

GUSTAVO ROIG

College of Engineering and Computing
Florida International University
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EDUCATION

Ph.D. University of Florida, Gainesville, Florida, 1970
M.E. University of Florida, Gainesville, Florida, 1967
B.S.E.E. University of Puerto Rico, Mayagüez Campus, Puerto Rico,
1966

PRESENT POSITION

- Associate Dean for the College of Engineering and Computing
- Director, Center for Diversity in Engineering and Computing
- Tenured Professor, Department of Electrical and Computer Engineering.

PREVIOUS PROFESSIONAL ACTIVITIES

Universidad Simón Bolívar, Venezuela
College of Engineering
Tenured Associate Professor/Coordinator of Electronic
Engineering - From 1975 to 1983

Polytechnic Institute of The Armed Forces of Venezuela
College of Engineering
Lecturer - From 1976 to 1983

Universidad de Puerto Rico, Mayagüez Campus
College of Engineering
Tenured Assistant Professor - From 1970 to 1975

PRESENT FIELD OF RESEARCH

Human Potential Development

OVERVIEW OF CURRENTLY FUNDED RESEARCH PROGRAMS

Engaging Latino Communities for Education (ENLACE Miami / Children's Trust) Funded by the W.K. Kellogg Foundation and the Children's Trust amount \$2,250,000.

ENLACE Miami strengthens the educational pipeline, so that more Hispanic youth will enter and complete college through sustainable partnerships among higher education institutions and local communities.

Principal Investigator

Funded by the W.K. Kellogg Foundation and the Children's Trust

Amount: \$2,250,000

1999 - Present

GEAR UP Empowerment Zone a partnership with Dade County Public Schools, ASPIRA of Florida, eNFAMILIA, Non-Violence Project, Mujer, The Yaeger Foundation.

This is a six year program which serves Homestead Middle School, Leisure City Middle School, ASPIRA South Middle School and South Dade Senior High.

Funded by the U.S. Department of Education

Amount: \$1,177,598.00/ per year.

2005 – Present.

Jets UNITE

In partnership with The Junior Engineering Technical Society funded by the U.S. Army.

Amount: \$30,000.00

2005 - Present.

Florida/Georgia Louis Stoke Alliance for Minority Participation in Science, Engineering and Mathematics (FG/LSAMP)

The focus of the FG/LSAMP is to increase significantly the enrollment, retention rate, and graduation rate of those individuals from traditionally underrepresented groups majoring in undergraduate and graduate science, engineering, and mathematics disciplines (SEM).

Funded by NSF/FAMU

Amount: \$1,950,000.00

Institutional Coordinator

1992 to present

Florida Action for Minorities in Engineering (FLAME)

The philosophy of the FLAME Program is to instill in students a desire for academic excellence. The program serves an Engineering Magnet Program that resides at Miami Coral Park Senior High School.

Principal Investigator

Funded by Dade County Public Schools

Amount: \$720,00.00

1988 to Present

National Action Council for Minorities in Engineering (NACME)

This is a scholarship program for undergraduate students majoring in Engineering that are economically disadvantaged.

Funded by Nacme

Amount: \$110,000.00

2002 – Present

Southeastern Consortium for Minorities in Engineering (SECME)

This program serves elementary, middle and high school students in a variety of competitions such as: egg drop, mousetrap car, bridge, brain bowl, etc. The College of Engineering at FIU is a co-sponsor of this activity in Miami-Dade County.

Sponsor

1996 to Present

Junior Engineering Technical Society (JETS)

The JETS's program provides high school students and teachers with a coordinated, integrated sequence of activities that encourage and support systemic change within the mathematics-science-technology arena. It emphasizes group activities, reasoning, problem solving and connections with the real world

University Representative

1989 to Present

HONORS, AWARDS AND SPECIAL RECOGNITION

A. Florida International University

Presidential Award - 2003

Certificate of Appreciation – Engineering Student Council - 2000

Research Award – 1999

Presidential Award Nominee – 1999

Recognition of Extraordinary Performance in Attracting Contract and Grant Resources to the University - 1998-1999

Access and Equity Award – 1998

Recognition of Extraordinary Performance in Attracting Contract and Grant Resources to the University – 1997-1998

Faculty Service Award – 1996-97

Recognition of Extraordinary Performance in Attracting Contract and Grant Resources to the University – 1996-1997

Community Service Award - Black Employees' Association – 1996

Affirmative Action and Equal Opportunity Award - 1991

Outstanding Dedication and Service - Alpha Omega Chi –1991

FIU Teaching Award - 1987

B. Miami-Dade County Public Schools

Certificate of Appreciation – Homestead Middle School - 2000

Exemplary Award Honorable Mention/Community Leader – Dade Partners Program – Miami-Dade County Public Schools 1998-99

Outstanding Contribution – Southeastern Consortium for Minorities in Engineering (SECME) – May 1999

Service Award - Miami Coral Park High School - 1998

Appreciation - Summer Youth Employment and Training Program Industry Focus: Engineering - Miami Coral Park High School - 1998

RAM Pride Award - Miami Coral Park High School - 1997

Miami Coral Park High School Goals and Accomplishments Award - 1997

Recognition/Southeastern Consortium for Minorities in Engineering (SECME) Program - 1996

Friends-Of-Dash Award - Design and Architecture Senior High School - 1996

P.T.S.A. Award/Miami Coral Park High School - 1994
Recognition/The Magnet Internship Program - 1994

Outstanding Support/Magnet Programs - 1993

Pioneer Award/Partners in Outreach Education - 1993

Outstanding Supporting of the Engineering Magnet Program -
Miami Coral Park Senior High - 1993

MAGNET Schools. DCPS/Math/Science/Engineering Advisory Board –
1992

Outstanding Support/Magnet Programs - 1992

Internship Program/Magnet Programs - 1992

C. National Awards, Recognitions and Nominations

Reginald H. Jones Distinguished Service Award nominee - 2001

Certificate of Appreciation – Miami-Dade County, State of Florida - 2000

Certificate of Appreciation – Junior Engineering Technical Society –
JETS/TEAMS Competition – 2000

Recognition for Support and Participation on the FGAMP '99 Planning
Committee – Florida/Georgia-Luis Stokes Alliance for Minority
Participation in Mathematics, Science and Engineering - 1999

Certificate of Appreciation - Junior Engineering Technical Society –
JETS/TEAMS Competition - 1999

Recognition/Florida-Georgia Louis Stokes Alliance for Minority
Participation in Mathematics, Science and Engineering (FGAMP) - 1998

Appreciation for Support of University Services Activities at NASA/John F.
Kennedy Space Center - 1998

Certificate of Appreciation - Junior Engineering Technical Society –
JETS/TEAMS Competition - 1997

Engineer of the Year 1995 Award - Association of Cuban Engineers -
1996

Nominated for Ida S. Baker Distinguished Minority Educator - 1996

Outstanding Service - The National Association of Minority Engineering Program Administrators - 1995

Appreciation for Reinforcing Students' Academic Skills that Emphasize Engineering, Technology, Mathematics, and Science - Junior Engineering Technical Society – 1994

Outstanding Contribution - Junior Engineering Technical Society – 1991

D. International Awards

Teamwork Award – Non-Violence Project of United States - 2000

Outstanding Supporting - Coalicion Costarricense de Iniciativas de Desarrollo - 1986 - San Jose, Costa Rica.

