The National Science Foundation

LOUIS STOKES ALLIANCES FOR MINORITY PARTICIPATION

Emphasizing development of broad based regional and national alliances of academic institutions, school districts, state and local governments, and the private sector to increase the diversity and quality of the STEM workforce.



Louis Stokes Alliances for Minority Participation

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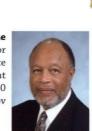
The National Science Foundation

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity and welfare; to secure the national defense..." With an annual budget of about \$6.06 billion, we are the funding source for approximately 20 percent of all federally supported basic research conducted by America's colleges and universities.



Dr. Arden L. Bement, Jr. Director National Science Foundation (703) 292-8000 abement@nsf.gov

Dr. James Wyche Division Director Division of Human Resource Development (703) 292-8640 jwyche@nsf.gov





Dr. Wanda E. Ward Assistant Director (Acting) Directorate for Education and Human Resources (703) 292-8600 weward@nsf.gov



Dr. A. James Hicks Program Director Louis Stokes Alliances for Minority Participation (703) 292-8640 ahicks@nsf.gov

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ooking Back, Looking Forward...

About this time of year, while working with our editor of the LSAMP Magazine, it is a good time for reflection and also for looking ahead. In taking a moment to think back on the growth of LSAMP, I am moved to thank many people who encouraged us to begin a strategy to broaden participation of underrepresented groups in science, technology, engineering and mathematics (STEM) disciplines, and those who contributed along the way to our success. Though there are far too many to mention here, I will pay special tribute to a few and then introduce you to some people and projects that will help carry us forward into the future.

Among those who laid the foundation for LSAMP, we owe a special debt to Drs. Walter E. Massey, Luther S. Williams, Joseph G. Danek, Roosevelt Calbert and William E. McHenry. To be clear, there were many other individuals who championed aspects and conducted important assignments within the agency for LSAMP. Surely, LSAMP's history would be seriously wanting with-

A. James Hicks, Senior Program Director

out the steady support from Congressman Louis Stokes. Important too, are the first six awardees and their subsequent success and successors: Drs. Louis Dale (AL), Eloy Rodriguez (CA), Richard Sullivan (MS), Manuel Gomez (Puerto Rico), Gary D. Keller Cardenas (AZ) and Ana "Cha" Guzman (TX). In combination, the unique vision of the aforementioned individuals made the launch of LSAMP and current successes possible. While mindful of their successes, I am also tempted to invite these original awardees, not to look back, instead to continue the forward march to excellence. Likewise, the large number of new LSAMP trailblazing alliances must continue their 'can do' performances.

NSF's leadership, two of whom are featured in this edition, continues major investment and support for the LSAMP Program. Readers are encouraged to read in these pages the brief essays on Drs. Ward and Wyche. Indeed, we salute these new NSF leaders.

In 2008, the LSAMP Program received a major award from Diverse Magazine. The program was named one of 10 Diversity Champions in the nation!

Today, we are 41 alliances strong---including two new alliances. In the far western United States the Pacific Northwest-LSAMP (PNW) is led by the University of Washington, Seattle. The PNW alliance is a three-state partnership involving, Washington, Oregon and Idaho. Along the east coast, The Garden State LSAMP is the second alliance and is led by Rutgers University. Congratulations to our new partners and they will do well!

Discussions about international activities occupied several hours of the agenda at the 2008 Joint Annual Meeting in Washington, DC. Today, our vision for LSAMP, in the near and long-term, encompasses foreign laboratory opportunities for selected students. I am pleased to report that we are moving forward! Dr. Duran's Report, in these pages, highlights the first wave of LSAMP Scholars to foreign research laboratories.

We have come a long way in a relatively short time, and we look forward to doing more in the future. Indeed, there is more to come!

Anda E. Ward Named Acting Assistant Director for NSF's Education Directorate



The National Science Foundation (NSF) has named Dr. Wanda E. Ward Acting Assistant Director for the Directorate for Education and Human Resources (EHR) effective January 18, 2009. With over 16 years of NSF experience, Dr. Ward brings dedicated leadership to EHR and its mission to achieve excellence in U.S. science, technology, engineering and mathematics education. She is replacing Dr. Cora Marrett who has been appointed Acting Deputy Director of NSF. Ward served as Deputy Assistant Director for EHR since February, 2007.

During her tenure at NSF, Dr. Ward has served in a number of science and engineering policy, planning and program capacities in both EHR and the Office of the Director. Ward served as deputy assistant director for NSF's Directorate for So-

cial, Behavioral and Economic Sciences (SBE) where she provided critical leadership for development of several NSF-wide activities, including the Human and Social Dynamics priority area, the Science of Learning Centers program, Cyber infrastructure and the Social Sciences and the ADVANCE program. She also directed the launch and development of a major activity in SBE to broaden participation through strategic regional alliances among the top 25 institutional producers of underrepresented minorities at the B.S. and Ph.D. levels. These endeavors led her to forge key international research and workforce development collaborations in both developed and developing nations. More recently, she led the programmatic development of a new activity in EHR, *Innovation through Institutional Integration* (I^3). This is an effort to enable institutional integration in colleges and universities of major NSF-supported programs designed to broaden participation, promote a globally-engaged workforce, integrate research and education, facilitate critical junctures and/or advance the research and evaluation of institutional integration. It seeks to challenge faculty, students and others in institutions of higher education, including two and four year colleges, to think strategically about the creative integration of NSF-funded awards. Ward has also served on the President's National Science and Technology Council subcommittees and interagency working groups in the areas of science education and workforce development and the social, behavioral and economic sciences.

Prior to joining NSF, Dr. Ward was an associate professor of psychology and founding director of the Center for Research on Multi-Ethnic Education at the University of Oklahoma, Norman. She has also held visiting academic appointments at the University of Illinois at Urbana-Champaign and Johns Hopkins University. She received a B.A. in psychology as well as the Afro-American Studies Certificate from Princeton University and a Ph.D. in psychology from Stanford University.

Dr. Ward was awarded a Ford Foundation Fellowship and the 2005 American Psychological Association (APA) Presidential Citation, the most distinguished honor given by the APA president. The APA award recognized her steadfast support of the advancement of behavioral science and her devotion to enhancing the diversity of the science and engineering workforce.

Dr. Ward received the prestigious 2006 Presidential Rank Award for Distinguished Executive, awarded annually by the U.S. President to one percent of career members of the Senior Executive Service, Senior Level or Scientific and Professional corps for outstanding leadership, accomplishments and service over an extended period of time in some of the nation's most critical positions in the federal government. She also received the 2006 Richard T. Louttit Award, the only award given by the Federation of Behavioral, Psychological and Cognitive Sciences, in recognition of behavioral and brain scientists whose careers have strengthened and brought honor to the science and advanced the capability of behavioral research to serve the public good.

ames Wyche Tapped to Head HRD

Dr. James H. Wyche, former CEO and President of Pan-Cagen, Inc., has joined the Directorate of Education and Human Resources (EHR) as Director of the Division of Human Resource Development (HRD). The mission of EHR is to achieve excellence in U.S. science, technology, engineering and mathematics (STEM) education at all levels and in all settings (both formal and informal) in order to support the development of a diverse and well-prepared workforce of scientists, technicians, engineers, mathematicians and educators and a well-informed citizenry that have access to the ideas and tools of science and engineering. The programs administered by the HRD support research, education, infrastructure enhancement and institutional transformation activities to promote access to and broaden participation in excellent STEM education and the STEM workforce. Dr. Wyche will place priority on investments that promise innovation and transformative strategies to eliminate barriers that limit the full participation of individuals regardless of race/ethnicity, gender and disability status. With the oversight and support of the EHR, HRD is well positioned as the National Science Foundation's (NSF) primary agent for engaging and broadening the participation of a diverse and growing pool of STEM students entering into the professional workforce. Dr. Wyche reports that the Division's mandate for nurturing human potential in STEM is achieved via eight core programs: AD-VANCE; Alliances for Graduate Education and the Professoriate (AGEP); Centers of Research Excellence in Science and Engineering (CREST); Historically Black Colleges and Universities Undergraduate Program (HBCU-UP); the Louis Stokes Alliances for Minority Participation (LSAMP); Research in Disabilities Education (RDE); Research on Gender in Science and Engineering (GSE), and Tribal College and Universities Program (TCUP). In addition, the Innovation through Institutional Integration (I-cubed) is a cross-cutting program that works to change institutional culture to contribute to successful STEM careers for all, further the nation's STEM enterprise and promote STEM organizations that reflect national diversity.

The HRD portfolio of programs is an important part of the EHR Broadening Participation to Improve Workforce Development theme, which has the following goals: 1) increase the diversity of individuals at all educational levels within the STEM workforce to a level representative of the nation's diverse population; 2) enhance the nation's diverse population's understanding and appreciation of STEM and 3) produce STEM leaders from underrepresented groups. Dr. Wyche plans to undertake strategic planning activities to ensure that the Division is establishing and fostering partnerships and integration within EHR and the NSF to more effectively work toward the goal of broadening participation. Dr. Wyche, states that the long term planning will incorporate the results of research on broadening participation and HRD program evaluation. The planning process will identify areas of programming and research that is not currently or adequately cov-



ered by HRD programs and activities. Attention will be given to key transition points that affect workforce development. These transition points are gateways into STEM career pathways from high school to community colleges, from community colleges to four-year institutions and on to graduate school, postdoctoral programs, the professoriate and other workforce career options.

Dr. Wyche received his B.S. degree in microbiology from Cornell University and his Ph.D. at Johns Hopkins in biology. He held postdoctoral fellow positions at the University of California, Berkeley and the University of California, San Diego. He has held faculty positions at the University of Missouri – Columbia, Hunter College and City University of New York. He served as Associate Dean of Biology and Medicine and Associate Professor of Medical Science at Brown University. Later, he was appointed Associate Provost and created with President Vartan Gregorian the Leadership Alliance. (www.theleadershipalliance.org) Based at Brown University with 23 member institutions, its goals were to advance the number of underrepresented students going into academe and private industry, and to advance minority faculty development.

Dr. Wyche served as executive director of the alliance and its national programs as well as other international student and faculty research initiatives in sixteen countries while conducting an active research program as Professor of Medical Science at Brown. Other positions included Interim President at Tougaloo College, Jackson, MS, Vice-Provost and Dean, College of Arts & Science (2002-04) at the University of Miami and Vice Provost and Professor of Biochemistry at the University of Oklahoma Health Sciences Center. He has received grants from the National Institutes of Health, the NSF and private foundations as well as provided services as a consultant and panelist.

oint Annual Meeting (JAM) 2008



2008 JAM LSAMP Attendees



Dr. Eloy Rodriquez was keynote speaker for the meeting.



From left: Dr. Victor Santiago, Dr. Eloy Rodriquez, Dr. Wanda Ward, Dr. James Wyche, Dr. Shirley McBay and Dr. Costello Brown

bint Annual Meeting (JAM) 2008



Dr. Art Hicks (left) opened the LSAMP Breakout Session.

LSAMP Breakout Sessions



Dr. A. James Hicks gave the keynote address.



Continued



Dr. William De Lauder, former President of Delaware State University, led the lineup of invited speakers.

Dr. Wanda Ward addressed attendees at the morning session.

oint Annual Meeting (JAM) 2008

Continued



Dr. Omnia El-Hakim discussed international efforts.



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L to R: Dr. Hicks, Dr. Ward and Dr. Bill McHenry

LSAMP JAM Snapshots



The LSAMP Center for International Research

Following up on presentations at JAM meetings in 2006 and 2008, and a strong positive response from the nationwide community, NSF funded its first "center-level" program in support of international undergraduate research for LSAMP. As such, the LSAMP Center for International Undergraduate Research Experiences (LSAMP-INT) was initiated in 2008. In this pilot year, funding was provided mersion experiences in a variety of renowned research such that 16 participants could be recruited from LSAMP programs nationwide.

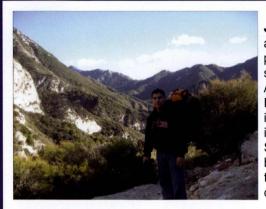
Our team started with JAM, and then a rapid series of re- gram, it became statistically more difficult to get a spot in gional meetings that has included Jackson State, Texas LSAMP-INT than the get into a medical school in the US! A&M, NY-AMP, CSU-AMP, CAMP, LAMP, Puerto Rico, As a result, this year we were able to increase the oppor-FGAMP, and others. Immediately, we found a deep pool tunities so that the 20 students listed below could particiof undergraduate talent (of course!) enthusiastically ready pate. Next year we hope for significantly more slots. to accept the challenge of getting enough accomplished Each year, about half of the participants will be sent to a over 12 weeks of an international research experience to set of primary iREU Sites involving France, Brazil, Argenmerit co-authorship in a peer-reviewed publication. We tina, and Ghana that are coordinated by the PIs through were also very impressed at the willingness of many AMP the University of Florida. The other half of the participants coordinators to extend these summer experiences will be embedded in about 18 other iREU Sites that span through the fall semester. The enthusiasm also extended much of the world and represent most directorates of to the faculty mentors, many of whom plan to visit their NSF depending on the experience and interest of the LSAMP students abroad over the summer. In this spirit, LSAMP student participants. The intellectual merit of the the LSAMP-INT team invites anyone from the LSAMP program is through the outstanding research projects incommunity to consider attending the NSF/FAPESP US- volving world-class scientists in varied international set-Brazil Workshop on Functional and Nanomaterials sched- tings. The cohort of participants will also share common uled for Aug 8-10 on the campus of the State University predeparture and postprogram experiences designed to of Campinas, near Sao Paulo; contact any of the LSAMP- maximize the broader impact of their international re-INT team for more information.

"NSF is delighted to see the impact that the LSAMP-INT program is already having, both for the outstanding students that participate as well as for globalizing the innovations of LSAMP programs nationwide" Luis Echegoven, Director, Division of Chemistry, NSF

"There is never a dull moment with Alvaro... nevertheless, when he learned about the possibility of going abroad, his normal level of high motivation skyrocketed to the nth degree. This is the type of program that can really make a difference in our LSAMP students on academic, personal, intercultural and professional levels. " Shannon Walton, Associate Director, TAMUS-LSAMP

laboratories around the world. In particular, the students will be embedded in international REU Sites (iREU). To our delight, before Christmas in this first year of the prosearch experience. In particular we will involve scientists at the Smithsonian and Florida Museums of Natural His-Participants in LSAMP-INT program are given deep im- tory as a way and enhancing the ability of the participants to communicate their research to a broader public. Overall, we are thrilled that the LSAMP-INT is poised to participate in the development of a diverse workforce with global science competencies critical to continued US competitiveness.

"CSU-LSAMP was very fortunate to have Dr. James P. Brown from LSAMP-INT make a presentation on international research experiences to a group of over 75 CSU-LSAMP students from across the state, which not only provided the motivation for some students to apply to this particular program, but also provided all students in attendance with an appreciation for the international scope of science and the value of U.S. participation in the global scientific community." Professor Juanita Barrena, Lead Project Director, CSU-LSAMP



Jorge Medina is currently a junior double majoring in physics and mathematics at California State University-Long Beach. He has performed research in solid state physics, pharmaceutical engineering and coding theory. Jorge is a LSU-LSAMP scholar and has received many competitive merit based scholarships such as the American Physical Society undergraduate scholarship. Jorge Plans to pursue a PhD in Physics and an MBA. He hopes to start his own business in the defense industry, pharmaceuticals, or PMC. For his 2009 project, Jorge will be participating in the context of the US/South America REU program. Jorge will be going to the State University of Campinas, also known as "UNICAMP". His research project will be in the physics/materials science area to take advantage of his interest in optics. In addition to learning about Brazilian culture and learning Portuguese in an outstanding setting to do so as a Spanish-speaker.



Maria Teresa Rodolis is currently a Junior at SUNY New Paltz, majoring in Chemistry with a minor and possible double major in Cellular Biology. As part of LSAMP-INT, she will be going to the Costa Rica field station operated by

the Organization for Tropical Studies. Maria is the Vice President of the Chi Alpha Epsilon honor society maintaining a GPA of 3.82. She began doing research in the summer of 2008 with Dr. Preeti Dhar on a project motivated by an increase in antimicrobial resistance by bacteria and fungus which led to many incurable diseases such as the flesh eating Methicillin-resistant Staphylococcus aureus. Her research project involves synthesizing monocyclic β-lactams, the molecule responsible for the antimicrobial activity of many antibiotics. By using varying starting material, she was able to determine how functional groups affect the β-lactam's properties most importantly its ability to kill or inhibit the growth of bacteria and fungus. Maria has presented her research project at the state wide LSAMP and CSTEP conference and will be presenting at the national ACS conference in March 2009, where she hopes to publish her work in the American Chemical Society journal. Maria enjoys working in the laboratory, hiking, listening to music, dancing and caring for her many pet animals.

Alvero Rodriguez is a molecular Biology Major at Texas A&M University. His previous research entailed a project of great importance to the environment. Even though cyanide is highly toxic, it is commonly found in industrial waste generated by several industries such as metal plating and mining. This chemical is hazardous for many organisms, including mammals, since it inhibits key factors in the respiratory pathway. Surprisingly, several fungi and bacteria can degrade and even survive cyanide's presence. These microbes count on a variety of cyanide degrading enzymes as part of a process to metabolize cyanide into less toxic compounds. An example is the Cyanide Dihydratase (CynDstut) found in Pseudomonas stutzeri AK61. The enzyme operates optimally around pH 7-8, but most polluted waters have much higher alkaline pH. The aim of this research project is to construct genetic mutants for this enzyme that are able to operate in these highly alkaline environments. These novel mutant enzymes can then be analyzed for improved properties useful for bioremediation of cyanide waste

waters. Alvero's summer will be spent at the University of Strasbourg, France where he will work with Prof R. Stote. He has many hobbies including a passion for astronomy.



Help us congratulate these twenty 2009 LSAMP undergraduates going abroad!

