research
EEL 6916: Graduate Project
BME 6970: Master's Thesis
EEL 6971: Master's Thesis
EEL 6996: Industry Internship (Summer Program Only)
EEL 7980: Ph.D. Dissertation