Students Teaching Award - Universidad Simon Bolivar - 1983 - Caracas, Venezuela

Students Teaching Award - Instituto Universitario de las Fuerzas Armadas Nacionales - 1983 - Maracay, Venezuela

Students Teaching Award - Instituto Universitario de las Fuerzas Armadas Nacionales - 1982 - Maracay, Venezuela

Teaching Award - Instituto Universitario de las Fuerzas Armadas Nacionales - 1981 - Maracay, Venezuela

Students Teaching Award - Instituto Universitario Politecnico de las Fuerzas Armadas Nacionales - 1981 - Maracay, Venezuela

Students Teaching Award - Universidad Simon Bolivar - 1980 - Caracas, Venezuela

Students Teaching Award - Instituto Universitario de las Fuerzas Armadas Nacionales - 1980 - Caracas, Venezuela

Students Teaching Award - Instituto Universitario Politecnico de las Fuerzas Armadas Nacionales - 1979 - Maracay, Venezuela

Outstanding Contribution - Universidad Simon Bolivar - 1979 - Caracas, Venezuela

Teaching Award - Universidad Simon Bolivar - 1978 - Caracas, Venezuela

SERVICES RENDERED

Panelist at the “University-Industry Research Partnerships Workshop” sponsor by University of California at San Diego and the San Diego Science and Technology Council. La Jolla, California. July 2001

Member of the peer review team for the Precollege Awards for Excellence in Mathematics, Science, Engineering, and Technology (PACE/MSET). Washington DC, September 2001

Speaker at the International Student Advisory Committee. Miami, July 2001.

Panelist at the USP Superintendent’s Coalition/NSF workshop on Instructional Leadership. Miami, March 2001.

Member of the Peer Review Team for Northwestern Senior High School (Southern Association of Colleges and Schools, Secondary Commission) April 8-10, 2001

Member of the Committee on Equal Opportunities in Science and Engineering (CEOSE), National Science Foundation (NSF). October 2000- September 2003

Member of the Board of Directors of the Magnet Educational Choice Association, Inc, Miami-Dade County Public Schools, Division of Schools of Choice. 2000-2001

Member of the Advisory Committee for Engineering, National Science Foundation (NSF) September 2000 until present.

Panelist in the White House Strategy Session Improving Hispanic Student Achievement panel “Increasing the College Completion Rate” June 14-15, 2000

Member of the Peer Review Team for Miami Carol City Senior High School (Southern Association of Colleges and Schools, Secondary Commission) March 20-21, 2000

Member of the Search & Screen Committee for the position of Dean of the College of Engineering. 2000

Advisory Committee Member of the District’s Comprehensive Plan for Mathematics and Science

February, 2000 until present

Member of the Board of Directors of Junior Engineering Technical Society (JETS) – 2000-2001

Panelist in the Ninth Annual Reverend Dr. Martin Luther King Jr. Commemorative Week Panel “Connectiveness: Creating Opportunities, Creating Possibilities”
January 13, 2000

Judge at the Minority University-Space Interdisciplinary Network (MUSPIN) Tenth annual Users’ Conference and Minority University Research and Education Division (MURED) Second Annual Education Conference. September 11-16, 2000

Member of University Undergraduate Council - 1999 – present

Member of the Center for Urban Education and Innovation Advisory Committee, College of Education, Florida International University.
From July 2000 to present

Member of the National Information Center on Hispanic Education (NICHE) Hispanic Association of College and Universities (HACU). Advisory Board. From 1999 to present

Member of Search & Screen Committee for the position of Dean of University Outreach and Continuing Education. 1999

Chairperson of the Search and Screen Committee of Chairperson of Mechanical Engineering Department – 1996

Florida Mexico Institute – Latin American and Caribbean Center (LACC)
Coordinator for the College of Engineering - 1996 until present

Member of the Search and Screen Committee of Vice-President, Business and Planning - 1995

Member of the Peer Review Team for Miami Coral Park Senior High School (Southern Association of Colleges and Schools, Secondary Commission) 1995

Member of the Peer Review Team for Design and Architecture Senior High School (Southern Association of Colleges and Schools, Secondary Commission) 1994
Coordinator of Minority Affairs, College of Engineering, Florida International University – 1988 to 1990

Senator at the University Faculty Senate - 1989 - 1991

Member of the Faculty Senate Steering Committee - 1989 - 1991

Coordinator of Undergraduate and Graduate Programs in Electronic Engineering
Universidad Simon Bolivar, Caracas, Venezuela – 1978 to 1983

Coordinator of Graduate Program in Electrical Engineering Universidad de
Puerto Rico, Mayaguez Campus, Puerto Rico – 1972 to 1975

Chairman Industry Application Society Chapter, Miami Section, Institute of
Electrical and Electronics Engineers (IEEE) - 1987

Member of the University Virtual Student Center Advisory Committee, Florida
International University - 2006

PROFESSIONAL SOCIETIES

Eta Kappa Nu, Tau Beta Pi, ASEE, IEEE

PUBLICATIONS

1. Mohammed, O, Castro, J, and **Roig G.** “Hardware Implementation of a Real-Time Electromagnetic Field Analysis System for Engineering Education”, Proceedings of the IEEE Southeastcon’2001, pp 254-285, Clemson, South Carolina, March 2001.
2. Mohammed, O, Meniv, D., Castro, J, and **Roig G.** “An Implementation of a Real-Time Experimental Analysis System for the Energy Conversion Laboratory,” Proceedings of the IEEE Southeastcom’2000, Nashville, TN, pp 165-169, April 2000.
3. Mohammed, O., Sebastien, R, and **Roig G.** “Real-time Experimental/Analysis System for the Energy Conversion Laboratory,” Proceedings of IEEE Southeastcon’99, Lexington, KY, PP. 138-141, march 1999.
4. Yen K, Ghoshray S., **Roig G.** “A linear Regression Model Using Non-symmetric Triangular Fuzzy Number Coefficients” Int. J. on Fuzzy Set & Systems, Vol. 16, No. 2, Sept. 1999

5. Ghohray S., Yen K., Andrian J., **Roig G.**, "Time Series by Formulating Proper Prediction in Chaotic Embedding Parameters", Proceeding of the 18th IASTED, Int'l Conference On Modeling, Identification and Control, pp. 559-562, 1999.
6. **Roig G.**, Goncharova A., Canino C., Puello-C. L., McCalla D., Nosti J., "Project VISION: A Model Program to Educate the Next Generation of Engineers, Scientists and Mathematicians" 36th Space Congress Proceedings, pp 245-251, 1999.
7. **Roig G.**, "Project VISION: Educating and Motivating the Next Generation of Engineers and Scientists" JETS Report. Volume 18, No. 1 Fall 1998, pag.16.
8. Caballero A., Mitrani J., **Roig G.**, Hill R., Perez N., "The Construction Alternative for High School "The Construction Alternative for High School Students". Journal of Construction Education. Vol. II, No 2 pp. 88-169, 1998
9. Yen K., Zhou S., and **Roig G.**, "Extreme Point Result for Robust Stability of Discrete Systems with Complex Coefficients in a diamond", accepted by Int'l J. of Control, Vol. 67, No. 4, pp529-538, 1997
10. Yen K., Ghoshray S., **Roig G.** "Path Planning by Octree Decomposition of Robot Workspace" Proceeding of the 3rd Int'l Conference on Automation, Robotics & Computer Vision, paper #WE4.7, 1994
11. Schmidt P. and **Roig G.**, "Investigation of Metal-Synthetic Diamond-Metal Systems". (Invited Paper) Interchange '91 Proceedings, Eds. A. Kulman and M.A. Overman, p.p. 116 - 120, 1992.
12. Yen K. Yang C., **Roig G.** , "Linear Piezoelectric Step Motors", IEEE Proc. Of Southeastcon'90, pp 21-23, 1990
13. Schmidt P., Ortiz-Conde A., Andrian J., Yen K. and **Roig G.**, "On the Small Signal Equivalent Circuit Model of the Thick Metal-Insulator-Metal Barrier". Proc. Twenty-First Annual Pittsburgh Conference of Modeling and Simulation, Part 4, pp. 1699-1703 (Vol 21 Instrument Society of America) 1990.
14. Schmidt P., **Roig G.**, and Ortiz-Conde A., "On the Modeling of Ballistic Electron Transport in Plasma". Proc. Twentieth Annual Pittsburgh Conference on Modeling and Simulation, Part 4, p.p. 1329 - 1333, (Vol. 20, Instrument Society of America), 1989.
15. **Roig G.**, Story J. and Cereijo M. "Engineering: The Career with Flexibility, Worldwide Jobs, and Highest Pay" Proc Pre-College Education of Minorities

