Diversity at USF

"Developing Global Leaders in STEM...One Student at a time"

A Report on Minority Doctoral Program Outcomes

NSF LSAMP Bridge to the Doctorate, IGERT, Alfred P. Sloan, McKnight

University of South Florida

The Alfred P. Sloan Foundation

The Florida Education Fund

The National Science Foundation

Florida-Georgia Louis Stokes for Minority Participation

A special thanks to Drs. A. James Hicks, Ralph Turner, Ted Greenwood, Lawerence Morehouse

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Director, Diversity and Outreach Programs

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Developing Global Leaders, Inspiring Student Success in STEM:
One student at a time

Since 2001, the University of South Florida, in partnership with the Alfred P. Sloan Foundation, National Science Foundation, and the Florida Education Fund's McKnight Doctoral Fellowship program has made strategic investments to enhance diversity in STEM. These efforts have resulted in successful recruitment and training of over **130** minority students in STEM graduate programs. At USF, the students have been recruited in the Colleges of Engineering, Marine Science, Arts and Sciences, and Medicine. These investments are now bearing fruit USF is now ranked as a leading producer of Minority PhD students in STEM (both African American and Hispanic). Thus far, over **20** students have received their doctoral degrees, over **50** are in the doctoral program and the rest are working towards admission into the doctoral program.

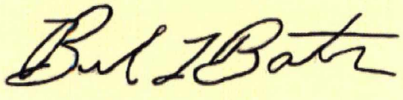
USFs strategic investments have facilitated the development of "best practices" and "interventions" for student success. These include: 1) professional development coursework to (a) help develop a cohort and (b) mentoring to help develop research problems and an early introduction to technical writing for successful fellowship applications (NSF, NASA, Ford, GEM, etc.) and journal publications; 2) a forum to develop their engagement, management and communication skills through undergraduate mentoring and K-12 outreach; 3) minority scientist-role model seminars to provide external mentoring ; 4) national lab internships (Brookhaven, Oak Ridge, Pacific Northwest National Lab, Naval Research Lab, NIST, NASA) to facilitate post-doctoral employment opportunities; 5) extended international research-training (Tanzania, China, Taiwan, New Zealand, Bolivia, Guyana, Antarctica, etc.) to provide students with a global perspective of research; and (6) working with various stakeholders to ensure the students are financially supported through the duration of their tenure.

The programs have contributed to the transformation of doctoral student profile at USF, which is now inching closer to national demographics, demonstrating that appropriately executed interventions positively influence outcomes. This transformation would not be possible without the vision and commitment of the University administration, faculty mentors/advisors and staff: We would like to thank our current and past leadership:

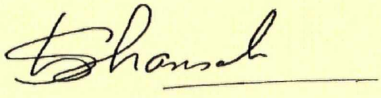
- College of Engineering: Drs. John Wiencek, Sunil Saigal, and Louis Martin-Vega
- College of Marine Science: Drs. Jacqueline Dixon, William Hogarth, and Peter Betzer
- College of Arts and Sciences: Drs. Eric Eisenberg and Cheryl Kirstein
- College of Medicine: Drs. Stephen Klasko, Eric Bennett, and Robert Deschenes
- Graduate School: Drs. Karen Liller, Richard Pollenz, Delcie Durham, Brent Weisman, Kellie McCormick Brown, and Dale Johnson
- Office of Research & Innovation: Drs. Karen Holbrook, Robert Chang, Ian Phillips, and Bruce Lindsey
- Office of the Provost and Executive Vice President: Drs. Ralph Wilcox and Renu Khator
- President: Dr. Judy Genshaft

And the Faculty PIs:

- NSF IGERT- SKINS: Drs. Shekhar Bhansali, Nagarajan Ranganathan, Don Hilbelink, Hariharan Srikanth, Thomas Weller
- NSF Bridge to Doctorate: Drs. Ashanti Johnson, Shekhar Bhansali, and Mr. Bernard Batson
- Alfred P. Sloan Foundation Doctoral Program (Marine Science): Dr. Ashanti Johnson
- Alfred P. Sloan Foundation Doctoral Program (Engineering): Drs. Shekhar Bhansali, Maya Trotz, Norma Alcantar, and Nathan Crane
- FEF Liaison: Drs. Shekhar Bhansali and Sylvia W. Thomas
- GEM Institutional Representative: Dr. Sylvia W. Thomas



Bernard Batson
Director, Diversity and Outreach Programs (CoE)
Program Administrator (Sloan, LSAMP-BD, & IGERT)



Shekhar Bhansali
Professor (Electrical Engineering)
PI (Sloan, LSAMP-BD, & IGERT:SKINS)

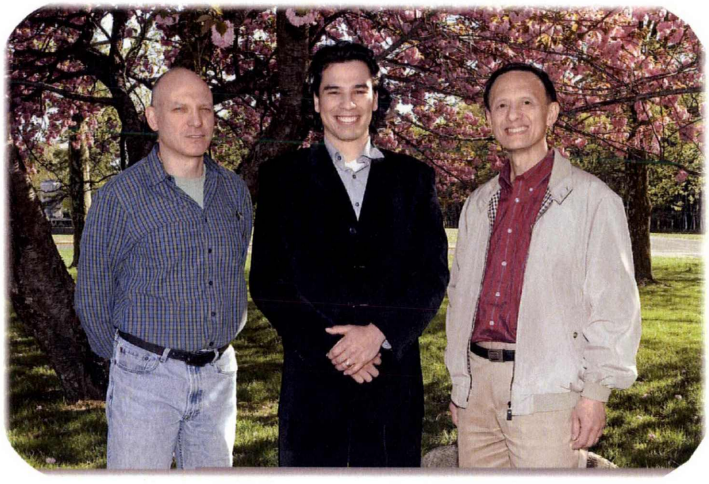
Program Investments

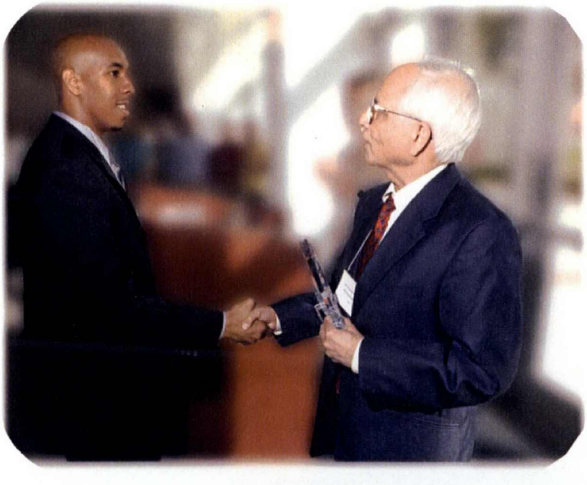
External dollars for student support
(USF contributions ~$2.0M)

- Bridge to the Doctorate - 4 awards (75 fellowships awardees)
- Including IGERT and SLOAN (155+ awards)
- $3.4 million – NSF IGERT
- $3.88 million – NSF BD
- $1.5 million – Sloan disbursements and commitments
- $1.5 million – McKnight disbursements and commitments
- $1.5 million – Peer Reviewed National fellowships

USF ROI – $2.0M invested, ~ $12M return

National Awards

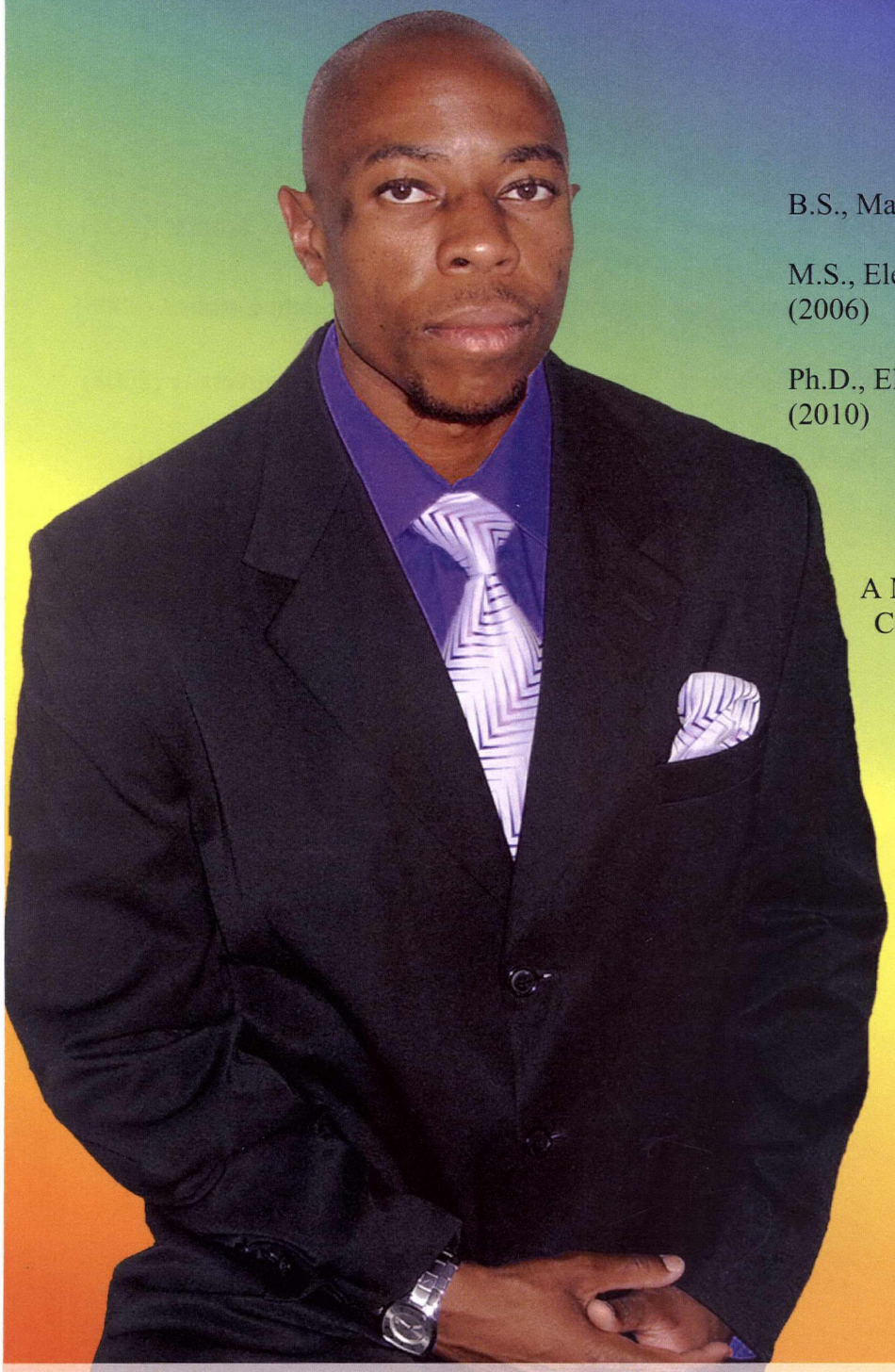




Program Graduates

Quenton Bonds, Ph.D. - Research Engineer

NASA Goddard Space Flight Center



EDUCATION

B.S., Mathematics, Alabama State University (2001)

M.S., Electrical Engineering, University of South Florida (2006)

Ph.D., Electrical Engineering, University of South Florida (2010)

DISSERTATION TITLE

A Microwave Radiometer for Close Proximity Core Body Temperature Extraction, Design, Development and Experimentation

"The Bridge to the Doctorate and McKnight programs are not only composed of individuals devoted to academic excellence but people who care. I'm no longer afraid to take on projects outside my field. In fact, I now integrate theories, concepts and ideas from other areas into my research adding creativity and uniqueness. Throughout my entire graduate program, both the BD-USF program have been vital components to my success."

Joseph T. Bonivel, Jr., Ph.D.

Engineering Science

EDUCATION

B.S., Mechanical Engineering, University of South Carolina (2004)

M.S., Mechanical Engineering, University of South Carolina (2006)

M.S., Mechanical Engineering, Carnegie-Mellon University (2008)

Ph.D., Engineering Science, University of South Florida (2010)

DISSERTATION TITLE

Consumable Process Development for Chemical Mechanical Planarization of Bit Patterned Media for Magnetic Storage Fabrication

The Bridge to Doctorate and Sloan programs were not only my support group for my doctoral research but also an epiphanic consortium to which I owe credit for some of the novelty of my research. Without the support (financially, intellectually, and socially) my growth as a researcher, engineer, and a person would not have been possible. I owe a debt of gratitude to the BD and Sloan families for their tireless efforts and support during my brief tenure at USF.

Camille Daniels, Ph.D. - Summer 2011 Graduate

College of Marine Science

EDUCATION

B.S., Biology, Louisiana State University (2002)

M.S., Biological Oceanography, University of South Florida (2005)

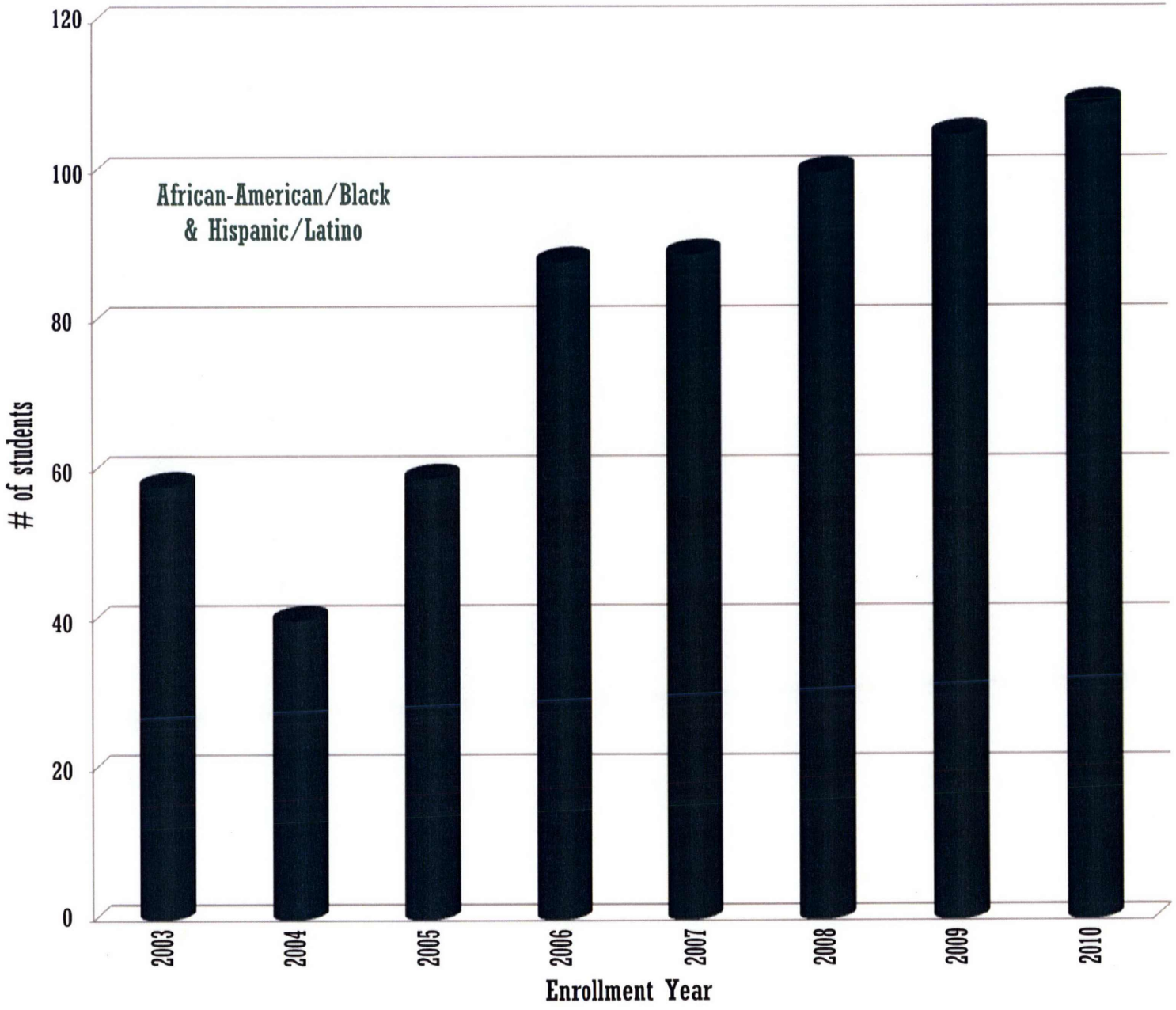
Ph.D, Biological Oceanography, University of South Florida (2011)

