

The National Science Foundation

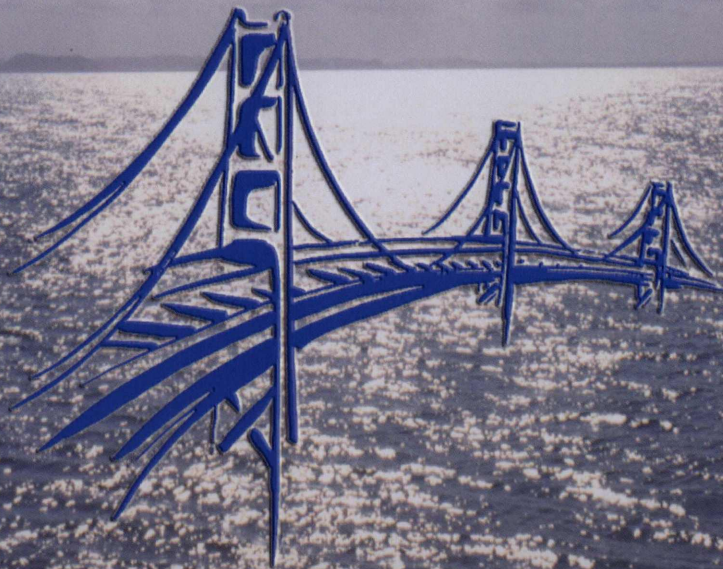
Louis Stokes Alliances for Minority Participation



April M. Boyd

BRIDGE to the DOCTORATE

A Pathway to the Next Level



Participating Alliances and Institutions

Alabama (Auburn University), *California* (University of California, Los Angeles), *California State* (San Francisco State University), *Florida/Georgia* (Florida State University), *Mississippi* (Jackson State University), *New Mexico* (New Mexico State University), *New York* (City University of New York), *North Carolina* (North Carolina A&T State University), *Philadelphia* (The University of Delaware), *Puerto Rico* (University of Puerto Rico at Rio Piedras), *Texas* (Texas A&M University), *Texas System* (University of Texas), *Western Alliance to Expand Student Opportunities* (Arizona State University)

2003-2004

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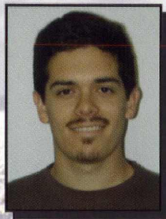
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A Cross-Section of Bridge to the Doctorate Students

Alabama



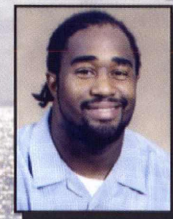
California



California State



Florida-Georgia



Mississippi



New Mexico



New York



North Carolina



Philadelphia



Puerto Rico



Texas



Texas System



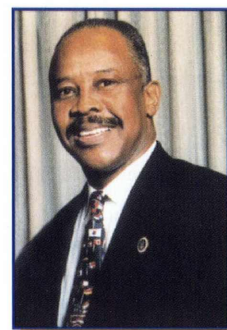
WAESO



A Pathway To the Next Level

A. James Hicks, Ph.D.
LSAMP Program Director

The National Science Foundation's newly instituted "Bridge to the Doctorate" (BD) initiative supports graduate activities for baccalaureate graduates of the LSAMP Program. The BD activity provides competitive support during the initial two years of graduate study and broadens participation through the attraction of underrepresented minorities in science, technology, engineering and mathematics (STEM) disciplines. The program is designed to ease the transition from undergraduate study to the next level.



Participating LSAMP institutions provide a highly enriched and proactive set of experiences, including academic and research mentoring, and elements and intricacies of the STEM workplace, especially the professoriate. Other professional workshops, seminars and travels focus on demystifying doctorate and post-doctorate programs, and how to thrive during the graduate school and post doctoral years.

In the fall of 2003, thirteen awards were made to some of America's top institutions offering graduate work. Each graduate site has a critical mass of ten minority students funded by the BD activity. Students selected by these institutions all have expressed interest and a strong motivation to acquire the terminal degree and remain life-long learners. Indeed, they are intentional learners and destined to be competitively empowered, informed and responsible contributors to the STEM enterprise!

Bridge to the Doctorate Alliances

Arizona State University



Auburn University



City College of New York



Florida State University



Jackson State University



New Mexico State University



North Carolina A & T State University



San Francisco State University



Texas A & M University



The University of Delaware



The University of Puerto Rico at Rio Piedras



The University of Texas at El Paso



University of California at Los Angeles



The Bridge to the Doctorate Program

The Directorate for Education and Human Resource (EHR) through the Division of Human Resource Development (HRD) announced the Louis Stokes Alliances for Minority Participation (LSAMP) supplementary activity, “Bridge to the Doctorate” beginning in FY 2003. The goal of these supplements is to fund an initial graduate degree bridge activity at Phase III LSAMP Alliance institutions. This activity is designed to broaden participation through the attraction of underrepresented minority students in science, technology, engineering, and mathematics (STEM) disciplines. Additionally, this activity seeks to remove minority students’ hesitancy about entering graduate school, and the fear of creating additional financial indebtedness associated with initial graduate education.

Approximately 22,000 baccalaureate degree recipients are produced annually at LSAMP institutions. In order to ensure matriculation of a larger number of these well trained and educated underrepresented minority students to graduate school, two-year supplemental funding on a competitive basis was made available to Phase III LSAMP Alliances.

The “Bridge to the Doctorate” activity includes effective strategies for recruiting, retaining, educating, and graduating student participants. A plan for formally connecting a significant number of newly minted LSAMP Master’s Degree graduates to doctoral degree programs is in place at participating institutions. In addition participating students will be tracked into doctoral degree programs and the workforce, including the professoriate.

Program Activities

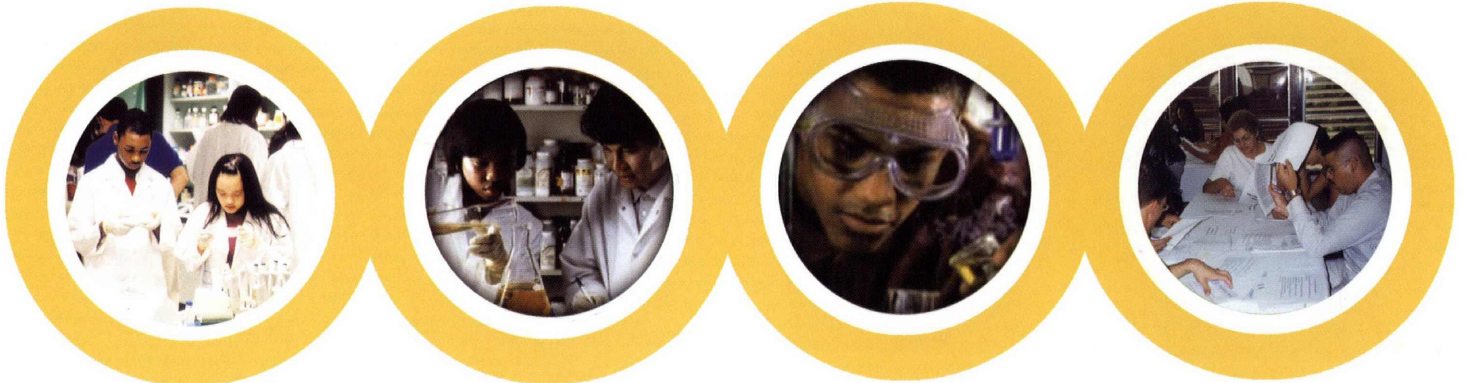
Participating institutions are providing highly valued activities such as mentoring of students, opportunities for students to travel to and participate in professional meetings, and hosting seminars and workshops. Example of such workshops and seminars include the following:

How to Thrive in Graduate School,

Demystifying Doctorate and Post-doctorate Programs,

Elements and Intricacies of the Science and Engineering Workforce Enterprise, Especially the Professoriate, and

Choosing the Right Graduate School and Advisor.