in Science and Engineering, pp 196-201 Newark, New Jersey, May 22-25, 1988

16. Yen K., **Roig G.**, Andrian J. "Oscillation Modes Control for Lightweight Robots Through Digital Simulation" Proc. Of the Society of Instrument and Control Engineers Annual Conference, pp 1013-1015, Narashino, Japan, August 2-4 1988
17. Laso L., Yen K., Andrian J., **Roig G.** "The Application of Microprocessors to Power Factor Measurement and Control" Proc. Of the Society of Instrument and Control Engineers Annual Conference, pp 853-855, Narashino, Japan, August 2-4, 1988
18. Andrian J., Yen K. and **Roig G.**, "New Noise Measurement Techniques of Low Impedance Device at High Electric Fields". Proc. of the 27th The Society of Instrument and Control Engineers Annual Conference, pp. 789-790, Tokyo, Japan, August 2-4, 1988
19. Andrian J., Yen K., and **Roig G.**, "Digital Simulation of Small Geometry Semiconductor Devices". Proc. Of the 19th Annual Pittsburgh Conference on Modeling and Simulation, Pittsburgh, pp. 1901-1903, 1988.
20. Yen K., Andrian J. and **Roig G.**, "Performance Comparison of Parallel Integration Algorithms for Sigital Simulator Design". Proc. of IECON '87, Cambridge, MA, 1987.
21. Andrian J, Yen K and **Roig G.**, "SPICE-Compatible High Frequency Noise Model of GaAs FET". IEEE Proc.Of Southeastcon'87 pp 191-193 1987
22. Alloca B., Yen K., Schmidt P. and **Roig G.**, "Effect of Transistor Non-linearities on the Efficiency of Class E Tuned Power Amplifiers". Proc. IEEE Southeastcon, Vol. 2, pp 564 - 565, 1987
23. Gomez F., Biagio A., Andrian J., **Roig G.**, "Nonlinear Analysis of the Total Harmonic Distortion of the Colpitts Oscillator: Theory and Measurements" Proc. IEEE Southeastcon, Vol 2, pp 566-567, 1987
24. Yen K., Andrian J., **Roig G.** ,"A New Look of Digital Simulation for Dynamic System" IEEE Proc. Of Miami Technicon '87, pp107-109, 1987
25. Andrian J., Yen K., and **Roig G.** "Semiconductor Physical Device Modeling", IEEE Proc. Of Miami Technicon '87, pp 110-113, 1987
26. Wade T., Van Der Ziel A., Chenette E., and **Roig G.**, "Noise Effects in Bipolar Junction Transistors at Cryogenic Temperatures: Part I" IEEE Transactions on Electron Device, Vol ED-23 #9, pp 998-1007, September 1976

27. Wade T., Van Der Ziel A., Chenette E., and **Roig G.** "Base Resistance Measurements on Bipolar Junction Transistors via Low Temperature Bridge Techniques" Solid-State Electronics, Vol 19, pp 385-388, 1976
28. Wade T., **Roig G.**, and Chenette E. "Noise in Bipolar Junction Transistors at Low Temperatures" Sotheastcon '72 IEEE Region III Conference; pp N5-1 to N5-4, Knoxville, Tennessee 1972
29. **Roig G.** "Low-Noise Transistor Amplifiers" CIAA Magazine, Voll XIII # 3 pp 8-9, July to September 1972
30. **Roig G.**, Chenette E., and Van Der Ziel, " Transistor Noise at Extreme Temperatures" Le Bruit de Fond Des Composants Actifs Semi-Conducteurs, pp 264-266, Toulouse, France, September 21-23, 1971

Papers

1. **Roig G.**, Fins F., "ENLACE Miami Summer Program". To be presented at the Technology Tools for Teaching and Learning Conference. San Juan, Puerto Rico, December 9-12, 2001
2. **Roig G.**, Nosti J., Hernandez L., Martin A., Martinez R., Koonce G., Lightcapp R., Reineke J. "The GEAR UP Homestead Program: Using Databases to Track Students Performance. To be presented at the Technology Tools for Teaching and Learning Conference. San Juan, Puerto Rico, December 9-12, 2001
3. **Roig G.** "Seven Years of Success and Achievements of the Florida/Georgia Louis Stokes Alliance for Minority Participation". To be presented at the Hispanic Association of Colleges and Universities (HACU) 15th Annual Conference: Excellence Through Diversity: Celebrating our Past and Reshaping our Future. San Juan, Puerto Rico. October 27-30, 2001
4. **Roig G.**, Milton F., Bilbao M., Moore Barry, Goggins M., Gilbert U., Jean A., Threatt-Milton I., Ring G., Oria B., "Florida Collaborative for Excellence in Teacher Preparation: Pre-Matriculation Residential Summer Program". Presented at the Statewide Higher Education Consortium in Mathematics and Science. Orlando, FL, November 9-11, 2000.
5. **Roig G.**, Goncharova A., "Project VISION: A Model Program for Teacher Training". Presented at the "First International Conference of Information". Tokyo, Japan. October, 16-19, 2000

6. **Roig G.**, Goncharova-B. A., Marrero B., Canino C., Haynes R., Milton F., Aguilar K., Bursiar H., Nunez J. "Project VISION Teacher Training" Presented at Presented Minority University-Space Interdisciplinary Network (MU-SPIN) Tenth Annual Users' Conference. Atlanta, GA, September 11-15, 2000.
7. **Roig G.**, Goncharova A., Marrero B., Haynes R., Canino C. Berry M., Milton F., David V., and Colón E. "Project VISION A Model Program to Develop Teacher Training" presented at NCORE 2000 Conference, Santa Fe, Nuevo Mexico, June 1-5, 2000.
8. **Roig G.** Goncharova A., Canino C., Puello-C. L., McCalla D., Nosti J.,: "Project VISION A Model Program to Educate the Next Generation of Engineers, Scientists and Mathematicians" presented at 36th Space Conference. Cape Canaveral, Florida, April 27-30, 1999.
9. **Roig G.**, Becerra-Fernandez I, Puello-Capone L, Colon E., Ebadian A., Goncharova-Berenguer A, Hopkins G., Iturre-Perez Lucy, Lopez A.M., McCalla D., Milian L., Mohammed O. Visiedo E., "Project VISION: An Elementary and Middle School Science and Math Teacher Training Program" presented at Department of Education Conference: Changing the Face of Education in the Millenium and Beyond. San Diego, C.A. December 05-10, 1998.
10. **Roig G.**, "Project VISION: Using Technology to Enhance the Science and Math Curriculum in the Middle Schools". Presented Minority University-Space Interdisciplinary Network (MU-SPIN) Eighth Annual Users' Conference. Albuquerque, October 22, 1998.
11. **Roig G.**, "Project VISION: A partnership among NASA/John F. Kennedy Space Center, Florida International University, Universidad del Turabo, Miami-Dade County Public Schools, and the Caguas/Gurabo Public Schools," presented at NASA's Thirty-Fifth Space Congress in Cocoa Beach, Florida, April 27th - May 1st 1998
12. Naranjo R. and **Roig G.**, "Distance Learning. Past, Present and Future". Presented at Hostos Community College, New York, December 1997 (Invited Paper)
13. Becerra-Fernandez I, Campbell R, **Roig G.**, and Hopkins G., "Program of Industry Supported Mentorships" (PRISM). Presented at ASEE Conference, Milwaukee, Wisconsin, June 1997.