DISSERTATION TITLE

Microbial Landscapes of Cnidarians and Ctenophores

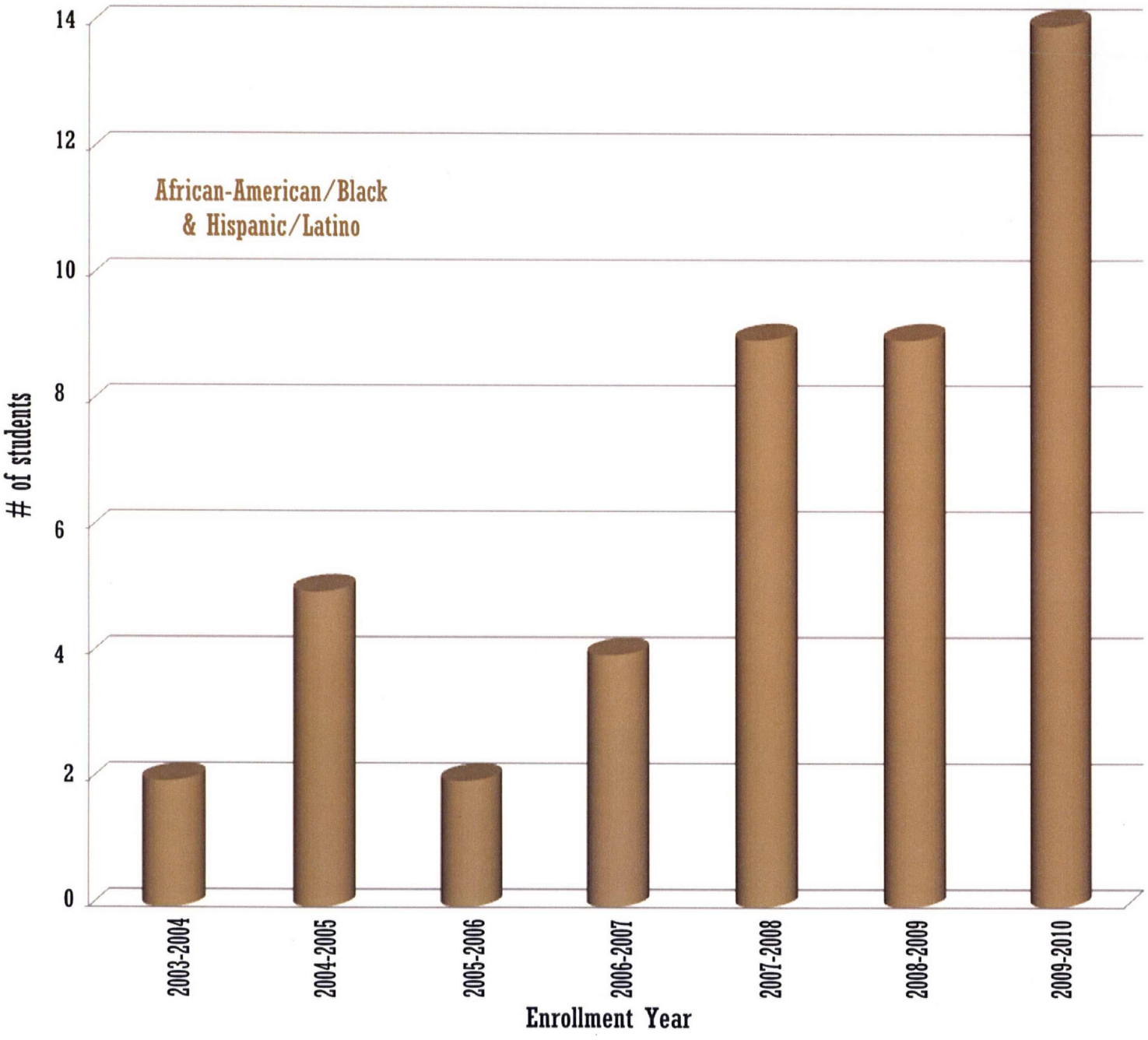
"The Bridge to the Doctorate and Sloan programs have provided a wealth of opportunity, funding, and community to support students pursuing graduate degrees in the STEM fields. While the ocean is occasionally my office, I know that upon my return I can always rely upon the engaging and collaborative atmosphere that faculty, staff, and students foster here at USF. This program affirms the power of educating and training a diverse group of scientists and engineers to innovate and mentor the next generation of inquisitive minds."

USF Doctoral Enrollment - STEM (2003-2010)



Source: USF INFOCENTER

USF Doctoral Degrees Awarded - STEM (2003-2010)



Source: USF INFOCENTER

Regina Easley, Ph.D. - August 2011 Graduate

College of Marine Science

EDUCATION

B.S., Chemistry, Hampton University (1999)

M.S., Chemistry, University of California, Los Angeles (2002)

Ph.D., Chemical Oceanography, University of South Florida (2011)

DISSERTATION TITLE

""High-resolution chemical sensor for unattended underwater networks""

In April 2010, Regina Easley participated in a NOAA sponsored research cruise to study the effects of the Deepwater Horizon oil spill in the Gulf of Mexico.

"Through my participation in the University of South Florida's LSAMP-BD program, I have been privileged to take part in a number of educational and career building opportunities. One of my best experiences in the Bridge to Doctorate program comes from daily interactions with other Bridge to Doctorate students. The support and encouragement of my fellow peers in the program has helped me maintain momentum to continually move forward."

Warner Ithier-Guzmán, Ph.D. - Environmental Scientist

University of Puerto Rico, Rio Piedras Campus

EDUCATION

B.S., Biology, Inter-American Univ. Puerto Rico (1998)

M.S., Environmental Protection and Evaluation, Inter-American University of Puerto Rico (2003)

M.S., Marine Science, University of South Florida (2007)

Ph.D, Marine Science, University of South Florida (2010)

DISSERTATION TITLE

Assessing the Ability of Soils and Sediment to Adsorb and Retain Cs-137 in Puerto Rico

"Obtaining my doctoral degree has been the achievement of the lifetime. All this has been possible to the continuous support of the University of South Florida, they provided the funding, guidance and professional support needed to achieve my goal. Thanks to them my research contribution has opened many doors in my native island of Puerto Rico."

Deidra Hodges, Ph.D. – Assistant Professor
Electrical Engineering, Southern Polytechnic State University (Marietta, GA)

EDUCATION

B.S., Physics, Dillard University (1982)

B.S., Electrical Engineering, Columbia University (1983)

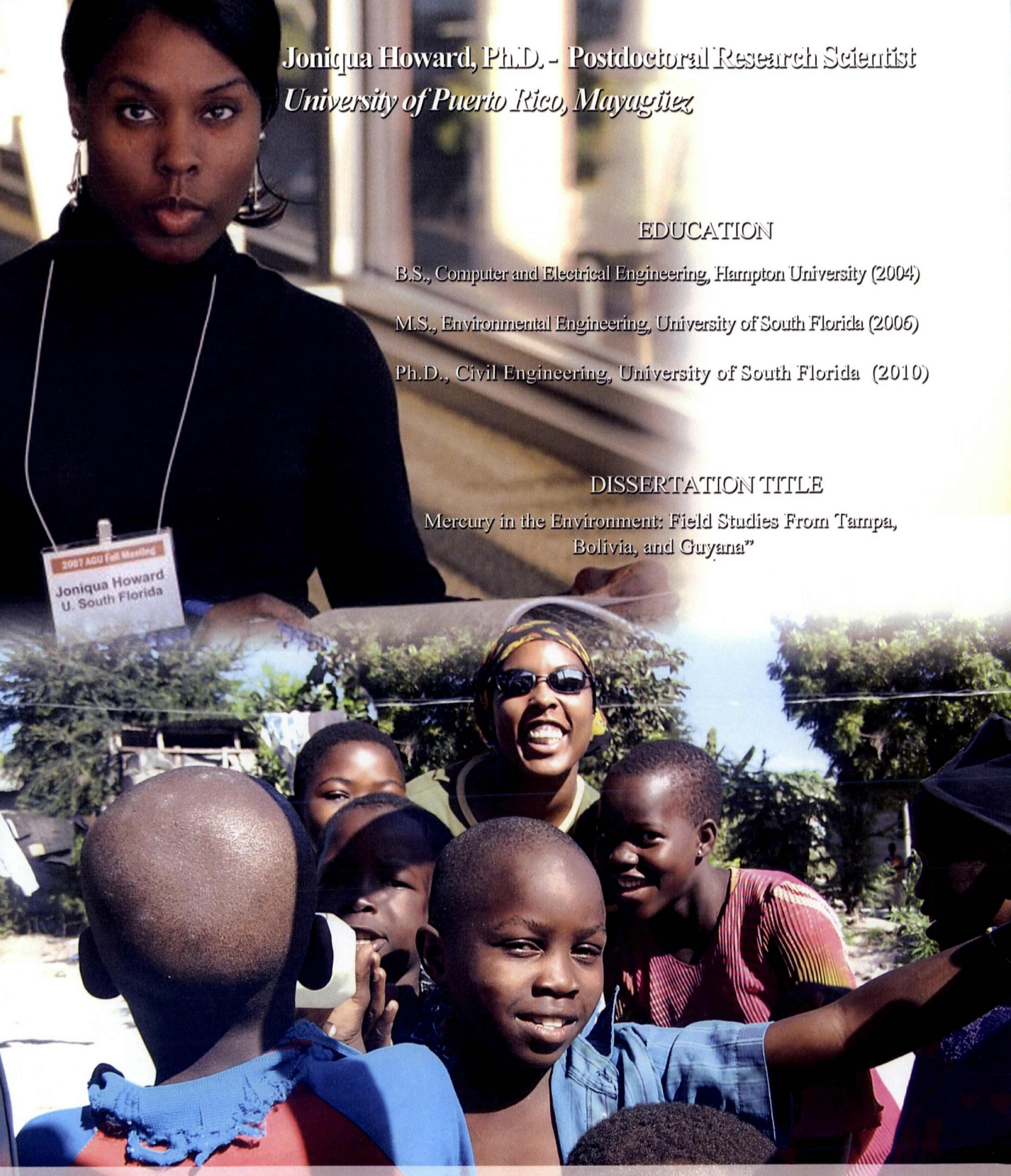
M.S., Electrical Engineering, Columbia University (1984)

Ph.D., Electrical Engineering, University of South Florida (2009)

DISSERTATION TITLE

Development of CdTe Thin Film Solar Cells on Flexible Substrate"

"Thank you very much for all of your support, invaluable knowledge gained in the conferences you provided, the opportunity to present, gain exposure and networking. Please keep up the outstanding work that you are doing! Your support and training opportunities, definitely had an impact on me and my career."



Joniqua Howard, Ph.D. - Postdoctoral Research Scientist

University of Puerto Rico, Mayagüez

EDUCATION

B.S., Computer and Electrical Engineering, Hampton University (2004)

M.S., Environmental Engineering, University of South Florida (2006)

Ph.D., Civil Engineering, University of South Florida (2010)

DISSERTATION TITLE

Mercury in the Environment: Field Studies From Tampa, Bolivia, and Guyana"

"The USF Bridge to the Doctorate experience has been a very enriching, rewarding, and above all empowering. It is more than simply a program of professionals, it is an extension of your imediate family! A place of safe refuge during the storm, as well as a place for growth, development, and unconditional love."

Jeffy P. Jimenez, Ph.D. - Research Scientist

Bausch & Lomb, Inc.

EDUCATION

B.S., Chemical Engineering, Los Andes University, Merida, Venezuela (2001)

M.S., Chemical Engineering, University of South Florida (2005)

Ph.D., Chemical Engineering, University of South Florida (2010)

DISSERTATION TITLE

Effects of Monoclonal Anti-Abeta Antibodies on the Amyloid Beta Peptide Fibrillogenesis and their Involvement in the Clearance of Alzheimer's Disease Plaques

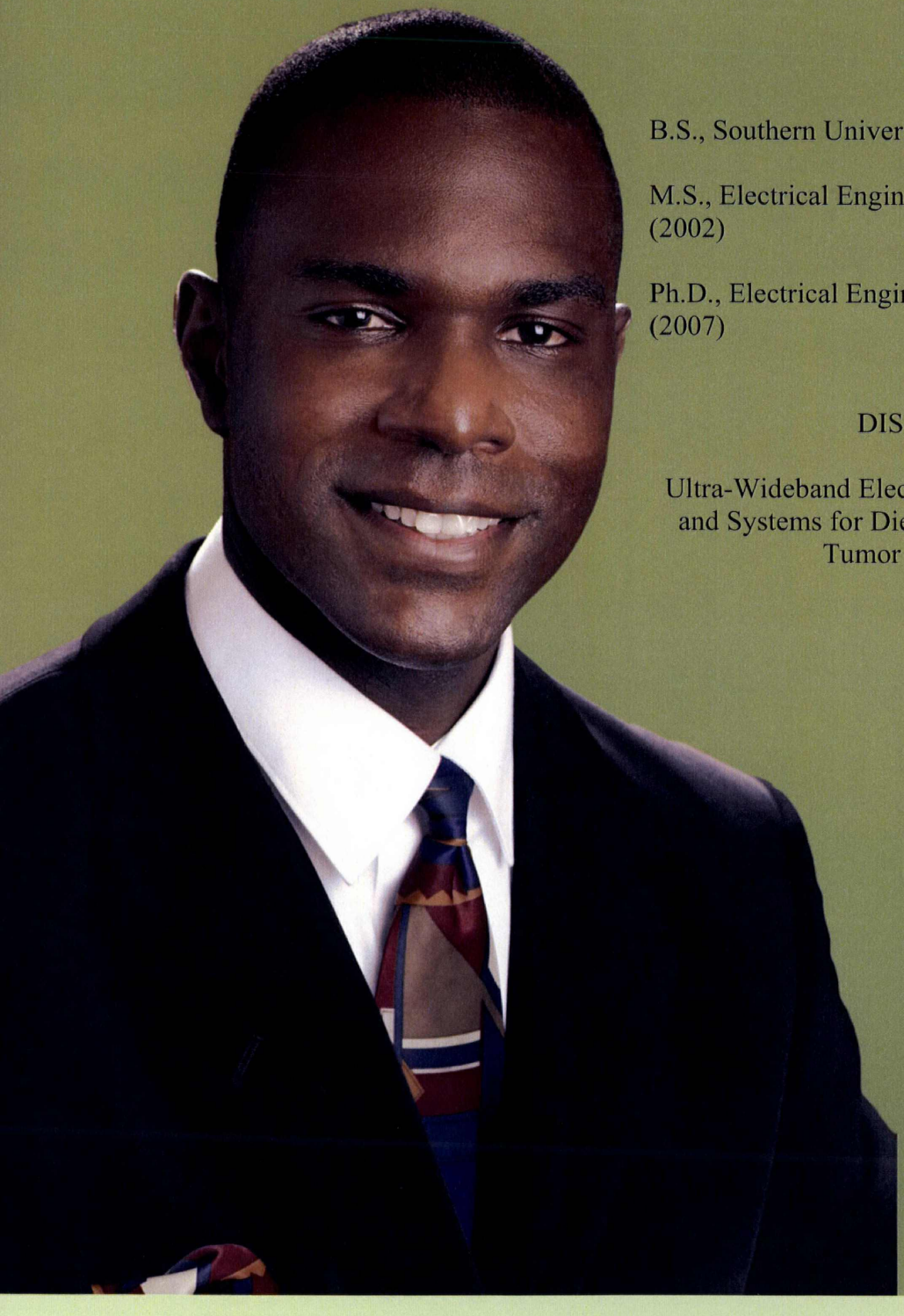
"I am very grateful to USF, not only for providing me with the opportunity to have a world class scientific training experience, but also for the mentoring and networking opportunities that enriched this experience. I feel privileged to have been part of some of the fellowship programs that are offered to USF engineering graduate students."