- 1) Samuel Ares, PR-LSAMP, Industrial Biotechnology Major, UPR-Mayaguez will go to CEA, Grenoble, France
- 2) Jabari Bailey, Georgia LSAMP, Biology major, Morehouse will go to UBA, Buenos Aires, Argentina
- 3) Alexander Blair, Georgia LSAMP, Biology major, Morehouse will go to USP, Sao Paulo , Brazil
- 4) DeMario Butts, Georgia LSAMP, Biology/Chemistry, Morehouse College will go to UNICAMP, Campinas, Brazil
- 5) Julie Cojulun, CAMP, Aerospace Engineering, UC-Irvine will go to UBA, Buenos Aires, Argentina
- 6) Charlie Corredor, NYC-LSAMP, Chemical Engineering, CCNY will be going to the Universite Pierre Marie Curie, Paris, France
- 7) Frederick Crawford, Ohio LSAMP, Chemical Engineering, OSU will go to UNESP-Araraquara, Brazil
- 8) Julius Edson, NYC-LSAMP, Chemical Engineering, CCNY will go to University of Graz, Austria
- 9) Willems Leveille, Northeast LSAMP, Civil Engineering, UMass, will go to University of Nairobi, Kenya
- 10) Jorge Medina, CSU-LSAMP, Physics/Math, CSU-Long Beach will go to UNICAMP, Campinas, Brazil
- 11) Diane Render, FGLSAMP, Math, Albany St will go to Charles University, Czech Republic
- 12) Maria Rodolis, SUNY LSAMP, Biology, SUNY New Paltz, will go to Organization Tropical Studies Field Station, Costa Rica
- 13) Alvaro Rodriguez, TAMUS LSAMP, Molecular Biology, Texas A&M, will go to University of Strasbourg, France
- 14) Selisa Rollins, WAESO LSAMP, Chemical Engineering, Arizona State will go to UNESP-Ararquara, Brazil
- 15) Octavio Romo-Fewell, CSU-LSAMP, Chemistry, San Diego State will go to Chulabhorn-Bangkok, Thailand
- 16) Pamela Sanchez, NYC-LSAMP, Math/Biology, Queens College, will go to UNESP-Ararquara, Brazil
- 17) Alison Scott, CSU-LSAMP, Biology, CSU-Los Angeles will go to UNICAMP, Campinas, Brazil
- 18) Matthew Temba, Georgia LSAMP, Math/Economics, Morehouse will go to University of Strasbourg, France
- 19) Aisha Williams, Illinois LSAMP, Biochemistry/Biology, Chicago State will go to LeLoir Institute, Argentina
- 20) Justin Wilkerson, TAMUS LSAMP, Aerospace Engineering, Texas A&M will go to USP, Sao Paulo, Brazil

By Randy Duran and Mike Scott, Department of Chemistry, University of Florida Troy Sadler, School of Teaching and Learning, Univ. of Florida Tom Emmel, Florida Museum of Natural History, University of Florida, and James P. Brown, Morehouse College

duran@chem.ufl.edu www.chem.ufl.edu/~reu

James Hicks Honored by Minority Access

Dr. A. James Hicks, Louis Stokes Alliance for Minority Participation (LSAMP) Program Director, was honored by Minority Access, Inc. on September 28, 2008 in Washington, DC as an Innovator Role Model for his outstanding leadership and service as Program Director of LSAMP and the Bridge to the Doctorate (BD) program. The citation presented to Dr. Hicks by Andrea Mickle, President and CEO of Minority Access, read as follows:

"National Role Model Innovator Awarded to A. James Hicks, Ph.D. for Creative and Innovative Initiatives Benefitting Humankind"

At Tougaloo College, a small historically black institution in Jackson, Mississippi, Dr. Hicks was inspired to change his major from history to biology when his professor recognized his talent and encouraged him to become his laboratory assistant. He found biology so exciting that he helped organize the college's first biology club. The road from college has taken him on a tremendous



journey, with stops in academia and government. As the Program Director of the National Science Foundation's LSAMP program he is inspiring young minority students to pursue careers in science, engineering, technology and mathematics (STEM).

Dr. Hicks earned a Ph.D. in Botany at the University of Illinois-Urbana and received post doctoral training at the Missouri Botanical Gardens, St. Louis, Missouri. Prior to becoming LSAMP Program Director, Dr. Hicks served as Chair and Professor of Biology and later Dean of the College of Arts and Sciences at North Carolina A&T University, Greensboro, North Carolina. He has received numerous honors and awards for his achievements in science and for his efforts in promoting the advancement of underrepresented groups in STEM. These include the Emerald Honors Award (Career Advancement); Torch Bearer Award for Distinguished Service to the Field of Student Retention; Tougaloo College Alumni Hall of Fame Inductee and Congressional Recognition for the 2006 Educational Think Tank (ET3) TEC Champion Leadership Award. He was accompanied to the award ceremony by his wife, Mrs. Pearl Hicks; his daughter, Dr. Roselyn M. Hicks and several LSAMP Principal Investigators. These included Dr. Louis Dale, Alabama; Dr. Cheryl Dozier, Peach State; Dr. Omnia El-Hakim, Colorado; Dr. Abdul K. Mohammed, Mississippi; Dr. Clarence Lee, Washington/Baltimore/Hampton Roads and Dr. Richardo B. Jacquez, New Mexico.

O-LSAMP's Omnia El-Hakim Is New IPA at NSF



Colorado LSAMP (CO-LSAMP) Principal Investigator Dr. Omnia El-Hakim has accepted a new Intergovernmental Personal Act (IPA) position at the National Science Foundation (NSF) as Director for Diversity and Outreach in the Directorate of Engineering. She is responsible for establishing sustainable diversity programs in the directorate that bridge to all the learning communities from K to post-graduate levels and providing a vision for ways to accomplish NSF's strategic goals as it relates to broadening participation in the engineering community to enhance equity and diversity. One of El-Hakim's visions is to reach out to international communities to

provide global opportunities that will benefit students and faculty locally and internationally. As a distinct advocate for women, underrepresented minorities and persons with disabilities across the nation, she is planning to collaborate with the existing programs at the HRD such as LSAMP, AGEP and TCUP to expand and create new outreach opportunities of excellence.

Alabama

During the 2008 fall term Alabama LSAMP institutions enrolled 6,096 underrepresented minority STEM students. During the 2008 May/June graduation ceremonies, 939 undergraduate STEM degrees were awarded to underrepresented minority students, an increase of 108 over the previous year. These are the results of the steady increase in enrollment over the last six years, successful mentoring and retention programs and ongoing collaboration among partner institutions.



The first five cohorts of the Alabama BD program included 62 graduate students of which three have received Ph.D. degrees and 44 are currently enrolled in Ph.D. programs nationwide. Four BD students in the "all but dissertation" (ABD) category are expected to graduate by the end of 2009. This will result in a total of seven Ph.D. degrees for the Alabama LSAMP BD program and the number will steadily increase as more BD students begin to graduate. Many of these students will take positions in research enterprises and the nation's higher education systems.

All Nations

The All Nations LSAMP is beginning its third year of their five year NSF funded grant. The program will continue to use its funding to meet the goal of doubling the number of American Indians achieving bachelor's degrees in science, technology, engineering and mathematics (STEM). This alliance incorporates 24 tribal colleges and 10 state and private universities within a 13 state area.

AMP Scholars - 134 undergraduate STEM students in 22 of our 34 partner institutions have been recruited as AMP scholars. Funds have been awarded to cover AMP liaison salaries, student stipends and supplies and professional development for students to attend STEM conferences/ trainings. This year we are on pace to double the number of scholars as our program takes off at a majority of our partner institutions.

California

Supplemental Activities and Inter-Institutional Collaboration: A formal Memorandum of Understanding (MOU) was drafted and signed by PIs of the University of California (UC) LSAMP and the California State University (CSU) LSAMP on behalf of expanded and coordinated efforts for graduate education, including the BD program and AGEP. The MOU reflects shared goals and common ground between and among the UC 10-campus system and CSU 23-campus system on behalf of minority STEM majors.

International/Domestic Undergraduate Research Activities and Dissemination: The UC LSAMP expanded research opportunities in 2007-08 and initiated an electronic newsletter format to recognize student research conducted at home and abroad. In particular, the International Experiences News featured UC STEM majors conducting research at renowned sites such as the CERN in Switzerland and the MAMI (Mainz Microtron) in Germany. The fall 2007 Conferences & News, as well as the Special SACNAS Edition E-News, recognized the national presence and awards received by UC students at prestigious professional meetings, including AAAS, ACS and Sigma Xi.

California State (CSU)

During 2007-2008, CSU-LSAMP contributed to NSF's Strategic Plan "learning goal" by engaging well over 2000 undergraduate students from underrepresented minority groups in activities designed to "cultivate a world-class, broadly inclusive science and engineering workforce." These activities included opportunities for some students to collaborate with researchers abroad during the summer 2008: two students in Germany; one student in French Polynesia; one student in Mexico; one student in Philippines and one student in Costa Rica.

During the period March 2008 to March 2009, CSU-LSAMP contributed to NSF's Strategic Plan "Discovery Goal" by supporting more than 400 undergraduate students with research experience and providing Master's level research training for 24 first-year or second-year BD students at CSU, Los Angeles.

Colorado

Colorado State University, Metropolitan State College of Denver and the University of Colorado at Boulder, all members of the Colorado Alliance for Minority Participation (CO-AMP), received awards for their commitment to diversity in 2008 from Minority Access, Inc. at the Ninth National Role Models Conference in Arlington, Virginia. Since 1995, Minority Access, Inc., a nonprofit organization of national prominence, has assisted colleges and universities, federal agencies and corporations in diversifying their campuses and worksites. Professor Dr. Omnia El-Hakim, Principal Investigator and Director of the CO-AMP program, accepted the three awards from Andrea D. Mickle, President of Minority Access, Inc.



Dr. Galal Said, President of Fayoum University in Fayoum, Egypt, visited Colorado State University (CSU) on December 12, 2007, to sign an International Memorandum of Understanding (IMOU) in a special ceremony with Provost and Senior Vice President, Dr. Tony Frank, to facilitate collaborative opportunities between CSU and Fayoum University. The IMOU enhances cooperative academic activities and strengthens the international context of research and education for students and faculty at both universities.

Florida-Georgia (FG)

Six LSAMP Scholars from Tallahassee Community College participated in REU programs: four with Brookhaven National Laboratory; one with SEAGEP at the University of Florida and one with the University of Iowa during summer 2008. One community college FGLSAMP scholar from Florida Community College – Jacksonville participated in research at the University of North Carolina, Charlotte. These are significant achievements resulting from an effort to establish opportunities for FGLSAMP Community College scholars to engage in significant research experiences.

EXPO 2008 hosted its largest annual conference with over 500 participants from across the nation. Dr. A. James Hicks was the keynote speaker at this event. There were three FGLSAMP alumni that received Ph.D degrees in 2008.

Illinois

Illinois LSAMP was awarded a supplement by NSF to support the research experiences of 21 participants at Argonne National Laboratory during the 2008 summer. The research fellows consisted of six faculty and 15 undergraduates from Illinois Alliance institutions. The 23 program participants obtained research experiences as a part of the Faculty and Student Teams (FaST) and Science Undergraduate Laboratory Internship (SULI) Programs. Both programs are a direct result of the interagency Cooperative Agreement between DOE and NSF.

The alliance was successful in securing a NSF BD Cohort VI award at the University of Illinois at Chicago (UIC). The

ILSAMP program has been the recipient of five BD cohorts and has supported in excess of 60 students at the graduate level. Two of these programs were located at Southern Illinois University at Carbondale (SIUC) and three are currently located at UIC.

Indiana

LSAMP Indiana worked jointly with the Midwest Crossroads AGEP campus programs at Indiana University – Purdue University, Indianapolis (IUPUI), Purdue University and Northwestern University to provide opportunities to participate in the Committee on Institutional Cooperation (CIC) Summer Research Opportunity Programs (SROPs). LSAMP students spent from 8-10 weeks actively engaged in research laboratories with faculty and advanced graduate students. Academic development activities were provided for the students in the form of workshops, seminars and research presentations, peer-mentoring, presentation preparation and preparation for graduate school.

LSAMP Indiana and the Midwest Crossroads AGEP Alliance Joint Annual Conference, *Changing the Face of STEM* was held at Indiana University in Bloomington, IN on November 9-10, 2007. The keynote speaker for the conference was Dr. Roosevelt Johnson, National Science Foundation Program Director for the Alliances for Graduate Education and the Professoriate (AGEP).



LSAMP/AGEP Third Annual Joint Research Conference

Islands of Opportunity

The Islands of Opportunity Alliance-LSAMP was proud to announce the 1st Annual Islands of Opportunity Alliance-LSAMP (IOA-LSAMP) Student Conference held August 14–16, 2008. The conference was hosted by the University of Hawaii at Manoa (UH Manoa) in collaboration with the greater IOA-LSAMP Program. The goal of the conference was to provide an avenue for underrepresented undergraduate science, technology, engineering and/or mathematics (STEM) LSAMP students to present what they learned from their recent research and internship experiences. Overall this conference provided student attendees information and insights on the various STEM programs and opportunities throughout the Pacific region, as well as within the continental United States and internationally.

In just one year since the inception of the Islands of Opportunity Alliance-LSAMP Program, the Alliance reported

a fourfold increase in the number of IOA-LSAMP supported activities and an increase of over twice the number of student participants.

Kentucky-West Virginia

Kentucky-West Virginia LSAMP Student Research Symposium was held February 29 - March 1, 2008, at the Radisson Plaza Hotel, Lexington, KY. Approximately, eightyfive guests attended the symposium. Students from the partner institutions presented their research in both oral and poster form and attended workshop sessions on interviewing skills and attending graduate school. Keynote speakers included Aprille Ericsson, Ph.D. from NASA Goddard Space Flight Center and Joe Martin, Ph.D., President and Founder of Real World University.

C.A.R.N.E.G.I.E.-H.A.L.L. Institute is a yearlong/summerafter school-weekend construct concerning the production and dissemination of new knowledge through intense immersion, preparation and research by student scholars and their mentors. The program's objective is to create first class scientists, technicians, engineers and mathematicians from underrepresented populations, who are middle range educational performers. The students participate in an extensive immersion of mathematics, science, communication and language skills, along with many hands-on activities.

Louisiana (LS)

LS-LAMP has significantly increased its STEM B.S. degree production of underrepresented minorities in 2007-08. Specifically, the 2007-08 degree production of 627 is 8.5% higher than the 578 of 2006-07. This major accomplishment is an indication of LS-LAMP progressive recovery from the historic devastation by hurricanes Katrina and Rita in 2005.

In 2007-08, the LS-LAMP vigorously engaged 226 STEM students in research and 127 students attended regional and national conferences and made presentations. The extensive and substantive research participation by LS-LAMP STEM students partly explains the significant graduate school attendance and success of LS-LAMP alumni.

Michigan

The first annual alliance-wide research symposium was held at Wayne State University on January 12, 2008. The symposium was designed to provide students insights into research through a series of interactions with faculty, graduate and undergraduate students involved in research. These interactions afforded participants the opportunity to find out the benefits and the challenges associated with research. A panel focused on preparing, seeking and using a research experience to enhance their competitive edge when applying for graduate school and seeking other research opportunities.

Summer Undergraduate Research Academy (SURA) - It is vital for students to have certain tools to be able to exist, be productive and excel in a research environment. The SURA, hosted by Michigan State University, was designed to provide rising freshmen and rising sophomore students across the alliance with these tools by providing them the opportunity to participate in research in a supportive and controlled environment.

Mississippi

The 4th Annual LSMAMP National Research Symposium was attended by over 200 students and faculty.

Four LSMAMP students completed international summer research internships.

New Mexico

The New Mexico State University (NMSU) NSF Scholarships in STEM (S-STEM) program was funded during the 2008 summer. This work will continue the activities of the NMSU Computer Science, Engineering and Mathematics (CSEMS) program, which ended in spring 2007. Many students have credited the program for helping them to focus their concentration on school through financial assistance and personal, academic and professional development opportunities. Ninety percent (90%) of the original cohort were successfully graduated/retained in STEM.

The NMSU College of Engineering adopted the Integrated Learning Communities (ILC) component of the Hewlett Foundation Engineering Schools of the West Initiative (ESWI) project as a central component of its freshman retention efforts. Originally comprised of volunteer cohorts of students, the cluster sequence is designed to integrate first year coursework to ensure that participating students develop a strong foundation in algebra, writing and problem solving skills, and a conceptual understanding of engineering design and analysis. The ILC project has received support from several industry partners and the NMSU administration. Through these efforts, a total of \$98,000 has been secured to support the project.

North Carolina

North Carolina State University has been awarded funding as the 2008-2010 BD site for the North Carolina Louis Stokes Alliance for Minority Participation (NCLSAMP) program. Dr. Tony Mitchell is the BD PI at the institution.

During the 2007-2008 program year, 153 students participated in research activities. In addition to research at their respective campuses, participants have gained experience

at external sites such as the Environment Protection Agency located in Research Triangle Park, Duke University, Davidson College, the University of Arizona and the Center for Remote Sensing of Ice Sheets (CReSIS) at Penn State University and Ohio State University.

Northeast

The Northeast LSAMP Options and Opportunities Conference, fall 2007, was designed to educate LSAMP students about the post-collegiate opportunities and resources available to them, to create a sense of group identity and to provide a venue for students to present original research.

Northeast LSAMP continues to sustain the doubling of underrepresented STEM enrollment.

North Star

The North Star STEM Alliance is fortunate to have Gustavus Adolphus College as a partner with its excellent annual Nobel Conference, which explores a scientific topic in depth for a lay audience. Forty students and their faculty hosts from Anoka Ramsey Community College, St. Cloud State University, Carleton College, Century College and Gustavus Adolphus College attended the two-day conference on the theme of alternative energy.

Giiwed'anang (pronounced ge-wed-an-ang) North Star American Indian Science and Engineering Society (AISES) Alliance is an alliance of student chapters within the North Star STEM Alliance. The goals of the giiwed'anang North Star Alliance are to form relationships among Minnesota AISES chapters; provide educational opportunities, academic guidance and support; open doors to research; build connections between high school, pre- and post-secondary education and industry in STEM and increase the numbers of students involved in the AISES Alliance. By networking these student chapters, this alliance fosters an essential community among Native American STEM students and supports their STEM accomplishments.

0hio

Over the course of Phase I of the Ohio LSAMP grant, 306 students have received funding from the alliance for either academic year and/or summer research. Of these, 119 have earned bachelor degrees and 42% have gone on to graduate school.

Reporting of improvements for STEM majors have occurred in the last three summers at the University of Michigan's Annual International Conference on "Science Engagement."