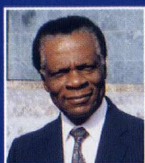


Bridge to the Doctorate Program Sites and Coordinators

LSAMP	Principal Investigator	BD Site	BD Coordinator
Alabama	Dr. Louis Dale, Vice President for Equity and Diversity, (205) 934-8762, ldale@uab.edu	Auburn University	Dr. Overtoun M. Jenda, Associate Dean and Professor of Mathematics, (334) 844-4663, jendaov@auburn.edu
California	Dr. Ralph J. Cicerone, Chancellor, (949) 824-5111, camp@uci.edu	University of California, Los Angeles	Dr. Richard L. Weiss, Professor of Biochemistry, (310) 825-3621, weiss@chem.ucla.edu
California State University	Dr. Richard Brown, Vice President for Academic Affairs, Interim, (916) 278-6331, ricb@csus.edu	San Francisco State University	Dr. Frank Bayliss, Professor of Biology, (415) 338-1071, fbayl@sfsu.edu and Dr. David Ellis, Professor of Mathematics, (415) 338-1026, dellis@math.sfsu.edu
Florida–Georgia	Dr. Ralph W. Turner, Associate Dean of Sociology and Criminal Justice, (850) 561-2678, Ralph.turner@famuc.edu	Florida State University	Dr. Patricia L. Stith, Coordinator of FGLSAMP-FSU, (850) 644-0387, pstith@admin.fsu.edu
Mississippi	Dr. James Perkins, Director of Research, (601) 979-2024, james.perkins@jsums.edu	Jackson State University	Dr. James Perkins, Director of Research, (601) 979-2024, james.perkins@jsums.edu
New Mexico	Dr. William V. Flores, Interim President/Provost, (505) 646-2035, president@nmsu.edu	New Mexico State University	Dr. Ricardo B. Jacquez, Project Director/Program Coordinator, (505) 646-3463, rjaquez@nmsu.edu
New York	Dr. Neville Parker, Professor of Civil Engineering, (212) 650-8854, ampcc@cunyvm.cuny.edu	The City University of New York	Dr. Gail Smith, Acting Assistant Provost, (212) 817-7540, gsmith@gc.cuny.edu
North Carolina	Dr. Carolyn W. Meyers, Provost and Vice Chancellor for Academic Affairs, (336) 334-7965/7966, cmeyers@ncat.edu	North Carolina A&T State University	Ms. Marcia F. Williams, NC-LSAMP Alliance Coordinator, (336) 334-7589 ext.140, marcia@ncat.edu
Philadelphia	Dr. Harvill Eaton, Provost and Senior Vice President for Academic Affairs, (215) 895-6321, eatonhc@drexel.edu	The University of Delaware	Assistant Dean, Michael L. Vaughan, Assistant Dean for Engineering Student Affairs, (302) 831-6315, vaughan@udel.edu
Puerto Rico	Dr. Manuel Gomez, Principal Investigator, (787) 765-5170, M_gomez@upr1.upr.clu.edu	University of Puerto Rico at Rio Piedras	Professor Javier Figueroa, Assistant Coordinator of the PR-LSAMP Program, (787) 765-5170, j_figueroa@upr.edu
Texas	Dr. Karan Watson, Associate Provost and Dean of Faculties, (979) 845-7200, Watson@ee.tamu.edu	Texas A&M University	Dr. Karen Butler, Assistant Dean of Engineering Graduate Programs and Associate Professor of Electrical Engineering, (979) 862-8869, karen.butler@mail.tees.tamus.edu
University of Texas System	Dr. Pablo Arenaz, UT System LSAMP Program Director, (915) 747-6005, parenaz@utep.edu	University of Texas	Ms. Sycora A. Wilson-James, Bridge to the Doctorate Coordinator, (915) 747-6388, sajames@utep.edu
Western Alliance to Expand Student Opportunities	Dr. Antonio A. García, Associate Professor of Bio-Engineering, (480) 965-8798, tony.garcia@asu.edu	Arizona State University	Dr. Antonio A. García, Associate Professor of Bio-Engineering, (480) 965-8798, tony.garcia@asu.edu

Alabama Louis Stokes Alliance for Minority Participation

Bridge to the Doctorate



"Many students are ready to attempt graduate study, but are hesitant because of the desire to earn money, and because graduate school is still an unknown quantity. Given that students' financial earning power is increased by the acquisition of a graduate degree, it is becoming easier for students to make the decision to pursue graduate studies. The Bridges to the Doctorate (BD) program is very timely for the Alabama program because of these factors. The BD program provides an excellent incentive for ten highly qualified students to pursue graduate studies with a doctoral degree as a goal."

LSAMP Principal Investigator: Dr. Louis Dale, Vice President for Equity and Diversity at The University of Alabama at Birmingham and Professor of Mathematics; (205) 934-8762, (205) 934-1650 ldale@uab.edu

Auburn is a state-assisted, comprehensive, Research I land-grant institution with a storied past dating from 1856. It has a long tradition of academic excellence and graduate education, awarding its first undergraduate degree in 1860 and its first graduate degree in 1870. Since then it has awarded more than 25,000 graduate degrees, including 3,500 doctorates. Auburn University is the largest university in Alabama with over 23,000 students, of whom 3,000 are graduate students.



Auburn has twelve colleges and schools in addition to the Graduate School – Agriculture, Architecture, Business, Education, Engineering, Forestry, Human Sciences, Liberal Arts, Nursing, Pharmacy, Sciences and Mathematics, and Veterinary Medicine. More than 1,100 graduate faculty members have terminal degrees from about 150 universities. More than ninety buildings occupy a campus of Southern charm graced with stately trees and abundant flowers.



Bridge to the Doctorate Coordinator: Dr. Overtoun M. Jenda, Associate Dean and Professor of Mathematics, Office of Minority Programs and Special Academic Projects, 231 Saunders Hall, Auburn University, AL 36849-5370, 334-844-4663, 334-844-4661 (fax) jendaov@auburn.edu; Research Area: Homological Algebra, Commutative Algebra

Bridge to the Doctorate Students



Angela Bell

Bachelor of Science: Chemistry
Alabama State University 2002
Chemistry

"Whether employed by a company in industry or an academic institution, I wish to become a significant contributor to my community and environment."



Nicole Harris

Bachelor of Science: Materials Engineering
Auburn University 2002
Materials Engineering

"I plan to become a professor in Materials Science and Engineering and to coordinate/manage research activities focused on the biomedical applications of smart materials."



Carma Cook

Bachelor of Science: Chemistry
Auburn University 1993
Chemistry

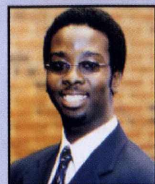
"My long-term goal is to pursue a career as a pharmaceutical scientist in the area of drug research and development."



Carl Pettis

Bachelor of Science: Mathematics
Alabama State University 2001
Mathematics

"I plan to pursue a career in industry or teach at the collegiate level."



Derek Forston

Bachelor of Science/Bachelor of Arts: Biomedical Sciences/Spanish
Auburn University 2003
Biological Sciences

"I plan to reach other students by teaching at a major university and undertaking rigorous research on an interesting phenomenon or enigma."



Charmaine Porter

Bachelor of Science: Microbiology
Auburn University 2003
Microbiology

"I am debating on whether I want to work in industry or education. As of now, I am leaning towards working in a university setting."



Iris Hill

Bachelor of Science: Zoology
Auburn University 2003
Conservation Biology

"I plan to combine and utilize the practice of conservation biology and veterinary medicine to improve the quality of living for exotic and endangered wildlife species by finding better methods of conservation, rehabilitation of habitats, and recovery of depleting populations."



Jana Smith

Bachelor of Science: Biology
University of Missouri – St. Louis 2000
Molecular Biology

"I desire to attain a post doctorate position at the University of California Davis or the University of Chicago in plant molecular biology. My ultimate goal is to become a principal investigator for (1) Monsanto in their gene discovery sector or (2) Donald Danforth Plant Sciences Center."



Angela Peterson

Bachelor of Science: Mathematics
Alabama State University 2001
Mathematics

"I plan to educate others on a collegiate level."



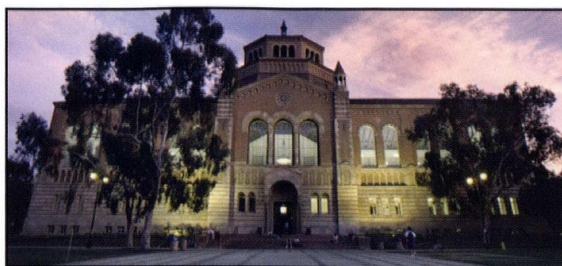
Michele Williams

Bachelor of Science: Computer Science
Bowie State University 2003
Computer Science

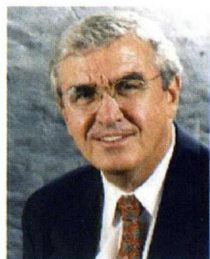
"After earning a PhD degree I plan to work on educational software products that tailor to older students. The focus of the products will be on students who might not have had a good learning foundation or may have learning disabilities that keep them from being successful in their academic endeavors."

UCLA LSAMP Graduate Program

UCLA is one of the premier research universities in the nation with outstanding faculty, 25,000 undergraduates, and 11,000 graduate and professional students. It offers more



than 100 first-rate master's and doctoral degree programs and extensive research and library facilities in a diverse cultural setting.



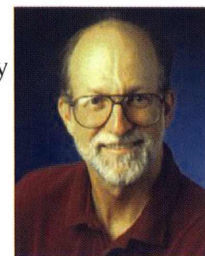
"Scholars in the UCLA Bridge to the Doctorate Program will serve as role models for CAMP students aspiring to graduate studies. Their success will serve as an inspiration for the next generation of under-represented students interested in pursuing careers in science."

pursuing careers in science."

PI - Nicolaos G. Alexopoulos, Ph.D.