National Recruitment

- Alabama A&M University
- Alabama State University
- Albany State University
- Bethune-Cookman University
- Clark Atlanta University
- Delaware State University
- Florida A&M University
- Florida State University
- Hampton University
- Inter American University of Puerto Rico
- North Carolina A&T State University
- South Carolina State University
- Southern University and A&M College
- Texas A&M University, Corpus Christi
- University of Central Florida
- University of Florida
- University of Puerto Rico, Mayaguez
- University of South Carolina
- Virginia Union University
- University of Maryland-Baltimore County
- University of Maryland-College Park
- University of North Carolina-Chapel Hill
- University of Arizona

Erick Maxwell, Ph.D - Senior Research Engineer

Georgia Research Institute of Technology, Atlanta, Georgia



EDUCATION

B.S., Southern University, Electrical Engineering (1994)

M.S., Electrical Engineering, University of South Florida (2002)

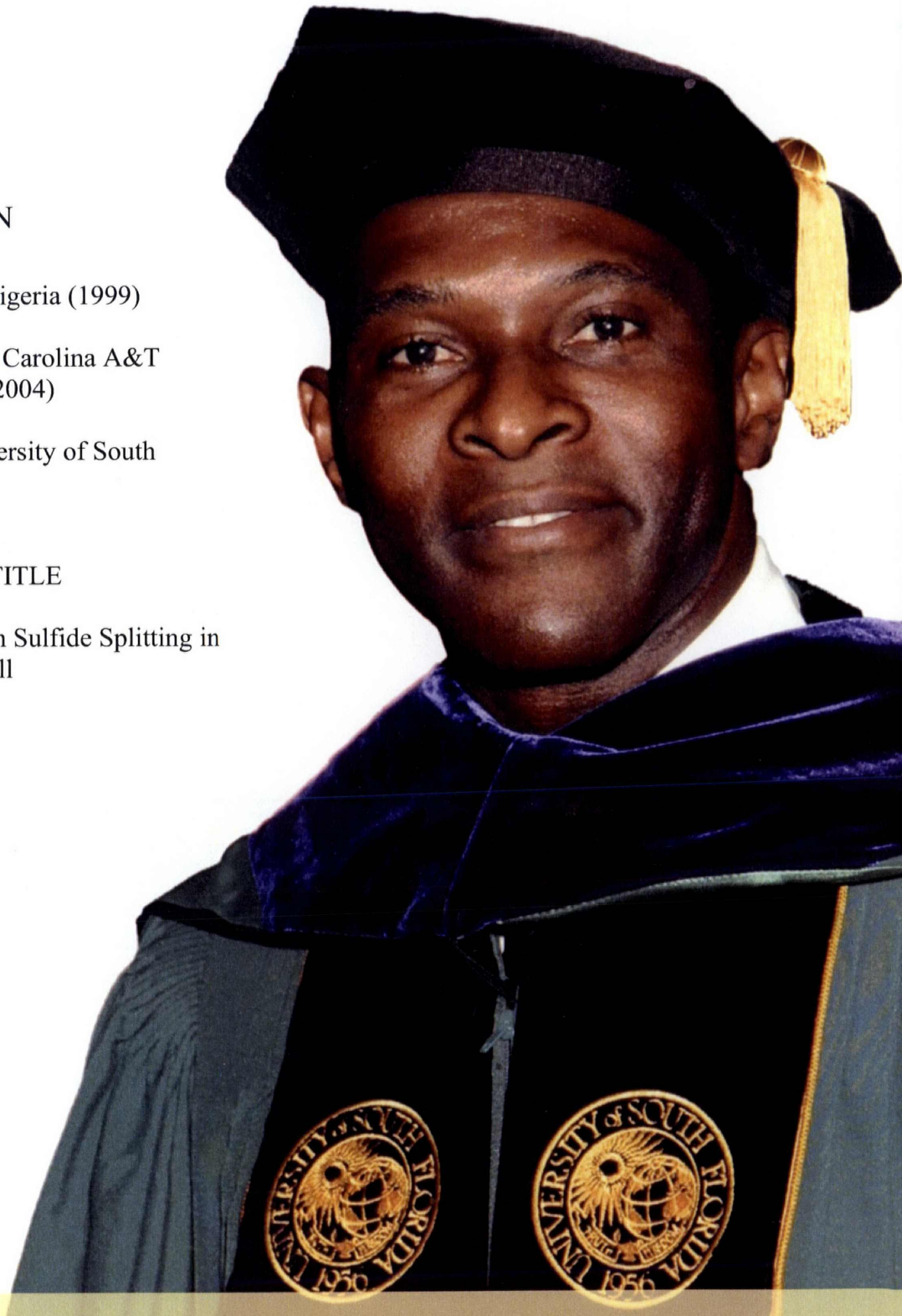
Ph.D., Electrical Engineering, University of South Florida (2007)

DISSERTATION TITLE

Ultra-Wideband Electronics, Design Methods, Algorithms, and Systems for Dielectric Spectroscopy of Isolated B16 Tumor Cells in Liquid Medium

"At USF, I was surrounded by a diverse cross-section of faculty, staff, and peers who were genuinely interested in my success as a student. These supporters served both officially and unofficially as my mentors, advisors, and instructors. Collectively, my experience at USF was one which provided not only the education for equipping me to make a technical contribution in my field, but also opportunities to use that education to successfully engage the community at large."

Jonathan Mbah, Ph.D. - Assistant Professor
Department of Chemical Engineering, Tuskegee University



EDUCATION

B.S., University of Lagos, Lagos, Nigeria (1999)

M.S., Chemical Engineering, North Carolina A&T State University, Greensboro, NC (2004)

Ph.D., Chemical Engineering, University of South Florida (2008)

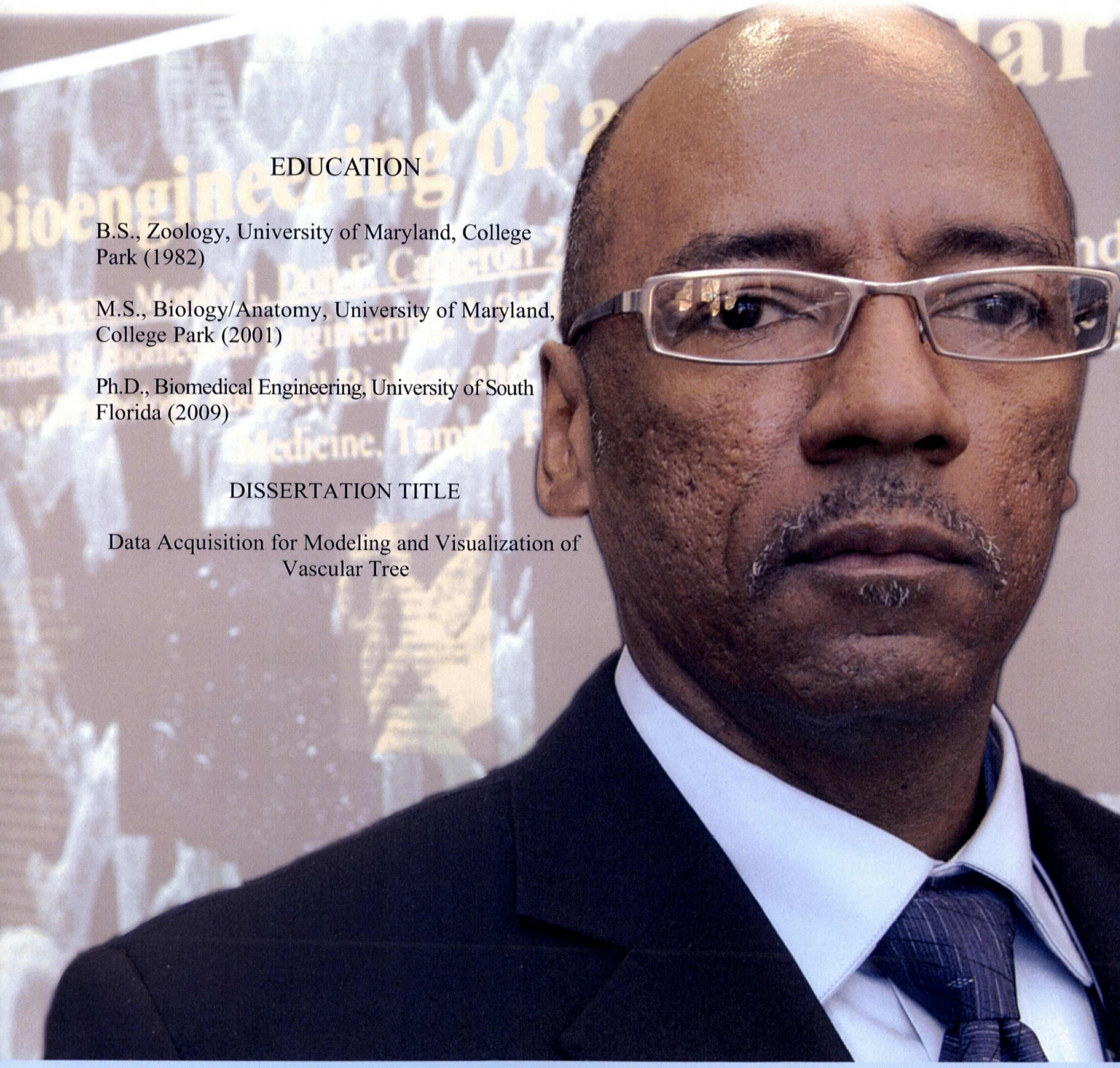
DISSERTATION TITLE

Endurance Materials for Hydrogen Sulfide Splitting in Electrolytic Cell

"I had tremendous and exciting experiences as a Ph.D. Chemical Engineering student at University of South Florida. The years were blissful and research experience was quite a remarkable one, considering the high standard of research and educational capabilities of the College of Engineering and USF in general. I cannot think of a better place to pursue a graduate program than at USF."

William L. Mondy, Ph.D. – Associate Professor,

Tissue Engineering and Cell Biology, Clafin University,(Orangeburg, SC)



EDUCATION

B.S., Zoology, University of Maryland, College Park (1982)

M.S., Biology/Anatomy, University of Maryland, College Park (2001)

Ph.D., Biomedical Engineering, University of South Florida (2009)

DISSERTATION TITLE

Data Acquisition for Modeling and Visualization of Vascular Tree

"The University of South Florida supported my efforts in designing and developing a research project from my own vision. The Sloan program facilitated opportunities to travel abroad for several international collaborations . The results were peer-reviewed publications, one being selected by my peers as the seventh most imortant article published on Biofabrication in 2009."

Roland Tenjoh Okwen, Ph.D. - Reservoir Research Engineer

Illinois State Geological Survey, Institute of Natural Resource Sustainability, University of Illinois, Urbana-Champaign

EDUCATION

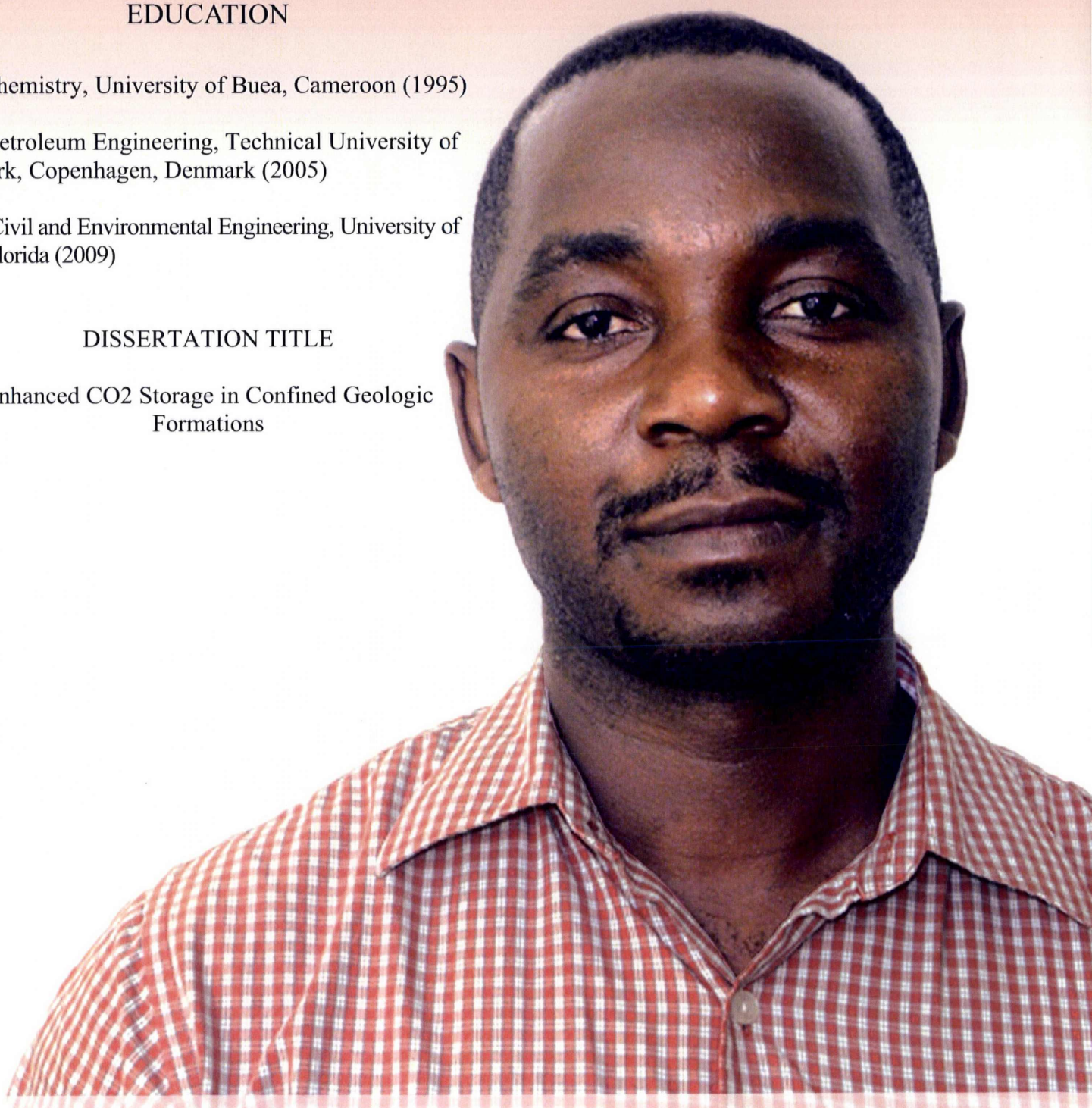
B.S., Chemistry, University of Buea, Cameroon (1995)

M.S., Petroleum Engineering, Technical University of Denmark, Copenhagen, Denmark (2005)

Ph.D., Civil and Environmental Engineering, University of South Florida (2009)

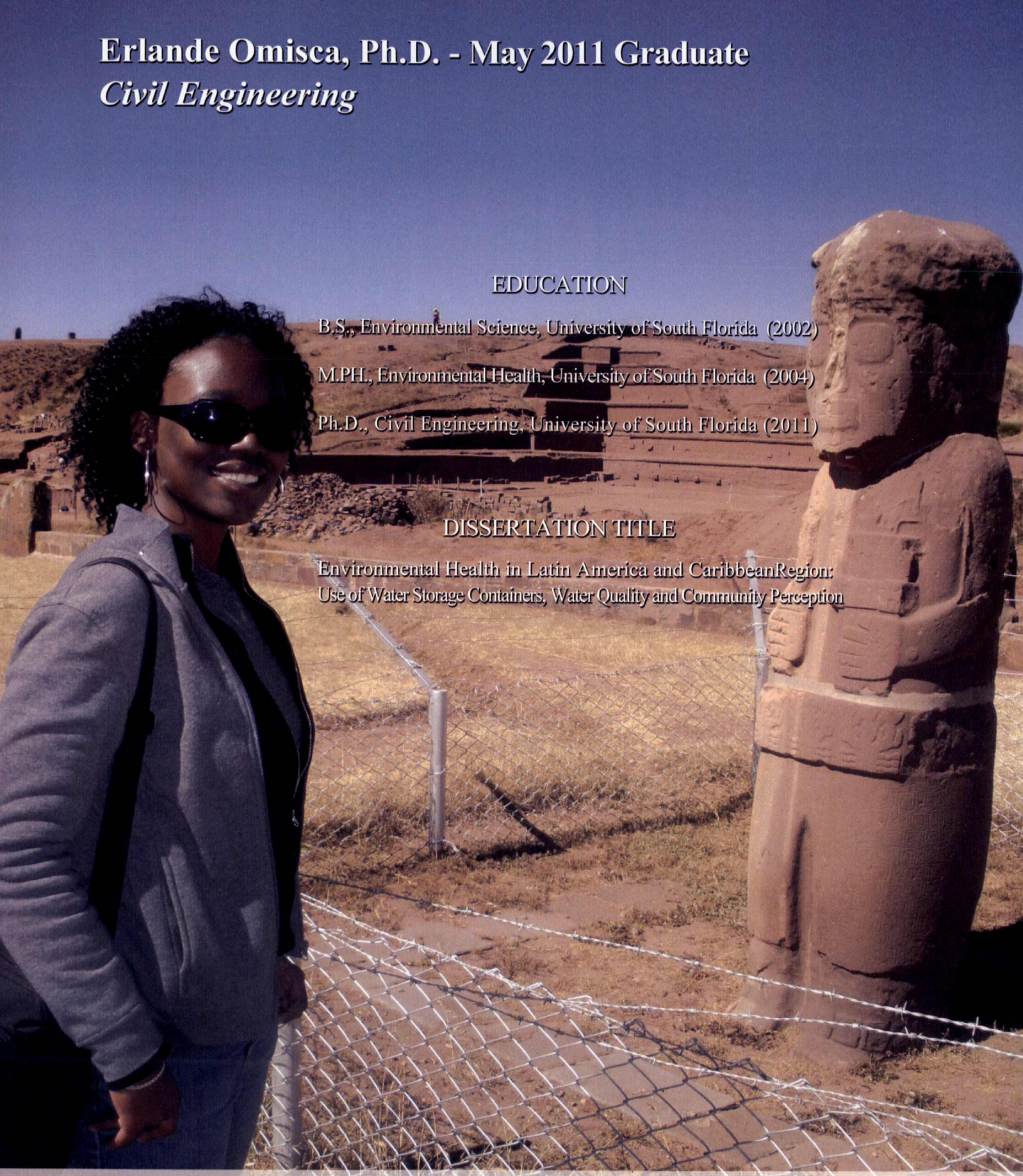
DISSERTATION TITLE

Enhanced CO2 Storage in Confined Geologic Formations



"I was fortunate to get funding from the Alfred P. Sloan Minority Ph.D. Scholarship program. This gave me the opportunity to present my work in conferences and to network with graduate students, professors and professionals with similar research interests. Overall, I received enormous support from NSF-IGERT and Sloan Minority programs at the college of Engineering and from my major supervisor who encouraged me to stay focused."

Erlande Omisca, Ph.D. - May 2011 Graduate
Civil Engineering



EDUCATION

B.S., Environmental Science, University of South Florida (2002)

M.PH., Environmental Health, University of South Florida (2004)

Ph.D., Civil Engineering, University of South Florida (2011)

DISSERTATION TITLE

Environmental Health in Latin America and CaribbeanRegion:
Use of Water Storage Containers, Water Quality and Community Perception

"The BD, Sloan, and McKnight programs opened doors for me and provided opportunities that would not have been possible otherwise. I've been able to travel abroad and do global research, gain a better perspective of the environmental health issues that exist, and experience more than I could ever imagine."