Oklahoma

The Oklahoma Alliance achieved great success during 2007-2008. The number of Bachelor of Science graduates in the STEM disciplines increased 38 percent. Four schol-

ars conducted international research, six articles were published in refereed science journals, and 47 percent of the 2008 graduates enrolled in graduate programs. OU and OSU rank, first and second respectively, in the number of Bachelor of Science Engineering degrees awarded to Native Americans. The 14th Annual Research Symposium was extremely successful. Dr. Hicks, NSF Program Director, spoke to the BD Fellows.

The BD Cohort VI is funded. OSU received funding to support 12 LSAMP scholars to complete the Ph.D. program. The alliance joined the Fulbright Academy of Science & Technology (FAST) and 90 percent of the 2008 Scholars conducted research.

Pacific Alliance

The University of Alaska Anchorage has received \$4.4 million from our industrial partners and philanthropic supporters to fund the Herbert P. Schroeder Endowed Chair of the Alaska Native Science & Engineering Program (AN-SEP). The new chair guarantees that there will forever be a faculty advocate for minority engineering and science students on our campus.

The alliance hosted a dissemination conference on the University of Alaska Anchorage campus. The conference was funded by the Ford Foundation, the Nathan Cummings Foundation and the Alfred P. Sloan Foundation. As a result of the conference, we have reorganized our national effort into the Indigenous Alliance for Engineering and Science Education. Thirteen higher education institutions in nine states and more than 50 high schools are now replicating the model we have developed to foster success for our students. Also, A.P. Sloan has agreed to fund an unlimited number of graduate fellowships for Native students attending the University of Alaska.

Peach State

The alliance institutions have been able to support student research during the fall, spring and summer semesters. All of the four-year institutions within the Alliance: Fort Valley State University (FVSU), Savannah State University (SSU), Southern Polytechnic State University (SPSU) and the University of Georgia, organized summer research opportunities for undergraduate students to conduct research with a faculty research mentor. These research opportunities enabled 93 LSAMP scholars to present their research at the 2nd Annual Peach State LSAMP Fall 2007 Symposium and Research Conference hosted at the University of Georgia.

Year III provided an opportunity for the Alliance institutions to expose 127 LSAMP scholars to national conferences and campus visits to graduate schools. This effort is providing the LSAMP scholars with a competitive edge as they prepare to engage in graduate studies in STEM.

Philadelphia

Cheyney University of Pennsylvania received a federal appropriation of \$1.2 million to renovate its Carver Science Building. Cheyney is also in the process of establishing an environmental science program through its partnership with the Environmental Protection Agency (EPA).

At Delaware State University, formal approval was obtained to implement four new graduate programs within the College of Mathematics, Natural Science and Technology (CMNST) in fall 2008: Ph.D. in Optics; Ph.D. in Neuroscience; Ph.D. in Applied Chemistry and M.S. in Applied Optics.

Puerto Rico

Twelve new BD Fellowships were awarded in 2008, bringing the total of BD fellows to seventy (70). Fellows from the first five cohorts have attended over 400 local, national and international scientific conferences and have published 62 research papers in peer-reviewed journals.

In 2007-08, PR-LSAMP institutions awarded 2,625 B.S. degrees in STEM fields and had an undergraduate enrollment in these fields of 23,975. Eighteen percent (18%) of the Hispanics who received a Ph.D. nationwide in a natural science field, from 2001 to 2008, received their B.S. degree from a PR-LSAMP institution.



In engineering the percent increased to 19 percent. At the local level, the University of Puerto Rico awarded 51 Ph.D. degrees in STEM fields in 2007-08, the highest number in the last two decades.

South Carolina

Louis Stokes South Carolina Alliance for Minority Participation (LS-SCAMP) partnered with the South Carolina Academy of Sciences and the South Eastern Alliance for Graduate Education for the Professoriate (SEAGEP) to host the first ever undergraduate networking session for minority students at the spring meeting of the Academy at Clemson University. Forty STEM students from four alliance institutions attended the session and met potential research mentors from Clemson University and gradu-14 Louis Stokes Alliances for Minority Participation ate students from the University of South Carolina who encouraged them to pursue Ph.D. degrees in STEM fields. LS-SCAMP institutions awarded 466 baccalaureate degrees to minority STEM students this reporting cycle. LS-SCAMP continues to produce 68% of the state of South Carolina's minority STEM baccalaureate degrees.

State University of New York (SUNY)

SUNY LSAMP has increased underrepresented minority (UREP) STEM enrollment by 252% and bachelor degree production by 91% since program inception.

SUNY LSAMP is currently completing a research project that will provide a model for planning successful strategies for academic and personal support and encourage progression to graduate study for UREP STEM students in a variety of educational settings.

Tennessee

The Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP) was selected to receive a Phase II award. Tennessee State University, as the lead campus, and the other alliance partners are elated to continue to participate in the LSAMP program. The alliance has had a unified vision as shown in our recent NSF site visit.

In a university-wide summer program at LeMoyne-Owen College, participants were introduced to college life and other activities to prepare them to be successful in college. Twenty-two pre-freshmen participated in seminars offered by campus professionals, took mini courses in mathematics, computer science and statistics and rotated through laboratory research opportunities.

Texas A&M

The Texas A&M University System (TAMUS) LSAMP held the 4th Annual TAMUS LSAMP Symposium at the NASA Johnson Space Center in Houston, TX on February 8-9, 2008. Entitled "Pathways to Scientific Excellence," 81 students participated, including 44 students who participated in the research poster presentation. Among the speakers were NASA astronauts Dr. Winston Scott and Mr. Jose Hernandez, Dr. Linda Phaire-Washington of Argonne National Laboratory, Brian Dansberry of NASA Undergraduate Student Research Program and keynote speaker Dr. Cherry Ross Gooden of Texas Southern University.

Completing the fourth cohort of BD fellows in 2007-2008, a total of 46 BD fellowships have been completed through TAMUS LSAMP. In addition, TAMUS LSAMP is excited to welcome the fifth BD cohort comprised of 12 fellowship students beginning in September 2008.

University of Texas System

The University of Texas (UT) System succeeded in re-incorporating community colleges into the program's activities for Phase IV and hosting several community college students at various universities for the 2008 Summer Research Academy (SRA).

University System of Maryland

The University System of Maryland (USM) Louis Stokes Alliance for Minority Participation (LSAMP) was awarded funding from NSF to conduct a new BD program for 2008-2010. The new cohort of 12 BD Fellows will pursue STEM graduate degrees at the University of Maryland, College Park.

The alliance has had great success in improving the quality of STEM bachelor's degree recipients. 255 (74%) of the 346 USM LSAMP participants during 2007-2008 completed the academic year with a cumulative grade point averages at or above 3.0 on a 4.0 scale and 67 graduated. Thirty-one (46 %) were graduated with Latin Honors.

Upstate New York

The Math Conference at Rochester Institute of Technology (RIT) provided a great opportunity for the math faculty on all campuses. Math courses are often gateway courses to the STEM disciplines. This conference provided an opportunity for professional development of math faculty; focused on curriculum and enabled math professors to think about barriers that exist for students learning math.

The REU's at Clarkson, Cornell and Syracuse provided opportunities for students from our community college partners and other four year partners to experience one another's campuses and engage the students in research and deepen their interest in STEM disciplines. Monroe Community College and Onondaga Community College students participated in labs in collaboration with RIT.

Urban Massachusetts

Creation of a model and actual placement of community college AMP students into university alliance members' research labs occurred during the academic year for five hours per week. The early exposure of these students to research with university graduate students and faculty increases persistence in STEM matriculation and competencies for future research.

There have been increased numbers of corporate and noncampus research institutes who are considering and accepting LSAMP students for national research and hightechnology internships through our region.

Virginia-North Carolina (VA-NC)

The VA-NC LSAMP held its first annual research symposium at Saint Augustine's College on March 31, 2008. Dr. A. James Hicks delivered the lunchtime address. The keynote speech was provided by Principal Investigator Dr. William B. Harvey. Representatives from all eight partner institutions convened for this event.

A website developed for VA-NC LSAMP with links to programmatic websites at each partner institution. The website provides contact information for program personnel, relevant articles, a slideshow of the annual symposium, frequently asked questions, information pertaining to graduate school and related links.

Washington/Baltimore/Hampton Roads (WBHR)

Howard University is ranked first as the highest producer of Blacks receiving science and engineering doctoral degrees nationally over the period from 1997-2006. In addition WBHR-LSAMP alliance members including Hampton University, ranked number three, and Morgan State University and Norfolk State University all ranked in the top 40 institutions as the undergraduate institution for Black science and engineering recipients.

The WBHR-LSAMP Alliance received the fifth class of BD students and has had substantial increases in the number of B.S. degrees produced in the STEM fields among the seven partners.

Western Alliance to Expand Student Opportunities (WAESO)

In the academic year 2007-2008, the end of year II in Phase IV, we report 1,480 underrepresented minority STEM baccalaureates annually, an increase of 13% over our Phase IV baseline value.

WAESO had five BD awards for a total of 58 fellowship students and added a sixth BD cohort in 2008. For Cohort I-V students over 92% have started or plan to pursue a doctoral STEM degree. A BD student won the IEC William L. Everitt Student Award of Excellence. Most importantly, half (29 of 58) of these students have already transitioned into doctoral programs even before completing their WAE-SO LSAMP BD fellowships.

Wisconsin (Wisc)

WiscAMP has had great success in leveraging and incentivizing additional funding. The highlights from WiscAMP funded initiatives include: 1) academic enhancement, 2) summer bridge programs, 3) summer research, 4) academic year research and 5) two-to-four year transfer partnerships.

Alabama



L to R: Dr. Louis Dale, Lucy Kehinde and Ms. Andrea Mickle

Tameka Walker, a University of Alabama in Huntsville (UAH) student, received a one year \$26,000 Fellowship from the American Chemical Society. She completed her M.S. degree in Chemistry as BD Fellow from 2004-06, and is currently in the Biotechnology Science and Engineering Ph.D. Program at UAH.

Lucy Kehinde, University of Alabama at Birmingham (UAB) student, was the first place winner and the recipient of \$1,000.00 in the Minority Access, Inc. National Role Model and Student Researcher Conference. The Annual Role Models and Student Research Conference is an opportunity to focus the national spotlight on institutions and individuals that have excelled in producing and supporting minority researchers.

Briana Merkerson, UAH student, attended the National Society of Black Engineers Fall Regional Conference in November 2008. She participated in the Undergraduate Research Regional Showcase Competition, where she placed second with her research project entitled; "Application of the Design for Six Sigma to Increase Industrial Engineering Enrollment."

Thomas Adams, UAH student, received the Motivating Undergraduates in Science and Technology (MUST) project scholarship. MUST, funded by NASA, is a joint partnership between the Hispanic College Fund, the United Negro College Fund Special Programs and the Society for Hispanic Professional Engineers. The MUST program awards scholarships and internships in STEM fields.

All Nations

Two students from Tribal Colleges, Salish Kootenai College (SKC) and Southwestern Indian Polytechnic Institute (SIPI) were successful at the 2008 AISES conference. Katie McDonald, a sophomore in the Environmental Science program at SKC, tied for second place in oral competition with her presentation, "Mercury Concentrations in Osprey (Pandion Haliaetus) Feathers on the Flathead Indian Reservation." Second place in the poster competition went to Vanessa Yazzie from SIPI with her presentation, "The effect of Thinning Treatments on Resin Production in Southwestern Ponderosa Pine."



California LSAMP

UC San Diego Structural Engineering majors Carolina Margarito, Jorge Ortiz, and Ruben Soto won First Place in the Fifth Annual National Seismic Design Competition in New Orleans, Feb. 9, 2008. They competed with undergraduates from 16 institutions nationwide. The students constructed a balsa-wood structure that would perform well under the 1940 El Centro, the 1994 Northridge, and the 1995 Kobe Earthquake simulations. Also at UC San Diego, Mechanical Engineering major Eva Gabriela Baylon was selected Scholar of the Week (Spring 2008), at HE-NAAC, Hispanic Engineer National Achievement Awards Conference. Baylon is also the SHPE, Society of Hispanic

Professional Engineers, Region 2 Vice Regional Student Representative.

BD fellow Moses Tataw (Cohort III, UCSD), has received a five-year IGERT Fellowship through the Department of



Computer Science. Tataw completed his first two years of graduate study at UCSD and continues his doctoral work at UC Riverside, where he is studying chemical genomics.

Eight UC-Irvine Aerospace & Mechanical Engineering and Computer Science majors won \$2,500 awards from the Mazda North American Foundation in collaboration with the National Hispanic Fund. Awardees: Andrew Marquez, Jose Gallegos, Frank Jimenez, Julie Cojulun, Jorge De Paz, Aaron Botello, Nery Chapeton-Lamas and Martin Tajiboy (sophomore).

Ten UC LSAMP students won awards at the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) 2008 national conference held in Salt Lake City. Research award winners: Ricardo Alamillo, Diego Herrera and Lourdes Velazquez, UC Santa Barbara; Anthony Co-

varrubias and Michelle Crespo, UCLA; Graciela Cruz, UC Davis; Omoyemwen Igbinedion and Tania Riveros, UC San Diego; and Yimdriuska Magan, UC Davis. It is significant that students won recognition from a nationally competitive field of 590 research posters.

California State

Emmanuel Y. Dotsey, B.S. Biological Sciences, 2007, Cal State LA, was a recipient of the Ford Foundation Pre-Doctoral Graduate Diversity Fellowship which began his second year of Ph.D. study in molecular pharmacology at UC Irvine.

Ameer Thompson, (B.S. Biological Sciences, 2005, Sacramento State) who is currently pursuing a Ph.D. in Cellular/ Molecular Biology at UC Davis was awarded an NSF Graduate Fellowship for the 2007-2008 academic year.

Gabriel Rodriguez (B.S., Earth Systems Science & Policy, 2008, Cal State Monterey Bay) received a Graduate Research Fellowship from the National Science Foundation to pursue his Ph.D. degree at UC Santa Barbara in the Department of Ecology, Evolution and Marine Biology.

Illinois

Kellen Marshall was accepted into the Leadership Conference at the University of Illinois at Chicago (UIC). The forum was sponsored by the Conference of Women Legislators of the Illinois General Assembly and the Institute of Government and Public Affairs at UIC on June 3 – June 8, 2008.

Tiffany Brown of Chicago State University was one of 15 undergraduate recipients of the 2008 UNCF•Merck Science Initiative award. As an UNCF•Merck Fellow, she has received a full academic scholarship and she will spend her summers conducting research at Merck Research Laboratories in Boston, MA. The program is supported through the Merck Institute for Science Education and Merck Research Laboratories.

Indiana

Adetayo Adesanya, a sophomore in Electrical and Computer Engineering Technology at Purdue University, recently was honored with two awards for his work on a project



with Purdue University assistant professor, Jeffrey Evans. He won first place in the undergraduate research poster competition at the 2007 LSAMP/AGEP Third Annual Joint Research Conference held at Indiana University in Bloomington, IN on November 9-10, 2007. Ad-

esanya also won first place at the National Society of Black Engineers conference in Orlando, FL in March 2008.

Islands of Opportunity

Makani Gregg, University of Hawaii at Hilo, was selected to do an oral presentation at the 2009 American Society of Limnology & Oceanography (ASLO) Conference in Nice, France.

Michealene Iaukea-Lum, University of Hawaii, was selected to participate in NASA's PIECES 2008-2009 program (includes a summer internship in 2009) at UH Hilo.

Kentucky-West Virginia (KY-WV)

Kentucky State University students Michael Somuah and Santhi Chilukuri received a third place award at the 2008 KY-WV LSAMP Student Research Symposium.

Mackendy Alcinvil, a junior information technology major (Kentucky State University) was named the 2008 GE African American Forum Scholar.

Sabrina Anderson, a senior computer science major, placed third for the Mike Shinn NSBE Distinguished Member of the Year Award. The award is given to student members who demonstrate high scholastic performance and dedicated service to the society and other organizations and possess high professional promise.

Louisiana (LS)

Cacey Stevens, a Southern University LS-LAMP affiliate and a Timbuktu Academy Scholar, received a 2008 NSF Graduate Research Fellowship. Ms. Stevens began pursuing a Ph.D. in physics at the University of Chicago.



Left to Right: LSU BD Scholars Fareed Dawan, Marc Peterson, Dr. James Wyche (Director, HRD, NSF) and scholar Raphyel Rosby

Grambling State University (GSU), LS-LAMP scholar Johnte Bass presented research at the 82nd Annual Meeting of Louisiana Academy of Sciences. Bass, sophomore physics major, placed second in the poster competition.

In 2007-2008, BD scholar Monica Sylvain from Cohort III (our first cohort) received a Merck award in the amount of \$200,000 for tuition, fees, research support, etc., for the remaining few years of her Ph.D. studies in chemistry.

Louis Stokes Alliances for Minority Participation 17

Eual Abraham Phillips, Jr., a STET Chemistry major and LS-LAMP/GSU scholar was awarded a \$25,000 United Negro College Fund Merck undergraduate science research scholarship for the 2008 to 2009 academic year.

Talea Mayo, LS-LAMP scholar at Grambling State University (GSU), earned a perfect score of 800 on the mathematics portion of the Graduate Record Examination. Mayo has been admitted to the School of Engineering and Applied Sciences Ph.D. program at Harvard University.

New Mexico

Danielle Miranda, participated both in the New Mexico AMP Summer Community College Opportunity for Research Experience (SCCORE) program and the Undergraduate Research Assistantship (URA), has been awarded the Memorial Medical Center Scholarship for 2007-2008.

The New Mexico Water Resources Research Institute named Jimmy Moreno recipient of the 2007-2008 Student Water Research Grant Program. Jimmy, a former URA and Bridge to the Doctorate participant is now pursuing his Ph.D. at NMSU.

CSEMS participant Theodore (Ted) Mansfield was inducted into the NMSU chapter of Tau Beta Pi Engineering Honor Society along with eight other engineering students. The selection for the society was based on academic performance and exemplary character.

North Carolina

Jessye Bemley, a senior Industrial and Systems Engineering major at North Carolina A&T State University, served as an intern with the Association for Women in Science and was featured in the June 2008 issue of the *Washington Wire* magazine.

Northeast

George N. Kousaros, Northeastern University (NU), was honored with the SHPE Student Role Model Award. George came to Northeastern through the LSAMP supported Summer Bridge Program at NU. He graduated in May 2007, and is now working as an engineer at NSTAR in Massachusetts.