14. McCalla D., Puello-Capone L., and **Roig G.**, "The Road to Restructuring Begins with a Question". Presented at the 15th Annual Magnet Schools of America Conference, Las Vegas, Nevada, April 29 - May 3, 1997.
15. **Roig G.**, "Technological Exploration", (Exploración Tecnológica). University of Puerto Rico, November 26, 1996.
16. Padmore L., Milton F., Spence D. and **Roig G.**, "FGAMP in Science, Engineering and Math/Dynamic Partnerships an NSF". Working Conference, Washington DC, June 19 - 21, 1996
17. Yen K, Ghoshray S, **Roig G.**, "Path Planning by Octree Decomposition of Robot Workspace", Proc. Of the 3rd. Intl. Conf. On Automation, Robotics & Computer Vision, Paper # WE4.7, 1994
18. Huang W., Yen K., **Roig G.** "Voltage Divided Noninverting Cuk Converter with Large Conversion Ratios" IEEE Proc. Of Southeastcon '91, pp 1005-1007, 1991
19. White C., Hopkins G., Cereijo M., **Roig G.**, "Florida Action for Minorities in Engineering: A joint effort between Dade County Public Schools and Florida International University". Presented in Frontiers in Education at ASEE, Vienna, Austria, July 1990.
20. Yen K., Yang C., **Roig G.**, "Linear Piezoelectric Step Motors", IEEE Proc. Of Southeastcon'90, pp 21-23, 1990 (see publication #3)
21. Schmidt P., Ortiz-Conde A., Andrian J., Yen K. and **Roig G.**, "On the Small Signal Equivalent Circuit Model of the Thick Metal-Insulator-Metal Barrier". Presented at the 21st Annual Pittsburgh Conference of Modeling and Simulation, Pittsburgh, PA, May 3, 1990
22. Schmidt P., **Roig G.**, and Ortiz-Conde A., "On the Modeling of Ballistic Electron Transport in Plasma". Presented at the 20th Annual Pittsburgh Conference on Modeling and Simulation, Part 4, p.p. 1329 - 1333, (Vol. 20, Instrument Society of America), 1989
23. **Roig G.**, Cereijo M. and Story J. " Low Cost Communication System for Medium Size Apartment Buildings for the Elderly" IAHS World Congress on Housing, Porto, Portugal, October 1989
24. Lazo L., Yen K., Andrian J. and **Roig G.**, "The application of Microcomputers to Power Factor Measurement and Control". Presented at SICE '88, Tokyo, Japan, 1988.

25. Yen K., Kim S., **Roig G.** and Andrian J., "Oscillation Modes for Lightweight Robots through digital Simulation". Presented at SICE '88, Tokyo, Japan, 1988.
26. Andrian J., Yen K., and **Roig G.**, "Digital Simulation of Small Geometry Semiconductor Devices". Presented at 19th Annual Pittsburgh Conference on Modeling and Simulation, Pittsburgh, 1988.
27. Yen K., Andrian J., **Roig G.**, "A New Look of Digital Simulation for Dynamic System" IEEE proc. Of Miami Technicon'87, pp 107-109, 1987
28. Andrian J., Yen K., and **Roig G.**, "Semiconductor Physical Device Modeling", IEEE Proc. Of Miami Technicon'87, pp 110-113, 1987
29. Andrian J., Yen K. and **Roig G.**, "SPICE-Compatible High Frequency Noise Model of GaAs FET". Proc. of SECON, Tampa, Florida, 1987
30. Yen K., Andrian J. and **Roig G.**, "Performance Comparison of Parallel Integration Algorithms for Sigital Simulator Design". Proc. of IECON '87, Cambridge, MA, 1987
31. **Roig G.** "Electronic Engineering at Simón Bolívar University" Pan-American Congress of Engineering. San José, Costa Rica, November 1982
32. **Roig G.** , " Telecommunications at Simón Bolívar University" South American Congress of Telecommunications. Lima, Peru, November 1979
33. **Roig G.** "The Importance of the Q Point in the Design of Transistor Amplifiers" Presented in VII Pan-American Congress of Mechanical and Electrical Engineering COPIMERA, Santiago de Chile, Chile, 1977
34. **Roig G.** "Large Signal Analysis of Transistor Amplifiers (B.J.T.) Presented in VII Pan-American Congress of Mechanical and Electrical Engineering COPIMERA, Santiago de Chile, Chile, 1977
35. **Roig G.** "Noise Measurements in Bipolar Junction Transistors at High Temperatures" Pan-American Congress of Engineering, Sao Paulo, Brazil, November 1975
36. **Roig G.**, "Active Filters, Theory and Design" Pan-American Congress of Engineering, Bogotá, Colombia, November 1973.
37. **Roig G.**, Chenette E., and Van Der Ziel, " Transistor Noise at Extrem Temperatures" Le Bruit de Fond Des Composants Actifs Semi-Conducteurs, pp 264-266, Toulouse, France, September 21-23, 1971

38. **Roig G.**, “Low-Noise Transistor Amplifier” Symposium on Noise in Electronic Materials and Devices. Gainesville, Florida, December 1972

COURSES TAUGHT AT FLORIDA INTERNATIONAL UNIVERSITY

Undergraduate

EEL 3003 Electrical Engineering I
EEL 3303 Electronics I
EEL 3111 Circuits I
EEL 3514 Communication Systems
EEL 4011 Sr. Design: Project Implementation
EEL 4140 Filter Design
EEL 4304 Electronics II
EEL 4314 Integrated Circuits and Systems
EEL 4510 Introduction to Digital Signal Processing
EEL 4515 Advanced Communication Systems
EEL 4905 Individual Problems in Electrical Engineering
EEL 4930 Special Topics in Electrical Engineering

Graduate

EEL 5145 Advanced Filter Design
EEL 5366 Industrial Electronics
EEL 5371 High Frequency Amplifiers
EEL 5500 Digital Communication Systems I
EEL 5501 Digital Communication Systems II
EEL 5719 Digital Filters
EEL 6905 Individual Work

Graduate Student Supervision

Master Thesis Defense Committee

Candidate: Ganu Shreerang Chintamani
Title: Implementation of Coupled Finite Element Model for Acoustic Evaluation in Electrical Machines Including Magnetostrictive Effects.
Presented: Fall 2000
Committee: Dr. O. Mohammed (Principal advisor)

Dr. K. Yen
Dr. G. Roig

Candidate: Roberto Siegert
Title: Optimization of Low-Voltage Surge Protection Modules Via High Energy Testing
Presented: Fall 1999
Committee: (Major Professor)
Dr. G. Roig

Candidate: Rafael Jesus Sans
Title: Development of Adaptive Image Estimate based on Minimum Description Length Criteria for Simultaneous Noise Reduction.
Presented: Fall 1999
Committee: (Major Professor)
Dr. G. Roig

Candidate: Hu, Sheng-Yao
Title: Analysis of Uniform Transmission Lines and Microstrip Branch Line Coupler Using Finite-Difference Time-Domain Method.
Presented: Summer 1996
Committee: Dr. T. Babij, (Major Professor)
Dr. G. Roig
Dr. M. Heimer

Candidate: Mehran, Geranmayeh
Title: Development of Adaptive Image Estimate based on Minimum Description Length Criteria for Simultaneous Noise Reduction.
Presented: Fall 1996
Committee: Dr. J. Andrian (Major Professor)
Dr. G. Roig
Dr. K. Yen

Candidate: Fernandez, Noemi
Title: Statistical Information Processing for Data Classification
Presented: Fall 1996
Committee: Dr. M. Adjouadi (Major Professor)
Dr. G. Roig

Candidate: Bajracharya, Sanjay
Title: Characterization and Modeling of Multi-Conductor Transmission Line using Finite-Difference Time-Domain Method.

Presented: Summer 1996

Committee: Dr. T.M. Babij (Major Professor)
Dr. G. Roig
Dr. M. Heimer

Candidate: Alvarez, Isidro
Title: Development of a Security Network (SECNET) Based on Integrated Services Digital Network (ISDN)

Presented: Summer 1996
Committee: Dr. S. Wunnava (Major Professor)
Dr. G. Roig
Dr. J. Confort

Candidate: Pessoa, Gláucio
Title: Application of Transthoracic Impedance Measurements to Monitoring Pulmonary Edema

Presented: Spring 1995
Committee: Dr. M. Hagmann (Major Professor)
Dr. G. Roig

Candidate: Yip, Wai Ping
Title: Calculation of Electric Field Distribution for Open Test Site.