Ophir Ortiz, Ph.D. - Postdoctoral Research Scientist

Rutgers University, New Jersey Center of Biomaterials

EDUCATION

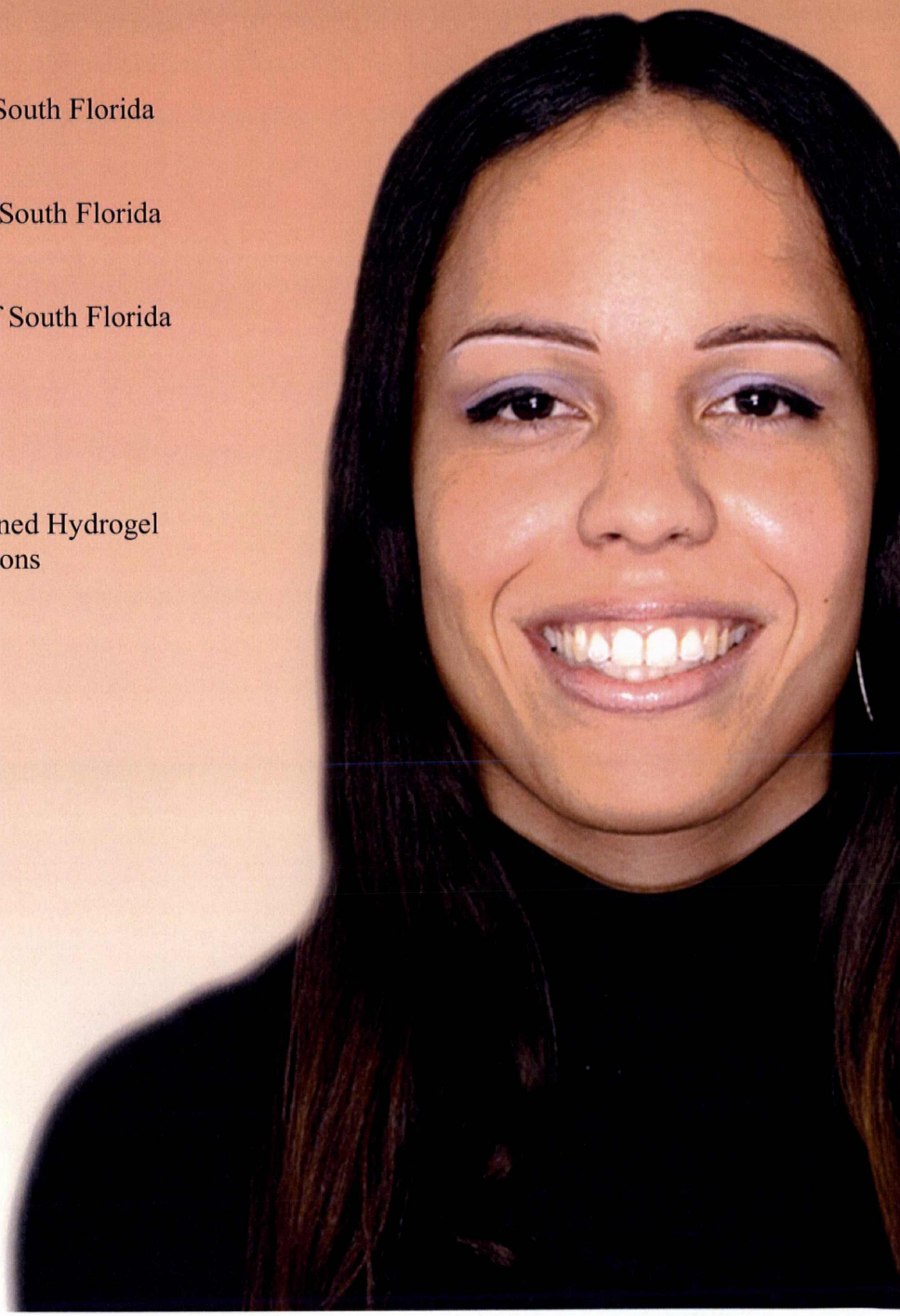
B.S., Electrical Engineering, University of South Florida (2002)

M.S., Electrical Engineering, University of South Florida (2004)

Ph.D., Electrical Engineering, University of South Florida (May 2010)

DISSERTATION TITLE

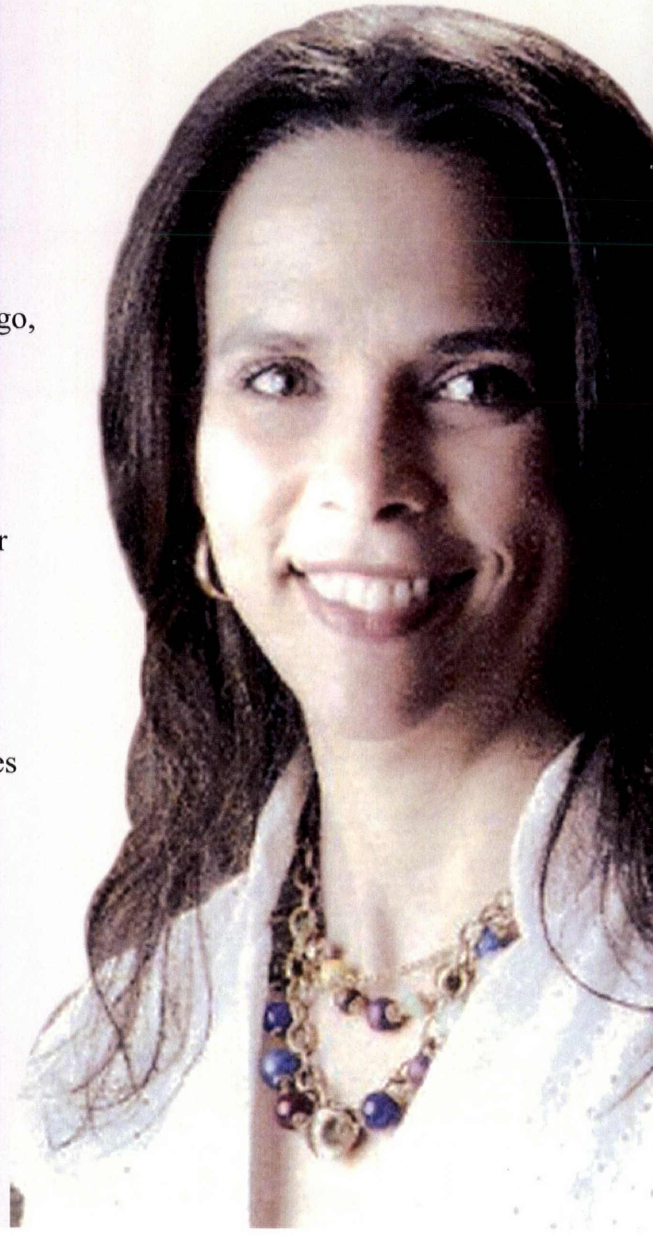
Active Surface Topographies in Constrained Hydrogel Films for Biomedical Applications



"It's been a long road!! Thanks for your support throughout the years, I very much appreciate the countless times you have helped and advised me."

Auristela Mueses Perez, Ph.D. – Faculty

Polytechnic University of Puerto Rico, Orlando



EDUCATION

B.S., Civil Engineering, Technological Institute of Santo Domingo, Dominican Republic (1987)

M.S., Civil Engineering, University of Puerto Rico, Mayagüez-Campus,

Ph.D., Civil Engineering, University of South Florida (December 2006)

DISSERTATION TITLE

Generalized Non-Dimensional Depth-Discharge Rating Curves Tested on Florida Streamflow

"I want to sincerely thank the Sloan program for its support. I am now a full time professor at Polytechnic University, Orlando Campus."

Javier F. Pulecio, Ph.D. – Postdoctoral Research Scientist

Center for Functional Nanomaterials, Brookhaven National Lab

EDUCATION

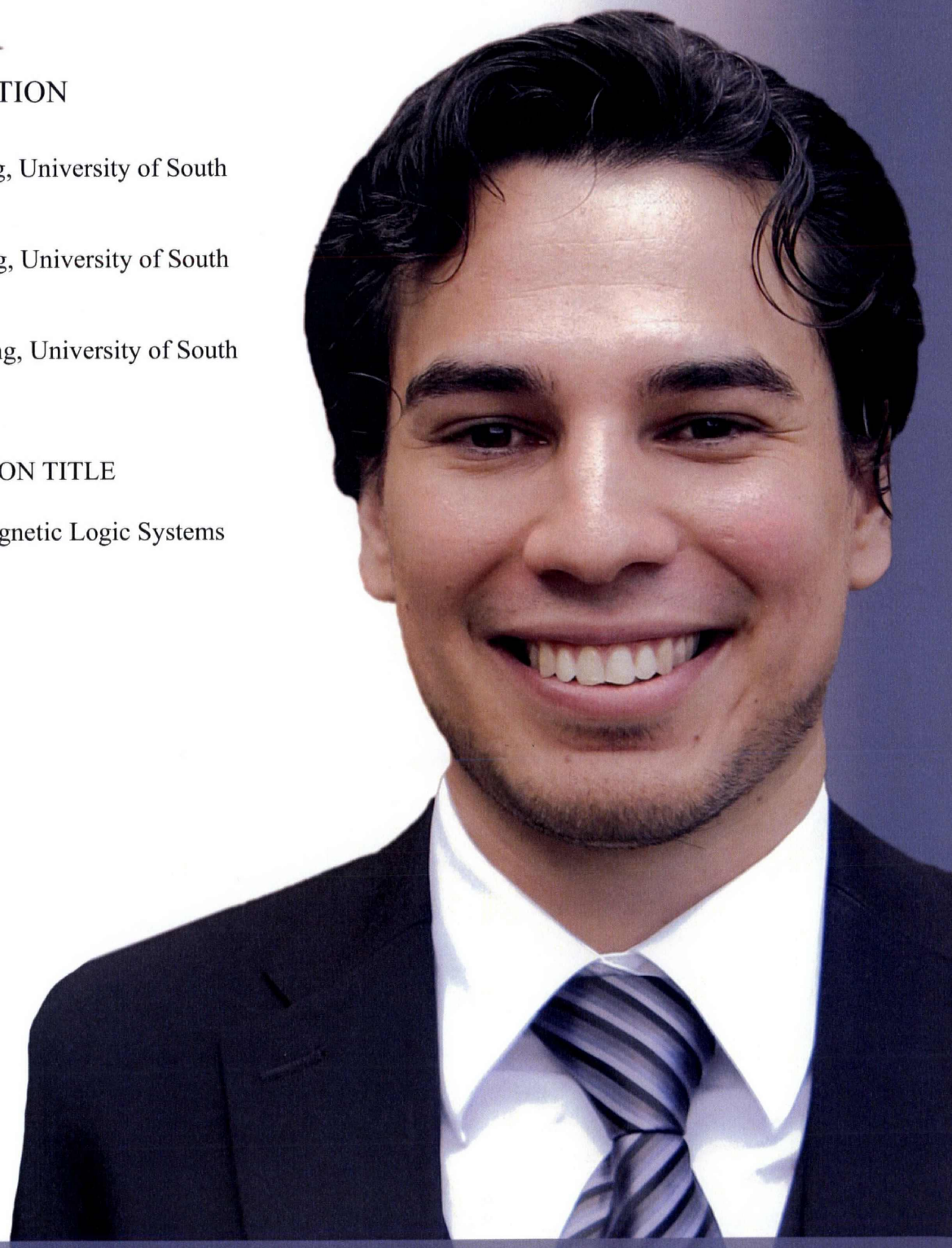
B.S., Computer Engineering, University of South Florida (2005)

M.S., Electrical Engineering, University of South Florida (2007)

Ph.D., Electrical Engineering, University of South Florida (2010)

DISSERTATION TITLE

Field-Coupled Nano-Magnetic Logic Systems



"The Bridge to the Doctorate fellowship has enabled me to utilize the knowledge I gained as an undergraduate and merge it with my newly defined research interests. I feel blessed to have been a member of the Bridge to the Doctorate family and hope that I will always represent, with my work and accomplishments, all that is right about this program."

Jose I. Rey, Ph.D., *Postdoctoral Research Scientist*
Cancer Imaging Group, Moffitt Cancer Center

EDUCATION

B.S., Civil Engineering, Universidad Metropolitana, Caracas, Venezuela (1996)

M.B.A., Texas A&M University (2000)

M.S. Duel degree programs, Biomedical Engineering and Bioinformatics

Ph.D., Engineering Science, University of South Florida, 2011

DISSERTATION TITLE

" Guiding Electric Fields for Electroporation Application"

"I feel that the completion of my doctorate work at the University of South Florida was part of a well choreographed team effort. The NSF IGERT and the Alfred P. Sloan Foundation programscame bundled with guidance and opportunities that opened many doors. Those opportunities were essential to enriching my graduate work experience and making it very successful."

Andrea Rocha, Ph.D. - August 2011 Graduate

Engineering Science

EDUCATION

B.S., Biology, Texas A&M University-Corpus Christi (2000)

M.S., Ocean and Earth Sciences, Old Dominion University (2007)

Ph.D., Civil Engineering, University of South Florida (2011)

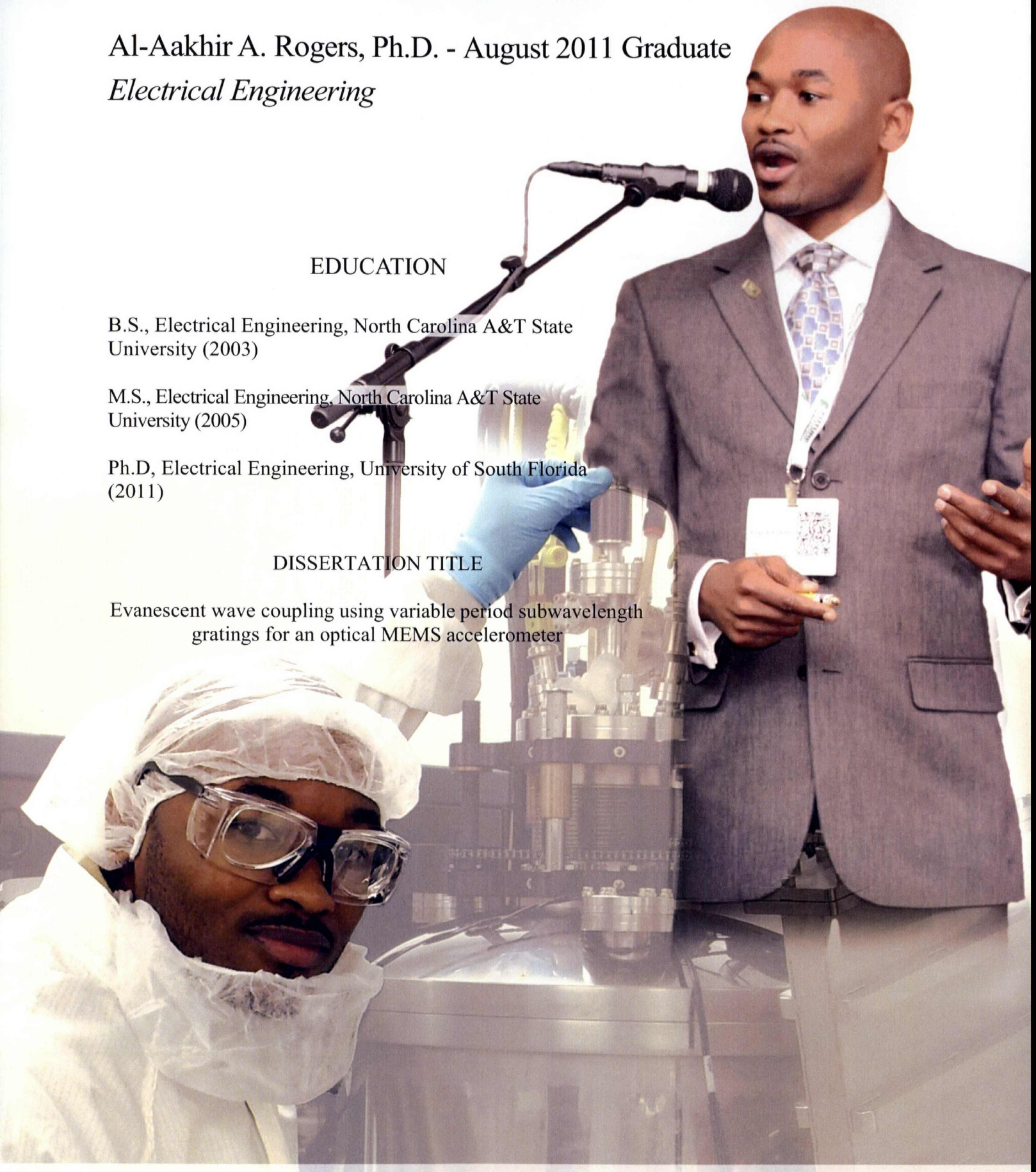
DISSERTATION TITLE

"Integrative systems, computational biology approach for generating renewable energy from wastewater: application towards biohydrogen production"

"Through my participation in the University of South Florida's LSAMP-BD program, I have been privileged to take part in a number of educational and career building opportunities. One of my best experiences in the Bridge to Doctorate program comes from daily interactions with other Bridge to Doctorate students. The support and encouragement of my fellow peers in the program has helped me maintain momentum to continually move forward."