Ohio

Glenn-Stokes intern, Frederick Crawford, participated in the New Mexico Louis Stokes Alliance for Minority Participation Research Conference. Frederick received the first place award for his oral presentation, "Hollow Fiber Filtration of Hemoglobin."

Oklahoma

Oklahoma Alliance scholars traveled internationally and 18 *Louis Stokes Alliances for Minority Participation*

nationally to conduct research and participate in internships. Brandon "Bubba" Brooks (Wales), Lauren Miller (Turkey), Andrew Mixson (Slovenia), Lauren White (Island of Dominica) each participated in international research experiences.

Leethaniel Brumfield III, was the first Langston University student chosen to participate in the 2009 Brad Henry International Scholars Program. He will spend the spring semester conducting research with faculty and students at Swansea University in Wales, United Kingdom.

Peach State

Vanessa del Valle, a junior biology and psychology double major from the University of Georgia, was selected as the 2008 Barry M. Goldwater Scholar, a prestigious national science award for sophomores and juniors who are excelling in mathematics, engineering and the natural sciences.

Philadelphia

Philadelphia AMP students from Lincoln University of Pennsylvania participated in international research activities in Spain and Hong Kong, China.

South Carolina

Robert Gilliard, a senior chemistry undergraduate major at Clemson University was awarded the Merck Index award, the American Chemical Society award and has presented 15 technical papers on his research at various scientific meetings.

Shenile Wright, a junior biology major from South Carolina State University participated in "The Cross Training Pilot Program," a unique STEM research initiative funded by USDA Agriculture Research Service Vegetable Laboratory, Charleston SC.

State University of New York (SUNY)

Elizabeth Millings, who attended Suffolk County Community College and is now attending Stony Brook University, has placed second in chemistry among a national group of her peers at the Science and Energy Research Challenge (SERcH) held in Oak Ridge National Laboratory.

Tennessee

Lutalo Webb, senior electrical engineering major at Vanderbilt University, conducted research at the University of Kentucky in the summer of 2008. Lutalo presented



his research at the National Society of Black Engineers (NSBE) Region III Fall Regional Conference (FRC) during the Undergraduate Technical Research Competition in which he won first place. This allowed him the oppor-

tunity to represent Region 3, Vanderbilt and TLSAMP at the National NSBE conference in Las Vegas, NV, which will be held March 25-29, 2009.

Texas A&M University (TAMU)

BD IV alumnus Aracely Rocha received the Platinum Medal for the student poster competition at the Society of Tribology and Lubrication Engineering (STLE) 2008 Annual Meeting in Cleveland, Ohio. Aracely also studied abroad in Lyon, France in summer 2008, where she performed research at the Ecole Centrale de Lyon.

BD IV alumnus Jacob Torres received first place for his oral presentation in the Special Environmental Health & Safety Recognition session in the 2008 TAMU Student Research Week competition.

TAMU – Corpus Christi held their 7th Annual Undergraduate Research Symposium, where the following LSAMP students won awards: Billyjack Melchor – First place, poster presentation; Jennifer Crompton – Second place, poster presentation; Edward Eiland – Honorable Mention, oral presentation; and Rebecca Espinosa – Honorable Mention, poster presentation.

The following TAMUS LSAMP students participated in International Experiences during the summer 2008: Adriana Levia – Norte, Mexico; Joshua Sendejar – Salamanca, Spain; Luis Larraga – Spain; Sharon Carlos – Spain; Anna Esquivel – Spain; Rogelio Garza – Spain and Josue Tello – Spain.

University of Texas (UT) System

<u>UT Arlington</u>: Ms. Hiva Pourarsalan (LSAMP '07) published two articles in the Texas Society of Microscopy Journal. The first appeared in April 2007 and the second appeared in November 2007.

<u>UT El Paso:</u> Mr. Jorge A. Martinez (LSAMP '08) was featured in a July 2008 issue of UT El Paso's "Prospector" newspaper for his work on the "Border Crossing Project."

Maribel Lopez (LSAMP '08) participated in a Materials Science research project at the *Museum de Louvre* in Paris, France during the summer of 2008.

University System of Maryland

Jazalyn Dukes, University of Maryland, College Park, was selected to receive a 2008 NSF Graduate Research Fellowship in the field of Civil and Environmental Engineering to study at the Georgia Institute of Technology. Jazalyn also received the A. James Clark School of Engineering's Leadership Award. Tamika John, biochemistry and molecular biology major; Tesia Stephenson, biological sciences major; and Whitney Fields, biochemistry and molecular biology major, all juniors at the University of Maryland, Baltimore County, received UNCF/MERCK Undergraduate Science Research Fellowships.

Brian Hayes, LSAMP student at the University of Maryland, College Park, was selected to receive a fellowship from the National GEM Consortium in the field of computer engineering to study at the Georgia Institute of Technology.

Twenty-three (23) LSAMP students attended the Annual Biomedical Research Conference for Minority Students (ABRCMS) held November 7-10, 2007, in Austin, Texas. Three LSAMP students at the University of Maryland, Baltimore County won prizes for research presentations. Luis Cocka won a prize for his cell biology oral presentation. Benyam Kinde won a prize for his biochemistry oral presentation and Grace Silva won a prize for her microbiology poster presentation.

Virginia-North Carolina

The Society of Hispanic Professional Engineers (SHPE) at the University of Virginia was recognized as the best small chapter in the country at this year's SHPE conference held November 12-16, 2008, in Phoenix. The group's president, Peter Rios (BME '09), was one of two students in the nation honored as "an outstanding future leader."

Washington/Baltimore/Hampton Roads (WBHR)

WBHR-LSAMP students presented research projects at the HBCU-UP Conference held on October 4-7, 2007, at the Grand Hyatt Hotel in Washington, D.C. Students from Norfolk State University were awarded the following prizes: Lauren Wagner, behavioral and social sciences category, First Place; Keith Goodman, ecology, environmental and earth sciences category, Second Place and Angelitta Britt, physical science and mathematics category, Third Place.

Wisconsin

Deana Brown spent the summer in Japan doing laboratory research involving Leukemia.

Mary Cobb and Christine Brown accompanied their mentor to Cogne, Italy to present research at the Sixth International Conference on the genus "*Marmota*": *Marmot in a Changing World in September of 2008*. Emily Castellanos traveled to Canada to collect sticklebacks of the fish family of Gasterosteidae for her biological research.



Alabama



Dr. Louis Dale The University of Alabama at Birmingham



Dr. Michael V. Drake The University of California, Irvine



Mississippi

Dr. Abdul K. Mohamed Jackson State University





Dr. Manuel Gomez The University of Puerto Rico



Texas A&M

Dr. Karan Watson Texas A&M University





Dr. Antonio Garcia Arizona State University

Florida-Georgia



Dr. Ralph W. Turner Florida A&M University



New York City

Dr. Neville A. Parker City College of New York



1992 **North Carolina**

Dr. Alton Thompson North Carolina A&T State University



South Carolina

Dr. George E. Cooper South Carolina State University

University of **Texas System**



Dr. Benjamin Flores The University of Texas at El Paso

California State



Dr. Joseph Sheley California State University



Illinois

Dr. Sandra Westbrooks Chicago State University



New Mexico

1993

Dr. Waded Cruzado New Mexico State University



Washington/Baltimore

Dr. Alvin Thorton Howard University



Ms. Zetra Weeler Salish Kootenai College

All Nations

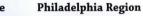


Dr. Cornell Thomas

Oklahoma State

University

State





Greater



Drexel University

1995

University System



Louisiana

Dr. Diola Bagayoko Southern University and A&M College



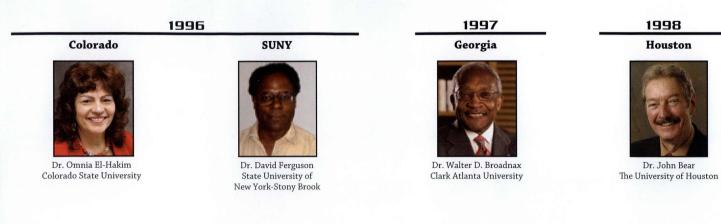
Dr. Freeman Hrabowski The University of Maryland-Baltimore County



Tennessee

Dr. Melvin N. Johnson **Tennessee** State University





2001



Dr. John Cunningham The University of Massachusetts-Amherst



Dr. Herb Schroeder University of Alaska-Anchorage





Dr. Beverly Davenport Sypher Purdue University

2003



Dr. E. Gordon Gee Ohio State University

Michigan



Dr. Mary Sue Coleman The University of Michigan



Peach State

2004

Dr. Michael Adams The University of Georgia



Wisconsin

Dr. Patrick Farrell The University of Wisconsin-Madison





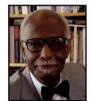
Dr. Rose Tseng The University of Hawaii at Hilo

2006 Kentucky-



Dr. Lee T. Todd The University of Kentucky

Urban Massachusetts



Dr. Wingston Langley The University of Massachusetts-Boston

North Star



Dr. Nancy "Rusty" Barceló The University of Minnesota

2007 Upstate



Dr. Eric C. Spina Syracuse University





Dr. William B. Harvey The University of Virginia



Alabama Louis Stokes Alliance for Minority Participation

Providing academic and financial support programs designed to significantly increase the quality and quantity of underrepresented minority students completing baccalaureate degrees in science, technology, engineering and mathematics (STEM) fields.

LEAD INSTITUTION

The University of Alabama at Birmingham Dr. Louis Dale Principal Investigator Dr. Carolyn Braswell Co-Principal Investigator, Project Director and UAB Principal Investigator 1530 3rd Avenue South · Campbell Hall 401 Birmingham, AL 35294-1170 Phone: 205-934-8762 • Fax: 205-934-1650 E-mail: <u>Idale@uab.edu</u> • <u>cbraswel@uab.edu</u>

PARTNER INSTITUTIONS

Alabama A&M University Dr. Jacqueline Johnson Principal Investigator (256) 372-5713 • jau.johnson@email.aamu.edu

Alabama State University Dr. Wallace Maryland, Jr. Principal Investigator (334) 229-4464 • <u>wmaryland@alasu.edu</u>

Auburn University Dr. Overtoun M. Jenda Principal Investigator (334) 844-4445 • jendaov@auburn.edu

Miles College Dr. Charles C. Woods Principal Investigator (205) 929-1551 • <u>cwoods@miles.edu</u>

Oakwood University Dr. Kenneth LaiHing Principal Investigator (256) 726-7112 • <u>laihing@oakwood.edu</u>

Stillman College Dr. Mary Jane Krotzer Principal Investigator (205) 366-8929 • <u>mkrotzer@stillman.edu</u>

 Talladega College

 Dr. Leonard Cole

 Principal Investigator

 (256) 761-6300 • lcole@talladega.edu

Tuskegee University Dr. Herman Windham *Principal Investigator* (334) 727-8556 • <u>windham@tuskegee.edu</u>

The University of Alabama Dr. Viola L. Acoff Principal Investigator (205) 348-3761 • vacoff@eng.ua.edu

The University of Alabama in Huntsville Dr. Adriel D. Johnson, Sr. Principal Investigator (256) 824-6235 • johnsona@email.uah.edu

The University of South Alabama Dr. Carl Cunningham, Jr. Co-Principal Investigator (251) 432-2275 • ccunningham@usouthal.edu

Dr. Alexandra Stenson Co-Principal Investigator (251) 460-7432 • <u>astenson@jaguar1.usouthal.edu</u>

- Undergraduate Scholarship Program
- Peer and Faculty Mentoring
- Community College Collaboration
- Graduate School Preparation
- Faculty Mentored Research
- Student Participation in Professional Conferences and Seminars

ACTIVITIES

- ALSAMP Governing Board
- Peer Study Groups
- Summer Internship Program
- Summer Bridge Program for Incoming Freshmen
- Career Fair and Advisement

RESEARCH

LSAMP Summer Interns presented research posters at the ALSAMP Summer Internship Conference held at The University of Alabama at Birmingham (UAB) on July 25, 2008.





(Left) Ms. Monique Taylor, Alabama State University and (Right) Mr. Ronnie McCoy, The University of Alabama.

BRIDGE TO THE DOCTORATE PROGRAM

Since 2003, 60 students have entered BD cohorts at Auburn University, Tuskegee University, The University of Alabama, UAB and The University of Alabama in Huntsville. In fall 2008, Auburn University accepted 12 additional students, bringing the ALSAMP total to 72 BD students.



Former LSAMP student, Dr. Crystal Johnson, received a four-year \$2.3 million grant from NSF and NIH to study pathogenic vibrios. She recently accepted a tenuretrack position at Louisiana State University.



Dr. Carma Cook, was awarded her Ph.D. in Biochemistry from Auburn University and is currently engaged in cancer research at Tuskegee University.



Lucy Kehinde will complete her Ph.D. in Vision Sciences in 2009 at UAB. She was Minority Access Inc.'s 2008 Student Role Model winning the First Place Student Research Presenter Award.

PROGRAM RESULTS

ALSAMP institutions **enrolled 6,096** underrepresented minority STEM students for the 2008-2009 fall semester. During the May/June 2008 graduation ceremonies, **939** under-graduate **STEM degrees** were awarded to underrepresented minorities in Alabama, an increase of **108** over the previous year. Three BD students have received Ph.D. degrees with four more scheduled to earn Ph.D. degrees in 2009. Forty-four BD students are enrolled in Ph.D. degree programs nationwide.





under the Indigenous Math and Science Institute at Salish Kootenai College, Pablo, Montana

The All Nations Louis Stokes Alliance for Minority Participation (ANLSAMP) is funded by the National Science Foundation. It's main goal is to substantially increase the number of Native American students that graduate in Science, Technology, Engineering & Mathematics (STEM). Our partners consist of 24 Tribal Colleges & Universities and 10 Mainstream Colleges and Universities in 13 States.

Alliance Partners

- Blackfeet Community College
- Central Michigan University
- Chief Dull Knife College
- College of Menomiee Nation
- Comache Nation College
- Dine College
- Fond du Lac Tribal College
- Fort Belknap College
- Fort Berthold Community College
- Fort Peck Community College
- Haskell Indian Nations University
- Heritage University
- Keweenaw Bay Ojibwa Community College
- Lac Courte Oreilles Ojibwa Community College
- Little Big Horn College
- Little Priest Tribal College
- Montana State University Bozeman
- Montana State University Northern
- Navajo Technical College
- North Dakota State University
- Northwest Indian College
- Oglala Lakota College
- Rocky Mountain College
- Saginaw Chippewa Tribal College
- Salish Kootenai College
- Sisseton Wahpeton College
- Sitting Bull College
- South Dakota School of Mines & Technology
- Southwestern Indian Polytechnic Institute
- Stone Child College
- United Tribes Technical College
- University of Idaho
- University of Montana
- Western Washington University



Turtle Mountain Community College took First Place in the Science Bowl at the 2008 Spring AIHEC conference. Pictured are Thomasina Stevens and J. Helphrey

Members of the Fort Berthold Community College team participating at the 2008 Spring AIHEC student conference. Left to right are Meranda Sanderson, Maria Gonzalez, & Dawn White.



Zetra Wheeler Principal Investigator All Nations LSAMP Salish Kootenai College PO Box 70 58138 Highway 93 Pablo, Montana 59855 Phone: (406) 275-4998 Fax: (406) 275-4807 www.anamp.org



Don Belile, Oglala Lakota College presents his poster on Watershed Classification at the 2008 Spring AIHEC student conference.

Daniel Chase, Turtle Mountain Community College, presents at the 2008 Spring AIHEC student conference. He is presenting his research on the effects of math tutoring at TMCC.

SCIENCE · TECHNOLOGY · ENGINEERING · MATHEMATICS

CALIFORNIA LSAMP PARTNERS

UC BERKELEY

GEORGE C. JOHNSON, PH.D. FACULTY DIRECTOR Professor, Mechanical Engineering gjohnson@me.berkeley.edu DIANA LIZARRAGA, M.A. COORDINATOR Professional Development Programs ladjana@berkeley.edu

UC DAVIS

GARY E. FORD, PH.D. FACULTY DIRECTOR Associate Dean and Professor College of Engineering ford@ece.ucdavis.edu GAIL MARTINEZ, PH.D. COORDINATOR Assistant Vice Provost, Undergraduate Studies, Offices of the Chancellor and Provost gamartinez@ucdavis.edu

UC IRVINE

DEREK DUNN-RANKIN, PH.D. FACULTY DIRECTOR Department of Mechanical and Aerospace Engineering ddunnran@uci.edu KIKA FRIEND, M.A. COORDINATOR 107 Rockwell Engineering Center kika@uci.edu

UC LOS ANGELES

RICHARD L. WEISS, PH.D. FACULTY DIRECTOR Department of Chemistry and Biochemistry weiss@chem.ucla.edu FRANK NEVAREZ COORDINATOR Undergraduate Research Center/ Center for Academic and Research Excellence frankn@ifesci.ucla.edu

UC RIVERSIDE

MICHAEL MARSELLA, PH.D. FACULTY DIRECTOR Department of Chemistry michael.marsella@ucr.edu CHRISTOPHER OLIVERA, PH.D. COORDINATOR christopher.olivera@ucr.edu

UC SAN DIEGO

jazize@ucsd.edu

DAVID M. ARTIS, PH.D. PROGRAM DIRECTOR Academic Enrichment Programs dartis@ucsd.edu JACQUIE AZIZE-BREWER, PH.D. COORDINATOR Academic Enrichment Programs

UC SANTA BARBARA

GLENN EL BELTZ, PH.D. FACULTY DIRECTOR College of Engineering beltz@engineering.ucsb.edu DOROTHY PAK, PH.D. JULIE STANDISH, PH.D. CO-COORDINATORS Materials Research Lab pak@mtl.ucsb.edu standish@lifesci.ucsb.edu

UC SANTA CRUZ

A. RUSSELL FLEGAL, PH.D FACULTY DIRECTOR Division of Physical and Biological Sciences flegal@etox.ucsc.edu

MALIKA BELL, M.S. COORDINATOR Dean's Office Division of Physical and Biological Sciences malika@biology.ucsc.edu

UNIVERSITY OF CALIFORNIA



FOR MINORITY PARTICIPATION

Broadening Participation Promoting Excellence

Since 1991, CAMP has made qualitative and quantitative contributions to minority STEM retention and degree completion UC Systemwide. A total of 15,092 B.S. degrees have been granted to underrepresented students since 1990-91, an increase of 122%. Minority STEM enrollment for 2007-08 at our 8 UC partner campuses totaled 8,735, a 130% increase since program inception. Activities include:

- **Academic advising** for success in the major
- Peer counseling/peer mentoring
- **Strategies for success** in test taking and time management
- **Study groups** that foster intellectual and social development
- Involvement in on-going research in a science or engineering lab
- **Technical training** in the laboratory
- **Guided development** of a research poster
- **Access** to summer internships
- Professional settings offering collegial interaction
- **Advising on opportunities** for financial aid
- Graduate school admissions test prep courses
- Graduate application workshops
- **Career counseling** and graduate recruitment
- **Travel** to professional society conferences.