Bridge to the Doctorate Coordinator

Richard L. Weiss
 Professor of Biochemistry
 Department of Chemistry and Biochemistry
 University of California, Los Angeles
 405 Hilgard Avenue
 Los Angeles, CA 90095-1569
 Phone: 310-825-3621
 E-mail: weiss@chem.ucla.edu
 Ph.D.
 Research Area: Amino Acid Metabolism



Graduate Scholars



José Avendano
 BS
 Mathematics
 University of California, Los Angeles
 2003
 Mathematics
 Teaching and Research (Professor)

Dennis Jay Montoya
 BA

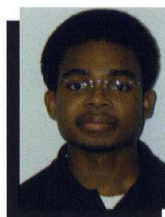
Molecular and Cellular Biology
 University of California, Berkeley
 2003
 Biomedical Sciences
 Teaching and Research (Professor)



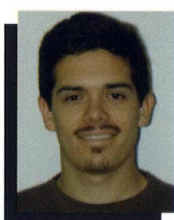
Kimberly Cross
 BS

Chemical Engineering
 University of California, Riverside
 2003

Chemical Engineering
 Fabrication of nano-scaled electronic devices



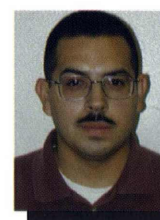
Odi C. Osonkie
 BS
 Biochemistry
 California State University, Northridge
 2003
 Biochemistry and Molecular Biology
 Teaching and Research (Professor)



David A. Galvan
 BS
 Physics
 University of California, San Diego
 2003
 Geophysics and Space Physics
 Work on Space Program with NASA

Jose Carlos Palacios
 BS

Mechanical Engineering
 California State University, Northridge
 1996
 Mechanical Engineering
 Research in Mechanical Engineering



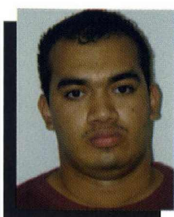
Karina Heredia
 BS

Chemistry
 California Polytechnic, Pomona
 2003

Organic Chemistry
 Pharmaceutical Research



Amber Michelle Young
 BS
 Physics
 University of California, Los Angeles
 2003
 Physics
 Teaching and Research (Professor)

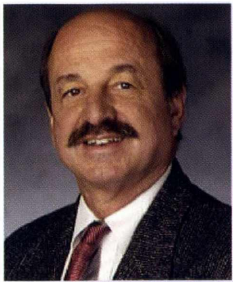


Miguel Jimenez
 BS
 Chemistry
 University of California, Los Angeles
 2003
 Chemistry
 Teaching and Research (Professor)

Jesse Zamudio
 BS

Biochemistry
 University of California, Los Angeles
 2003
 Biomedical Sciences
 Teaching and Research (Professor)





Ric Brown, Ed.D.
Vice President for
Academic Affairs
California State
University, Sacramento

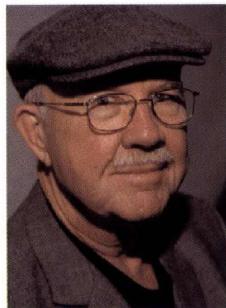
California State University LSAMP Program

For the California State University-LSAMP Program (CSU-LSAMP), the new LSAMP-Bridge to the Doctorate (BD) Program has provided the CSU Alliance the opportunity to leverage the expertise of one of its members in using master's level education as a "bridge" for URM students seeking Ph.D.s in STEM disciplines. Specifically, the CSU chose San Francisco State University (SFSU) as the Alliance's initial graduate institutional site for the LSAMP-BD Program because of SFSU's demonstrated success in retaining, graduating, and placing its URM master's students in STEM doctoral programs through its well established MA/MS/Ph.D. cooperative graduate program. The LSAMP-BD Program will enable SFSU to expand its successful program and provide LSAMP graduates from all 19 participating CSU campuses the opportunity to participate in the program.

San Francisco State University

San Francisco State University is an urban comprehensive university with eight colleges offering baccalaureate degrees in 112 areas. Reflecting the ethnically diverse area in which it is located, SFSU ranks 10th in the nation in awarding baccalaureate degrees to minorities. The College of Science and Engineering is committed to the philosophy that the best education of its students comes through involvement in research and the solution of real-world problems. Faculty encourage students to ignore traditional barriers, to become actively involved in research, and to connect with the Bay Area's rich science and technology network.

SFSU's many state-of-the-art facilities include a Conservation Genetics Laboratory, the Romberg Tiburon Center for Environmental Studies, an electron microscope facility, computational chemistry and visualization laboratory, a DNA analysis facility, a Thin Film Laboratory, a molecular biology core facility, the Nuclear Magnetic Resonance Center, Mass Spectrometry Center and an Alpha 3000 internet server.



Frank Bayliss
Bridge to Doctorate Coordinator
Professor of Biology
Ph.D., 1971,
University of California, Davis
Research interest: microbiology
415/338-1071
fbayl@sfsu.edu



David Ellis
Bridge to Doctorate Coordinator
Professor of Mathematics
Ph.D., 1969, City
University of New York
Research interest: applied mathematics
415/338-1026
dellis@math.sfsu.edu

Bridge to Doctorate Students Academic Year 2003-2004



Claudia Aguilar BS,
physiology, 2002, San
Francisco State
University
Current program:
MA, physiology
Career goal:
Ph.D./MD—research



Christina Harris
BA, biology, 2002,
University of
Missouri
Current program:
MA, physiology
Career goal:
Ph.D.—
faculty/research



Marilyn Asuncion
BS, physiology,
2001, San
Francisco State
University
Current program:
MA, physiology
Career goal:
Ph.D.—research



Regina Lagman
BS, physiology,
2000, San
Francisco State
University
Current program:
MPH, public
health
Career goal:
Ph.D.—research



Danielle Augustin
BS, microbiology,
2001, San Diego
State University
Current program:
MA, microbiology
Career goal:
Ph.D.—
faculty/research



John Paul Salazar
BS, molecular biol-
ogy,
University of
California-Santa
Cruz
Current program:
MS, chemistry
Career goal:
Ph.D.—
faculty/research



Nichole Coleman
BS, chemistry,
1977, San Jose
State University
Current program:
MS, chemistry
Career goal:
Ph.D.—
faculty/research



Lisseth Villareal
Electrical engineer-
ing,
2002, Cal Poly
San Luis Obispo
University
Current program:
MS, engineering
Career goal:
Ph.D.—
faculty/research



Noe Gomez
BS, cell/molecular
biology, 1996,
University of
California-Irvine
Current program:
MA, microbiology
Career goal:
Ph.D.—
faculty/research



Cornell Wells
BS, physiology,
2002, San
Francisco State
University
Current program:
MA, physiology
Career goal:
Ph.D./MD—
research



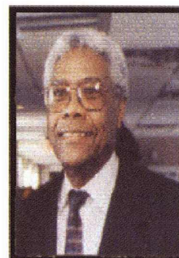
Florida-Georgia Louis Stokes Alliance for Minority Participation Bridge to the Doctorate Program



Charmaine O'Brien, BA
Florida A & M University



Patricia L. Stith, PhD
Coordinator of FGLSAMP-FSU



Ralph Turner, PhD
Director of FGLSAMP

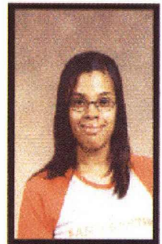


Sharon Escoriza, B.S
Florida State University



Joshua De Leon, BA
University of C. Florida

The Florida-Georgia Louis Stokes Alliance for Minority Participation (FGLSAMP) is a coalition of 12 institutions in Florida and one in Georgia. The members include Florida State University, University of Florida, Florida A&M University, University of Central Florida, Tallahassee Community College, Albany State University, Bethune-Cookman College, Florida International University, Florida Memorial University, University of Miami, University of South Florida, Miami Dade Community College, and Florida Community College. The goal of FGLSAMP is to increase the number of students who receive undergraduate and graduate degrees in Science, Engineering and Mathematics.



Fanisha Wynne, BS
Tougaloo College

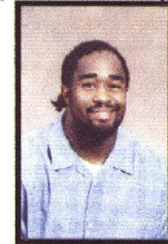


Marcus Boone, BA
Albany State University



Raymond Loiseau, BA
Florida State University

Florida State University is the site for the FGLSAMP Bridge to the Doctorate Program. FSU is a comprehensive, graduate-research university with a liberal-arts base. The university's primary role is to serve as a center for advanced graduate and professional studies and providing excellence in undergraduate programs. It has an enrollment of 38,000 students. FSU offers Ph.D. degree programs in biology, chemistry, computer and information sciences, mathematics, meteorology, oceanography, physics and engineering.



Rojae Charity, BS
Florida A&M University



Yoshino Woodard, BS
Florida State University



Erin Harrell, BA
Florida State University



FGLSAMP Graduate Mentor Network at FSU
Sitting: Mark Howse, Yoshino Woodard, Ted Campbell, Charmaine O' Brien, Marcus Boone. Standing: Dana Gardner, Charmane Caldwell, Jaray Jasper, Johnnie Birch, Joshua De Leon, Patricia Stith, Raymond Loiseau, Latecfah Stanford, and Yanet Manzano



Dana Gardner, BS
University of Florida



Mississippi

LSAMP Bridge to the Doctorate Program



Dr. James Perkins
 Director of Research
 College of Science, Engineering
 & Technology
 Director of LSMAMP
 Director of Bridge Program
 P.O. Box 18119
 Jackson, MS 39217
 601-979-2024
 james.perkins@jsums.edu
 PhD. in Chemistry

Jackson State University, in partnership with the other LSMAMP institutions has made increasing the number of minority STEM doctorates a cornerstone of its mission.

Funding of this Bridge to the Doctorate Program has accelerated this process and is providing the foundation for institutionalization of the Bridge program at JSU and is an important addition to the LSMAMP program.

Jackson State University is a coeducational, public institution, supported by the State of Mississippi. It is the seventh largest among the nation's 117 Historically Black Colleges and Universities (HBCUs). Located near the downtown area of Jackson, Mississippi, the capital and largest city in the state, Jackson State University is designated as "doctoral/research intensive" by the Carnegie Foundation and offers doctorates in nine disciplines.