Al-Aakhir A. Rogers, Ph.D. - August 2011 Graduate

Electrical Engineering



EDUCATION

B.S., Electrical Engineering, North Carolina A&T State University (2003)

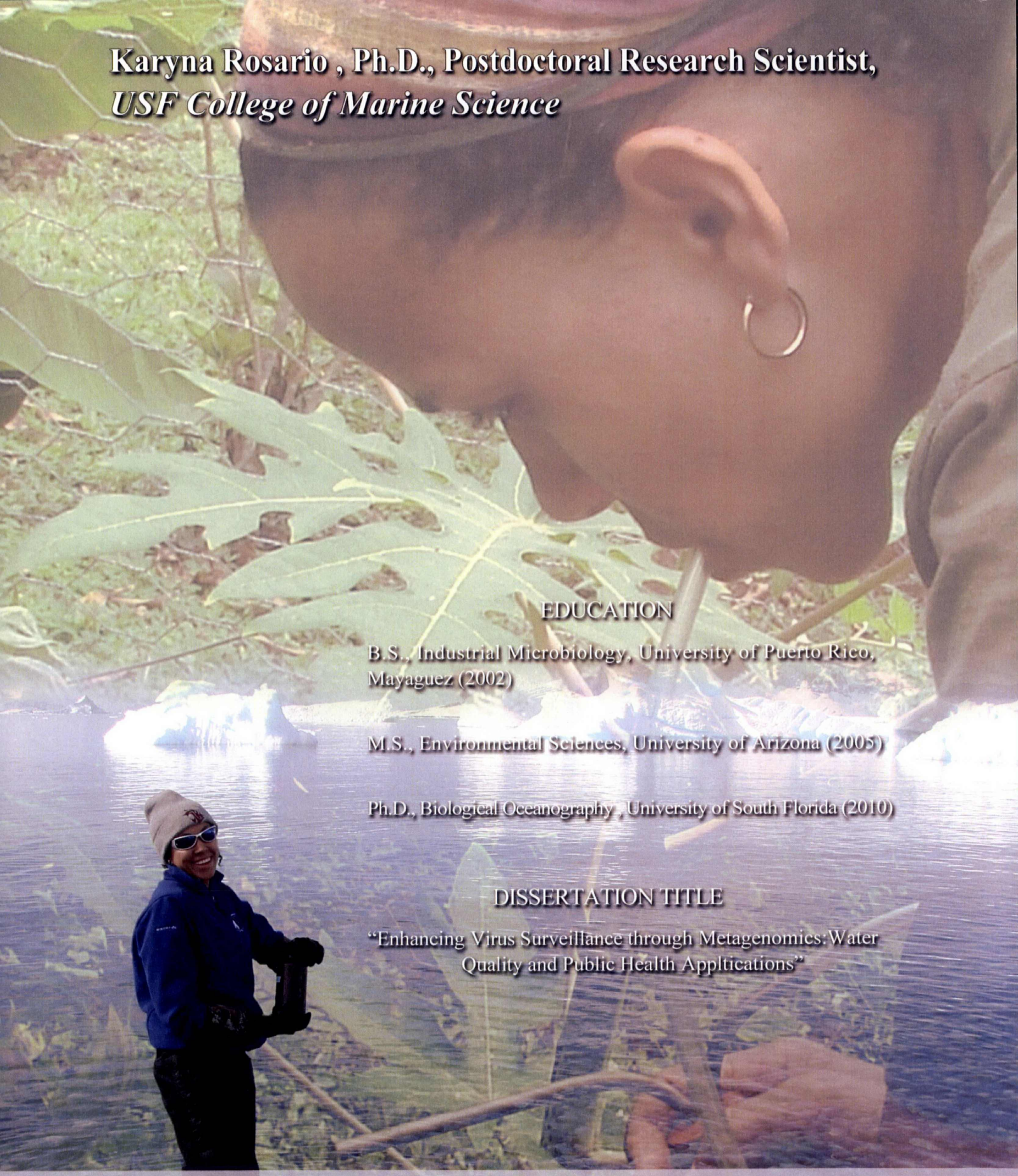
M.S., Electrical Engineering, North Carolina A&T State University (2005)

Ph.D, Electrical Engineering, University of South Florida (2011)

DISSERTATION TITLE

Evanescent wave coupling using variable period subwavelength gratings for an optical MEMS accelerometer

*"The BD, Slaon, and McKnight programs have been a tremendous asset to my social, academic, and professional life. I am confident that my preparation and successes will afford me the opportunity to make important scientific contributions and give back to underrepresented communities as the BD program has done for me...**Da B-dot-D, da Bee-Dee**"*



Karyna Rosario , Ph.D., Postdoctoral Research Scientist, *USF College of Marine Science*

EDUCATION

B.S., Industrial Microbiology, University of Puerto Rico, Mayaguez (2002)

M.S., Environmental Sciences, University of Arizona (2005)

Ph.D., Biological Oceanography , University of South Florida (2010)

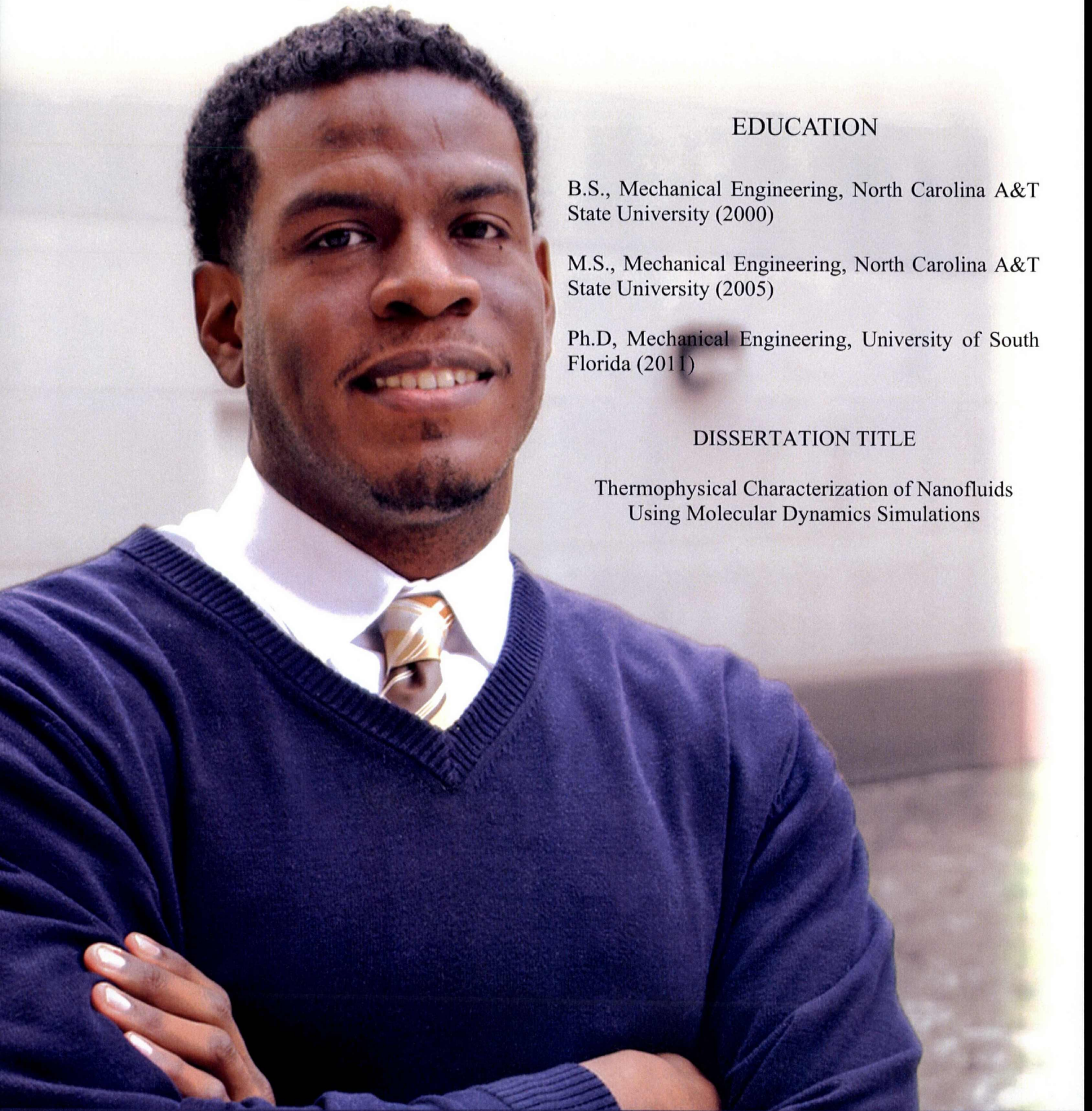
DISSERTATION TITLE

"Enhancing Virus Surveillance through Metagenomics: Water Quality and Public Health Appltications"

"The NSF FGLSAMP Bridge to the Doctorate (BD) Fellowship gave me the opportunity to start my Ph.D. program at the University of South Florida. The BD Fellowship has been an incredible resource, not only because of the much needed financial aid, but also because of the support system it provides through the staff and other BD fellows. This award has been a great help for me to accomplish my academic goals and I am very grateful for it."

John Shelton, Ph.D. - August 2011 Graduate

Mechanical Engineering



EDUCATION

B.S., Mechanical Engineering, North Carolina A&T State University (2000)

M.S., Mechanical Engineering, North Carolina A&T State University (2005)

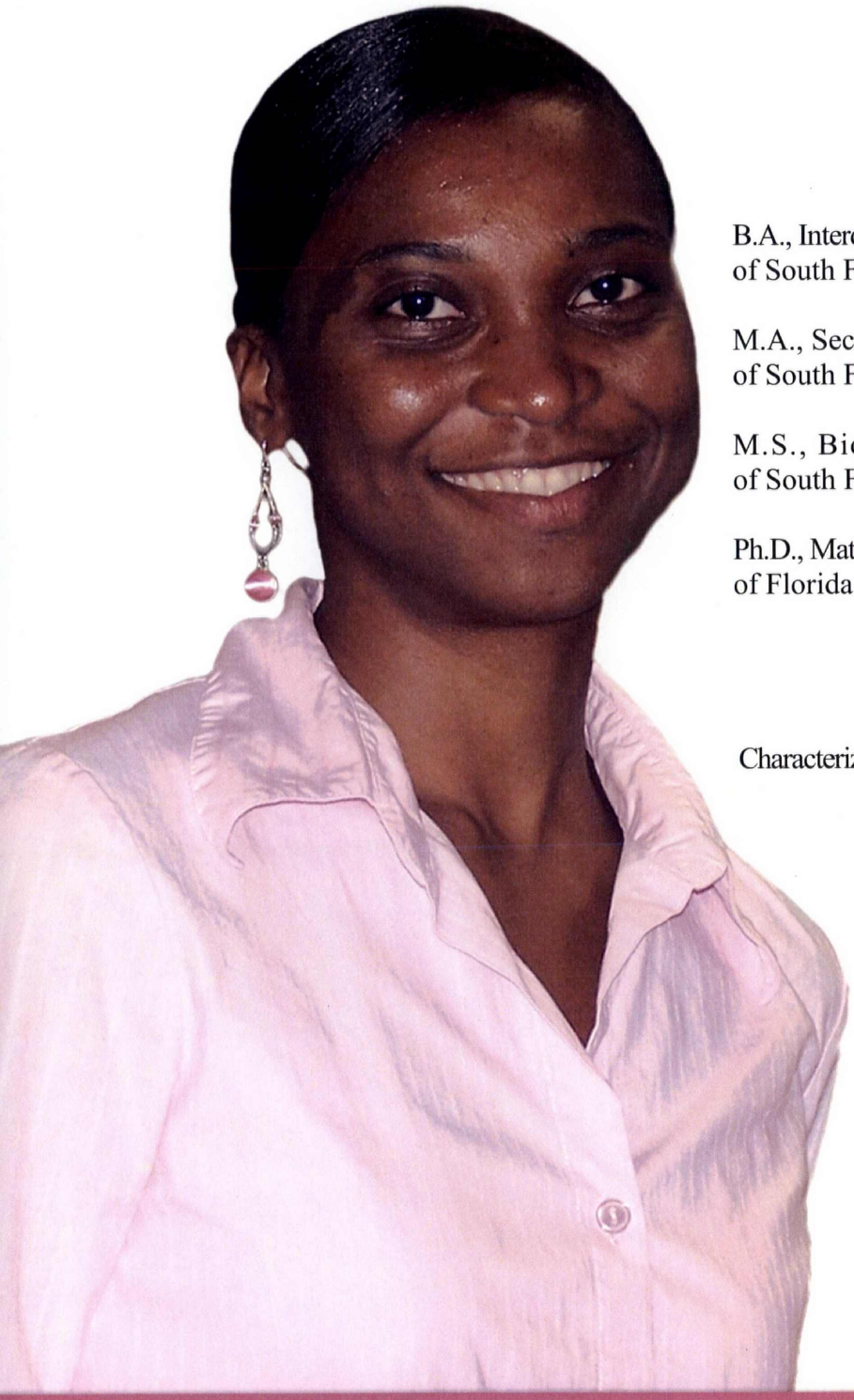
Ph.D, Mechanical Engineering, University of South Florida (2011)

DISSERTATION TITLE

Thermophysical Characterization of Nanofluids Using Molecular Dynamics Simulations

The Bridge to the Doctorate Fellowship program at the University of South Florida is a support network that has proven to be invaluable. The collective drive for success and excellence has been an excellent motivator for me on the days when I needed it. In addition to this, I think that the excellent mentoring provided by the faculty and staff here has helped prepare me to reach my academic career goals."

Yolaine Jeune - Smith, Ph.D., Postdoctoral Fellow
Cancer Imaging Group, Moffitt Cancer Center



EDUCATION

B.A., Interdisciplinary Natural Sciences, University of South Florida (1999)

M.A., Secondary Science Education, University of South Florida (2002)

M.S., Biomedical Sciences, University of South Florida (2006)

Ph.D., Materials Science and Engineering, University of Florida (2010) - *transferred from USF*

DISSERTATION TITLE

Characterizing and engineering microtubule properties for use in hybrid nanodevices

"The BD Cohort I & II were my family away from home. The love and support I received from you all was just what I needed to persevere. Mr. Bernard Batson is the greatest!"

Helen Thomas, Ph.D. - Visiting Professor

University of the Virgin Islands

EDUCATION

B.S., Electrical Engineering, University of South Florida (2001)

M.S., Electrical Engineering, University of South Florida (2004)

Ph.D., Electrical Engineering, University of South Florida (2009)

DISSERTATION TITLE

Non-Contact Characterization of Dielectric Conduction on 4H-SiC

"I would to thank the all the faculty, my friends and colleagues at the University of South Florida. The support I received from everyone and the fellowship programs was invaluable in helping me obtain my doctoral degree."

Nekesha Williams, Ph.D. - Postdoctoral Research Scientist,
Department of Earth and Atmospheric Sciences,
CUNY City College

EDUCATION

B.S., Environmental Studies, State University of New York (SUNY-ESF) 2002

M.S., Forest Hydrology, North Carolina State University (2004)

Ph.D., Chemical Oceanography University of South Florida, (2010)

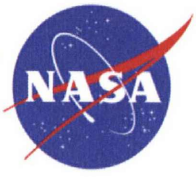
DISSERTATION TITLE

Linking Soil Loss to Sediment Delivery in Two Estuaries in Puerto Rico

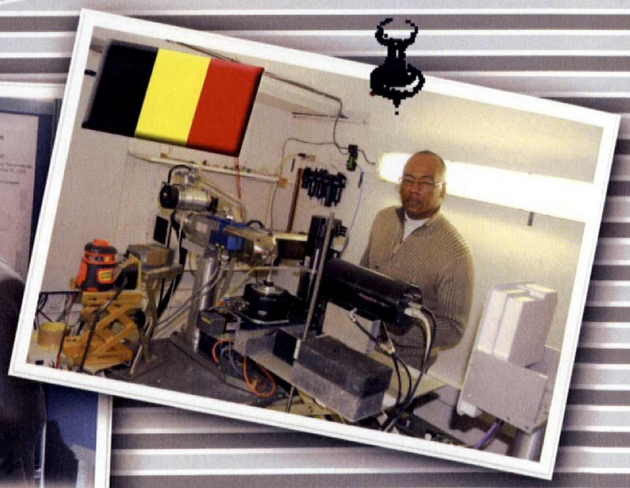
"Being a Bridge to the Doctorate Fellow not only provided the financial support necessary for completing my degree program, but I gained so much more...I was adopted into a family and community of scholars that sustained me through this season of my life. I could not ask or expect more!!"