CALIFORNIA LSAMP



A Grant Through the National Science Foundation

LEAD CAMPUS: UNIVERSITY OF CALIFORNIA, IRVINE email: dmartino@uci.edu • www.california-lsamp.uci.edu



Michael V. Drake, M.D., Chancellor, UC Irvine, P.I. Debra J. Richardson, Dean, Bren School of Information and Computer Science, Co-P.I.

UNIVERSITY OF CALIFORNIA CAMP LEADERSHIP

Project Managers: Derek Dunn-Rankin, Ph.D., The Henry Samueli School of Engineering

Marjorie DeMartino, M.F.A., UC Irvine Center for Educational Partnerships

24 Louis Stokes Alliances for Minority Participation



CSU-LSAMP Alliance - Campus Coordinators

CSU Bakersfield - Javier Trigos-Arrieta (661) 664-2031 • jtrigos@csub.edu

CSU Channel Islands - Philip Hampton (805) 437-8869 • philip.hampton@csuci.edu

CSU Chico - Lori Holcombe (530) 898-4175 • Iholcombe@csuchico.edu

CSU Dominguez Hills - Hee-Kwang Choi (310) 243-3985 • hchoi@csudh.edu

<u>CSU East Bay</u> - David Bowen (510) 885-2654 • david.bowen@csueastbay.edu

CSU Fresno - Lilia de la Cerda (559) 278-4748 • liliad@csufresno.edu

CSU Fullerton - Christina Goode (714) 278-2505 • cgoode@fullerton.edu

Humboldt State - Jacob Varkey 7) 826-4164 • jpv1@humbold1.edu

SU Long Beach - Morteza Ebneshahrashoob (562) 985-5625 • mortezae@csulb.edu

Cal State Los Angeles - Margaret Jefferson (323) 343-2059 • mjeffer@exchange.calstatela.edu

CSU Monterey Bay - William Head (831) 582-3576 🖌 william head@csumb.edu

CSU Northridge - Karla Johnson-Majedi (818) 677-2191 • kjm@csun.edu

Cal Poly Pomona - Eric Lara (909) 869-2482 • ericlara@csupomona.edu

CSU Sacramento - Juanita Barrena (916) 278-6519 • jbarrena@csus.edu

CSU San Bernardino - Belisario Ventura (909) 537-5406 • bventura@csusb.edu

San Francisco State - David Ellis (415) 338-1026 • dellis@math.sfsu.edu

San Jose State - Karen Singmaster (408) 924-4980 • singmast@aol.com

Cal Poly San Luis Obispo - David Cantu (805) 756-1.433 • dcantu@calpoly.edu

<u>San Marcos State</u> - Keith Trujillo (760) 750-4183 • keith@csusm.edu

Sonoma State - Samuel Brannen (707) 664-2591 • brannen@sonoma.edu

CSU Stanislaus - Jane Bruner (209) 667-3476 • bruner@science.csustan.edu

San Diego State - Estralita Martin (619) 594-4009 • esmartin@sciences.sdsu.edu

LSAMP Scholars Program. The Scholars Program is an Alliance-

Science Educational Equity Summer Enrichment Conference Additionally, in 2008-2009, CSU California State University, S LSAMP supported 24 Master's Level Students at two Bridge to the Doctorate (BD) Activities: the second year of a BD-Cohort V and the first year of a BD-Cohort VI, both at California State University Los Angeles

CSU-LSAMP Statewide Office

Joseph Sheley, Principal Investigator Juanita Barrena, Co-PI, Lead Project Director Nicole Campos, Project Manager

California State University, Sacramento 6000 J Street, Sequoia Hall 534 Sacramento, CA 95819-6124 Phone: (916) 278-3838 Fax: (916) 278-3854 www.csus.edu/csu-lsamp



CSU Fresno

Major: Biology

participation in STEM disciplines. At the time the Alliance was established, it included 16 campuses of the California State University and was gradually expanded to include all 22 full-service comprehensive universities of the CSU. The only CSU campus that is not included is The California Maritime Academy, which is a unique and specialized campus of the CSU. Hence, this project is truly a comprehensive effort of the CSU, the largest system of public higher education in the world, located in one of the largest and most diverse States in the Nation.

During the 2003-2008 project period, CSU-LSAMP served an average of 3,106 URM STEM students and greatly exceeded its objective of serving at least 2000

CSU-LSAMP Students from Vario December 1, 2007

URM-STEM level-1 students per year. Over the five-year project period, CSU-LSAMP provided support for a total of 7, 581 unduplicated level-1 participants, 7,386 (97.4%) of whom self-identified as members of URM groups.

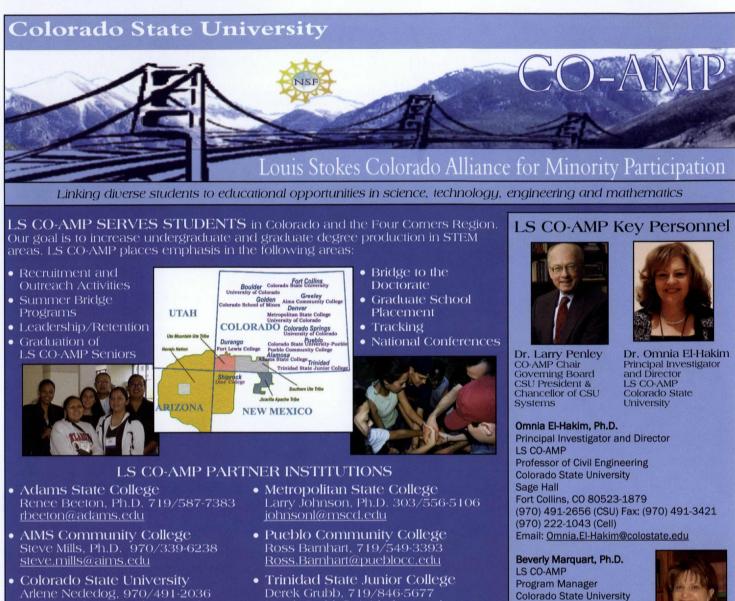
California State University Louis Stokes

Alliance for Minority Participation

The California State University Louis Stokes Alliance for Minority Participation

(CSU-LSAMP), with NSF support, was initiated in 1993 to serve as a comprehen-

CSU-LSAMP also supported the fourth year of an Alliance-wide initiative referred to as the CSUwide program initiated in 2004-2005, which provides special statewide recognition and support to exceptionally promising upper division students who demonstrate an interest in pursuing graduate study in STEM.



- Arlene.Nededog@colostate.edu • Colorado State University -Pueblo • University of Colorado –Boulder Jane.fraser@colostate-pueblo.edu
- Colorado School of Mines Khanh W. Vu, 303/273-3021 kvu@mines.edu
- Fort Lewis College Don May, Ph.D. 970/247-7545 May_d@fortlewis.edu

International Activities:

- IMOU with Fayoum, Egypt & proposed MOU with University of Alabama in Birmingham
- CSU Students attended meeting in Deggendorf, Germany
- University of Colorado -Colorado Springs partnership with Ching Yun University in Taiwan
- Minority Access Inc. 2008 Role Models Conference -Diversity Awards Received by CO-AMP institutions:
- Colorado State University Fort Collins
- Metropolitan State College of Denver
- University of Colorado Boulder

- Derek Grubb, 719/846-5677 Derek.Grubb@trinidadstate.edu
- Cindy.Cabrales@colostate.edu
- University of CO –Colorado Springs Tina Moore, 719/262-3347 Tmoore@engineering.uccs.edu
- University of Colorado –Denver Angela Marquez, 303/556-6209 angela.marquez@ucdenver.edu
- TRIBAL PARTNERS Navajo Nation –Clarissa Bowman Southern Ute Tribe –LaTitia Taylor Ute Mtn. Ute Tribe -Robert Rime

Colorado State University

Sage Hall Fort Collins, CO 80523-1879 (970) 491-6686 (CSU) Fax: (970) 491-3421 Email: Beverly.Marguart@colostate.edu

MANAGEMENT TEAM

David Aragon

University of Colorado - Boulder Hector Carasco, Ph.D. Colorado State University - Pueblo Ernie Chavez, Ph.D. Colorado State University - Fort Collins Peter Dorhout, Ph.D. Colorado State University - Fort Collins Larry Johnson, Ph.D. Metropolitan State College of Denver



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www. FGLSA **AMP**



FLORIDA GEORGIA LOUIS STOKES ALLIANCE for Minority Participation in Science, Technology, Engineering, and Mathematics

FGLSAMP is a coalition of 13 institutions committed to significantly increasing the number of undergraduate degrees awarded in science, technology, engineering, and mathematics (STEM) areas. We have also gladly accepted the charge by the National Science Foundation (NSF) to positively influence the number of STEM B.S. degree recipients entering STEM graduate programs. Through an initiative funded by NSF, FGLSAMP has established the "Bridge to the Doctorate" at Florida State University, University of South Florida, and University of Florida which currently supports 60 scholars pursuing STEM Ph.D. degrees.

FGLSAMP Institutions

Albany State University Bethune-Cookman University *Florida A & M University Florida Community College (Jax.) **Florida International University Florida Memorial University Florida State University Miami-Dade Community College Tallahassee Community College University of Central Florida University of Florida University of Miami University of South Florida**

*Lead Institution

FGLSAMP Central Office:

1540 South Adams Street, Suite A Tallahassee, FL 32307 (850) 561-2467 **Ralph W. Turner, Project Director Byron Greene, Project Manager**

jackson.greene@famu.edu

S	Structured
Success	Tutorial Programs
Ö	Peer Mentoring
N	Academic
5	Enhancement
and the second	Workshops
ot	Graduate School
5	Preparation
Pillars	Seminars
	Partnerships with
F	STEM Departments
	and Faculty
7	Research
	Experiences for
	Undergraduate
5	Scholars
	Collaboration
5	with other STEM
T	Organizations

FGLSAMP at a glance:

Undergraduate/Graduate Support **Summer Research Program Bridge to the Doctorate**



THE GEORGIA LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION PROGRAM

DR. MELVIN R. WEBB PROGRAM DIRECTOR

CLARK ATLANTA UNIVERSITY 223 JP BRAWLEY DR. P.O. BOX 1980 ATLANTA, GA 30314 404-880-6978 404-880-6843 (FAX)

EMAIL: MWEBB@CAU.EDU

PARTICIPATING INSTITUTIONS

Clark Atlanta University Dr. I. Finkelstein, PI

Georgia State University Dr. A. Bumstark, PI

Morehouse College Dr. J. K. Haynes, PI

Spelman College Dr. Albert Thompson, PI

> Paine College Dr. R. Kessler, PI

Atlanta Metropolitan College Dr. B. Morgan, PI The Georgia LSAMP is one of the nation's most productive in terms of ranking among the baccalaureate-origin institutions of Black STEM doctorate recipients. The unifying themes of this LSAMP are: focused recruitment, retention, required research participation, student financial support, and graduate school enrollment. The Georgia LSAMP will significantly increase the number of STEM baccalaureate degrees awarded, increase the number of students entering graduate school each year, and increase retention.

Alliance Components

Curricular Enhancement Early Identification/ Recruitment Summer Bridge Programs Research Internships Faculty Mentoring Tutorial Support Cooperative Study Groups

Alliance Accomplishments

This AMP continues to make significant contributions to the production of a diversified STEM workforce in the 21st century. The following are some accomplishments.

- Three partner institutions are ranked among the top 20 baccalaureate-origin institutions of Black STEM doctorate recipients.
- The non-HBCU partner is ranked number one in awarding baccalaureate degrees to Blacks: 3rd in biology, 8th in chemistry, 9th in mathematics, and 11th in computer science.
- ◊ Three institutions are listed among the top 10 best colleges for Blacks.
- ◊ Three student STEM Research Symposia conducted by Alliance members
- ◊ One student STEM participation day program conducted for two-year college students.



Creating a Global Community of Scholars in Science, Technology, Engineering, and Mathematics

University of Houston had over 40 H-LSAMP scholars graduate, and the College of Natural Science and Mathematics Valedictorian was an H-LSAMP Mathematics Scholar who is currently perusing his PhD.

Texas State-San Marcos

Is taking the global community stewardship seriously. Scholars are working with campus leaders to educate them on the negative environmental footprint of plastic bottled water.

Houston Community College

The H-LSAMP program has joined forces with the West Houston Science Center to expand dual enrollment programs for local high school students.

San Jacinto College

Launched its first H-LSAMP summer research program with community college students conducting research in hydrogen fuel cells, drug discovery, protein synthesis, and surface chemistry.

TRAINING A NEW GENERATION OF GLOBAL LEADERS

The University of Houston-Downtown held its first ever cyber infrastructure day focusing on leveraging the international communities large scale infrastructure for involving students and faculty in all aspects of computer science research. Students, Faculty, and Staff were treated to a full day of talks from leaders in the field of CI.

Texas State University-San Marcos's Nick Mustachio pictured below has completed two NASA summer internships, completed research projects in the departments of chemistry and biochemistry, and recently took first place at the 19th annual MAES Leadership Conference. Mr. Mustachio plans on pursuing a PhD in Chemical Engineering, and plans to apply to the NASA astronaut program.



PI: Dr. John L. Bear jbear@uh.edu

University of Houston De'Anza Johnson djohns12@uh.edu

UH-Victoria Dr. Li Chao chaol@uhv.edu The University of Houston, in partnership with BP, has awarded a special H-LSAMP scholarship to Ms. Janelly Saldana. Ms. Saldana participated in the new San Jacinto College District H-LSAMP research program after completing her high school diploma and associated degree simultaneously. After spending the summer working on hydrogen fuel cells she decided on a degree in geophysics, and hopes to obtain a PhD in geophysics after graduation.

Co-PI: Dr. Bobby Wilson Wilson_bl@tsu.edu

Texas Southern University Michelle Tolbert Tolbert_ym@tsu.edu

Texas State University Susan Romanella sr23@txstate.edu **Ex. Dir:** Craig Cassidy ccassidy@uh.edu

UH-Downtown Dr. Richard Alo RAlo@uhd.edu

San Jacinto College District Sharon Sledge Sharon.sledge@sjcd.edu



H-LSAMP's role in solving the global energy crises:

Thanks to a generous gift from BP, the H-LSAMP program will be able to recruit and retain the future world leaders in energy, and allow them the opportunity to conduct research within our energy cluster. This allows students the opportunity to train with the worlds best minds in earth, energy, and sustainable development.

> Houston Community College Dr. Mahmoud Shagroni mahmoud.shagroni@hccs.edu

Rice University Theresa Chatman tlc@rice.edu

Louis Stokes Alliances for Minority Participation 29





Dr. Sandra Westbrooks CSU Provost & PI Illinois LSAMP



Dr. Marian Wilson Comer Executive Director Illinois LSAMP



Dr. LeRoy Jones II Project Director & Co-PI Illinois LSAMP

LEAD INSTITUTION

Chicago State University Illinois LSAMP 9501 S. King Drive/SCI 101A Chicago, Illinois 60628 Phone: 773.995.3296 Fax: 773.995.2966 Email: ilsamp@csu.edu Website: www.csu.edu/ILSAMP

PARTNER INSTITUTIONS

DePaul University Dr. Carolyn Narasimhan 773.325.1854/cnarasim@depaul.edu **Governors State University** Dr. Joseph Addison 708.534.4529/j-addison@govst.edu Illinois Institute of Technology Dr. Peter Johnson 312.567.3440/johnsonp@iit.edu Illinois State University Dr. Jenny Daugherty 309.438.3708/jldaug2@ilstu.edu Northeastern Illinois University Dr. David Rutschman 773.442.5714/d-rustschman@neiu.edu Southern IL Univ-Edwardsville Dr. Sadegh Khazaeli 618.650.3561/skhazae@siue.edu Southern IL Univ-Carbondale Dr. Karen Renzaglia 618.453.3229/renzaglia@cos.siu.edu University of Illinois-Chicago Dr. Anatology Libgober 312.413.2138/libgober@math.uic.edu

ILLINOIS LOUIS STOKES

Alliance For Minority Participation



OVERVIEW

The Illinois Louis *Stokes* Alliance for Minority Participation (ILSAMP) is composed of eighteen



partners striving to significantly increase the number of underrepresented scholars earning degrees in science, technology, engineering and mathematics (STEM) disciplines in the state of Illinois. In support of this goal, ILSAMP has 1) provided programs improve **STEM** students to



academic preparation, 2) modified or reinvented gateway courses to better educate more students and, 3) provided under-represented students with more educational options to increase opportunity and enhance performance. The synergies created by these objectives play a noteworthy role in producing future research scientists and faculty to meet the needs of our country.

City Colleges of Chicago Dr. Leonard Etlinger 312.553.2752/letlinger@ccc.edu South Suburban College Mrs. Amy Petty 708.596.2000/southsuburbancollege.edu Saint Augustine College Dr. Bruno Bondavalli 773.878.3439/bbondavalli@staugustine.edu

PROGRAMS

Illinois LSAMP provides activities that are comprehensive, multidisciplinary, and focused on enhancing the scholarship of underrepresented students. Considerable effort is expended to address transition points in a student's academic career. The transition points include high school to college, 2-year college to 4-year college, under-graduate study to graduate study, and



academic study to careers in STEM. Other activities include: hands-on research apprenticeships, scholarship programs, science conferences, facilitated study groups, faculty mentoring, professional development activities, peer mentoring, summer bridge programs and internships.