Presented: Spring 1995
Committee: Dr. T. Babij (Major Professor)
Dr. G. Roig **Dr. S. Wunnava**

Candidate: Sierra, Abel
Title: Design for Testability, Structured Test Methods.

Presented: Spring 1995
Committee: Dr. S. Wunnava (Major Professor)
Dr. K. Yen
Dr. M. Heimer
Dr. J. Andrian
Dr. G. Roig

Candidate: Ghoshray, Basbyasachi
Title: Robot Obstacle Avoidance by Geometric Modeling Techniques.

Presented: Spring 1995
Dr. K. Yen (Major Professor)
Dr. G. Roig
Dr. Andrian

Candidate: Zhang, Wei
Title: Adaptive Motion Control System of Tethered Wheel Mobil Robot for Underground Movement Measurement

Presented: Fall 1995

Committee: Dr. Y. Yen (Major Professor)
Dr. G. Roig

Candidate: Cabrera, George
Title: Broadband RF Current Vector
Presented: Fall 1994
Committee: Dr. M. Hagmann (Major Professor)
Dr. G. Roig
Dr. M. Heimer

Candidate: Shan, Hsiao-Chih
Title: Analysis of Microstrip Patch Antennas Using Finit Difference Time-Domain method.
Presented: Summer 1994
Committee: Dr. T. Babij (Major Professor)
Dr. G. Roig
Dr. M. Heimer

Candidate: Parada-Fortun, Silvia
Title: Fuzzy Logic Controller: The Design of a Fuzzy Logic Controller for Continuous Mean Arterial Blood Pressure Control.
Presented: Summer 1994
Committee: Dr. K. Yen (Major Professor)
Dr. M. Heimer
Dr. G. Roig

Candidate: Gordon, Howard
Title: A Computer Oriented Energy Conversion Laboratory for Educational Purposes.
Presented: Summer 1993
Committee: Dr. O. Mohammed (Major Professor)
Dr. G. Roig
Dr. S. Wunnava

Candidate: Zhao, Liyang
Title: Development of an Improved Scanning Tunneling Microscope
Presented: Fall 1993
Committee: Dr. M. Hagmann (Major Professor)
Dr. K. Yen
Dr. G. Roig

Candidate: Hu, Zhiqun
Title: Analysis of VHF Class E Amplifier and Design and Construction of a High Efficiency Telemetry System

Presented: Summer 1992
Committee: **Dr. G. Roig** (Major Professor)
Dr. K. Yen

Candidate: Wu, F.
Title: A User Friendly Leed Digital Image Processing System
Presented: Summer 1991
Committee: Dr. S. Wunnava (Major Professor)
Dr. Y. Darici
Dr. G. Roig
Dr. K. Yen

Candidate: Ladrón de Guevara, Jorge
Title: Development of a Remote and Embedded Traffic Control System
Presented: Fall 1991
Committee: Dr. S. Wunnava (Major Professor)
Dr. G. Roig

Candidate: Huang, Wenlue
Title: Application of Adaptive Control Theory to Lenear Inductor Alternator Design
Presented: Spring 1990
Committee: Dr. K. Yen (Major Professor)
Dr. G. Roig
Dr. J. Andrian

Candidate: Kim, Seonki
Title: Oscillation Mode Modeling and Control for Flexible Robot Arm
Presented: Summer 1988
Committee: Dr. K. Yen (Major Professor)
Dr. G. Roig
Dr. J. Andrian

Candidate: Múndulas, Jorge M.
Title: Electrostatic Coupler for Improved Radio-Frequency Monitoring System on Generators
Presented: Summer 1987
Committee: Dr. O. Mohammed (Major Professor)
Dr. G. Roig

Ph. D. Thesis Defense Committee

Candidate: Ghoshray, Basbyasachi
Title: Improving the Predictability of Time Series by Chaotic
Parameter Estimation
Presented: Spring 1999
Committee: Dr. K. Yen (Major Professor)
Dr. G. Roig
Dr. S. Wunnava

Candidate: Becerra-Fernandez, Irma
Title: Encryption Based Security for Integrated Services Digital
Network Communication: Technique and Application
Presented: Fall 1994
Committee: Dr. S. Wunnava (Major Professor)
Dr. M. Heimer
Dr. G. Roig
Dr. K. Yen

Candidate: Cereijo Martinez, Maria
Title: A new Parallel Technique for the Solution of Sparse
Nonlinear Equations
Presented: Fall 1994
Committee: Dr. D. Barton (Major Professor)
Dr. G. Roig

PROPOSALS AWARDED

2000-2005

Project/Proposal Title: **Gear Up Homestead Program**

Principal Investigator: **Roig**
Source of Support: **U.S Department of Education**
Amount: \$ **\$8,200,000**

Project/Proposal Title: **Project Vision**

Principal Investigator: **Roig**
Source of Support: **NASA**
Amount: \$ **\$170,000**

Project/Proposal Title: **Florida Collaborative for Excellence in Teaching
Preparation (FCETP)**

Principal: Investigator **Roig**
Source of Support:

Amount \$:	NSF/FAMU \$131,000
Project/Proposal Title:	Miami Pre Freshmen Engineering Programs (Miami Prep/ Proyecto Access)
Principal Investigator:	Roig
Source of Support:	NASA/ University of San Antonio
Amount \$:	\$347,000
Project/Proposal Title:	Engineering and Technology Industry Focus Center (IFC)
Principal Investigator:	Roig
Source of Support:	Youth CO-OP
Amount: \$	\$37,000
Project/Proposal Title:	SHPE Honores
Principal Investigator:	Roig
Source of Support:	NASA
Amount: \$	48,000.00
Project/Proposal Title:	Engineering and Technology Industry Focus Center (IFC)
Principal Investigator:	Roig
Source of Support:	Youth Co-Op
Amount: \$	\$74,000.00
Project/Proposal Title:	Bringing Science & Technology to Hispanic Youth through Televised, Spanish-LAN
Principal Investigator:	Roig
Source of Support:	NASA
Amount: \$	154,667.00
Project/Proposal Title:	Project M.A.S.T.T. Mathematics/Applied Sciences Teachers' Training
Principal Investigator:	Roig
Source of Support:	NASA
Amount	:\$183.249.00

Project/Proposal Title: **Florida Action for Minorities in Engineering (Summer 2001)**
 Principal: Investigator **Roig**
 Source of Support: Miami-Dade County Public Schools
 Amount \$: 29,440.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation in Engineering, Mathematics and Sciences (FG-LSAMP) Legislature**
 Principal Investigator: **Roig**
 Source of Support: Florida A&M University/NSF
 Amount \$: 100,175.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation**
 Principal Investigator: **Roig**
 Source of Support: Florida A&M University
 Amount: \$ 220,807.00

Project/Proposal Title: **Project VISION**
 Principal Investigator: **Roig**
 Source of Support: Miami-Dade County Public Schools
 Amount: \$ 4,800.00

Project/Proposal Title: **Educational Innovations in Science, Engineering and Mathematics, with a Comprehensive Students Pipeline: From Pre-College to Graduate Studies, Promoting Recruitment, Retention and Academic Excellence.**
 Principal Investigator: Malek
 Co-Principal Investigator: **Roig**
 Source of Support: Office of Naval Research
 Amount: \$ 150,000.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
 Principal Investigator: Padmore
 Co-Principal Investigator: **Roig**/Gilmer/Hynes
 Source of Support: Florida A&M University
 Amount: \$ 29,339.00

Project/Proposal Title: **Project VISION – George Washington Carver Elementary**
Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 1,200.00

Project/Proposal Title: **Project VISION/Kinloch Park Middle School**
Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools.
Amount: \$ 7,200.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
Principal Investigator: Padmore
Co Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 13,174.00

Project/Proposal Title: **Projecto ACCESS/Miami PREP**
Principal Investigator: **Roig**
Source of Support: Hispanic Association of Colleges and Universities
Amount: \$ 82,100.00

Project/Proposal Title: **Electrical Wiring Program at Barbara Goleman High School**
Principal Investigator: Caballero
Co-Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 8,100.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
Principal Investigator: Padmore
Co Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 154,213.00