Achievements

- 2 - Alfred Ph.D. Sloan Minority Ph.D. programs (Engineering , Marine Science)
- IGERT program recognized by NSF for leadership in diversity
- USF BD showcased as an "model" program at NSF blue ribbon panel
- 15-NSF Fellowships (GRFP, GRS, G-K-12)
- 7-GEM Fellowships
- 3 -NASA Fellowships
- 25-McKnight Doctoral Fellowships
- 4-Ford Foundation Diversity Fellowships
- Multiple international research internships & conferences (Antarctica, Australia, Belgium, Bolivia, Brazil, Canada, China, Costa Rica, Germany, Guyana, Haiti, India, Israel, Italy, Mexico, New Zealand, Singapore, South Africa, Taiwan, Tanzania)
- Federal supported research-training (Brookhaven, NIST, Oakridge, Pacific Northwest National, NASA, NRL, NOAA)
- 12-International Fellowships (NSF EAPSI/IREE , PASI, NATO ASI)
- 20+ USF Graduate and CMS Endowed Fellowships



"A Global Perspective"



Examples of Graduate Student Successes

- **Faculty**
  - Southern Polytechnic State University
  - Tuskegee University
  - Clafin University / Medical University of South Carolina
  - Polytechnic University of Puerto Rico, Orlando, FL
  - University of the Virgin Islands

- **Post-Doctoral Researchers**
  - University of Puerto Rico, Rio Piedras
  - University of Puerto Rico, Mayagüez
  - Rutgers University
  - Brookhaven National Lab
  - Moffitt Cancer Center
  - USF College of Marine Science
  - CUNY City College

- **Research Scientists and Engineers**
  - NASA Goddard Space Flight Center
  - Bausch and Lomb, Inc.
  - Georgia Research Institute of Technology
  - University of Illinois at Urbana - Champagne
    Illinois State Geological Survey

Graduates Not Pictured

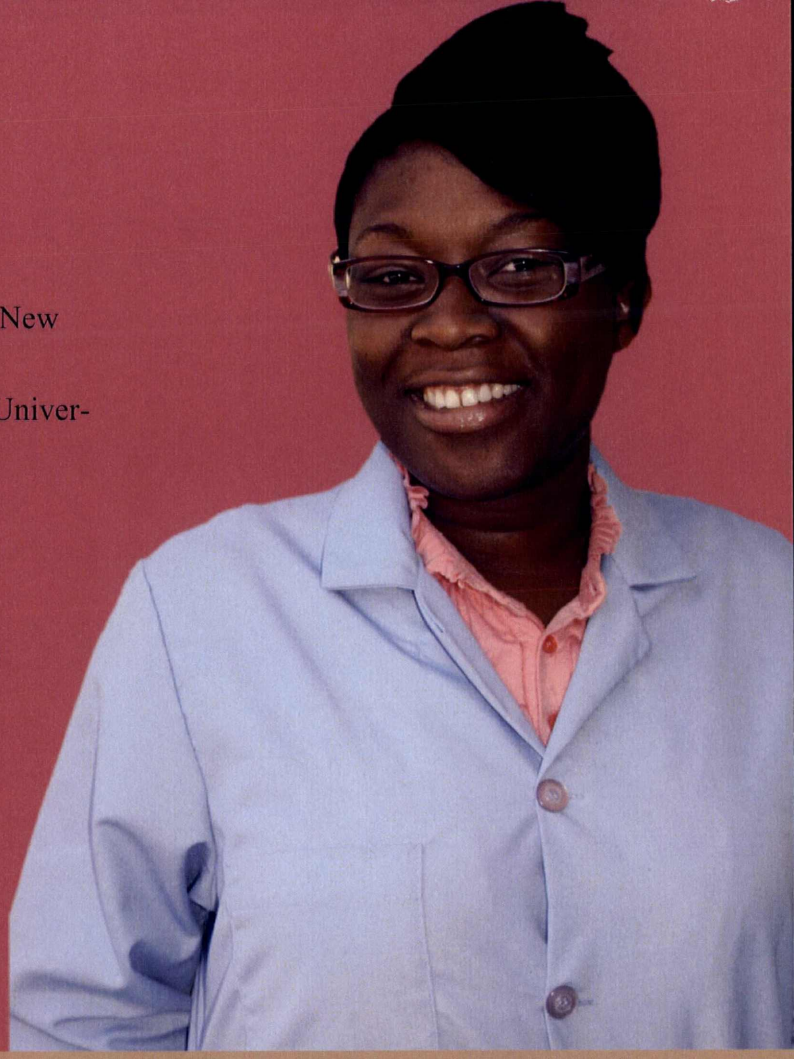
- Joshua Candamo, Ph.D., Chief Executive Officer, K9 Bytes Software
  Education: B.S., Computer Science, University of South Florida (2001),
  Ph.D., Computer Science, University of South Florida (2009)
  Dissertation Title: "Boundary Profile Representation for Objects and Their Surroundings in Outdoor Videos"

- Eduardo Vergas-Jorge, Ph.D. - Faculty, Polytechnic University of Puerto Rico, Orlando
  Education: B.S., Mechanical Engineering, Technological Institute of Santo Domingo, Dominican Republic (1987)
  M.S., Mechanical Engineering, University of Puerto Rico Mayagüez-Campus (2005)
  Ph.D., Mechanical Engineering, (2008), University of South Florida
  Dissertation Title: "Design and Implementation of a Hard Real-Time Telerobotc Control System Using Sensor-Based Assist Functions"

- Meralys Reyes-Natal, Ph.D.
  Education:, B.S., Chemical Engineering, University of Puerto-Rico-Mayagüez (2003)
  Ph.D., Chemical Engineering, University of South Florida (2008)
  Dissertation Title: "CVD Modeling and Growth of the 3C-SiC Heteroepitaxial System via Chloride Chemistry"

Current Students

Kemi Akintewe, Doctoral Student,
Chemical Engineering



EDUCATION

B.S., Chemical Engineering, City College of New York, New York, NY (2002)

M.S., Materials Science & Engineering, The Ohio State University, Columbus, OH (2005)

RESEARCH TOPIC

Biofunctionality of Responsive Polymer Surfaces

Frank Alexander, Jr., Doctoral Student,
Electrical Engineering

EDUCATION

B.S., Electrical Engineering, Southern University and A&M College , Baton Rouge (2009)

M.S., Electrical Engineering, , University of South Florida (2011)

RESEARCH TOPIC

Optimization of Interdigital Electrode (IDE) Arrays for Impedance Based Evaluation of Hs 578T Cancer Cells

Veronica Aponte-Morales Doctoral Student,
Engineering Science,
Department of Civil and Environmental Engineering

EDUCATION

B.S., Chemistry, University of Puerto Rico-Mayagüez (2006)

RESEARCH TOPIC

Nitrification and Denitrification of Anaerobic Digested Swine Waste

Ellisa Parker-Athill, Doctoral Student,
Molecular Pharmacology and Physiology,
USF health

EDUCATION

B.S., Biochemistry, Florida State University (2006)

M.S., Medical Sciences, University of South Florida (2009)

RESEARCH TOPIC

The Role of Maternal Immune Activation in Neurodevelopmental Disorders

Kathryn Bailey, Doctoral Candidate,
Engineering Science,
Department of Civil and Environmental Engineering

EDUCATION

B.S., Biology, Albany State University (2004)

M.S., Marine Science, University of South Florida (2007)

RESEARCH TOPIC

Chemical Sequestration of Technetium-99: An Analysis of the Biological Effects in the Vadose Zone

Evelyn Benabe, Doctoral Candidate,
Electrical Engineering

EDUCATION

B.S., Electrical Engineering, University of Puerto Rico-Mayagüez (1995)

M.S., Electrical Engineering, University of South Florida (2000)

RESEARCH TOPIC

RF and Wireless Microwave Engineering; Development and application of microwave materials

Timetria Bonds , Doctoral Candidate,
Molecular Pharmacology and Physiology,
USF Health

EDUCATION

B.S., Biology, Alabama State University (2006)

RESEARCH TOPIC

Regulation of Store-Operated Calcium Channels by Opioid Receptors in the Function of Cardiac Neurons

Justin Boone, Doctoral Student,
Electrical Engineering

EDUCATION

B.S., Electrical Engineering, Southern University and A&M College , Baton Rouge (2009)

M.S., Electrical Engineering, , University of South Florida (2011)

RESEARCH TOPIC

Design and Simulation of a Scalable Dipole Fed Slot Antenna

Vinicio Carias, Doctoral Student,
Biomedical Engineering

EDUCATION

B.S., Electrical Engineering, Northwestern University (2009)

RESEARCH TOPIC

Dual responsive actuation through poly(n-isopropylacrylamide) Fe3O4 nanocomposites

Natasha Cover, Doctoral Candidate,
Biomedical Engineering

EDUCATION

B.S., Biology, Virginia Union University (2006)

M.S., Biomedical Engineering, University of South Florida (2008)

RESEARCH TOPIC

Design and Optimization of a New Drug Delivery Approach for the Female Reproductive System Using an Animal Model

Michael Cross, Doctoral Student,
Applied Physics

EDUCATION

B.S., Computer Science, University of Texas - San Antonio, TX (2005)

RESEARCH TOPIC

Electrospinning of Polypeptide-based biomaterials

David Cure, Doctoral Student,
Electrical Engineering

EDUCATION

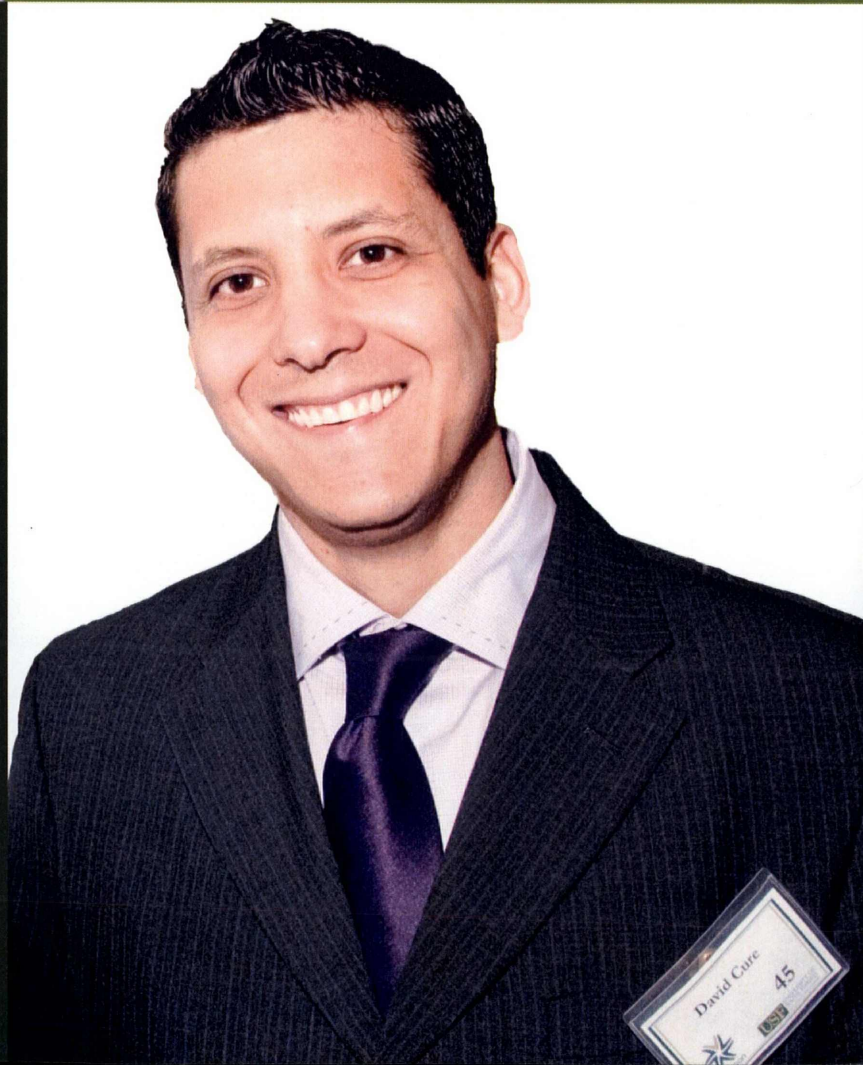
B.S., Electrical Engineering, University of Norte-Barranquilla, Columbia (2001)

M.S., Communications Engineering;
University Polytechnic of Madrid-Madrid, Spain (2002)

M.S., Electrical Engineering, University of South Florida (2006)

RESEARCH TOPIC

Flexible Ferroelectric-Based Antenna Arrays for Conformal Radiometric Imaging



Yvonne K. Davis, Doctoral Candidate,
Molecular Medicine, USF Health

EDUCATION

B.S., Microbiology, University of South Florida (2003)

RESEARCH AREAS

"Growth and differentiation of cancer cells on three-dimensional (3D) scaffolds as a model to study tumor-stroma interactions"

Natasha Méndez-Ferrer, Doctoral Student,
Marine Science

EDUCATION

B.S., Environmental Technology, University of Puerto-Rico, Aguadilla (2008)

RESEARCH TOPIC

Biological Oceanography

Sachel Villafane Garcia, Doctoral Student, Chemistry

EDUCATION

B.S., Chemistry, University of Puerto Rico Mayagüez (2002)

M.S., Biomedical Engineering, University of South Florida (2007)

RESEARCH TOPIC

Use of Non-Cognitive Assessments as a Learning Tool in Chemistry

Adrienne George, Doctoral Student, Marine Science

EDUCATION

B.S, Natural Resources/Environmental Science, Delaware State University (2009)

RESEARCH TOPIC

Delineation of Captive Coral Diseases

Michael Grady, Doctoral Student,
Electrical Engineering

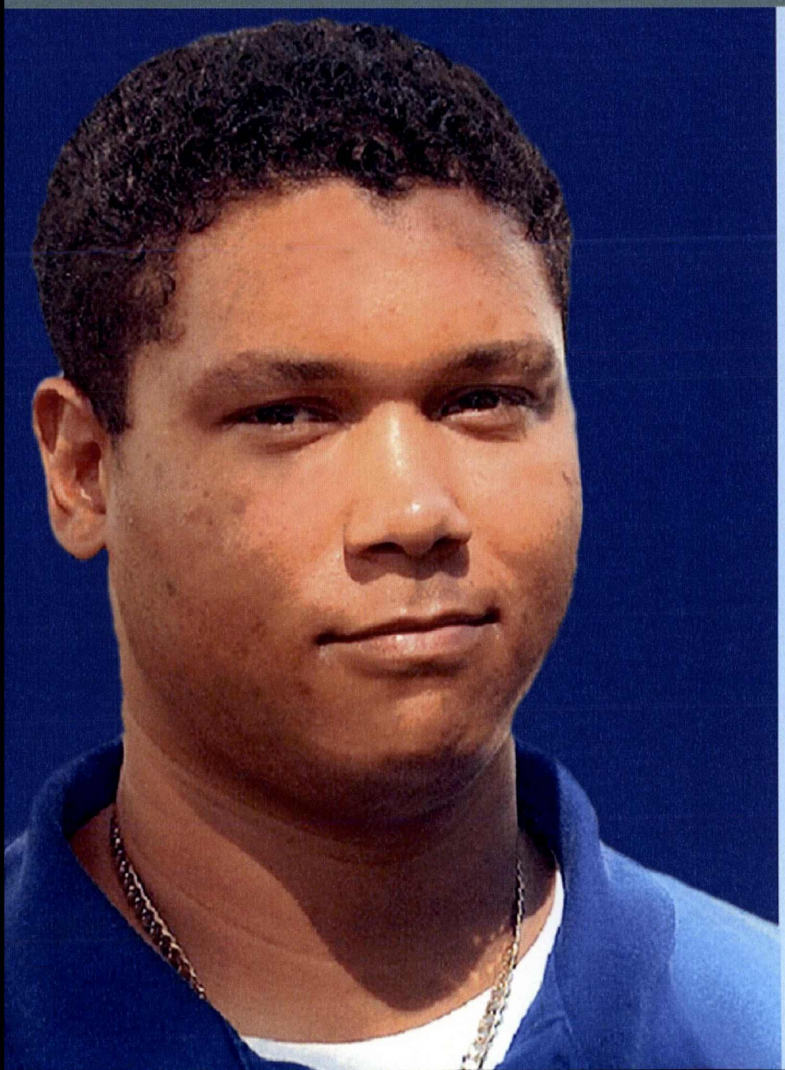
EDUCATION

B.S., Electrical Engineering,(2008), Auburn University

M.S., Electrical Engineering (2010), Auburn University

RESEARCH TOPIC

RF/Microwave Engineering



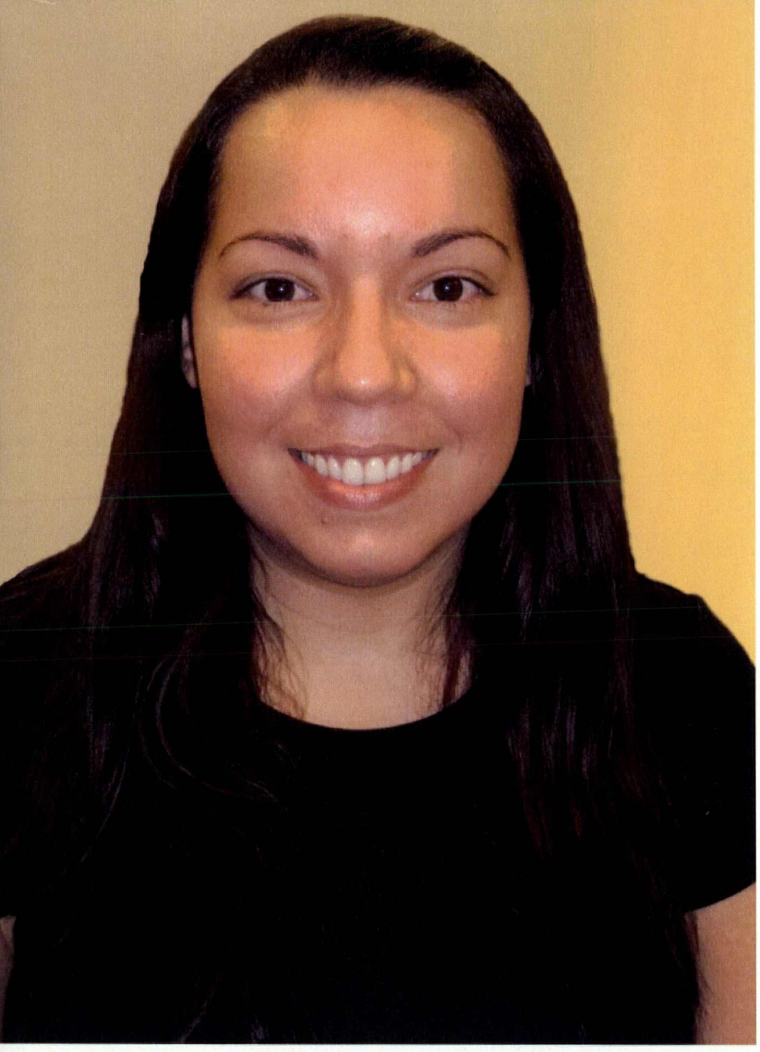
Sennai Habtes, Doctoral Student,
College of Marine Science