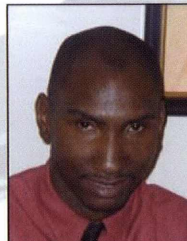
Najealicka Armstrong
 BS - Biology
 Alcorn State University- '02
 Biology
 Career Goal: Ph.D. in Biology

Eric McClendon
 BS - Chemistry
 Jackson State University- '03
 Chemistry
 Career Goal: Ph.D. in Organic Chemistry



Charity Mosley
 BS - Chemistry
 Norfolk State University- '02
 Chemistry
 Career Goal: Ph.D. in Forensic Chemistry

Brian Napolion
 BS - Chemistry
 Jackson State University- '03
 Chemistry
 Career Goal: Ph.D. in Physical Chemistry



Kylie Nash
 BS - Computer Science
 Jackson State University- '03
 Computer Science
 Career Goal: Ph.D. in Computer Science/Visualization

Mekel Richardson
 BS - Biology
 Jackson State University- '02
 Molecular Biology
 Career Goal: Ph.D. in Molecular Biology



Isi Tolliver
 BS - Biology
 Jackson State University- '00
 Cardiology/Immunology
 Career Goal: Ph.D. in Molecular Biology

Tyisha Traylor
 BS - Biology
 Jackson State University- '02
 Biology
 Career Goal: Ph.D. in Pharmacology/Toxicology



Tomekia Simeon
 BS - Chemistry
 Tougaloo College- '03
 Chemistry
 Career Goal: Ph.D. in Computational Chemistry

Cornelius Toole, Jr.
 BS - Computer Science
 Jackson State University- '03
 Computer Science
 Career Goal: Ph.D. in Computer Science/Visualization



New Mexico

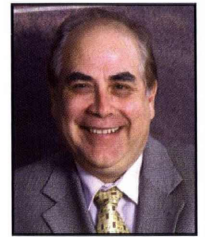
Alliance for Minority Participation

Bridge to the Doctorate



New Mexico State University is a vibrant mix of Southwestern tradition and leading edge technology — a major research university that is also a regional center of art and cultural activities. With a multicultural population of more than 23,000 graduate and undergraduate students on the main campus and four branch campuses, NMSU continues to build on its land-grant heritage of teaching, research and service. The university offers 73 bachelor's degree programs, 51 master's degree programs and 24 doctoral programs. It is classified by the Carnegie Foundation for the Advancement of Teaching as a Doctoral/Research University - Extensive.

Principle Investigator: William V. Flores, Interim President and Provost



“The Bridge to the Engineering Doctorate is an important addition to the New Mexico Alliance for Minority Participation. It creates a natural academic pathway to the Ph.D. with potential to advance discovery and understanding while promoting teaching, training and learning in engineering. The project will broaden the participation of underrepresented groups and enhance the synergy between research and education.”

Project Director/Program Coordinator: Ricardo B. Jacquez, Ph.D., PE; (505) 646-3463; rjaquez@nmsu.edu; Ph.D., Civil Engineering; Research area: Environmental Engineering with emphasis on application of microbiology to wastewater treatment.

Bridge to the Doctorate Students



Angela Chacon: B.S., Civil Engineering, New Mexico State University, 2004. Graduate major: Civil Engineering. Career goal: An academic career as a structural engineering professor with research interest in bridge engineering and bridge testing utilizing traditional materials as well as advanced composite materials.



Thomas Dodge: B.S., Civil Engineering, New Mexico State University, 2002. Graduate major: Civil Engineering. Career goal: Research in the area of concrete material mechanics and its relation to soil-structure interaction with respect to seismic design in both a theoretical and practical approach to the applications, and work within an engineering design firm or in academia.



Aaron De Los Santos: B.S., Electrical Engineering, New Mexico State University, 2004. Graduate major: Electrical Engineering. Career goal: Wireless communication technology research and the design of communication equipment that will revolutionize personal and business communication and to teach in a university setting.



Frank Jurado III: B.S., Civil Engineering, New Mexico State University, 2003. Graduate major: Civil Engineering. Career goal: To conduct research in the removal of arsenic from drinking water which will further the goal of becoming an expert, professional and leader in engineering instruction and research as a professor and active researcher.



Jimmy M. Moreno: B.S., Geological Engineering, New Mexico State University, 2001. Graduate major: Civil Engineering. Career goal: To obtain a Ph.D. with an emphasis in water resources, in particular, groundwater/surface water interaction, and to gain practical experience with a final goal of returning to a university setting as an educator.



Rajesh Daniel Nayar: B.S., Engineering Technology—Electrical, New Mexico State University, 2002. Graduate major: Electrical Engineering. Career goal: Design hardware solutions to common security problems with a long-term goal to return to New Mexico State University as a faculty member, and, through my research, to contribute to local economic development.



Ruben Ortega: B.S., Electrical Engineering, New Mexico State University, 2004. Graduate major: Electrical Engineering. Career goal: Bio-medical applications for electromagnetic systems (bio-electromagnetics), for example, hyperthermia treatment of cancer, medical imaging, electrical therapy of cardiac arrhythmia and brain mapping, and becoming a faculty member in an electrical engineering department.



Sergio Pizarro: B.S., Electrical Engineering, New Mexico State University, 2004. Graduate major: Electrical Engineering. Career goal: To conduct research in the design of Frequency Modulated Continuous-Wave (FMCW) radar systems for mapping underground structures leading to applications within the mining industry to protect miners and increase efficiency of the industry.

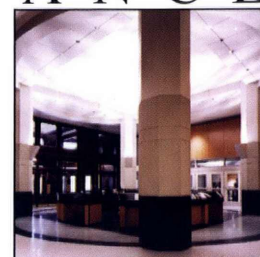
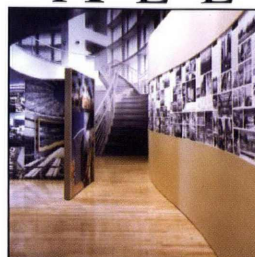
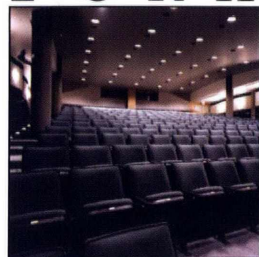
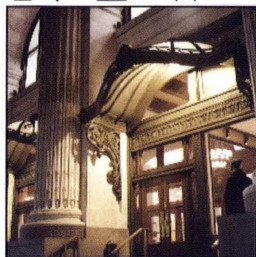


Danielle Sanchez: B.S., Chemical Engineering, New Mexico Institute of Mining and Technology, 2003. Graduate major: Chemical Engineering. Career goal: To develop computer models for engineering design, enhance my research expertise and to establish a network of funding and equipment resources, leading to a career in industry and eventually a position as a professor.



Ryan M. Christopher: B.S., Electrical Engineering, New Mexico State University, 2004. Graduate major: Electrical Engineering. Career goal: To contribute original research and innovation in the area of electromagnetics, specifically biomedical applications, as well as to attain a professorship at a University in the area of Electrical Engineering.

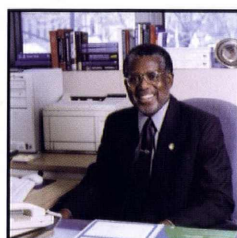
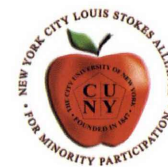
NEW YORK CITY ALLIANCE



The Graduate Center, The City University of New York, 365 Fifth Avenue, New York, NY 10016
 Bridge to the Doctorate Coordinator at the Graduate Ctr. - Gail Smith, Acting Assistant Provost
 212-817-7540 • gsmith@gc.cuny.edu



A unique and distinguished intellectual partnership, The Graduate Center is the doctorate-granting institution for The City University of New York (CUNY). Here, 4,000 students and 1,600 faculty join in the shared enterprise of exploring and expanding the boundaries of knowledge within 32 doctoral programs in the humanities, social sciences and sciences. More than a third of the rated Ph.D. programs rank among the country's top 20.



Dr. Neville Parker, NYC LSAMP PI, City College
 138th & Convent Ave., Marshak J14, 212-650-8854, ampcc@cunyvm.cuny.edu

The objectives of the Bridge to the Doctorate program is to entice newly minted LSAMP STEM graduates to forego the immediate rewards of the workplace and embark on an extended journey that would provide the long-term gratification of a research/academic career. It is expected that at the end of the two years of the Bridge program, the NYC LSAMP will have tracked twenty students into STEM Ph.D. programs.



Eva Atia

B.S. in Comp. Sci.
 College of Staten Is. '02

Graduate Major
 Comp.Sci.
 College of Staten Is.

Career Goal:
 Graduate with a PhD in
 Computer Science, and
 continue to expand my
 knowledge and utilize my
 skills in the Information
 Technology research.

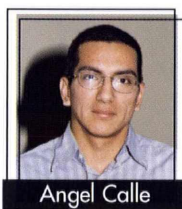


Lori Collins

B.S. in Information
 Systems Management
 York College '03

Graduate Major Computer
 and Information Science
 Brooklyn College

Career Goal:
 Obtain my PhD in Comp.
 Sci., continue to influence
 minority students into the
 sciences and continue my
 research interest in High
 Performance Computing
 and A.I.