Project/Proposal Title: **¡ENLACE Miami!**
Principal Investigator: **Roig**
Source of Support: W.K. Kellogg Foundation
Amount: \$ 375,000.00

Project/Proposal Title: **Project VISION**
Principal Investigator: **Roig**
Source of Support: NASA
Amount: \$ 100,000.00

1999-2000

Project/Proposal Title: **Project VISION**
Principal Investigator: **Roig**
Source of Support: APIRA of South Florida
Amount: \$ 4,000.00

Project/Proposal Title: **Project VISION/George Washington Elementary**
Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 1,800.00

Project/Proposal Title: **Project VISION/Kinlock Park Middle**
Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 3,675.00

Project/Proposal Title: **Project VISION/North-Dade Middle Schools**
Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 4,800.00

Project/Proposal Title: **Miami PREP/Proyecto ACCESS**
Principal Investigator: **Roig**
Source of Support: NASA/HACU
Amount: \$ 85,000.00

Project/Proposal Title: **Engineering and Technology Industry Focus Center (IFC)**
Principal Investigator: **Roig**
Source of Support: Training and Employment Council of South Florida
Amount: \$ 73,515.00

Project/Proposal Title: **SHPE Honores**
Principal Investigator: **Roig**
Source of Support: NASA
Amount: \$ 48,000.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP)**
Principal Investigator: **Roig**
Source of Support: Florida A&M University/NSF
Amount: \$ 1,177.00

Project/Proposal Title: **Project VISION**

Principal Investigator: **Roig**
Source of Support: NASA
Amount: \$ 300,132.00

Project/Proposal Title: **¡ENLACE Miami!**
Principal Investigator: **Roig**
Source of Support: W.K. Kellogg Foundation
Amount: \$ 100,000.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP)**
Principal Investigator: **Roig**
Source of Support: Florida A&M University
Amount: \$ 1,177.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
Principal Investigator: Padmore
Co-Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 30,758.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
Principal Investigator: Padmore
Co-Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 52,058.00

1998-99

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP)**
Principal Investigator: **Roig**
Source of Support: Florida A&M University
Amount: \$ 145,792.00

Project/Proposal Title: **Proyecto ACCESS/Miami PREP**
Principal Investigator: **Roig**
Source of Support: Hispanic Association of Colleges and Universities
Amount: \$ 51,742.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**
Principal Investigator: Padmore
Co-Principal Investigator: **Roig**/Gilmer/Hynes

Source of Support: Florida A&M University
Amount: \$ 18,898.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**

Principal Investigator: Padmore
Co-Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 1,504.00

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation**

Principal Investigator: Padmore
Co-Principal Investigator: **Roig**/Gilmer/Hynes
Source of Support: Florida A&M University
Amount: \$ 1,028.00.

Project/Proposal Title: **Proyecto ACCESS/Miami PREP**

Principal Investigator: **Roig**
Source of Support: HACU
Amount: \$ 10,000.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP)**

Principal Investigator: **Roig**
Source of Support: Florida A&M University
Amount: \$ 68,000.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Summer 1999**

Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 29,440.00

Project/Proposal Title: **Apprentice for a Positive Tomorrow (APT) – Annually**

Principal Investigator: Caballero
Co-Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 33,042.00

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP)**

Principal Investigator: **Roig**
Source of Support: Florida A&M University
Amount: \$ 3,500.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Fall 1999 and Spring 2000**

Principal Investigator: **Roig**
Source of Support: Miami Coral Park Senior High School / M-DCPS
Amount: \$ 32,250.00

Project/Proposal Title: **JETS/Unite - Annual**
Principal Investigator: **Roig**
Source of Support: Junior Engineering Technical Society/US Department of Education
Amount: \$ 30,000.00

Project/Proposal Title: **Engineering and Technology Industry Focus Center (I.F.C.)**
Principal Investigator: **Roig**
Co-Principal Investigator: Fins
Source of Support: Training and Employment Council of South FL
Amount: \$ 75,849.00
DSRT# 99-068

Project/Proposal Title: **GEAR UP Homestead Program / Five years**
Principal Investigator: **Roig**
Source of Support: US Department of Education
Amount: \$ 7,548,000.00
F.I.U. DSRT #:

Project/Proposal Title: **Project VISION**
Principal Investigator: **Roig**
Source of Support: NASA/Kennedy Space Center
Amount: \$ 106,594.00
F.I.U. DSRT #:

Project/Proposal Title: **Florida Collaborative for Excellence in Teacher Preparation (F.C.E.T.P.) Two Years**
Principal Investigator: Padmore
Co. Principal Investigators: Gilmer/**Roig**/Hynes
Source of Support: National Science Foundation
Amount: \$ 17,116.00

Project/Proposal Title: **Project VISION/Teacher Training Program-Annual**
Principal Investigator: **Roig**
Source of Support: M-DCPS/Kinloch Middle School
Amount: \$ 3,444
F.I.U. DSRT #: 99-061

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FGAMP) Five years**
 Principal Investigator: **Roig**
 Source of Support: Florida Agricultural and Mechanical University/NSF
 Amount: \$ 50,000.00
 F.I.U. DSRT #: 99-058

Project/Proposal Title: **Project ACCESS/Miami PREP - Annual/Summer '99**
 Principal Investigator: **Roig**
 Source of Support: HACU/NASA
 Amount: \$ 28,258.00
 F.I.U. DSRT #: 99-019

Project/Proposal Title: **Project VISION/Teacher Training Program-Annual**
 Principal Investigator: **Roig**
 Source of Support: M-DCPS/Kinlock Park Elementary
 Amount: \$ 3,000.00
 F.I.U. DSRT #: 98-553

Project/Proposal Title: **Very Intensive Scientific Intercurricular Onsite Education, Project VISION Two Years - 2nd Year**
 Principal Investigator: **Roig**
 Co-Principal Investigator: Fernandez/Ebadian
 Source of Support: NASA/John F. Kennedy Space Center
 Amount: \$ 200,000.00

Project/Proposal Title: **Metal Ceramic Composite Materials Market Study One Year**
 Principal Investigator: Rippen
 Co-Principal Investigator: **Roig**
 Source of Support: Ceramic Composites Limited
 Amount: \$ 25,000.00
 F.I.U. DSRT #: 99-044

Project/Proposal Title: **Junior Engineering Technical Society/JETS-Annual**
 Principal Investigator: **Roig**
 Source of Support: Junior Engineering Technical Society
 Amount: \$ 20,000.00
 F.I.U. DSRT #: 98-303

Project/Proposal Title: **USI/PLASMAS/Institution of Higher Education Partnership, Annual**
 Principal Investigator: **Roig**
 Source of Support: M-DCPS/Division of USI Mathematics and Science

Amount: \$ 917.00
F.I.U. DSRT #: 98-444

Project/Proposal Title: **Apprentice for a Positive Tomorrow (APT)-
Annual**

Principal Investigator: **Caballero**
Co-Principal Farmer/Mitrani/**Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 283.00
F.I.U. DSRT #: 98-391

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for
Minority Participation, Five Year - Year Around**

Principal Investigator: **Roig**
Source of Support: Florida A&M University/NSF
Amount: \$ 100,180.00
F.I.U. DSRT #: 98-379

Project/Proposal Title: **Florida Action for Minorities in Engineering -
Year Around**

Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 32,250.00
F.I.U. DSRT #: 98-383

Project/Proposal Title: **Apprentice for a Positive Tomorrow (APT) Year
Around**

Principal Investigator: **Caballero**
Co-Principal Farmer/Mitrani/**Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 18,517.00
F.I.U. DSRT #: 98-391

Project/Proposal Title: **A software-hardware integrated approach for
real-time information processing and computer
design, Three Years**

Principal Investigator: Barreto
Co-Principal Investigators: Adjouadi/Jacko/**Roig**/Pasztor
Source of Support: National Science Foundation
Amount: \$ 333,973.00
F.I.U. DSRT #: 98-122