Made Possible with the Generous Support of the National Science Foundation







Principle Investigator Dr. Beverly Sypher Purdue University Associate Provost and Professor of Communication (765) 496-3509 bdsypher@purdue.edu

Statewide Director Dr. Pamella Shaw **Purdue University Assistant Provost** (765) 496-7967 ppshaw@purdue.edu



Purdue University North Central Dr. Sharron Jenkins (219) 785-5206 sjenkins@pnc.edu



Purdue University Calumet Dr. George Z. Hong (219) 989-2925 hongg@calumet.purdue.edu



Indiana State University Dr. Jennifer Latimer (812) 237-2254 jlatimer@indstate.edu









- **LSAMP** Activities:
- Undergraduate Research
- Summer Bridge Program •
- Peer and Faculty Mentoring
- **Student Internships** .
- Academic and Financial Support •
- NASA Summer and Academic Year Collaborations •
 - Tutoring

•

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- Graduate School Preparation Workshops •
 - Annual LSAMP/AGEP Joint Conference
- **Conference** Presentations .

Website: http://www.purdue.edu/lsamp





Ball State University Dr. Anita Gnezda (765) 285-8060 aggnezda@bsu.edu



Indiana University Dan Woodside (812) 855-0876 dwoodsid@indiana.edu



Indiana University Northwest Cathy Ann Hall (219) 981-4296 cathall@iun.edu



Indiana University Purdue University -Indianapolis Dr. Kim Nguyen (317) 274-1126 knguyen@iupui.edu









The Islands of Opportunity Alliance-

Yap

Chuuk

Federated States of Micronesia

Pohone

LSAMP Supporting underrepresented student success in

science, technology, engineering and math

The newly formed IOA-LSAMP, led by the University of Hawai'i at Hilo, works collaborately with 18 institutions throughout Hawai'i and the Pacific region to increase the quantity and quality of underrepresented students receiving baccalaureate degrees in science, technology, engineering and math.

To achieve this goal, IOA-LSAMP partners have initiated a comprehensive effort that includes:

- Outreach and Recruitment
- Summer Bridge Programs
- Attendance at Professional Conferences
- Research Experience Opportunities
 Community Projects
- Academic Support Programs
- Retention Efforts

Dr. Rose Tseng, PI of the Islands of Opportunity Alliance

Hawail

Alliance member institutions are:

Univ. Hawai'i at Hilo, Dan Brown, (808)974-7468, dbrown@hawaii.edu American Samoa Comm. Coll., Kenneth Belle, kenneth_belle_dpm@yahoo.com Chaminade University, Helen Turner, (808)739-8399x399, hturner@chaminade.edu College of Marshall Islands, Don Hess, (692)625-5903, cmihess@yahoo.com College of Micronesia, Brian Lynch, (691)320-2480, brianl@comfsm.fm Guam Community College, Michelle Santos, (671)735-5606, msantos@guamcc.edu Hawai'i Community College, Laura Brezinsky, (808)974-7481, laura@hawaii.edu Hawaii Pacific University, Bud Jenkins, (808)687-7028, rjenkins@hpu.edu Honolulu Community College, Erika Lacro, (808)845-9154, lacro@hawaii.edu Kapiolani Community College, Robert Franco, (808)734-9514, bfranco@hawaii.edu Kauai Community College, Colleen Kaiminaauao, (808)245-8319, ckaimi@hawaii.edu Leeward Community College, James Oda, (808)455-0651, jsoda@lcc.hawaii.edu Maui Community College, Kahele Dukelow, (808)984-3346, kaheleon@hawaii.edu Northern Marianas College, Glenn Keaton, (670)234-5498 ext1212, glennk@nmcnet.edu Palau Community College, Vernice Yuzi, (680)488-2470, vernicey@palau.edu University of Guam, Claudia Taitano, yestaitano@yahoo.com Univ. Hawai'i at Manoa, Joshua Kaakua, (808)956-2289, kaakua@eng.hawaii.edu Univ. Hawai'i - West Oahu, Linda Furuto, (808)455-0651, Ifuruto@hawaii.edu Windward Community College, Dave Krupp, (808)235-7402, krupp@hawaii.edu

Islands of Opportunity Alliance-LSAMP

Dan Brown, Program Director University of Hawai'i at Hilo dbrown@hawaii.edu 808-974-7468 Phone 808-974-7737 Fax

Moana Ulu Ching Project Assistant moanac@hawaii.edu 808-933-0705 Phone 808-933-0704 Fax

http://www.uhh.hawaii.edu/affiliates/ioalsamp/

Kentucky - West Virginia Alliance for Minority Participation

a Louis Stokes Alliance for Minority Participation



Principal Investigator: Dr. Lee T. Todd President University of Kentucky 101 Main Building Lexington, KY 40506-0032 Phone: (859) 257-1701 Fax: (859) 257-1760 Email:Itodd@email.uky.edu



Co-Principal Investigator: Dr. Ingrid St. Omer Assistant Professor Electrical & Computer Engineering University of Kentucky 453 F. Paul Anderson Tower Lexington, KY 40506-0046 Phone: (859) 257-6143 Fax: (859) 257-6143 Fax: (859) 257-3092 Email: istomer@engr.uky.edu

Highlights of Phase 1, Year 2

- Second annual Kentucky-West Virginia LSAMP Research Symposium was held on Friday, February 29, and Saturday, March 1, 2008 at the Radisson Plaza Hotel, Lexington, KY.
- iSTEMulating Emerging Mindsi recruitment program established at the University of Louisville to assist African American youth.



 Initiation of the Challenging America, Re-engineering National Education Gains Including Fresh Epistemology - Holistic Approaches to Learning and Leadership, (C.A.R.N.E.G.I.E. - H.A.L.L.) program for rising high school juniors to prepare them for the rigors of a STEM curriculum and the college/university experience.



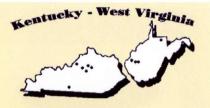
Pre-Freshman Mathematics and Chemistry courses were offered to LSAMP students at West Virginia University to prepare them for their first year at WVU.

The Alliance has developed an approach which incorporates:

- ï Recruitment and retention
- ï Research experiences
- ï Transitional experiences
- ï Climate
- ï Curriculum reform
- ï Postgraduate career aspirations
- ï Role models



http://kywvamp.uky.edu



Executive Director Michael Lee Phone: (859) 323-4969 Fax: (859) 257-5060 Email: mlee@engr.uky.edu

Partner Institutions:

Bluegrass Community and Technical College Ms. Charlene Walker Phone: (859) 246-6438 Fax: (859) 246-4699 Email: charlene.walker@kctcs.edu

Centre College Dr. Preston Miles Phone : (859) 238-5414 Fax : (859) 236-7925 Email: miles@centre.edu

Marshall University David Cartwright Phone: (304) 696-6024 Fax: (304) 696-6533 Email: david.cartwright@marshall.edu

Kentucky State University Dr. T.S. Kochhar Phone: (502) 597-6070 Fax: (502) 597-6826 Email: Tejinder.kochhar@kysu.edu

Western Kentucky University Dr. Charles McGruder Phone: (270) 745-5277 Fax: (270) 745-2014 Email: mcgruder@wku.edu

West Virgina State University Ms. Dedriell D. Taylor Phone: (304) 766-5701 Fax: (304) 766-4296 Email: dtaylor11@wvstateu.edu

West Virginia University

Dr. David Miller Phone: (304) 293-2011 ext 2323 Fax: (304) 293-3982 Email: millerd@math.wvu.edu

University of Louisville Dr. Pamela Feldhoff Phone: (502) 852-7136 Fax: (502) 852-6222 Email: pwfeld01@louisville.edu

West Virginia State Community and Technical College Ms. Dedriell D. Taylor Phone: (304) 766-5701 Fax: (304) 766-4296 Email: dtaylor11@wvstateu.edu

ALLIANCE PARTNERS

Dillard University (DU) Dr. Abdalla Darwish (504) 816-4840 adarwish@bellsouth.net

Grambling State University (GSU) Dr. Milford Greea (318) 274-3740 greenem@gram.edu

Louisiana State University (LSU) Dr. Su-Seng Pang (225) 578-5892 mepang@me.lsu.edu

> LUMCON Dr. Paul Sammarco (985) 851-2876 Psammarco@lumcon.edu

McNeese State University (MSU) Dr. George Mead (337) 475-5785 mead@mcneese.edu

Nunez Community College (NCC) Ms. Christine Thomas (251) 580-8398 Cthomas9475@yahoo.com

Southern University and A&M College (SUBR)

Drs. Diola Bagayoko & Ella Kelley (225) 771-2730 or 771-3990 bagayoko@aol.com, elkchem@aol.com

Southern University New Orleans (SUNO)

Dr. Joe Omojola (504) 286-5128 or 284-5458 jomojola@suno.edu

Southern University Shreveport (SUS) Warner Brown (318) 674-3409

> wbrown@susla.edu Tulane University (TU) Dr. Henry Bart

(504) 865-5191 hank@museum.tulane.edu

University of Louisiana-Lafayette (ULL) Dr. Vijay Raghavan (337) 482-6603 raghavan@louisiana.edu

University of New Orleans (UNO) Dr. Ashok Puri (504) 280-6341 apuri@uno.edu

LOUIS STOKES Louisiana Alliance for Minority Participation

LS-LAMP Awarded 1995

Substantially increasing the number and quality of minority students earning degrees in science, technology, engineering and mathematics (STEM) disciplines and who successfully pursue graduate degrees



Students participating in the LS-LAMP program are immersed in the LS-LAMP 10-Strand Systemic Mentoring Model (visit www.ls-lamp.org)

Louis Stokes Louisiana AMP Bridge to Doctorate Program at LSU

Lead Institution SOUTHERN UNIVERSITY AND A&M COLLEGE

Louis Stokes D Louisiana Alliance for Minority Participation P.O. Box 9274

Baton Rouge, LA 70813 Ph: (225) 771-2777 Fax: (225) 771-2311

www.ls-lamp.org





DR. DIOLA BAGAYOKO Principal Investigator Co-Principal Investigator



DR. KERRY DAVIDSON Co-Principal Investigator, LS-LAMP and Deputy Commissioner for Sponsored Programs, LA Board of Regents



Board and LA Commissioner of

Higher Education

du

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Ine MI-I SAMP Plan

The Michigan Louis Stokes Alliance for Minority Participation

aims to double the annual number of minority students earning baccalaureate degrees in science, technology, engineering and mathematics fields. To achieve this goal, the four partner universities are sharing and implementing retention best practices in the following areas: research, mentoring, high school-to-college transition support, pre-first year summer programs, all-student events and a comprehensive student support services delivery system.

For more information about MI-LSAMP, visit http://www.engin.umich.edu/students/mi-Isamp/

Principal Investigator

Dr. Mary Sue Coleman, Principal Investigator and President, University of Michigan, Office of the President, 2074 Fleming Administration Building, 503 Thompson Street, Ann Arbor, MI 48109-1340, (734) 764-6270, (734) 936-3529 (Fax), marysuec@umich.edu









Photo A: Senior Jeremy Brown, a Biomedical Engineering student, at the University of Michigan received support from the MI-LSAMP to participate in international research.

Photo B: University of Michigan student Ashley Anderson, majoring in Industrial and Operations Engineering, received financial support from the MI-LSAMP to participate in international research.

Photo C: Pre-First Year Summer Program students participating in the MI-LSAMP All Students Day at Wayne State University.

Photo D: Six students from Michigan State University receiving their Bachelors of Science degrees from the College of Engineering on May 4, 2008, (left to right), Jerome Yancy (Computer Engineering), Kenneth Booker (Electrical Engineering), Kevin Fells (Electrical Engineering), Francis Ifeanyi Okonkwo (Electrical Engineering), Ian McLuarin (Electrical Engineering) and Marquise Abbey (Electrical Engineering).



Project Director

Dr. Levi T. Thompson, Project Director, Richard Balzhiser Professor of Chemical Engineering and Director, Hydrogen Energy Technology Laboratory, University of Michigan, 3026 H. H. Dow Building, 2300 Hayward Street, Ann Arbor, MI 48109-2136, (734) 936-2015, (734) 763-0459 (Fax), Itt@umich.edu

Michigan State University - Dr. Thomas F. Wolff Co-Principal Investigator and Associate Dean for Undergraduate Studies College of Engineering, (517) 355-5128, wolff@egr.msu.edu

Wayne State University - Dr. Ralph H. Kummler Co-Principal Investigator and Dean College of Engineering, (313) 577-3775, rkummler@wayne.edu

Western Michigan University - Dr. Edmund Tsang Co-Principal Investigator and Associate Dean for Undergraduate Programs and Assessment College of Engineering and Applied Sciences, (269) 276-3249, edmund.tsang@wmich.edu

Administrative contact - Elaine M. Dowell - Alliances Program Administrator - (734) 936-3635, morne@umich.edu

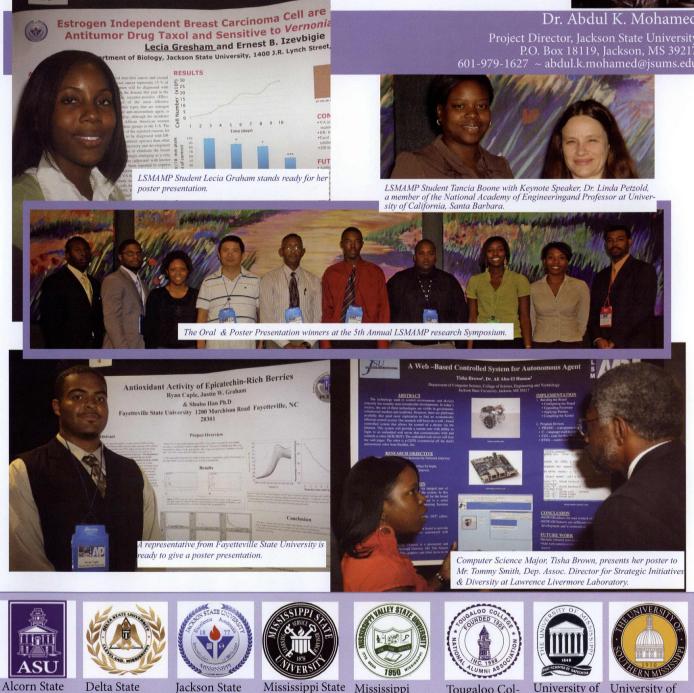
MI-LSAMP Website http://www.engin.umich.edu/students/mi-lsamp/



Louis Stokes Mississippi Alliance for Minority Participation

Celebrating 16 Years of Increasing Minority Degrees in Science, Technology, Engineering and Mathematics





Alcorn State University Dr. Troy Stewart, Sr. Site Coordinator 1000 ASU Drive, #780, Alcorn State, MS 39096 601-877-6440 troy@alcorn.edu



University Lacey S. Fitts University Dr. Ashton Site Coordinator Hamme P.O. Box 3241 Site Coordinator Cleveland, MS P.O. Box 18119 Jackson, MS 39217 662-846-4496 601-979-3713 lfitts@deltastate.edu ashton.t.hamme @jsums.edu

University Dr. Tommy Stevenson Site Coordinator P.O. Box 9544 MSU, MS 39762 662-325-8449 tommy@engr.msstate.



Valley State University Dr. Joseph Wahome Site Coordinator 14000 Hwy 82 West Itta Bena, MS 38941 662-254-3384 wahome@mvsu.edu

Tougaloo College Dr. Joseph Russell Site Coordinator P.O. Box 157 Tougaloo, MS 38677 601-977-4468 jrussell@tougaloo.

University of Mississippi Dr. Don Cole Site Coordinator P.O. Box 157 University, MS 38677 662-915-1379

University of Southern Mississippi Andrè Heath Site Coordinator P.O. Box 5137 Hattiesburg, MS 39406 601-266-6593 dcole@olemiss.edu andre.heath@usm.edu

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NEW MEXICO AMP

Expanding Student Horizons — New Mexico AMP's core programs

The Integrated Learning Communities Project emphasizes and promotes:

- Development of mathematical skills
- Integration of coursework
- Conceptual understanding of engineering design
- Career exploration, problem solving, and collaboration and teamwork
- *Introduction to Engineering* course developed by New Mexico AMP

The Bridge to the Doctorate provides and enhances:

- Academic, financial, and research support through the Master's degree
- Professional development
- Editorial assistance for thesis preparation
- Progress toward the Ph.D.
- Guidance in applying for Ph.D. programs

The Undergraduate Research Assistantship introduces and develops: -

- Involvement in cutting-edge research projects
- Faculty mentoring
- Research presentation experience
- Workshop training focused on developing scientific reports, posters, and oral presentations
- Preparation for internships, graduate school, and/or the workforce

A total of 6,743 STEM degrees have been awarded over the life of the New Mexico AMP program. In 2007/2008, 39.7% of STEM degrees were awarded to underrepresented students.

New Mexico AMP University Partners	
Eastern New Mexico University	New Mexico State University
Regina Aragon, Ph.D.; (575) 562-2328;	A. Michele Auzenne; Program Manager;
regina.aragon@enmu.edu	(575) 646-1847; mauzenne@nmsu.edu
New Mexico Highlands University	University of New Mexico
A. Michele Auzenne, Program Manager, (575) 646-1847;	Laura Crossey, Ph.D., (505) 277-5349;
amp@nmsu.edu	lcrossey@unm.edu
New Mexico Institute of Mining and Technology	Western New Mexico University
Allison Costello, (575) 835-5424;	Zenaido (Tres) Camacho, (575) 538-6251;
costello@admin.nmt.edu	camachoz@wnmu.edu











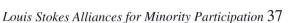
The Student Research Conference strengthens and builds:

- Oral and written communication skills
- Professional conference presentation experience
- · Faculty and professional mentoring
- Professional, career, and academic workshops
- Networking





New Mexico Senator Mary Kay Papen delivers the Luncheon Keynote Address (above), and students present their research in poster format (top right). Students enjoy dining at the conference (bottom right).