EDUCATION

B.S., Environmental Sciences, University of North Carolina, Chapel Hill (2003)

RESEARCH TOPIC

Variability of Larval Scombrid Habitat in the Gulf of Mexico



Keily Heredia, Doctoral Candidate,
Chemistry

EDUCATION

B.S., Chemistry, South Carolina State University (2004)

M.S., Chemistry, University of North Carolina, Charlotte, NC (2006)

RESEARCH TOPIC

Using Cognitive and Non-Cognitive Assessments to Examine Student Performance and Retention in General Chemistry: A Focus on URM Students

Eric Huey, Doctoral Student,
Electrical Engineering

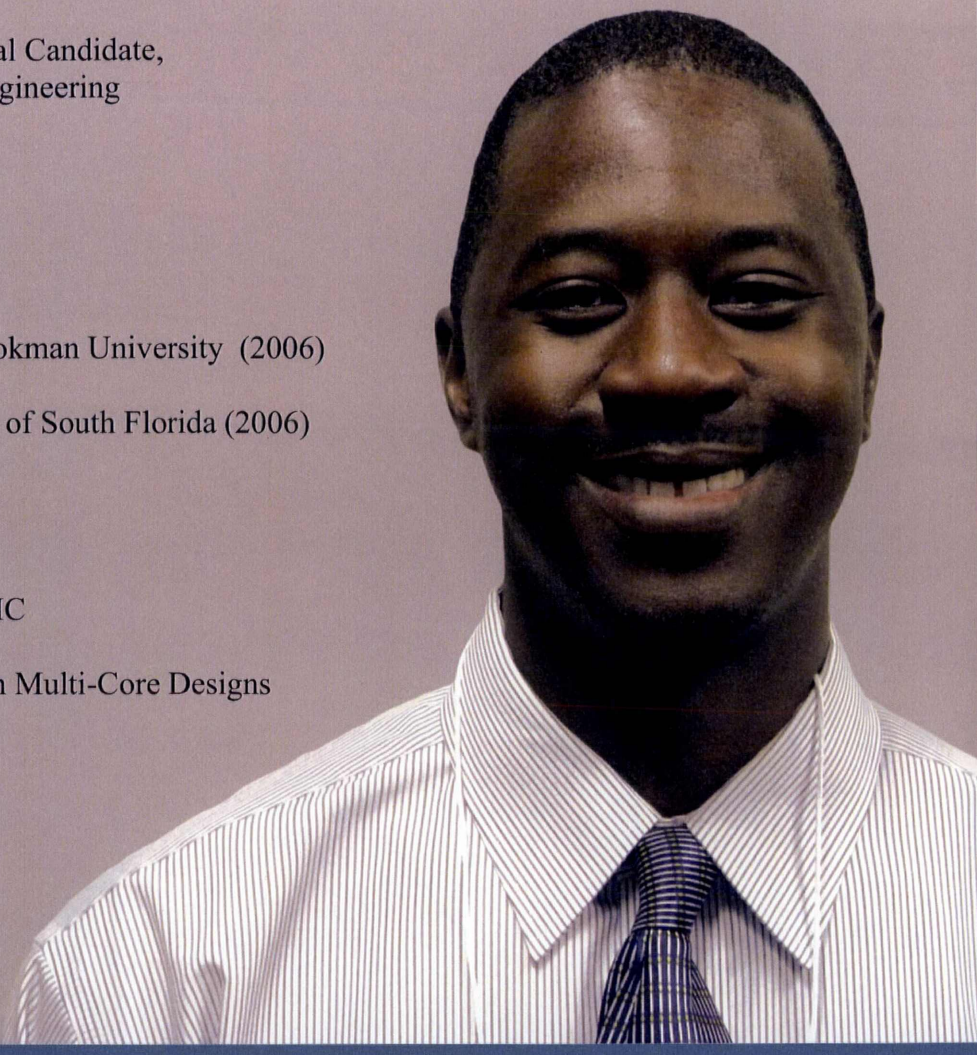
EDUCATION

B.S., Electrical Engineering, Southern University and A&M College , Baton Rouge (2008)

M.S., Electrical Engineering, , University of South Florida (2011)

RESEARCH TOPIC
Nanowire Growth on Plastic Substrates for Bio-Sensing

Ransford Hyman, Jr., Doctoral Candidate,
Computer Science and Engineering



EDUCATION

B.S., Computer Engineering, Bethune Cookman University (2006)

M.S., Computer Engineering, University of South Florida (2006)

RESEARCH TOPIC

A Strategy for Soft Error Reduction in Multi-Core Designs

Youcelyne Larose, Doctoral Student,
Chemistry

EDUCATION

B.S., Chemistry, Florida A&M University (2006)

M.S., Chemistry, Florida A&M University (2009)

RESEARCH TOPIC

Analytical Chemistry

Bridge to the Doctorate Cohort 2004-2006

Maritza Muñiz-Maisonet, Doctoral Student, Cheimical Engineering

EDUCATION

B.S., Chemical Engineering, University of Puerto Rico-Mayagüez (2004

M.S., Chemical Engineering, University of Iowa (2008)

RESEARCH TOPIC

Polymeric materials, Materials Science

Claussel Mathis, Doctoral Student, Physics

EDUCATION

B.S. - Florida A&M University – Physics

M.S. – University of Central Florida - Physics

RESEARCH TOPIC

Electrical Manipulation of the Na/K Pump Function

Marietta Mayo, Doctoral Candidate,
Marine Science

EDUCATION

B.S., Environmental Science, University of South Florida (2001)

M.S., Environmental Management, Universidad Metropolitana, (2007)

RESEARCH TOPIC

Determination of the Uranium Budget in the Shark River Estuary System, Everglades National Park

Julio Medrano, Doctoral Student,
Electrical Engineering

EDUCATION

B.S. Electrical Engineering, State University of New York (SUNY)-Buffalo (1989)

M.E., Electrical Engineering; State University of New York (1991)

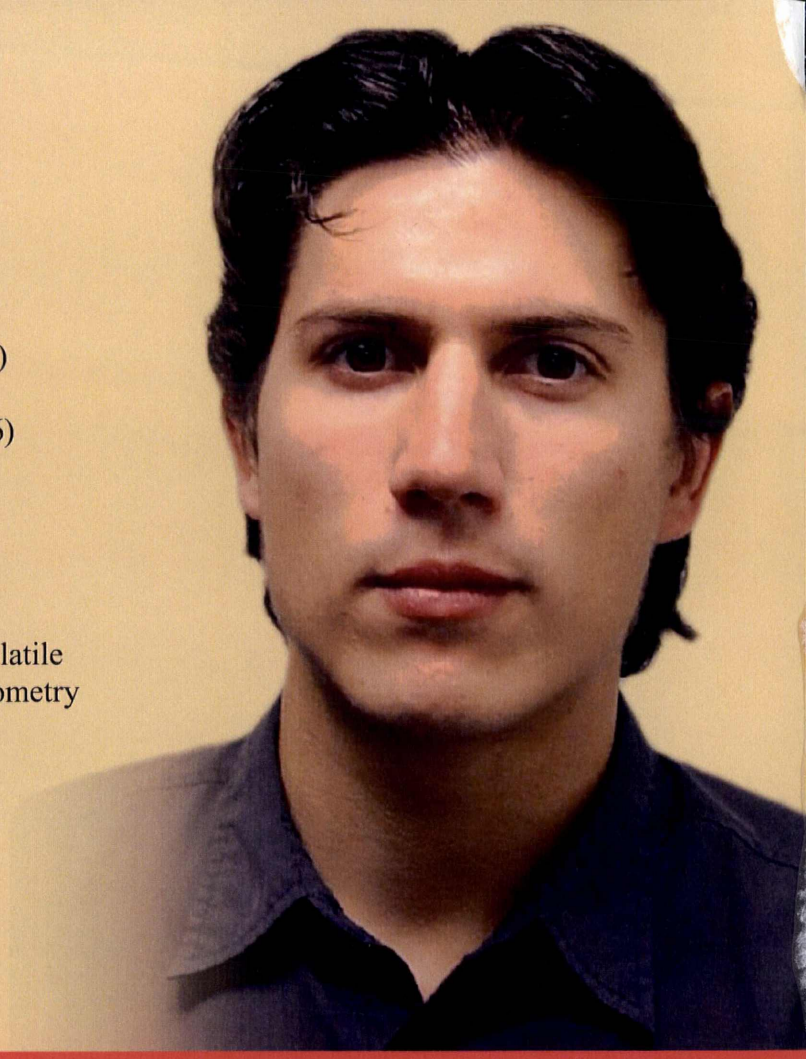
M.B.A.., Farleigh-Dickson University, (1992)

M.S., Telecommunications Computing Management, Polytechnic University-Brooklyn (1996)

RESEARCH TOPIC

Dynamic Biompedance Feedback for In Vivo Electroporated Tissues

Luis Miranda, Doctoral Candidate,
Marine Science



EDUCATION

B.S. Chemistry, Florida A&M University (2002)

M.S., Chemistry, Florida A&M University (2006)

RESEARCH TOPIC

Detection and quantification of discrete dissolved volatile compounds in aqueous solutions through mass spectrometry analysis using novel membrane inlet systems

Nadine Nelson, Doctoral Student,
Molecular Medicine, USF Health

EDUCATION

B.S., Cell Biology and Genetics, University of Maryland, College Park (2007)

RESEARCH TOPIC

The Role of Myeloid Derived Suppressor Cells in a Murine Pancreatic Tumor Model

Shara Pantry, Doctoral Candidate,
Molecular Medicine, USF Health

EDUCATION

B.S., Biology, Florida International University (2003)

M.S., Biology, University of South Florida (2006)

RESEARCH TOPIC

Molecular Biology of Herpesviruses

Sandro Paz, Doctoral Student,
Industrial and Management Systems Engineering

EDUCATION

B.S., Industrial Engineering, Pontificia Universidad Caólica, (1996)

M.Sc., Industrial Engineering, University of Puerto Rico-Mayagüez (2001)

RESEARCH TOPIC

Strategies for pandemic influenza mitigation, considering demographic, economic and geographic topics

Alisha Peterson, Doctoral Student,
Chemical and Biomedical Engineering

EDUCATION

B.S., Chemistry, Alabama State University (2008)

M.S., Engineering Science, University of South Florida (2010)

RESEARCH TOPIC

Electroporation of Nanoparticiples for Cellular Drug Delivery

Dorielle Price, Doctoral Candidate,
Electrical Engineering

EDUCATION

B.S., Electrical Engineering, Clark Atlanta University (2005)

M.S., Electrical Engineering, University of South Florida (2007)

RESEARCH TOPIC

Design Rule for Optimization of Microelectrodes used in Electric-cell Substrate Impedance Sensing (ECIS)

Tony Price, Doctoral Candidate,
Electrical Engineering

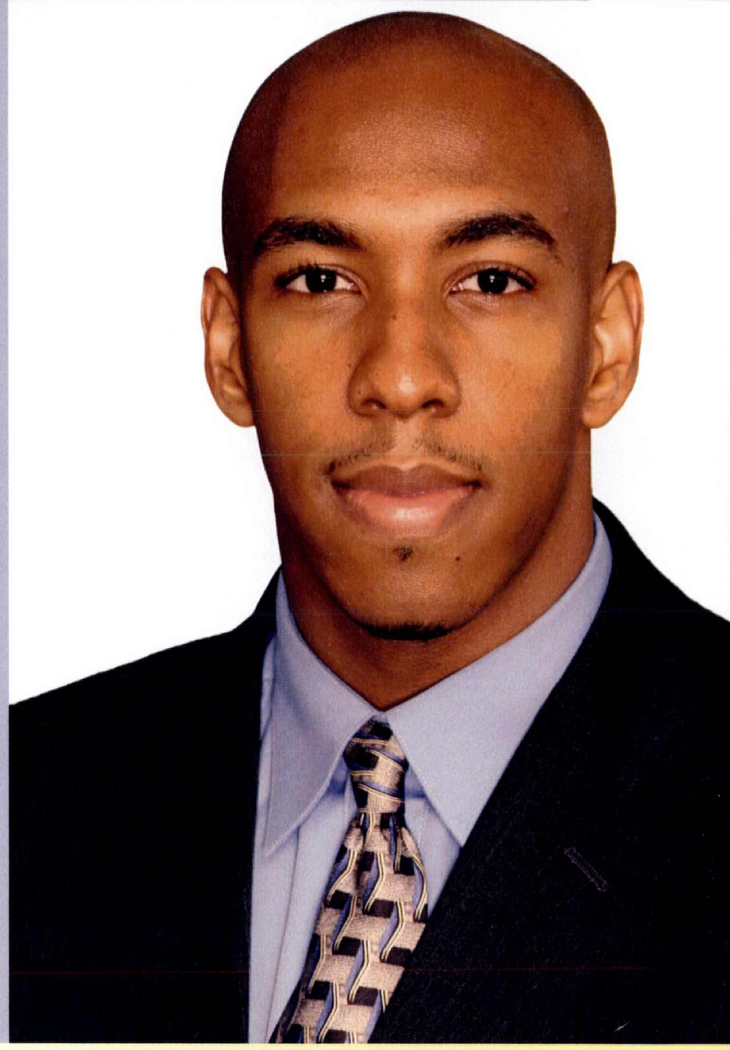
EDUCATION

B.S., Electrical Engineering, Clark Atlanta University (2005)

M.S., Electrical Engineering, University of South Florida (2007)

RESEARCH TOPIC

Nonlinear Modeling of Barium Strontium Titanate Varactors for RF and Microwave Applications



Monica Puertas, Doctoral Student,
Industrial and Management Systems Engineering

EDUCATION

B.S., Industrial Engineering, Pontificia Universidad Caólica, (1996)

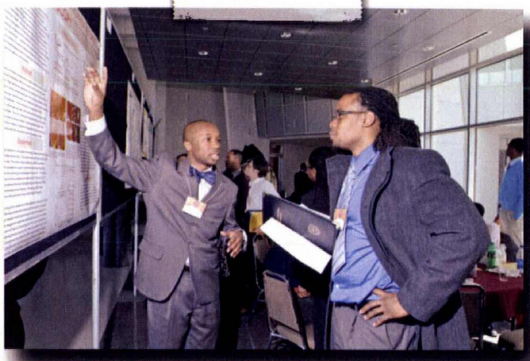
M.Sc., Industrial Engineering, University of Puerto Rico-Mayagüez (2001)