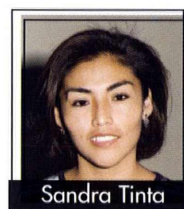


Angel Calle

B.M.C.C.
 B.E. in Electrical
 Engineering
 City College '03

Graduate Major
 Electrical Engineering
 City College

Career Goal:
 After obtaining my PhD, I
 would like to continue
 doing research in Robotics
 with a focus on Control
 Systems.



Sandra Tinta

B.S. in Comp. Sci.
 Lehman College '03

Graduate Major
 Comp.Sci.
 Lehman College

Career Goal:
 Obtain a PhD in software
 engineering, gain experi-
 ence in an Industrial set-
 ting and utilize it in an
 Academic setting.

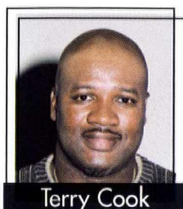


Leah Pride

N.Y.C. College of Tech.
 B.S. in Biochemistry
 City College '03

Graduate Major
 Biochemistry
 City College

Career Goal:
 Develop projects that
 explore ways to improve
 the condition
 of the environment.

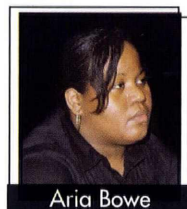


Terry Cook

B.S. in Comp. Sci.
 Lehman College '04

Graduate Major
 Comp.Sci.
 Lehman College

Career Goal:
 Research and teaching in
 databases, computer
 architecture & operating
 systems

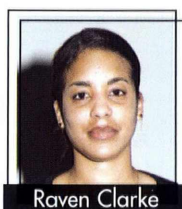


Aria Bowe

B.S. in Biology
 Queens College '04

Graduate Major Biology
 Queens

Career Goal:
 Continue my research
 interest in Biological
 processes and the influ-
 ence of culture on these
 processes.

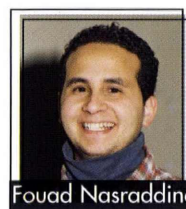


Raven Clarke

B.B.A. in C.I.S.
 Baruch College '04

Graduate Major
 Mathematics

Career Goal:
 Eventually I would like to
 become a Professor

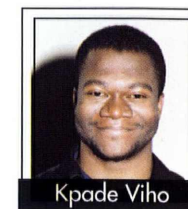


Fovad Nasraddine

La Guardia C.C.
 B.S. in Physics
 StonyBrook Univ. '03

Graduate Major Earth &
 Atmospheric Science
 City College

Career Goal:
 Continue research and
 teaching in Atmospheric
 Science on completing my
 PhD.



Kpade Viho

B.M.C.C.
 B.B.A. in C.I.S.
 Baruch College '04

Graduate Major Computer
 Info. Sys. Baruch

Career Goal:
 Complete my graduate
 degree and continue to
 deepen my knowledge by
 continuing research in
 Information Technology.

NC-LSAMP

North Carolina Louis Stokes Alliance for Minority Participation

Dr. Carolyn W. Meyers, Principal Investigator

Dr. Joseph Monroe, Co-Principal Investigator

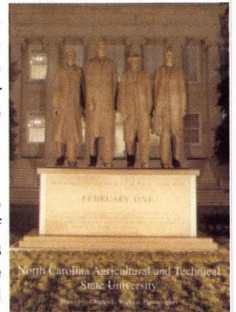


Dr. Carolyn W. Myers, Provost and Vice Chancellor for Academic Affairs, NC-LSAMP PI

"The Bridge to the Doctorate Program, funded by the National Science Foundation (NSF) has afforded the North Carolina Louis Stokes Alliance for Minority Participation (NC-LSAMP) the opportunity to provide financial support to ten graduate students pursuing their Masters Degrees. These students otherwise would have to acquire financing through loans and outside employment. Because of the Bridge to the Doctorate Program these Bridge Scholars can now dedicate their full attention to their pursuit of a graduate degree without the added pressure of indebtedness. The Bridge to the Doctorate program will provide even greater visibility to the existing NC-LSAMP program and continue to bring prestige to the North Carolina Alliance institutions."

Bridge to the Doctorate Institution, North Carolina A&T State University

North Carolina A&T State University, one of four Ph.D. granting institutions within the Alliance is the selected institutional site for the Bridge to the Doctorate program. One of the largest producers of minority engineering graduates in the country; the university leads in the production of graduates from HBCU institutions. North Carolina A&T State University offers fourteen (14) science, technology, engineering and mathematics (STEM) graduate degree programs. Seven STEM-related research centers are located on campus, including: The Center for Aerospace Research; The Center for Electronics Manufacturing; The Center for Composite Materials Research; The Center for Advanced Materials and Smart Structures; The Center for Energy Research and Technology.



Bridge to the Doctorate Coordinator



Marcia F. Williams, MBA
NC-LSAMP Alliance Coordinator
College of Engineering, 640 McNair Hall
North Carolina A&T State University
1601 E. Market Street
Greensboro, NC 27411
Phone: (336) 334-7589, ext. 140; Fax (336) 334-7540
E-Mail: marcia@ncat.edu

B. S. Degree in Industrial Technology, North Carolina A&T State University
MBA, Wake Forest University

Area of Expertise: Ms. Williams has fifteen years of experience in sponsored program administration, including the areas of program and strategic planning, organizational development, staff development, and student affairs. Additionally, she has participated in collaborations on issues of entrepreneurship and small business development; and serves on university level committees addressing the issues of racial and gender equity in STEM disciplines.

NC-LSAMP Bridge to the Doctorate Scholars



Carlton Chiles

B. S., Industrial Technology, Graphic Communications
North Carolina A&T State University, 2002
Graduate School Major: Industrial and Systems Engineering
Career Goal: "The combination of both my undergraduate classes and corporate experience enhanced my passionate desire to pursue my doctorate degree and teach others about this exciting and innovative field".



Teberih Kiflay

B. S., Computer Information Systems
University at Buffalo, 2001
Graduate School Major: Industrial and Systems Engineering
Career Goal: "My ultimate goal is to become a researcher and a professor who makes a difference in the lives of students. I would like to come back to a Historically Black College or University to teach and influence our underrepresented minorities in a positive manner".



Al-Aakhir Grimes

B. S., Electrical Engineering
North Carolina A&T State University, 2003
Graduate School Major: Electrical and Computer Engineering
Career Goal: "I intend to continue my education beyond my Masters Degree. Following as the Lord leads, I have a calling to reach out and help others with the talents I have been given. I would like to encourage younger students to participate in programs like NC-LSAMP, which have blessed and changed by life".



Bianca Richardson

B.S., Industrial Technology, Graphic Communications
North Carolina A&T State University, 2003
Graduate School Major: Construction Management Systems
Career Goal: "My career goals are to work in the field of construction, whereby I will ultimately own a construction business and receive a Ph.D. in an Engineering and/or Technology field. Additionally, I also aspire to return to the university level as a professor at North Carolina A&T State University".



Jeffery Jenkins

B. S., Electronics and Computer Technology
North Carolina A&T State University, 2003
Graduate School Major: Electronics and Computer Technology
Career Goal: "My projected goal is to obtain a Masters degree in Electronics and Computer Technology and to continue my studies in pursuit of a Ph.D. Taking my education to a higher level will not only help me become a better leader, but also help dedicated professors strive to be greater educators".



John Shelton

B.S., Mechanical Engineering
North Carolina A&T State University, 2000
Graduate School Major: Mechanical Engineering
Career Goal: "Upon receiving my Masters degree in Mechanical Engineering, I intend to pursue my Ph.D. in Mechanical Engineering. I would like to continue developing innovative research in next-generation mechanical materials by pursuing a career in academia and by sharing these interests in collaborative research with colleagues and students".



Alaina Jones

B.S., Architectural Engineering and Engineering Physics
North Carolina A&T State University, 2003
Graduate School Major: Civil Engineering
Career Goal: "After successful completion of the masters program, I plan to work on a doctoral degree. The LSAMP programs and the financial assistance will enable me to successfully reach my goals and make me a more marketable doctoral candidate".



Latoya Spells

B.S., Electronics and Computer Technology
North Carolina A&T State University, 2002
Graduate School Major: Electrical and Computer Engineering
Career Goal: "Presently I am a graduate student in the Electrical and Computer Engineering department and soon plan to pursue my Ph.D. in the same area. I chose this field of expertise because of my strong desire to work with the hardware and analytical perspective of Electrical and Computer Engineering".



Kenneth Jones

B. S., Electrical Engineering
North Carolina A&T State University, 2003
Graduate School Major: Computer Engineering
Career Goal: "Upon completion of my Masters in computer engineering, I plan to work in the area of research and development of digital systems, particularly with microprocessors and their use within consumer products."



Levell Spencer

B. S., Industrial Technology
Alcorn State University, 2003
Graduate School Major: Industrial Technology, Manufacturing Systems
Career Goal: "Although I would like to become an Industrial Production Manager in the realm of manufacturing, eventually, I would like to obtain my Ph.D. in Technology Management or a related discipline."

Greater Philadelphia Region LSAMP Bridge to Doctorate Program Participants

The University of Delaware has grown from its founding as a small private academy in 1743 to a major university. As one of the oldest land-grant institutions, as well as a sea-grant, space-grant and urban-grant institution, Delaware offers an impressive collection of educational resources. Undergraduates may choose to major in any one or more of over 100 academic majors. The University's distinguished faculty includes internationally known scientists, authors and teachers, who are committed to continuing the University of Delaware's tradition in providing one of the highest quality undergraduate education available.