1997-98

Project/Proposal Title: **Aeronautics Learning Laboratory for science,**

**technology and Research (All Star) Network -
Year three-Year Around**

Principal Investigator: Levy
Co-Principal Investigator: Ebadian/**Roig**
Source of Support: NASA/Ames Research Center
Amount: \$ 16,757.00
F.I.U. DSRT #: 95-55

Project/Proposal Title: **The Engineering and Technology Industry Focus
Center**

Principal Investigator: **Roig**
Source of Support: Training and Employment Council of South FL
Amount: \$ 54,000.00
DSRT#

Project/Proposal Title: **Homestead Middle School-Year Around**

Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 9,700.00
F.I.U. DSRT #: 98-211

Project/Proposal Title: **Professional Development for Elementary
Teachers Annual**

Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 643.00
F.I.U. DSRT #: 98-247

Project/Proposal Title: **Florida Action for Minorities in Engineering
(FLAME) - Summer 1998**

Principal Investigator: **Roig**
Source of Support: Miami-Dade County Public Schools
Amount: \$ 29,440.00
F.I.U. DSRT #: 98-273

Project/Proposal Title: **Establishment of an Integrated Infrastructure for Learning
Strategies and Human-Computer Interaction: A Partnership
between FIU and the NSF-Center for Interdisciplinary
Research on Constructive Learning Environment**

Principal Investigator: Adjouadi
Co-Principal Investigator: Barreto/Jacko/Pasztor/**Roig**
Source of Support: National Science Foundation
Amount: \$ 422,391.00
F.I.U. DSRT #: 98-184

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation (FGAMP) Five Year - Year Around**
Principal Investigator: **Roig**
Source of Support: National Science Foundation
Amount: \$ 126,756.00
F.I.U. DSRT #: 98-176

Project/Proposal Title: **Aeronautics Learning Laboratory for Science, Technology and Research (All Star) Network - Third Year, Year Around**
Principal Investigator: Levy
C Principal Investigator: Ebadian/**Roig**
Source of Support: NASA/Ames Research Center
Amount: \$ 292,529.00
F.I.U. DSRT #: 95-55

Project/Proposal Title: **Proyecto Access (Miami PREP) Annual, 2nd Year**
Principal Investigator: **Roig**
Source of Support: Hispanic Association of Colleges and Universities (HACU)/NASA
Amount: \$ 97,200.00
F.I.U. DSRT #: 97-44

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation in Science, Engineering and Mathematics - Five Years, Year Around**
Principal Investigator: **Roig**
Source of Support: Florida A & M University/NSF
Amount: \$ 57,402.00
F.I.U. DSRT #: 92-272

Project/Proposal Title: **Very Intensive Scientific Intercurricular Onsite Education (Project VISION) Two years, First year**
Principal Investigator: **Roig**
Co-Principal Investigator: Norwood/Becerra-Fernandez/Ebadian
Source of Support: NASA/Kennedy Space Center
Amount: \$ 400,000.00 (First Year – 1997-98)
F.I.U. DSRT #: 97-32

Project/Proposal Title: **Aeronautic Learning Laboratory for Science, Technology and Research (Year three)**
Principal Investigator: Levy
C Principal Investigator: Ebadian/**Roig**
Source of Support: NASA

Amount: \$ 100,000.00
F.I.U. DSRT #: 95-55

Project/Proposal Title: **Florida/Georgia Louis Stokes Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years**

Principal Investigator: **Roig**
Source of Support: Florida A & M University/NSF
Amount: \$ 100,180.00
F.I.U. DSRT #: 97-380

Project/Proposal Title **Florida Action for Minorities in Engineering Year Around**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Amount: \$ 32,250.00
F.I.U. DSRT #: 97-376

Project/Proposal Title: **Florida Action for Minorities in Engineering, Year Around**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Amount: \$ 26,764.00
F.I.U. DSRT #: 97-246

Project/Proposal Title: **Interactive Video Conference, One Year**

Principal Investigator: **Roig**
Source of Support: Nasa
Amount: \$ 20,000.00
F.I.U. DSRT #: 97-440

Project/Proposal Title: **Apprentice for a Positive Tomorrow (Project APT) Annual**

Principal Investigator: **Caballero**
C Principal Investigator: Farmer/Mitrani/**Roig**
Source of Support: Dade County Public Schools
Amount: \$ 18,800.00
F.I.U. DSRT #: 97-447

Project/Proposal Title: **JETS/UNITE, Annual**

Principal Investigator: **Roig**
Source of Support: Junior Engineering Technical Society/US Army
Amount: \$ 30,000.00
F.I.U. DSRT #: 97-450

Project/Proposal Title: **Establishing a Comprehensive Educational Pipeline from Existing Pre-college Programs to Graduate Studies in the ECE Department**
Principal Investigator: Malek
Co-Principal Investigator: **Roig/Yen/Barreto/Heimer/Tansel/Fernandez**
Source of Support: US Department of Defense
Amount: \$ 210,814.00
F.I.U. DSRT #: 97-452

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years, year Around**
Principal Investigator: **Roig**
Source of Support: Florida A & M University/NSF
Amount: \$ 24,900.00
F.I.U. DSRT #: 92-272C

1996-97

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering and Mathematics – Five Years, Year Around**
Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 57,920.00
F.I.U. DSRT #: 92-272C

Project/Proposal Title: **Richmond Heights Middle School, Annual**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 1,200.00

Project/Proposal Title: **Proyecto ACCESS Annual, First Year**
Principal Investigator: **Roig**
Source of Support: Hispanic Association of Colleges and Universities/NASA
Award Amount: \$ 108,262.00
F.I.U. DSRT #: 97-44

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering and Mathematics – Five years, (Teacher Preparation)**
Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/NSF

Award Amount: \$ 16,752.00
F.I.U. DSRT #: 92-272C

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering and Mathematics – Year 5**

Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 24,900.00
F.I.U. DSRT #: 92-272C

Project/Proposal Title: **Homestead Middle School, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 9,750.00
F.I.U. DSRT #: 97-37

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 26,764.00
F.I.U. DSRT #: 97-246

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering and Mathematics, Five Years**

Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/
Florida State Legislature
Award Amount: \$ 100,180.00
F.I.U. DSRT #: 96-371

Project/Proposal Title: **JETS/UNITE, Annual**

Principal Investigator: **Roig**
Source of Support: Junior Engineering Technical Society/US Army
Award Amount: \$ 30,000.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 5,640.00
F.I.U. DSRT #: 96-349

Project/Proposal Title: **Multidimensional and Multispectral Information Processing and Computational Aspects**

Principal Investigator: **Adjouadi**
CoP. Investigator: Story/**Roig**/Subbarao
Source of Support: National Science Foundation
Award Amount: \$ 221,065.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 5,640.00
F.I.U. DSRT #: 96-349

1995 – 96

Project/Proposal Title: **Apprentices for a Positive Tomorrow (APT), Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 8,000.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 26,764.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, five Years**

Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 182,856.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 21,360.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years**

Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/Florida State Legislature
Award Amount: \$ 100,180.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Summer Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 600.00

Project/Proposal Title: **JETS/UNITE, Annual**
Principal Investigator: **Roig**
Source of Support: Junior Engineering Technical Society/US Army
Award Amount: \$ 30,000.00
Project/Proposal Title: **Miscellaneous Funds**
Principal Investigator: **Roig**
Source of Support: Miscellaneous Donors
Award Amount: \$ 4,000.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering and Mathematics – Summer Program**
Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 32,858.00

Project/Proposal Title: **Aeronautics Learning Laboratory for Science Technology and Research Network**
Principal Investigator: Levy
Co-Principal Investigator: **Roig**/Ebadian
Source of Support: NASA
Award Amount: \$ 226,977.00

Project/Proposal Title: **Dual Enrollment Program Between the Design and Architecture Senior High and FIU School of Design**
Principal Investigator: Rosales
Co-Principal Investigator: **Roig**/Majzub/Bueno
Source of Support: Dade County Public Schools
Award Amount: \$ 18,000.00