2008 URBAN UNIVERSITY CONFERENCE "Explorations and Discovery

new york city alliance

ALLIANCE MEMBERS

Dennis Slavin Sadie Bragg Jason Finkelstein William Tramontano Brooklyn Joe Barba Gail Simmons Donald Robotham Carlos Molina Robert Greenberg Jose Morin Stuart Suss Marcia Caton Robin Kunstler Mohsin Patwary Robin Bargar **Thomas Strekas** Paul Marchese Panaviotis Meleties

Baruch BMCC Bronx CC City College of Staten Island CUNY Graduate School Hostos CC Hunter John Jay Kingsborough CC LaGuardia CC Lehman Medgar Evers NYC College of Tech. Queens Queensborough CC York

For more information visit our website: nyc-amp.cuny.edu or call 212-650-8854



NC-LSAMP

TY THROUGH

NCLSAMP Central Office: North Carolina A&T State University

Dr. Alton Thompson, Principal Investigator Ph: (336) 334-7965, Fax (336) 334-7136, altont@ncat.edu

Dr. Joseph Monroe, Co-Principal Investigator Ph: (336) 334-7589, Fax (336) 334-7540, monroe@ncat.edu

Mrs. Marcia Williams, Alliance Coordinator Ph: (336) 334-7589, Fax (336) 334-7540, marcia@ncat.edu

Ms. Kristie Johnson, Program Assistant Ph: (336) 334-7589, Fax (336) 334-7540, kjohnso1@ncat.edu

PARTNER INSTITUTIONS Fayetteville State University

Dr. Daniel Okunbor, Principal Investigator Ph: (910) 672-2104, Fax (910) 672-1083, diokunbor@unc.fsu.edu

Ms. Shatasha Hamlin, *Campus Coordinator* Ph: (910) 672-1659, Fax (910) 672-1083

North Carolina Central University Dr. Saundra DeLauder, Principal Investigator Ph: (919) 530-6456, Fax (919) 530-5135, sdelaude@nccu.edu)

North Carolina State University Dr. Tony Mitchell, *Principal Investigator* Ph: (919) 515-3264, Fax (919) 515-8702, tmitchel@eos.ncsu.edu

University of North Carolina at Chapel Hill Dr. Patricia Pukkila, Principal Investigator Ph: (919) 966-5576, Fax (919) 962-1548, pukkila@unc.edu

Dr. Nalin Parikh, Campus Coordinator Ph: (919) 962-7160, Fax (919) 962-0480, nparikh@physics.unc.edu

University of North Carolina at Charlotte Dr. Billy Hill, Principal Investigator Ph: (704) 687-2092, Fax (704) 687-3914, bjhill@email.uncc.edu

Mrs. Jodi Turner, *Campus Coordinator* Ph: (704) 687-2065, Fax (704) 687-3914

University of North Carolina at Pembroke

Dr. Velinda Woriax, Principal Investigator Ph: (910) 521-6567/6245, Fax: (910) 521-6649, velinda.woriax@uncp.edu

Ms. Valarie Deese, Campus Coordinator Ph: (910) 521-6741, Fax: (910) 521-5755, valarie.deese@uncp.edu

Winston-Salem State University Dr. Elva Jones, Principal Investigator Ph: (336) 750-2485, Fax: (336) 750-2499, jonese@wssu.edu

website: www.nclsamp.ncat.edu

Louis Stokes Alliances for Minority Participation 39

NORTH CATOLINA ALLIANCE TO CHERE & HOUGH EDICAT

North Carolina

Amplications of Prospering Nanotechnology in the Current Nation







The North Star STEM Alliance is a partnership of 16 Minnesota colleges and universities and two community organizations—the Science Museum of Minnesota and the Minnesota High Tech Association—committed to supporting underrepresented students toward earning bachelor's degrees in STEM—science, technology, engineering, and mathematics.

In this second year of our program we are implementing Scholar and Fellow programs. Activities supported by the Scholar program engage students more deeply in their own disciplines and support their academic achievement. North Star Fellows are student leaders within their colleges who work toward increasing the academic success and engagement of other underrepresented students in STEM disciplines.

North Star STEM Alliance Leadership

University of Minnesota-Lead Institution

Principal Investigator Nancy "Rusty" Barceló Vice President and Vice Provost, Office of Equity and Diversity

Co-Principal Investigators Paul J. Strykowski

Associate Dean for Undergraduate Programs, Institute of Technology

Robin Wright Associate Dean, College of Biological Sciences

F. Abel Ponce de León Sr. Associate Dean for Research and Graduate Programs, College of Food, Agricultural and Natural Resource Sciences

Program Director Anne Hornickel Director of Diversity and Outreach, Institute of Technology ahornick@umn.edu, 612-626-0043

Alliance Partners

Anoka-Ramsey Community College Arun Goyal arun.goyal@arcc.edu, 763-433-1639

Augsburg College Rebekah Dupont dupont@augsburg.edu, 612 -330-1042 **Carleton College** Deborah Gross dgross@carleton.edu, 507-222-5629

Century College Pakou Vang pakou.vang@century.edu, 651-773-1741

Fond du Lac Tribal and Community College Michael Gillespie mgillespie@fdltcc.edu, 218-879-0714

Gustavus Adolphus College Brenda Kelly bkelly@gustavus.edu, 507-933-7039

Macalester College Rebecca Hoye hoye@macalester.edu, 651-696-6252

Metropolitan State University Ramin Daghigh ramin.daghigh@metrostate.edu, 651-793-1447

Minneapolis Community and Technical College janis.hollenbeck@minneapolis.edu 612-659-6104

Minnesota High Tech Association Peter Lindstrom plindstrom@mhta.org, 952-230-4555

Minnesota State University—Mankato David Haglin david.haglin@mnsu.edu, 507-389-5306

North Hennepin Community College Elaina Bleifield elaina.bleifield@nhcc.edu, 763-424-0868 **St. Cloud State University** Bruce Jacobson bljacobson@stcloudstate.edu, 320-308-4211

St. Olaf College Matt Richey richeym@stolaf.edu, 507-786-3418

Science Museum of Minnesota David Chittenden davec@smm.org, 651-221-9415

University of Minnesota—Duluth Timothy Holst tholst@d.umn.edu, 218-726-7807

University of Minnesota—Morris Nancy Carpenter carpenne@morris.umn.edu, 320-589-6337

University of Minnesota—Twin Cities Simone Gbolo-Thompson gbol0001@umn.edu, 612-625-6135



Students learn about summer research opportunities at the kick-off event held at the Science Museum of Minnesota.

Learn more about us at www.northstarstem.org

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Northeast Louis Stokes Alliance for Minority Participation

www.nelsamp.neu.edu

The Northeast LSAMP continues to offer students options and opportunities to increase academic success, engage in research and become part of a community of scholars.









John Cunningham jcunningham@provost.umass.edu 413.545.2554

Susan Bronstein <u>sbronstein@acad.umass.edu</u> 413.545.5742



Nicole Bradford nbradford@wpi.edu 508.831.5893 Rhode Island Harold Knickle <u>knickleh@egr.uri.edu</u> 401.874.2678

Susan Powers-Lee <u>s.powers-lee@neu.edu</u> 617.373.4741



Ohio Science and Engineering Alliance 247 University Hall, 230 North Oval Mall Columbus, OH 43210 614.247.7267 Website: www.OhioSEA.org

A Louis Stokes Alliance for Minority Participation Program

Lead Institution: The Ohio State University PI: President E. Gordon Gee Co-PI: Patrick Osmer Vice Provost of Graduate Studies Dean of the Graduate School

The OSEA Research Forum was held on August 7 and 8, at the Nationwide and Ohio Farm Bureau 4-H Center. The 4-H Center was built to the specifications of the national LEED (Leadership in Energy and Environmental Design) program and is the first "green" building on the campus of Ohio State University.

The Forum workshops included Getting into Graduate School: Aim High, Plan Well, Yolanda Zepeda, Associate Director, Academic and International Programs, Committee on Institutional Cooperation; A Day in the Life of a Graduate Student, LaRuth McAfee, Ph.D., Executive Director for Education, Center for Layered Polymeric Systems at Case Western Reserve University; Project 1000 Information Workshop Laura A. Serrano, Assistant Project Manager, Project 1000, Arizona State University and Valerie Robinson, Director of Diversity Enhancement, Miami University; and Strategic Planning: Preparing for the GRE, Deborah Kwon, The Ohio State University.

BY THE NUMBERS

76 Poster Presentations 76 Student Attendees **17 Oral Presentations**

39 Faculty, Staff and Grad Students

A total of 306 students have participated in the Ohio LSAMP program between 2004 and 2008. To date, 119 have graduated with STEM degrees of which 42% have enrolled in graduate school pursuing a Ph.D.



Daviana Lopez Torre Microbiolog ersidad Del Est

Chemical Engineering The Ohio State University

Biological Sicneces The Ohio State University

Interns Frederick Crawford and Darrice Collins presented their research at the New Mexico LSAMP Conference in October 2008 where Mr. Crawford was awarded first place for his oral research presentation. Daviana Lopez Torres, Frances Lugo Alvarado and Yaika Echevarria Roman presented their summer research at the Model Institutions for Excellence Symposium in San Juan, PR.

T. Carter Gilmer 419.372.0471/cgilmer@bgnet.bgsu.edu

James McGuffin-Cawley 216.368.6482/ jxc41@po.cwru.eud

Carol Phillips-Bey 216.523.7151/ c.phillips-bey@csuohio.edu 330.672.2920/ ghnelson@kent.edu

Richard Bretz 513.529.2349/ bretzrl@muohio.edu

Caroline Breitenberger 614.292.6945/ caroline+@osu.edu

Howard D. Dewald 740.593.2979/ dewald@ohio.edu

Cheryll A. Dunn 513.556.6561/ cheryll.dunn@uc.edu

Malcolm W. Daniels 937.229.2736/ malcolm.daniels@notes.udayton.edu

Constantine Theodosiou 419.530.7794/ constantine.theodosiou@utoledo.edu 937.708.5657/ easikele@wilberforce.edu

P. Ruby Mawasha 937.775.5001/ mawasha@cs.wright.edu

Charles R. Singler 330.941.4628/ crsingler@ysu.edu

Ohio State University: Alliance Office Cvndi Freeman 614.292.6998/ freeman-fail.1@gradsch.ohio-state.edu

OKLAHOMA Louis Stokes Alliance for Minority Participation



Developing Worldly Scholars



Dr. Hicks visited with students during the 14th Annual Research Symposium, September 20, 2008





Leethaniel Brumfield, III, Langston University, 2009 recipient of the Brad Henry International Scholars Program, Swansea University, Wales.

Alliance Partners

Cornell Thomas, PI - Ok	lahoma State University
405.744.5372	c.thomas@okstate.edu
Kay Porter, Program Manager	
405.744.6710	kay.porter@okstate.edu
Fara Williams, Data Coordinator	
405.744.7820	fara@okstate.edu
Rosemary Hayes, Evalua	tor
405.325.7309	rhayes@ou.edu
Keith Vitense — Cameron University	
	keithv@cameron.edu
Carl Rutledge — East Central University	
580.559.5392	crutledge@mac.com
Sharon Lewis — Langston University	
	salewis@lunet.edu
Jody Buckholtz — Northeastern OSU	
918.456.3839	
Timothy Maharry — Northwestern OSU	
580.327.8583	
Timothy Patton — Southeastern OSU	
580.745.2284	
Brian Campbell — Southwestern OSU	
580.774.3118	
Gregory Wilson — Univer	
	gwilson@uco.edu
Simin Pulat — University	
405.325.1069	
J.C. Diaz — University of	
918.631. <mark>222</mark> 8	diaz@utulsa.edu



Cammi Valdez, Southwestern OSU, was admitted to Harvard Medical School. She will pursue a Ph.D. in Chemical Biology.

International Research



Lauren Miller: Turkey

Lauren White: **Island of Dominica**







Funded by the National Science Foundation

University of Oklahoma LSAMP Scholars Hosted a Big Bridge-Little Bridge Summer Engineering Experience with incoming Freshmen Engineering students

Cornell Thomas

Oklahoma State University

Vice President for Institutional Diversity, **Program Director** OK-LSAMP and the Bridge to the Doctorate program



www.ok-lsamp.edu okamp@okstate.edu

Andrew Mixson: Slovenia **Bubba Brooks: Wales**

Louis Stokes Alliances for Minority Participation 43

LSAMP Pacific Alliance

Building a National Model for Excellence in Native American Higher Education Programs http://ANSEP.UAA.Alaska.edu

University of Alaska Anchorage University of Alaska Fairbanks University of Washington

Pacific Alliance Strategies

Pre-College: empowerment & excitement around STEM careers

• computer building with biology, chemistry, physics, and trigonometry

High School to University Summer Bridge: Building a strong foundation for academic and professional achievement

• Internships with calculus preparation

Undergraduate Retention: Fostering an engaged academic learning community

- •Learning Community
- •Co-enrollment: students attend class in teams
- •Team building
- •Group study
- Advising
- Scholarships
- Internships
- Faculty & Peer Mentoring
- Supporting community
- Professional mentoring
- •Graduate student mentoring
- •Hands on Research
- •Service learning

Graduate School

- Peer mentoring & co-enrollment
- Workshops for presentations and technical papers
- •Organized study groups
- Collaborative experiences
- Faculty cross-cultural training
- •Faculty mentoring
- Internships
- National & international conferences
- •Grant writing experience
- •Graduate research and undergraduate research
- Equipment funding
- •Workshop for Teaching Assistant (TA) instruction

University of Alaska Anchorage Dr. Herb Schroeder, (907) 786-1860, herb@uaa.alaska.edu

University of Alaska Fairbanks Dr. Tom Clausen, (907) 474-5512, <u>fftpc@uaf.edu</u>

University of Washington James Dorsey, (206)543-0562, jbdorsey@u.washington.edu





Lead Institution

The University of Georgia www.pslsamp.uga.edu

Michael Adams, Ph.D. Principal Investigator

Cheryl Dozier, DSW Lead Co-Principal Investigator 706-583-8195 cdozier@uga.edu

Michelle Garfield, Ph.D. Co-Principal Investigator 706-542-5745 mgarfiel@franklin.uga.edu

Maureen Grasso, Ph.D. Co-Principal Investigator 706-425-3111 mgrasso@uga.edu

Wyatt Anderson, Ph.D. Co-Principal Investigator 706-542-7001 wyatt@uga.edu

Ernest L. Brothers, Ph.D. Executive Director 706-425-3380 ebrother@uga.edu

Tia A. Minnis, MT, MBA Assistant Director/Program Coordinator 706-425-3381 tminnis@uga.edu

Partner Institutions

Georgia Perimeter College www.gpc.edu/~gpclsamp Elizabeth A. Molloy, Ph.D. emolloy@gpc.edu

Fort Valley State University www.fvsu.edu/outreach/pslsamp.asp Dwayne Daniels, Ph.D. daniels@fvsu.edu

Savannah State University www.savstate.edu/scitech/ssupslsamp Kuppuswarmy Jayaraman, Ph.D. jayaramk@savstate.edu

Southern Polytechnic State University http://pslsamp.spsu.edu Phillip Patterson, Ph.D. ppatterson@spsu.edu

Peach State Louis Stokes Alliance for Minority Participation

he mission of the Peach State Louis Stokes Alliance for Minority Participation (Peach State LSAMP) is to increase the number of underrepresented minority students statewide who complete undergraduate degrees in science, technology, engineering and mathematics (STEM) fields and to encourage those graduates to pursue graduate studies.



The mission is accomplished through a collaborative effort led by the University of Georgia and sustained by a coalition of four colleges and universities including: Georgia Perimeter College, Fort Valley State University, Savannah State University and Southern Polytechnic State University.

Major Accomplishments of Phase I, Year III

- Summer Research Programs for Undergraduates: Summer research opportunities for undergraduate students to work in a lab with a faculty mentor.
- Summer Bridge Program for High School Students: This program provided high school students the opportunity to visit different campuses and investigate an array of STEM majors.
- Tutoring initiatives for PSLSAMP students.
- Career support and professional development: Orientation to graduate school, tours of campuses offering advanced

programs, career fairs, GRE test prep and similar activities. These activities communicated the expectation that students would continue their career beyond the bounds of their current program.



Peach State Louis Stokes Alliance for Minority Participation University of Georgia Bank of America Building • Suite 211 • 110 E. Clayton Street • Athens, GA 30602 706-425-3158 (Office) • 706-425-3159 (Fax) www.pslsamp.uga.edu • pslsamp@uga.edu

Louis Stokes Alliances for Minority Participation 45

CENTRAL MANAGEMENT

(Drexel University)

Principal Investigator Dr. Mark Greenberg Provost and Senior Vice President of Academic Affairs

Project Director Mr. Stephen R. Cox, Co-PI

Project Coordinator Ms. Veniece Keene

Administrative Assistant Ms. Dorcia Baxter

ALLIANCE PARTNERS

Cheyney University of Pennsylvania Dr. Sakkar A. Eva (610) 399-2349 seva@cheyney.edu

Community College of Philadelphia (CCP) Dr. Linda Powell (215) 751-8554 lpowell@ccp.edu

Delaware State University Dr. Mazen Shahin (302) 857-7055 mshahin@desu.edu

Drexel University Ms. Marisol Rodriguez (215) 895-1641 mr44@drexel.edu

Lincoln University of Pennsylvania Dr. Robert Langley (610) 932-1074 langley@lincoln.edu

New Jersey Institute of Technology (NJIT) Mr. Laurence Howell (973) 596-3690 howell@adm.njit.edu

Temple University Dr. Bruce Conrad (215) 204-2896 Bruce.Conrad@temple.edu

University of Delaware Mr. Michael Vaughan (302) 831-2403 vaughan@udel.edu

University of Pennsylvania Ms. Cora Ingrum (215) 898-7084 ingrum@seas.upenn.edu

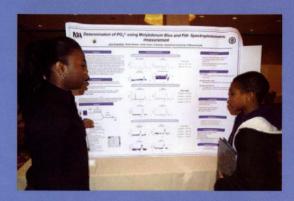


Philadelphia AMP / Greater Philadelphia Region
Louis Stokes Alliance for Minority Participation
Drexel University, 3141 Chestnut Street, Bldg. 1, Room 308, Philadelphia, PA 19104
Phone: (215) 895-2203 Fax: (215) 895-2098 Web: http:// www.philadelphiaamp.org



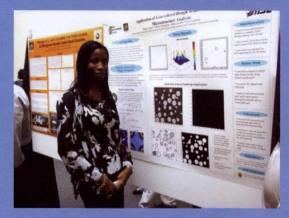
AMP students, Brandon Presley, Temple University (above) and Julia Greenfield, Lincoln University (right) present their research projects during the 11th Annual Philadelphia AMP Research Symposium and Mentoring Conference poster competition.

Research and Professional Conference Presentations





Johnny Perez, Ph.D. Candidate, Chemistry, Temple University (BTD Cohort V student) conducts research in his laboratory.



Allegra Cooper, AMP student, Delaware State University awaits the judging of her research project in Material Science as part of her participation in the DREAMS Summer Research at Drexel University.