The University enrolls over 16,000 undergraduates and nearly 3,000 graduate students. As a state-assisted, privately controlled institution, the University seeks to enroll students from diverse backgrounds and a wide variety of geographic regions. Currently, 60 percent of Newark campus undergraduates are nonresidents who represent nearly every state and several foreign countries. The University of Delaware is strongly committed to enrolling and retaining minority students.



Stephen R. Cox

Director of Undergraduate Research, Drexel University, Project Director, Greater Philadelphia Region Louis Stokes Alliance for Minority Participation

"The Bridges to the Doctorate Program is the transitional quantum state of the STEM (science, technology, engineering and mathematics) enterprise dedicated to the development of Doctoral candidates who have been enriched in the energy matrix of the LSAMP. What was a vision has become a strategic model to move underrepresented students from

pre-college through baccalaureate degree attainment and on to terminal degree completion. In the Greater Philadelphia Region the LSAMP Bridge to the Doctorate program is the state of equilibrium that we expect to become the norm, not the exception, when producing Ph.D. candidates in the future."

Michael L. Vaughan

Assistant Dean for Engineering Student Affairs and Campus PI, Bridges to the Doctorate University of Delaware, College of Engineering
141 DuPont Hall, Newark, DE 19716
(302) 831-6315

Fax number: (302) 831-8179

vaughan@udel.edu; Degree: BSEE,

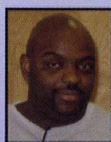
MSEE - North Carolina A&T State University; Research Area: Ph.D. Candidate, Civil Engineering - University of Delaware



Bridge to Doctorate Students

Chuck Ogbuawa, Chemistry, Bachelor of Science (BS), University of Delaware, 1994, Chemistry/BioChemistry

Career Goal: The objective of my Masters Degree is to develop pure synthesis skills before pursuing a Ph.D. in Organometallic Chemistry. There are a lot of interesting ligands that can be synthesized and applied to catalyst development for enantioselective processes. The pursuit of more environmentally friendly chemical processes is what I endeavor to discover as a principal investigator.



Cheryl Cannon: Biology and Chemistry, Bachelor of Science (BS), Delaware State University, 2003, Chemistry/BioChemistry

Career Goal: After obtaining my MS degree, I would love to pursue my education at the next level. My graduate experience at the University of Delaware will give me the building blocks that I need to get involved in research pertaining to fetal genetic disorders.

Tiffany Denny, Electrical Engineering, Bachelor of Electrical Engineering (BEE), University of Delaware, 2003, Electrical and Computer Engineering. Career Goal: For some time, I have considered pursuing graduate education. This program made it possible. My ultimate goal is to get my terminal degree in Electrical Engineering and work in Signal Processing.

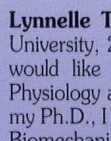


John Fader: Mechanical Engineering, Bachelor of Mechanical Engineering (BME), University of Delaware, 2001, Mechanical Engineering. Career Goal: Once I complete my MS degree in Mechanical Engineering, I would like to pursue further study in Composite Materials. Ultimately, I would like to work in that industry.

Raul Jackson: Chemical Engineering, Bachelor of Science in Chemical Engineering (BSChE), Drexel University, 2003, Chemical Engineering. Career Goal: Upon attaining my Masters and Doctoral degrees in Chemical Engineering, I plan on entering the field of Waste Water Treatment and Technology. I have had previous experience in this field as an undergraduate when I interned at the waste water treatment plant at a leading environmental treatment company. During my term there, I monitored plant emissions of hazardous air pollutants and developed a sampling program which enabled the company to handle regulatory violations proactively.



Cornelius McFadden: Chemistry, Bachelor of Science (BS), Lincoln University, 2003, Chemistry/BioChemistry. Career Goal: My interest in Organic Chemistry allows me to be a part of the LSAMP Bridge to the Doctorate Program. By matriculating at University of Delaware in Chemistry/Biochemistry I can participate in research in Biochemistry such as Protein synthesis and Enzyme Kinetics. The research experiences afforded to me through the program will set me on the fruitful path to achieve my goal to earn a Ph.D. in Organic Chemistry.



Lynnelle Thorpe: Biology, Bachelor of Science, Delaware State University, 2003, BioMechanics Movement Science. Career Goal: I would like to develop my expertise in Human Movement and Physiology at the MS level at University of Delaware. After I pursue my Ph.D., I would like to work in a research environment focused on Biomechanics for Human Rehabilitation.



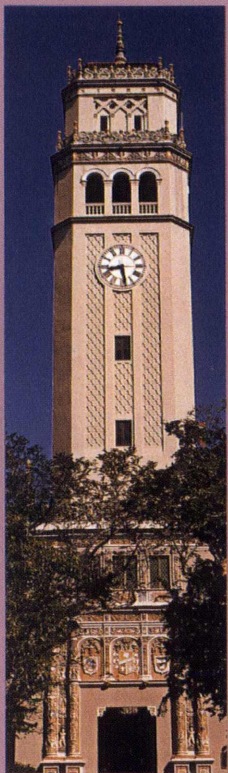
Lawrence Totty: Computer Science, Bachelor of Science, Lincoln University, 2003, Computer Science. Career Goal: After obtaining a Master's degree, I want to work in the Software Development industry. Developing real-life simulations for a myriad of uses has been a dream of mine since I was very little. I also want to earn my Ph.D. and become a full-time professor of Computer Science on the university level.



Krystaufeux Williams: Physics, Mechanical Engineering, Bachelor of Science (BS), Bachelor of Science in Mechanical Engineering (BSME), Lincoln University, Drexel University, 1998, 2001, Physics. Career Goal: My career goals include eventually teaching Physics to young students at a university. I enjoy some of the theoretical nature of Physics, and I look forward to showing students how to understand physics. It is not so important that each of my students become physicist, but it is more important that people (especially my own) know that they can be scientists. Furthermore, I would like students to solve critical thinking problems and know about the physical world around them.



Gregory Wilson: Chemistry, Bachelor of Arts (BA), Cheyney University of Pennsylvania, 2000, Chemistry/BioChemistry. Career Goal: I am currently matriculating in the Chemistry and Biochemistry Department at the University of Delaware. In two years, I expect to have obtained a Master's degree in pursuit of a full Doctorate as part of the LSAMP Bridge to Doctorate Program. My intention is to achieve the academic skills and the laboratory experience that will qualify me as a knowledgeable and competent individual in the Chemical Industry.



Puerto Rico

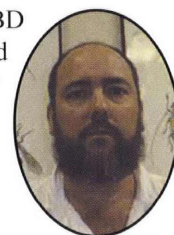
Louis Stokes Alliance for Minority Participation



"The PR-LSAMP Bridge to the Doctorate Program will contribute to increase the pool of highly qualified STEM PhDs in research and/or university teaching. This will have a long-term impact in Puerto Rico, particularly when taking into consideration the cumulative effect of graduates' life careers in academia and the thousands of students whose learning will be impacted".

Bridge-to-the-Doctorate Coordinator

Prof. Javier Figueroa, the Assistant Coordinator of the PR-LSAMP Program is the BD Coordinator. His field of specialization is Biology and Ecology. He has conducted research in Population Biology, biogeographical distribution and systematics of the Order Odonata in neotropical environments with emphasis in the Greater Antilles.



UPR Resource Center for Science and Engineering
P.O. Box 23334; San Juan, Puerto Rico 00931-3334
Tel. (787) 765-5170, ext. 2012; FAX (787) 766-1293, E-mail: j_figueroa@upr.edu

Bridge-to-the-Doctorate Participants

Institutional Site for the BD Program

The University of Puerto Rico at Río Piedras (UPR-Río Piedras) is the flagship institution of the Island's public higher education system. Located in the San Juan metropolitan area, UPR-Río Piedras enrolls almost 18,000 undergraduate students and over 3,000 graduate students. The large majority of students, 98%, are Puerto Rican; 68% are women, and 60% are first generation college students. The institution grants bachelors' degrees in 69 areas of specialization, 10 master's degrees in 43 areas of specialization and three doctoral degrees (Ph.D., J.D. and Ed.D.) in 14 areas of specialization. Although the Carnegie Foundation classifies UPR-Río Piedras as a Research Intensive University, it is positioned to become a Research Extensive University while maintaining its commitment to quality undergraduate education. Nationwide, 10% of the Hispanics who earned a Ph.D. degree in a natural science field from 1996 to 2001 attained their BS degree from UPR-Río Piedras.

Karilys González

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Chemistry
BS Degree in Chemistry (June 2003)
Graduate Major: Chemistry
Career Goal: To become a researcher in an industrial setting to develop specific dyes to improve resolution in magnetic resonance images and teach college level courses.



Luzed Díaz Pérez

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Biology
BS Degree in Biology (December 2002)
Graduate Major: Cellular Molecular Biology
Career Goal: I would like to become a college professor in the field of cellular and molecular biology; my main interests are in the area of biological membranes.



Daniel Caballero

Undergraduate Institution: UPR-Río Piedras
BS Degree in Biology and Chemistry (June 2003)
Graduate Major: Biochemistry
Career Goal: To become a university professor in the fields of Biochemistry and Biophysics and do research in the area of Ion Channel Biophysics.