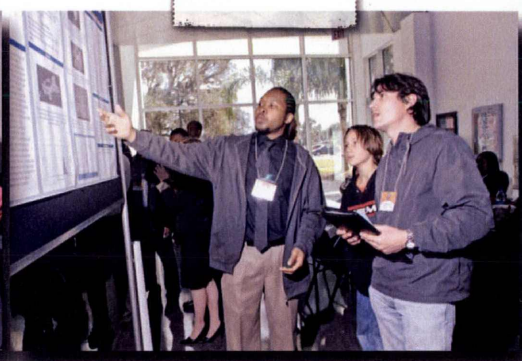
RESEARCH TOPIC

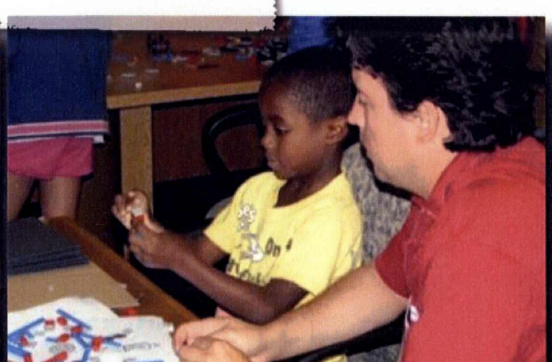
Healthcare Engineering

Bridge to the Doctorate Cohort 2005-2007

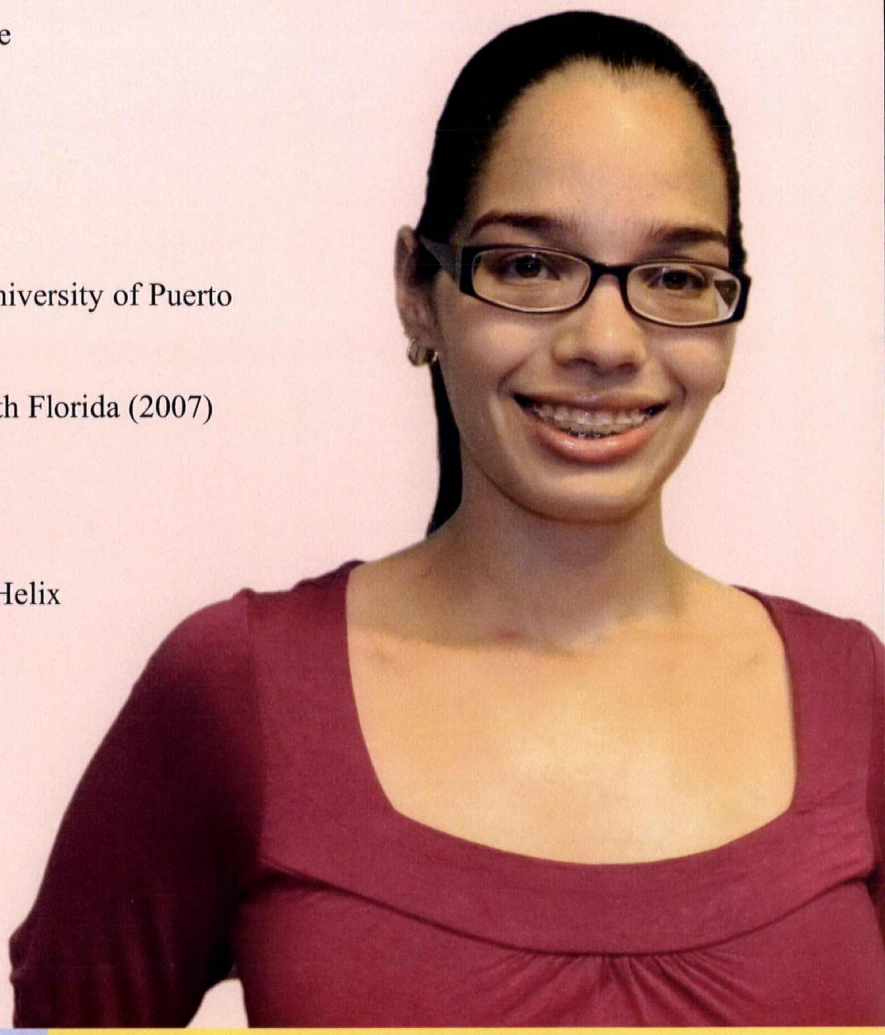
"The Next Generation in STEM"







Issa Ramirez, Doctoral Candidate
Mechanical Engineering



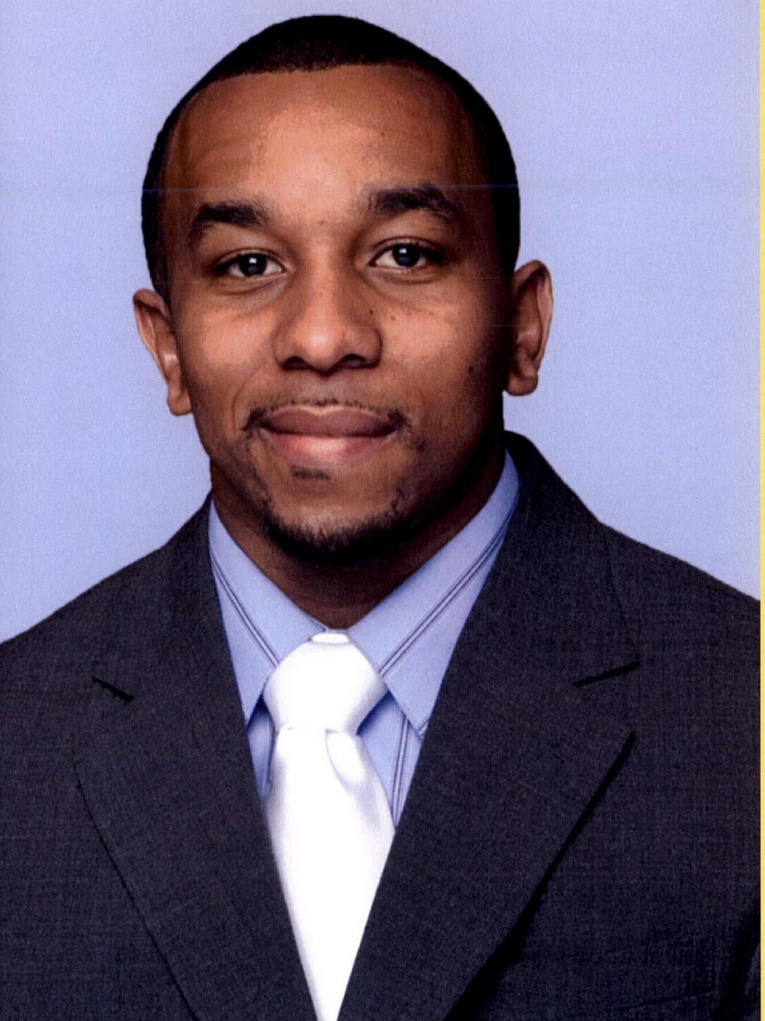
EDUCATION

B.S., Mechanical Engineering, Inter-American University of Puerto Rico-Bayamón (2006)

M.S., Mechanical Engineering, University of South Florida (2007)

RESEARCH TOPIC

The Design of a Compliant Double-Helix Spatial Platform



Brandon Richard, Doctoral Student,
Electrical Engineering

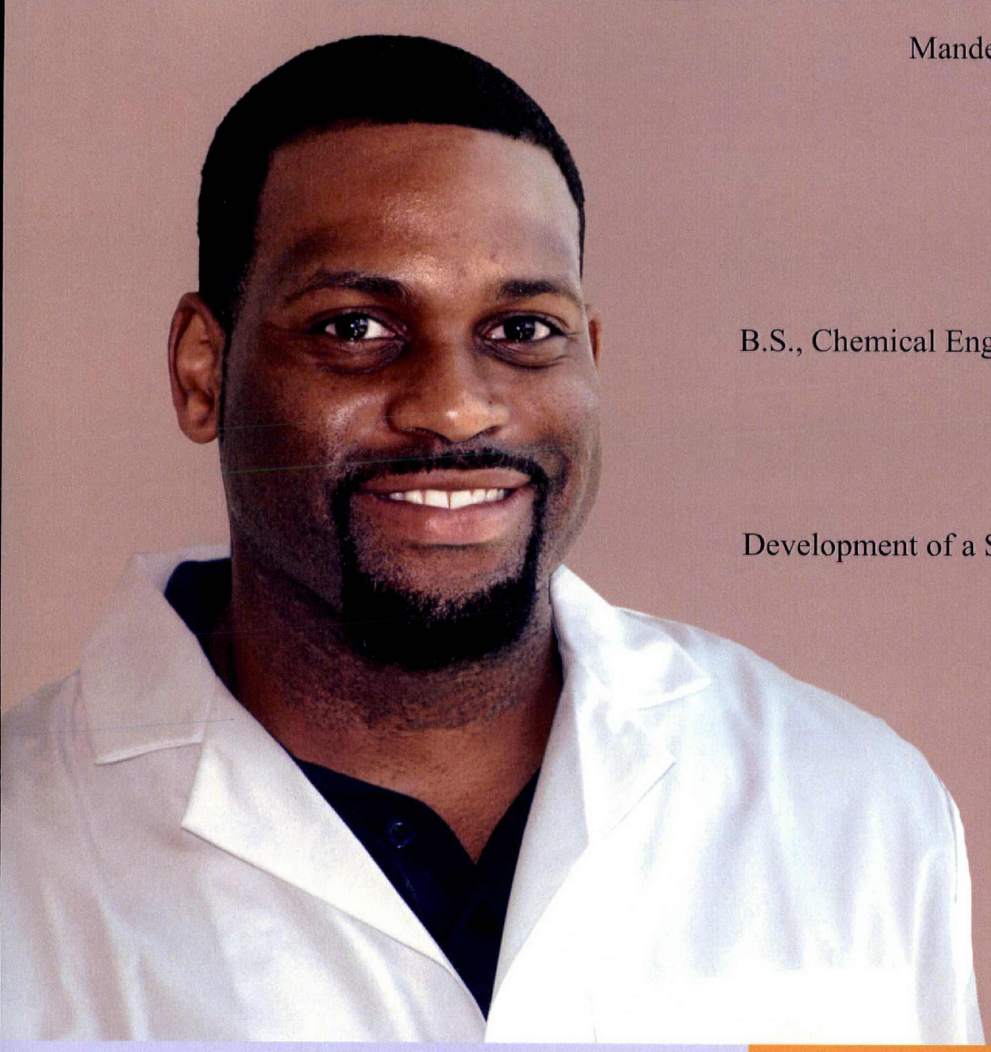
EDUCATION

B.S., Electrical Engineering, Southern University and A&M College , Baton Rouge (2009)

M.S., Electrical Engineering, , University of South Florida (2011)

RESEARCH TOPIC

Multicompartmental nanofibers via electrospinning and their applications



Mandek Richardson, Doctoral Student,
Biomedical Engineering

EDUCATION

B.S., Chemical Engineering, University of South Florida (2007)

RESEARCH TOPIC

Development of a Surface Acoustic Wave Sensor for Biomarker Detection

Eloy Martinez-Rivera, Doctoral Student,
Marine Science

EDUCATION

B.S., Coastal Marine Biology, University of Puerto Rico, Humaco (2006)

RESEARCH TOPIC

Life in Constant Cold: Mitochondrial Bioenergetics in Teleostei Species from the Southern Ocean

Maria Vega-Rodriguez, Doctoral Student,
Marine Science

EDUCATION

B.S., Coastal Marine Biology, University of Puerto Rico-Humaco (2004)

M.S., Marine Science, University of Puerto-Rico, Mayagüez Campus (2006)

RESEARCH TOPIC

Environmental parameters that influence coral reef diversity in the Florida Keys

Mark Santana, Doctoral Student,
Department of Civil and Environmental Engineering

EDUCATION

B.S., Environmental Engineering, Old Dominion University (2006)

M.S., Environmental Engineering, University of Zaragoza, Zaragoza, Spain (2008)

M.S., Civil Engineering, University of Virginia (2010)

RESEARCH TOPIC

Water Resources and Environmental Engineering

Candice Simmons, Doctoral Student,
Marine Science

EDUCATION

B.S., Environmental Sciences, Florida A&M University (2006)

M.S., Chemical Oceanography, University of SouthFlorida (2009)

RESEARCH TOPIC

Assessing the Presence and Distribution of Polybrominated Diphenyl Ethers in Hillsborough Day a Northeastern Region of Tampa Bay, FL

Inia Soto, Doctoral Candidate,
Marine Science

EDUCATION

B.S., Biology, University of Puerto-Rico-Mayagüez (2005)

M.S., Biological Oceanography, University of South Florida (2006)

RESEARCH TOPIC

Spatial and temporal frequency, displacement, and connectivity of Karenia brevis blooms in the Gulf of Mexico

Phaedra Thomas, Doctoral Student,
College of Public Health

EDUCATION

B.S., Biology, Albany State University (2006)

M.S., Biology, University of South Florida (2008)

RESEARCH TOPIC

The Partial Characterization of a Plasmodium falciparum Not1 gene (PF11_0049)

Danya Martinez-Torres, Doctoral Student,
Industrial and Management Systems Engineering

EDUCATION

B.S., industrial Engineering, University of Puerto Rico-Mayagüez (2006)

M.S., Industrial and Management Systems Engineering, University of South Florida (2008)

RESEARCH TOPIC

Non-Pharmaceutical Interventions (NPI) for the Mitigation of Pandemic Influenza

Innocent Udom, Doctoral Student,
Chemical Engineering

EDUCATION

B.S., Chemical Engineering, Russian University of Chemical Technology, Moscow, Russia (1998)

M.S, Chemical Engineering, University of South Florida (2010)

RESEARCH TOPIC

Biofuels Production for Space Vehicles and Enhanced CO2 Fixation via Microalgae

Vladimir Valdez, Doctoral Student,
Molecular Medicine, USF Health

EDUCATION

B.S., Florida State University (2005)

RESEARCH TOPIC

Erf4 Acts as a Specific Chaperone for the Erf2 Palmitoyl Transferase in Saccharomyces cerevisiae

Enrique Gonzalez-Velez, Doctoral Student,
Civil Engineering (transprotation Emphasis

EDUCATION

B.S., Civil Engineering, University of Puerto Rico-Mayagüez (2004)

M.S., Civil Engineering, University of Puerto Rico-Mayagüez (2006)

RESEARCH TOPIC

Evaluation of Roadway Lighting I luminance Using Advanced Lighting Measurement System

Kamisha Woolery, Doctoral Candidate,
Cell Biology and Pathology, USF Health

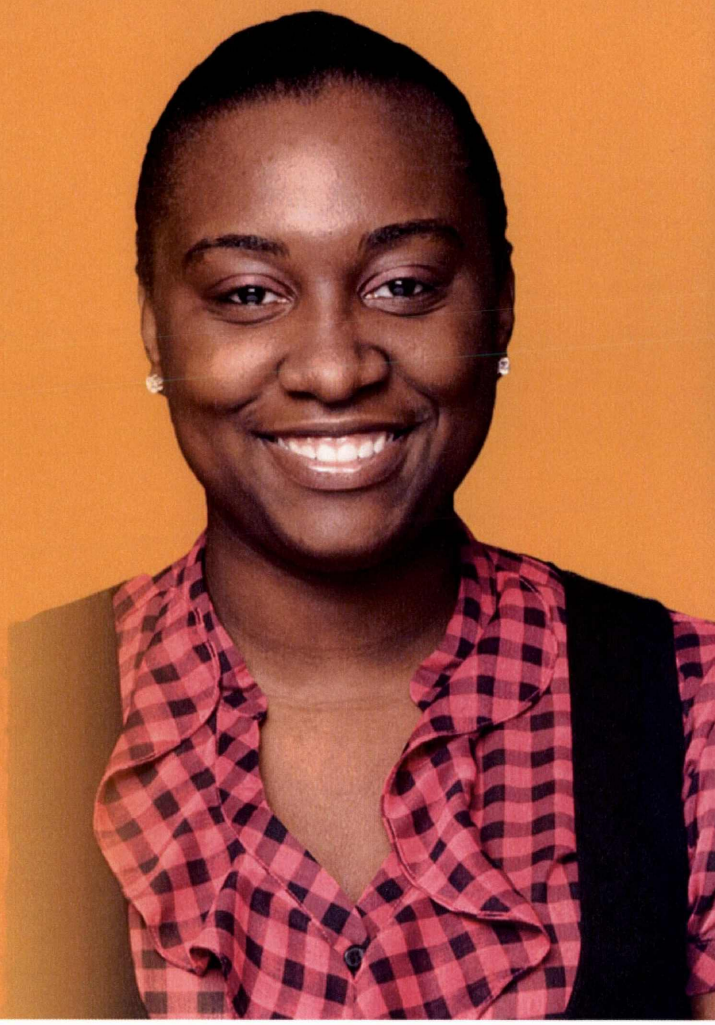
EDUCATION

B.S., Biomedical Sciences, University of South Florida (2009)

RESEARCH TOPIC

The 185delAG BRCA1 Mutant Protein, BRAT, Increases Interleukin-1β Expression in Ovarian Epithelial Cells

Tarah Ward, Doctoral Student,
Chemistry



EDUCATION

B.S., Chemistry, Florida A&M University (2006)

M.S., Chemistry, Florida A&M University (2009)

RESEARCH TOPIC

Laser spectroscopy, Bioinorganic and physical Chemistry

Fellows Not Pictured

- Darline Lott, Doctoral Student, Geology
  Education: B.S., Geology (1993),
  M.S., Geology (1996), University of Missouri-Kansas City
  Research area: Utility of Conductance Mass-Balance Method for Base Flow Separation

- Fedena Fanord, Doctoral Candidate, Chemical Engineering
  Education: B.S., Chemical Engineering, Rensselaser Polytechnic Institute (2006),
  M.S., Chemical Engineering, University of South Florida (2008)
  Research area: Surface Modified Gold Nanoparticles to Study Perthes Disease

- Michael Martinez-Colon, Doctoral Candidate, Marine Science
  Education: B.S., Geology (1993), University of Puerto-Rico-Mayagüez (1997),
  M.S., Geology (2003)
  Research area: Heavy Metal Pollution Experiments on Tropical Benthic Foraminifera

- Rafael Rodriguez, Doctoral Student, Mechanical Engineering
  Education: B.S., Mechanical Engineering, University of Puerto Rico-Mayagüez (1989)
  M.S., Mechanical Engineering, Missouri University of Science and Technology (1995)
  Research area: Gas Turbine Emission Reduction Using a Flow Blurring Atomization Nozzle Array

- Monica Wilson, Doctoral Candidate, Physical Oceanography
  Education: B.S., Marine Science (2003), B.S., Computer Science (2003),
  M.S., Marine Science (2007)
  Research area: Localized Effects of Synoptic to Interannual Scale Climate Variability in Tampa Bay, FL

Alfred P. Sloan Foundation Minority Ph.D. Scholars

Graphics and Design by Evolve Management Group - Al-Aakhir A. Rogers, Ph.D. - al3aakhir@gmail.com