1994-95

Project/Proposal Title: **DOE/PREP, One Year**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 13,382.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Summer Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 13,382.00

Project/Proposal Title: **QEM/NASA Sharp Plus, One Year**
Principal Investigator: **Roig**
Co-Principal Investigator: Yen
Source of Support: QEM/NASA
Award Amount: \$ 48,700.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years**
Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 147,246.00

Project/Proposal Title: **JETS/UNITE, Annual**
Principal Investigator: **Roig**
Source of Support: Junior Engineering Technical Society/DoD USA
Award Amount: \$ 30,000.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics five Years**
Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/Florida State Legislature
Award Amount: \$ 100,180.00

Project/Proposal Title: **Aeronautics Learning Laboratory for Science Technology and Research Network, Annual**
Principal Investigator: Levy
Co-Principal Investigator: **Roig/Ebadian**
Source of Support: NASA
Award Amount: \$ 172,780.00

Project/Proposal Title: **Dual Enrollment Program between the Design and Architecture Senior High School and FIU School of Design**
Principal Investigator: Majzub
Co-Principal Investigator: **Roig**/Rosales
Source of Support: Dade County Public Schools
Award Amount: \$ 10,000.00

Project/Proposal Title: **Improvement and Enhancement of Engineering Education at FIU**
Principal Investigator: Levy
Co-Principal Investigator: Yih/Ebadian/**Roig**
Source of Support: DOE
Award Amount: \$ 63,869.00

1993-94

Project/Proposal Title: **Florida Action for Minorities in Engineering – Summer Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 13,382.00

Project/Proposal Title: **USDOE PREP Project – Summer Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools/USDOE
Award Amount: \$ 19,329.00

Project/Proposal Title: **Fall/Winter Magnet Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 29,940.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years**
Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 217,660.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five years**
Principal Investigator: **Roig**
Source of Support: Florida Agricultural and Mechanical University/Florida State Legislature
Award Amount: \$ 93,032.00

Project/Proposal Title: **JETS/UNITE, Annual**
Principal Investigator: **Roig**
Co-Principal Investigator: Tansel/Schmidt/Yen
Source of Support: Junior Engineering Technical Society/US Army
Award Amount: \$ 30,000.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Summer Outreach Program**
Principal Investigator: **Roig**
Source of Support: Dade County Public Schools
Award Amount: \$ 65,340.00

Project/Proposal Title: **Establishment of an Institutional Infrastructure: Center for Advanced Technology Education**
Principal Investigator: Adjouadi/Arefi/ **Roig**
Co-Principal Investigator: Evangelist/Story/Wunnava/Holmes/Park/Deng
Source of Support: NSF
Award Amount: \$ 900,044.00

1992-93

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**
Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt/Andrian/Yen
Source of Support: Dade County Public Schools
Award Amount: \$ 24,075.00

Project/Proposal Title: **Florida/Georgia Alliance for Minority Participation in Science, Engineering, and Mathematics, Five Years**
Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt
Source of Support: Florida Agricultural and Mechanical University/NSF
Award Amount: \$ 103,040.00

Project/Proposal Title: **Florida Action for Minorities in Engineering –**

Summer Institute – Executive Internship – Full Immersion

Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt/Andrian
Source of Support: Dade County Public Schools
Award Amount: \$ 35,202.00

Project/Proposal Title: **Improvement and Enhancement of Engineering Education at FIU**

Principal Investigator: Levy
Co-Principal Investigator: Ebadian/Yih/**Roig**
Source of Support: DOE
Award Amount: \$ 164,567.00

Project/Proposal Title: **Effective Mobility Enhancement and Noise in Silicon on Insulator Mosfets**

Principal Investigator: Schmidt
Co-Principal Investigator: **Roig**/Andrian
Source of Support: DoD NASA
Award Amount: \$ 44,937.00

Project/Proposal Title: **FIU – PREP Program**

Principal Investigator: Ebadian
Co-Principal Investigator: Levy/Yih/**Roig**
Source of Support: US EPA
Award Amount: \$ 39,904.00

1991-92

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Co-Principal Investigator: Hopkins/Schmidt
Source of Support: Dade County Public Schools
Award Amount: \$ 17,100.00

Project/Proposal Title: **Gateway Engineering Education Coalition**

Principal Investigator: Hopkins
Co-Principal Investigator: **Roig**/Lulu/Story/Heimer
Source of Support: Drexel University/NSF
Award Amount: \$ 343,000.00

Project/Proposal Title: **FIU MUTEK Program**

Principal Investigator: Levy

Co-Principal Investigator: **Roig/Ebadian/Yih**
Source of Support: DOE
Award Amount: \$ 100,000.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Full Immersion – Summer Program**
Principal Investigator: Hopkins
Co-Principal Investigator: **Roig/Schmidt/Yen**
Source of Support: Dade County Public Schools
Award Amount: \$ 26,525.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**
Principal Investigator: Hopkins
Co-Principal Investigator: **Roig/Andrian**
Source of Support: Dade County Public Schools
Award Amount: \$ 16,240.00

Project/Proposal Title: **Florida Action for Minorities in Engineering – Executive Program Dade County Public Schools – FIU**
Principal Investigator: Hopkins
Co-Principal Investigator: **Roig/Schmidt**
Source of Support: Dade County Public Schools
Award Amount: \$ 2,640.00

Project/Proposal Title: **Effective Mobility Enhancement and Noise in Silicon-On-Insulator Mosfets**
Principal Investigator: Schmidt
Co-Principal Investigator: **Roig/Andrian**
Source of Support: DOD
Award Amount: \$ 99,887.00

Project/Proposal Title: **Diamonds Films Formed by the Ionized Cluster Beam Deposition Technique**
Principal Investigator: Schmidt
Co-Principal Investigator: **Roig/Urban**
Source of Support: DOD
Award Amount: \$ 102,193.00

1990-91

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**
Principal Investigator: **Roig**

Co-Principal Investigator: Schmidt/Yen
Source of Support: Dade County Public Schools
Award Amount: \$ 44,046.00

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Co-Principal Investigator: Schmidt/Yen
Source of Support: Dade County Public Schools
Award Amount: \$ 17,204.00

Project/Proposal Title: **Computer Aided Multimedia Delivery System for Beginning Level Engineering Courses**

Principal Investigator: Story
Co-Principal Investigator: **Roig/Ray**
Source of Support: US DOE
Award Amount: \$ 49,989.00

Project/Proposal Title: **Investigation of Metal-Synthetic Diamond-Metal Systems**

Principal Investigator: Schmidt
Co-Principal Investigator: **Roig**
Source of Support: DOD
Award Amount: \$ 38,044.00

1989-90

Project/Proposal Title: **Florida Action for Minorities in Engineering, Annual**

Principal Investigator: **Roig**
Co-Principal Investigator: Story
Source of Support: Dade County Public Schools
Award Amount: \$ 35,000.00

1988-89

Project/Proposal Title: **Digital Communication System – Increase**

Principal Investigator: **Roig**
Co-Principal Investigator: Yen
Source of Support: Arguellos Ent.- Caracas, Venezuela
Award Amount: \$ 5,000.00

Project/Proposal Title: **Digital/Analog Transceiver & Processor**

Principal Investigator: **Roig**
Source of Support: Telecash Corp.- Caracas, Venezuela

Award Amount: \$ 37,000.00

1987-88

Project/Proposal Title: **Florida Action for Minorities in Engineering,
Annual**

Principal Investigator: **Roig**

Co-Principal Investigator: Story

Source of Support: Dade County Public Schools

Award Amount: \$ 42,450.00

Project/Proposal Title: **Digital Communication System**

Principal Investigator: **Roig**

Co-Principal Investigator: Yen

Source of Support: Arguellos Ent.- Caracas, Venezuela

Award Amount: \$ 14,716.00

1986-87

Project/Proposal Title: **Design & Construction of a Low Cost Hearing
Aid for the Medically Declared Deaf**

Principal Investigator: **Roig**

Source of Support: Academic Affairs Summer Research Competition

Award Amount: \$ 9,452.62