Marilyn García Arriaga

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Chemistry
BS Degree in Chemistry (June 2002)
Graduate Major: Organic Chemistry
Career Goal: Teach and conduct research in the field of Organic Chemistry.



Omar A. Cruz Nieves

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Biology and Chemistry
BS Degree in Biology and Chemistry (June 2003)
Graduate Major: Biochemistry
Career Goal: To become a professor and researcher in Biochemistry and Biophysics, specifically in the area of ligand-gated ion channels such as the nicotinic acetylcholine receptor (and a famous race car driver!).



Agustín Díaz Díaz

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Chemistry
BS Degree in Chemistry (June 2003)
Graduate Major: Inorganic Chemistry
Career Goal: Conduct research in the field of Bioinorganic Chemistry developing artificial photosynthesis systems.



Betzaida Castillo Cruz

Undergraduate Institution: UPR-Humacao
Undergraduate Major: Industrial Chemistry
BS Degree in Industrial Chemistry (May 2002)
Graduate Major: Biochemistry
Career Goal: To become a professor and researcher in the field of Biochemistry in the areas of Biotechnology and non-aqueous enzymology.



Yamaris Pacheco Moctezuma

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Chemistry
BS Degree in Chemistry (July 2002)
Graduate Major: Biochemistry
Career Goal: To secure a position in an internationally competitive pharmaceutical and conduct research in the areas of biochemistry or biotechnology.



Azlín Biaggi Labiosa

Undergraduate Institution: UPR-Mayagüez
Undergraduate Major: Chemistry and Physics
BS Degree in Chemistry (June 1999) and Physics (June 2003)
Graduate Major: Chemical Physics
Career Goal: To become a college professor in the field of solid state physics and do research in the field of nanotechnology, particularly with nanocrystalline silicon films.



Jessica Oyola Cintrón

Undergraduate Institution: UPR-Río Piedras
Undergraduate Major: Chemistry
BS Degree in Chemistry (June 2003)
Graduate Major: Chemical Physics
Career Goal: To be a college professor and a researcher in the field of Biophysics developing structural and conformational studies for azurin from pseudomonas aeruginosa (blue copper protein).



The Texas A&M System LSAMP (TX LSAMP)

Bridges to the Doctorate (BD) Program



"Excellence, leadership and diversity are goals common to the Texas A&M University mission, and to the *Bridges to the Doctorate Program*. The program makes it possible for its fellows to be active participants, rather than observers, in the community of graduate students, academics and professionals at TAMU, and in their fields. By permitting *fellows* to dedicate themselves to their academics and research without subsistence distractions, and by elevating their status with their advisors, as a result of their selection for an NSF-funded fellowship, the program provides supports which enable and motivate persistence, degree completion, and preparation for leadership, in academia and in industry".

Dr. Karan Watson, TX LSAMP PI
Associate Provost and Dean of Faculties

Home of the TX LSAMP Bridges to the Doctorate Program: TX A&M University

Texas A&M University (TAMU) opened in 1876, as the first public institution of higher education in Texas. TAMU is a rare Land-, Sea- and Space-Grant institution reflecting a broad scope of research endeavors, and an enrollment of approximately 44,000 students, with master's and doctoral degrees in approximately 125 fields of study. The Dwight Look College of Engineering, which hosts the *Bridges to the Doctorate Program*, offers 14 doctoral programs.



Dr. Karen Butler Purry, Bridges to the Doctorate Program Coordinator



Assist. Dean of Engineering Graduate Progs. • Associate Professor of Electrical Engineering

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Education:

- Ph.D, ELEN, May 1994, Howard University (research area: Power Distribution System Automation)
- M.S., ELEN, 1987, University of Texas, Austin
- B.S., ELEN, 1985, Southern University, Baton Rouge

Interest Areas:

- Computer and Intelligent Systems Application to Power Distribution
- Estimation of Remaining Life of Transformers, Intelligent Reconfiguration,
- Systems, Distribution Automation and Management, Fault Diagnosis,
- System Modeling and Simulation for Hybrid Vehicles

TX LSAMP Bridges to the Doctorate Program Fellows



Shannon Henderson

Education:

BS: Industrial Engineering, TAMU, 1999

MS: Safety Engineering, TAMU, 2001

Graduate Major: Interdisciplinary Engineering

Career Goal:

In my chosen field of study, centered on safety engineering, it is my desire to work in an industry-leading petroleum/petro-chemical organization recognizing, analyzing and eliminating hazardous factors in the workplace. I hope to implement strong, proactive commitments and solutions to the working world of safety and industrial hygiene.



Jessica P. Houston

Education:

BS: Chemical Engineering, New Mexico State University, 2000

MS: Chemical Engineering, TAMU, 2002

Graduate Major: Chemical Engineering

Career Goal:

I will seek a postdoctoral appointment in biomedical research. Ideally, I would like to participate in postdoctoral training with Los Alamos National Laboratories (LANL), and then pursue a full-time research scientist position within Chemistry, Biology or Engineering division at LANL. Therefore, I foresee my future predominantly in research with a government-industry influence where teamwork is emphasized.



Maxine Jones

Education:

BS: Chemical engineering, Mississippi State University, May 2002.

Graduate Major: Student in Chemical Engineering

Career Goals:

I'm currently majoring in chemical engineering in graduate school. After graduation, I plan to work in the petroleum/petrochemical industry for about 15-20 years and then return to college to teach.



Erica D. Reese

Education:

B.S.: Civil Engineering, TAMU, May 1999

M.S.: Civil Engineering, TAMU, December 2001

Graduate Major: Civil Engineering, Texas A&M University, In progress

Career Goals:

I would like to do research and model development in the field of human health and ecological risk assessment, ideally, while on the faculty, right here at Texas A&M University! I am interested in the modeling of risk, and the toxicological aspect of chemicals, the environment and receptors and in integrating quantitative structure-activity relationships with physical-chemical parameters to make better estimates of risk for chemicals that have little or no available toxicological data.



Douglas Rodriguez

Education:

B.S.: Mechanical Engineering, TAMU, 2000

Graduate Major: Mechanical Engineering, Texas A&M University (Student)

Career Goal:

To pursue a career in academia where I can conduct meaningful research as well as serve as a mentor and teacher.



Samuel Rodriguez

Education:

BS: Computer Engineering, TAMU, May 2002

Graduate Major: Computer Science

Career Goal:

Upon completion of my Ph.D. I hope to become a professor and continue researching.



Deborah Matilde Santos Roman

Education:

BS: Natural Science, University of Puerto Rico, 1997

MS: Natural Resources, University of Connecticut, 1999

Graduate Major: Student studying Water Resources Engineering At TAMU

Career Goal:

After completion of the Ph.D. Degree I would like to teach at the University level in my country, Puerto Rico or the United States.



Migvia del C. Vidal Vázquez

Education:

BS: Chemical Engineering, University of Puerto Rico, 1997

Graduate Major: Chemical Engineering

Career Goal:

I would like to work for the chemical industry in the area of process safety. As a long-term plan, I would like to work as a professor and as a mentor.



Juan C. Juarez

Education:

BS: Electrical Engineering, TAMU, May 2000.

MS: Electrical Engineering, August 2002

Graduate Major: Electrical Engineering

Career Goals:

Juan aims to become a professor at a top research university where he may get to teach future engineers and perform novel research. His main interests of study are fiber optic sensors, optical communications, quantum computing, and test and measurement systems.



Julianna G. Camacho Rodriguez

Education:

BS: Chemical Engineering, University of Puerto Rico-Mayaguez, May 2001.

MS: Environmental Engineering, Texas A&M University (TAMU),

(Anticipated) August 2004)

PH.D: Environmental Engineering, TAMU, (Anticipated) 2006

Career Goals:

"My professional goal is a career in the field of academia or public service. My vocational objective is to help in the process of scientific development for the treatment of water, since it is directly related to human and environmental health. As a faculty member I would have the opportunity to conduct research, and to aid others with the same aspirations. In public service, all the knowledge I obtained as a graduate student could be used to improve the services available to the public. The best way for me to achieve these goals in a challenging and rewarding career is by obtaining a doctoral degree in environmental engineering."

University of Texas System

Bridge to the Doctorate

2003-2005



Sandra Macias, BS
Microbiology, Fall 2002
GRADUATE MAJOR: Microbiology
"My career goal is to obtain my Ph.D. in the Biomedical Sciences, particularly in Cancer Biology and to apply it in research as well as teaching at the University level"



Juan J. Licon, BS
Mechanical Engineering, Fall 2003
GRADUATE MAJOR: Mechanical Engineering
"Once I obtain my [masters] degree, I plan to go to graduate school once again, but this time to pursue a doctoral degree...in Mechanical Engineering"



J. Hector Sandoval, BS
Mechanical Engineering, Fall 2003
GRADUATE MAJOR:
Metallurgical and Materials Engineering
"Once I finish my graduate studies...I would like to pursue a Ph.D. in Materials Science and focus on the applications of biocompatible materials in the medical field"



Alfredo Perez, Jr., BS
Electrical Engineering, Fall 2002
GRADUATE MAJOR: Electrical Engineering
"I want to pursue a Doctoral degree in Biomedical Engineering. Then, I would like to, both, teach at a university in my region and start up a high-technology business in my hometown"



Claudia L. Vargas, BS
Microbiology, Fall 2002
GRADUATE MAJOR: Biology
"Obtain a Ph.D. and go into academia"



Diana Kretzer, BS
Microbiology, Fall 2003
GRADUATE MAJOR: Biology
"My career goal is to complete my Master's degree and then move on to my Doctorate degree in the field of Biological Sciences. I would like to work in a laboratory setting and later return to teach at the university level"



Karla Soto, BS
Metallurgical and Materials Engineering, Spring 2003
GRADUATE MAJOR:
Metallurgical and Materials Engineering
"Obtain a Master of Science in metallurgical and materials engineering. Continue in Ph.D. program in Biomaterials engineering and do research"



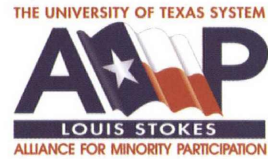
Monica Miranda, BS
Computer Science, Fall 2002
GRADUATE MAJOR: Computer Science
"My career goal is to continue my research in decision support systems and apply these skills to systems that will be beneficial to the software engineering community and to non-technical communications in general"



Rogelio Franco, BS
Mechanical Engineering, Fall 2002
GRADUATE MAJOR: Mechanical Engineering
"Expand my knowledge and continue researching in the area of miniature combustion chambers, communicate knowledge to future generations and for the challenge that it brings upon me"



Veronica Armendariz, BS
Chemistry, Spring 2003
GRADUATE MAJOR: Chemistry
"My immediate career goals after the completion of my MS degree are to get into an interdisciplinary Ph.D. Program that involves Environmental, Materials, and Instrumental Chemistry. After the completion of a Ph.D., I would like to continue doing research either for the industry or for a governmental agency"



"The UT System LSAMP program is very proud to have been selected as one of the first Alliances to receive the Bridges to the Doctorate grant. The program will give us the opportunity to encourage students who might not have considered pursuing a doctoral degree. Also, the grant gives us the opportunity to experiment with novel ways to promote graduate education and to increase the efficacy of existing activities"



Pablo Arenaz, PhD.
UT System LSAMP Program Director

The University of Texas at El Paso is a Carnegie Doctoral/Research Intensive University with 18,500 students, including over 3,000 graduate students. The university's student population is primarily Hispanic, closely mirroring the demographics of the El Paso region. The University began as the Texas School of Mines and Metallurgy, which served as a foundation for its recognized strengths in engineering and science. UT El Paso offers over 60 Master's degree programs and 11 doctoral programs, including interdisciplinary programs in Environmental Science and Engineering and Materials Science and Engineering.



Bridge to the Doctorate Coordinator

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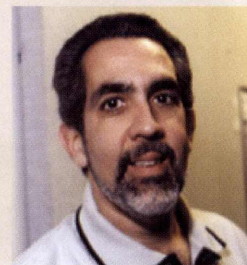
Western Alliance to Expand Student Opportunities (WAESO) Bridge to the Doctorate Program

The Arizona Biodesign Institute at Arizona State University is a new enterprise that focuses on designing new biodevices, biomaterials, biotools, biosystems, and bioinformatic networks, all intended to directly help people, and to lay down the foundation for new economic activity. This research institute is serving as the prototype for the building of a new entrepreneurial research spirit at Arizona State University. AzBio is comprised of Centers, each of which is committed to involving postgraduate, graduate and undergraduate students in research projects to prepare them to be the highly trained professionals of the future. Symposia and workshops are held regularly by the Institute, and the Institute is joining other efforts in planetary studies, anthropology, and environmental research to develop curricula and programs to inform teachers and help prepare youth for careers in science. In collaboration with other university resources, the Institute maintains an active public outreach program, which addresses the ethical, legal, and societal issues created by advances in biotechnology. The building shown above will be completed in Fall 2004. A list of the centers and the faculty leaders is given below.



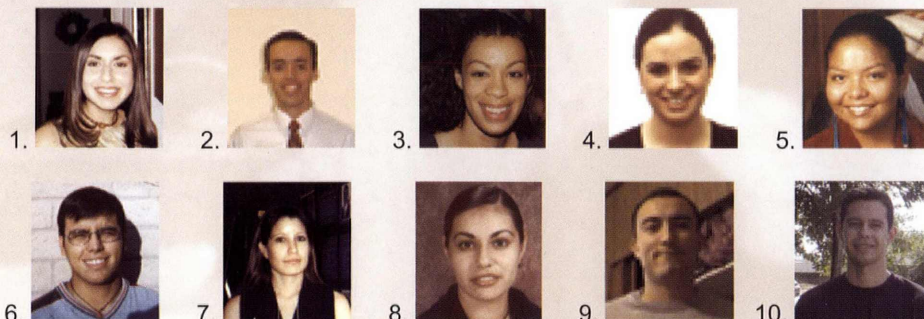
- **Vaccines from Applied Crop Science** – Prof. Charles Arntzen (Biology, member of the National Academy of Sciences)
- **Protein and Peptide Pharmaceuticals** – Prof. Colleen Brophy (Bioengineering, joint appointment with Phoenix VA Hospital)
- **BioOptical Nanotechnology** – Prof. Neal Woodbury (Chemistry and Biochemistry, PI of a NSF IGERT)
- **Single Molecule Biophysics** – Prof. Stuart Lindsay (Physics, holder of the endowed Carson Chair)
- **Applied NanoBioscience** – Prof. Frederic Zenhausern (Center researcher with extensive industrial experience in nanotechnology)
- **Neural Interface and Brain Control** – Prof. Jiping He (Bioengineering, PI of a NSF IGERT)
- **Rehabilitation Neuroscience and Rehabilitation Engineering** - Profs. Ranu Jung and James Abbas (Bioengineering)
- **Evolutionary Functional Genomics** - Prof. Sudhir Kumar (Life Sciences)

We in the Western Alliance to Expand Student Opportunities (WAESO), are thrilled to participate in the LSAMP Bridges to the Doctorate program since it links academically talented and diverse STEM students with a new nanobiotechnology institute which has regional, national, and international impact and collaborations. The bridged LSAMP students share the vision of the institute leaders in breaking disciplinary boundaries by working closely with collaborative teams of physicists, biologists, engineers, chemists, and biomedical researchers. In turn, institute leaders are pleased to be able to recruit talented and energetic LSAMP graduates who have been encouraged and nurtured by our exemplary faculty mentors within our alliance. On behalf of my WAESO colleagues, I applaud the National Science Foundation's efforts in once again designing a new "bridge" to help meet the nation's critical need in workforce development in science and technology.



Dr. Antonio A. García

Bridge to the Doctorate Coordinator: Dr. Antonio A. García, PhD, Associate Professor of Bioengineering, Program Director, WAESO, Harrington Department of Bioengineering, Ira A. Fulton School of Engineering, College of Engineering and Applied Sciences, PO Box 875305, Arizona State University, Tempe, AZ 85287-5305, (480) 965-8798, tony.garcia@asu.edu **Research Area:** Bionanotechnology;
Degree: Chemical Engineering.



1.) **Name:** Brenda Rascón; **Undergraduate Degree:** B.A.; **Undergraduate Major:** Anthropology; **Institution:** Arizona State University; **Year of Degree:** 2004; **Graduate School Major:** Biology; **Career Goal:** University Professor/PhD 2.) **Ivan Rodríguez**, B.S., Physics, Brigham Young University, 2003, Biophysics, Physicist 3.) **Ariel Jones**, B.S., Biology, University of New Mexico, 2004, Biology, PhD-Dedication to Improving Public Health 4.) **Fernanda Karola Pompa-Maldonado**, B.S., Industrial Engineering, University of Arizona, 2003, NanoBioscience, PhD 5.) **Karmen H. Billey**, B.S., Biology/Minor Chemistry, New Mexico Highlands University, 2003, Bio-Engineering, Bio-Engineering/Medical Professional 6.) **Jovan Trujillo**, B.S., Chemical Engineering, University of Arizona, 2004, Chemical Engineering, PhD 7.) **Diana L. Kretzer**, B.S., Microbiology, University of Texas, El Paso, 2003, Biology, PhD 8.) **Dania Pino**, B.A., Cell Biology, Arizona State University-West, 2003, Biology, PhD 9.) **Eric J. Samora**, B.S., Industrial Engineering/Minor Mathematics, Colorado State University, Pueblo, 2002, Bioengineering, PhD 10.) **Daniel Garcia-Mont**, B.S., Electronics Engineering Technology, University of Puerto Rico – Bayamon, 2003, Graphic Information Technology, PhD-University Professor.

Bridge to the Doctorate Student Summary

Institution	Areas of Study					Total
	Life Sciences	Physical Sciences	Engineering	Mathematical Sciences	Computer and Informational Sciences	
Arizona State University	5	1	4	0	0	10
Auburn University	4	2	0	3	1	10
City University of New York	2	1	1	1	5	10
Florida State University	4	2	3	0	1	10
Jackson State University	4	4	0	0	2	10
New Mexico State University	0	0	10	0	0	10
North Carolina A&T University	0	0	10	0	0	10
San Francisco State University	7	2	1	0	0	10
Texas A&M University	0	0	9	0	1	10
University of Delaware	0	5	4	0	1	10
University of Puerto Rico at Rio Piedras	5	5	0	0	0	10
University of Texas at El Paso	3	1	5	0	1	10
University of California, Los Angeles	3	4	2	1	0	10
Total	37	27	49	5	12	130

BRIDGE TO THE DOCTORATE ALLIANCES