ALLIANCE ACCOMPLISHMENTS

Philadelphia AMP continues to demonstrate the capacity to increase the baccalaureate degree persistence of underrepresented students in science, technology, engineering, and mathematics (STEM) by maintaining an annual minority STEM baccalaureate rate of production of over 500 + students over the last eight years, an annual minority STEM Masters rate of production of 140+ students over the last five years, and an annual minority STEM Ph.D. rate of production of over 10+ students over the last seven years. In addition, 25 AMP graduates have received Ph.D. degrees from institutions nationwide; it is expected that this number will dramatically increase in the next few years with the doctoral completion of our Bridge to the Doctorate (BTD) students.





PR-LSAMP Staff and Institutional Liaison Officers



Sustained Research Experiences

The Puerto Rico LSAMP program started its Phase IV in August 2006. Undergraduate and graduate STEM students from participating institutions benefit from: Sustained mentored research experiences; undergraduate to graduate bridging program to enhance their academic preparation for graduate school; the Puerto Rico Interdisciplinary Scientific Meeting (PRISM); and a series of Scientific Conferences to expose STEM students to role models in frontier research areas. Puerto Rico LSAMP will continue to sponsor the Annual Best Practices Conference on Teaching and Learning and the Transdisciplinary Research Conference. Visit our website at WWW.PRLSAMP.ORG.

The Bridge-to-the-Doctorate Program

Since 2003, seventy (70) BD fellowships have been awarded to former LSAMP undergraduate students, in all STEM fields. The community of BD Fellows attended over 400 local, national and international scientific conferences. Fellows have published 62 research papers in peer review journals. Ninety seven percent (97%) of the Fellows are in the Ph.D. pipeline.



BD Fellows from Cohort V meet in Congress with Puerto Rico's Resident Commissioner and Governor Elect, Hon. Luis Fortuño



University of Puerto Rico

Participating Institutions

UPR-Aguadilla Prof. Migdalia Sotomayor (787)890-2681 x-226 migsotomayor@yahoo.com

UPR-Mayaguez Prof. Jeannette Santos (787)832-4040 x-2398 jsantos@ece.uprm.edu

UPR-Arecibo Dr. Maiella Ramos (787)878-2830 maiellaramos2001@yahoo.com

UPR-Cayey Prof. Belinda Roman (787)738-2161 x-3205 Wild_germplasm@yahoo.com

UPR-Humacao Dr. Denny Fernandez (787)850-9388 d_fernandez@webmail.uprh.edu

UPR-Rio Piedras Dr. Ivelisse Rubio (787)764-0000 x-7243 iverubio@uprrp.edu

UPR-Bayamon Prof. Concepción Rodriguez (787)786-2885 corodriguez@uprb.edu

UPR-Ponce Prof. Lizzette Roig (787) 844-8181 x-2335 Quim@cutpo.upr.clu.edu



Inter American University

UIA-Bayamon Prof. Rafael Canales (787)279-1912 x-2115 rrcanales@bc.inter.edu

UIA-Metro Dra. Rosa Brito (787)250-1912 x-2142 rbrito@metro.inter.edu



Pontifical Catholic University

Prof. Carmen Asencio (787)841-2000 casencio@pucpr.edu



Lead Institution

South Carolina State University Dr. George E. Cooper, President Principal Investigator

(803) 536-7013

Dr. Judith Salley, Executive Director (803) 536-8513 djdsalley@scsu.edu

Alliance Partners:

Allen University Dr. Patrick Inyangetor (803) 376-5700 pinyangetor@allenuniversity.edu

Benedict College Dr. Stacey Franklin Jones (803) 705-4548 jones@benedict.edu

Claflin University Dr. Angela Peters (803) 535-5447 angela.peters@claflin.edu

Clemson University Ms. Sue Lasser (864) 656-5541 slasser@ces.clemson.edu

College of Charleston Ms. Christine Moore (843) 953-4997 moorec@cofc.edu

Morris College Dr. Radman Ali (803) 934-3266 rali@morris.edu

South Carolina State University Mr. Nathaniel Gant (803) 536-8184 ngant@scsu.edu

University of South Carolina Dr. Michael Perkins (803) 777-4177 perkins@engr.sc.edu

Voorhees College Dr. Doris Ward (803) 780-1068 dward@voorhees.edu

Two-Year Technical Colleges:

Denmark Technical College Mrs. Jacqueline Skubal (803) 793-5100

Midlands Technical College Mr. Rick Bailey (803) 738-7618 BaileyR@midlandstech.edu

Orangeburg Calhoun Technical College Mr. Walt Tobin (803) 536-0311 tobin@octech.edu

SCAMP WEB ADDRESS http://scamp.scsu.edu

THE LOUIS STOKES

SOUTH CAROLINA ALLIANCE FOR MINORITY PARTICIPATION PROGRAM



Organized in 1992 and restructured in 2002, LS-SCAMP is one of the oldest and most successful alliances established in the state of South Carolina. The LS-SCAMP program is a collaborative effort between the National Science Foundation (NSF) and twelve institutions in South Carolina. The overall goal includes increasing the quality and quantity of underrepresented minority students who complete baccalaureate degrees in STEM disciplines and who successfully transition to pursue advanced graduate STEM degrees. Currently, 68% of the state of South Carolina's minority BS Degrees in STEM fields are produced by SCAMP institutions.



Program Activities

- Summer Bridge Programs •
- Graduate School Prep Workshops
- Mentoring Programs
- **Research Courses**
- - Science and Engineering Research Conference
 - Scholarships



Identifying Best Practices in UREP STEM Education

he State University of New York Louis Stokes Alliance for Minority Participation (SUNY LSAMP), now in the third year of Phase III, continues to increase student enrollment, degree production, and entrance to graduate school. Since its inception in 1996, SUNY LSAMP has increased underrepresented minority (UREP) science, technology, engineering, and mathematics (STEM) enrollment by 252 percent and bachelor's degree production by 91 percent. Since 2006, we have added three Bridge to the Doctorate programs at Stony Brook University and the University at Buffalo.

SUNY LSAMP Phase III Research Project

SUNY LSAMP is currently completing a research project that had two main focuses: First, it examined the structures and processes required to identify best practices for the delivery and administration of support services; and, second, it identified the various factors, attitudes, and experiences that lead UREP STEM students to graduate school and on to the professoriate. The findings from this study will provide a model for planning successful strategies for academic and personal support and encourage progression to graduate study for



Tracey Evans, Marine and Atmospheric Sciences, Stony Brook University

UREP STEM students in a variety of educational settings. We are currently preparing an article for publication with the results of the project.

Some Preliminary Results

- The SUNY LSAMP alliance was very important because it provided: (1) coordination and communication about program requirements, funding, and reporting; (2) sharing of information and support regarding the effectiveness of activities; and (3) continuity and training.
- Contact with the NSF-sponsored SUNY AGEP helped coordinate resources to show SUNY LSAMP students the route to graduate school.
- The overall ways in which each institution structured academic support services had a significant impact on success of the services provided to SUNY LSAMP students.

Services Include:

- Scholarship and stipend support
- Workshops and tutoring in science, technology, engineering, and mathematics disciplines
- Mentoring programs that link faculty and staff to students
- Paid research and internship opportunities
- Opportunities for students to attend professional conferences and present the results of their research
- Assistance to students in preparing for and applying to graduate programs
- Innovative enrichment courses and program models
- Research and scholarship about UREP STEM issues
- Social, cultural, and community building activities
- Bridge to the Doctorate programs for LSAMP graduates

David Ferguson, Project Director Phone: (631) 632-9987 E-mail: David.Ferguson@stonybrook.edu

Lucy Gluck, System Coordinator Phone: (631) 632-9988 E-mail: Lucille.Gluck@stonybrook.edu

es for

Web Site: www.stonybrook.edu/sunylsamp

v Particip

SUNY LSAMP Institutions

Albany Region • Christopher Fernando, Director • (518) 442-5196 • cfernando@uamail.albany.edu • University at Albany • Schenectady Community College Binghamton Region • Peter Partell, Director • (607) 777-6212 • partell@binghamton.edu University at Binghamton • Broome Community College • Tompkins Cortland Community College Buffalo Region • Drexel Gidney and John Staley, Co-Directors

(716) 645-2774/(716) 645-6966 • gidney@eng.buffalo.edu • jstaley@buffalo.edu • University at Buffalo • Buffalo State College
 Hudson Valley Region • Stacie Swingle Nunes, Director • (845) 257-2695 • nuness@newpaltz.edu • College at New Paltz • Ulster County Community College
 Dutchess County Community College • Orange County Community College
 Long Island Region • David Ferguson and Henry Teoh, Co-Directors
 (631) 632-8763/(516) 876-2753 • David.Ferguson@stonybrook.edu • hteoh@verizon.net • Stony Brook University • College at Old Westbury
 Farmingdale State University • Nassau County Community College • Suffolk County Community College

Stony Brook University/SUNY is an affirmative action, equal opportunity educator and employer. 0811057

TENNESSEE LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

PRINCIPAL INVESTIGATOR Dr. Melvin Johnson, President

EXECUTIVE DIRECTOR Lonnie Sharpe, Jr.

ASSISTANT COORDINATOR Shelia Maxwell

PARTNERS



LeMoyne-Owen College Muhammad Shafi 901-435-1386 Muhammad shafi@loc.edu



STATE UNIVERSITY Middle Tennessee State University Thomas Cheatham





THE UNIVERSITY OF

University of Memphis Henry Kurtz 901-678-3067 hkurtz@memphis.edu



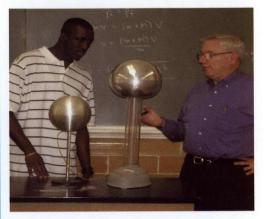


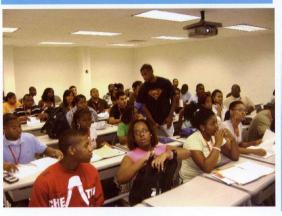
Vanderbilt University K. Arthur Overholser 615-343-3773 <u>k.a.overholser@vanderbilt.edu</u>

www.tnstate.edu/tlsamp (615) 963-1398 The Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP) emphasizes collaborative learning approaches, mentoring activities via faculty, staff, and upper level students, and hands-on research and internship experiences. Many students across the Alliance participate in these and other retention programs every year. However, there are three TLSAMP initiatives that our Alliance stresses. They are the Summer Research, the Summer Bridge, and the Research Symposium.

The Summer Research...

Students are involved in research at an Alliance institution under the guidance and direction of research faculty. Their research consists of independent explorations, cooperative learning, and composition and synthesis of data into a viable presentation. Courtney Ward of the University of Memphis and his faculty mentor, Dr. Don Franceschetti, are shown to the right working on one of the research projects.



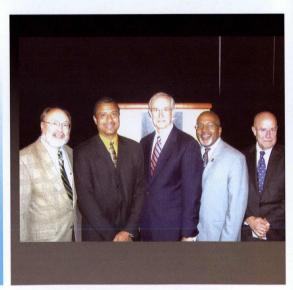


The Summer Bridge ...

This program is an outreach effort that is used to ease the transition from high school to college. Summer Bridge 2008 was hosted by the University of Tennessee Knoxville. There were forty-two students in attendance. These students attended one of the alliance institutions in the fall of 2008. The 2008 participants are shown on the left in one of their many classes.

The Research Symposium...

The Annual Research Symposium was hosted by Vanderbilt University where more than 200 students, faculty and guests were in attendance. Ken Galloway, Vanderbilt Dean of Engineering, Lonnie Sharpe, Jr., Executive Director of TLSAMP and Interim Dean of Engineering at Tennessee State, Charles Atkins, Chief of Staff of the Committee on Science and Technology of the U.S. House of Representatives (plenary speaker), Robert Hampton, Provost and VP of Academic Affairs at Tennessee State, and Art Overholser, co-PI of TLSAMP and Senior Associate Dean of Engineering at Vanderbilt are shown to the right.



LSAMP Louis Stokes Alliance for Minority Participation THE TEXAS A&M UNIVERSITY SYSTEM

The **Texas A&M University System Louis Stokes Alliance for Minority Participation (TAMUS LSAMP)** is a partnership comprised of Texas A&M University (TAMU), Texas A&M University, Corpus Christi (TAMUCC), and Prairie View A&M University (PVAMU). Since the inception of TAMUS

LSAMP in 1991, as one of the first LSAMPs funded by NSF, the TAMUS LSAMP has functioned as a key vehicle in enhancing retention and degree completion for underrepresented minority (URM) students in science, technology, engineering and mathematics (STEM). Beginning November 2007, the alliance entered its fourth phase of NSF funding. In Phase III, the primary focus centered on preparing students to engage in research and research-related opportunities, as early as possible in the student's academic careers. Phase IV endeavors to sustain and build upon academic gains and retention and learning outcomes of Phase III by building strong ties with community college partners for recruitment of URM students into STEM majors and providing international experiences for students to increase and diversify the pool of globally trained STEM graduates.

Program Components

Undergraduate Research Program (UGR)

- Links UGR students with active and supportive faculty-researchers where students perform meaningful research
- Students attend academic, personal, and professional workshops and seminars to encourage and prepare them to continue their academic and research careers in STEM graduate programs

Bridge to the Doctorate Program (BTD)

- Completed Cohort IV in Aug 2008 (and began Cohort V Sept 2008), the BTD program is designed to aid Master's level students in successfully matriculating into Doctoral programs
- Two-year fellowships include stipends, mentoring assistance, academic enrichment workshops and seminars focused on thriving and succeeding in a Ph.D. program

TAMUS LSAMP also provides support for URM in International Experience and Summer Bridge programs.

Right: NASA Astronaut Mr. Jose Hernandez speaks to students at the 4th Annual TAMUS LSAMP Symposium, held at the NASA Johnson Space Center in Houston, TX.





Left: Graduate students lvory Mayhorn III, Ebony Mayhorn, and LaToya Anderson attending the poster session at the 4th Annual TAMUS LSAMP Symposium.

LEADERSHIP



Dr. Karan Watson Principal Investigator Texas A&M University Dean of Faculties & Associate Provost watson@tamu.edu

TEXAS A&M UNIVERSITY

Dr. Karen Butler-Purry Co-Principal Investigator & Project Director Professor of Electrical Engr. klbutler@ece.tamu.edu (979) 847-9048

Ms. Shannon D. Walton Associate Director shannon@tamu.edu (979) 862-4315

PRAIRIE VIEW A&M UNIVERSITY

Dr. Kendall Harris Co-Principal Investigator Dean of Engineering ktharris@pvamu.edu (936) 261-9956

TEXAS A&M UNIVERSITY CORPUS CHRISTI

Dr. Frank Pezold Co-Principal Investigator Dean of Science and Technology frank.pezold@tamucc.edu (361) 825-3655

http://www.tamuslsamp.org





he University of Texas System LSAMP has brought together the nine academic components of The University of Texas System in an effort to increase the number of underrepresented minority students enrolling in and graduating from baccalaureate programs in science, technology, engineering and mathematics (STEM). An additional goal of the alliance has been to increase the number of underrepresented minority students in STEM graduate programs at UT-System institutions. Emphasis in Phase III is on increasing graduate opportunities for underrepresented minority individuals at Alliance institutions, particularly at the doctoral level.minority individuals at Alliance institutions, particularly at the doctoral level.

In Phase III, the number of underrepresented ²⁵⁰ minority graduates in UT System STEM ²⁰⁰ disciplines has increased by 241% from the baseline value in 1992. The initial LSAMP ¹⁵⁰ program goal was set at 1,374 graduates. As of 2008, the total number of graduates has reached 1,924. We are proud of this statistic because the UT System has contributed to increasing the total number of underrepresented minorities receiving STEM degrees at the national level. ⁻⁵⁰



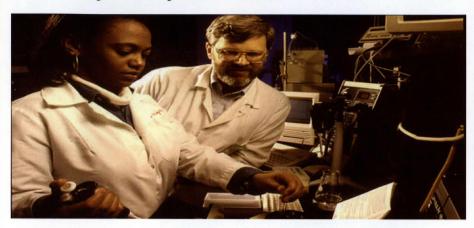


Community College Partners: Alamo Community College District David Chavera <u>dchavera@mail.accd.edu</u> (210) 733-2458 ♦ Collin County Community College District ♦ El Paso Community College Emil Michal <u>emilm@epcc.edu</u> ♦ Howard College Linda Keeney <u>keeney@howardcollege.edu</u> (432) 264-5129 ♦ Midland College Margaret Wayde <u>mwade@midland.edu</u> (432) 685-4615 ♦ Odessa College Connie May <u>cmay@odessa.edu</u> (432) 335-6611

UT System LSAMP website: http://research.utep.edu/lsamp

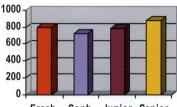
LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

University of Maryland, Baltimore County University of Maryland, College Park University of Maryland Eastern Shore



USM LSAMP is a comprehensive program designed to increase both the quantity <u>and</u> the quality of underrepresented minority (URM) and other students who receive baccalaureate degrees in STEM fields and are well prepared to pursue graduate degrees. Alliance institutions foster campus climates that facilitate the success of STEM students.

- STEM baccalaureate degrees were awarded to 6,656 URM students, 1995-2008.
- Distribution of the 3,198 URM STEM students enrolled for 2007-2008 indicates a healthy pipeline with 1,529 freshmen and sophomores and 1,669 juniors and seniors.



Fresh. Soph. Junior Senior

- Many LSAMP students advance to the nation's top graduate programs.
- Alliance institutions awarded 905 master's degrees and 256 Ph.D. degrees to URM students, 1995-2008.



Program Highlights:

- Undergraduate Research
- Academic Support
- Scholarship Support
- Mentoring
- Summer Bridge
- Conference Presentations
- Monitoring and Tracking
- Graduate School and Lab Visits
- Career Exploration and Planning
- Cultural Enrichment
- Community Service
- Bridge to the Doctorate
- Collaboration with Other STEM Programs



CONTACT:

UMBC

Cynthia M. Hill Associate Provost chill@umbc.edu 410-455-2445

UMCP

Tamara N. Hamilton Program Director hamiltot@umd.edu 301-405-3882

UMES

Carla R. Bailey Program Coordinator crbailey@umes.edu 410-651-7969

LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

Principal Investigator Eric Spina Vice Chancellor and Provost Syracuse University

Campus Coordinators LEAD INSTITUTION Syracuse University Gabrielle Chapman ghchapma@syr.edu 315.443.3425

ALLIANCE PARTNERS Clarkson University Jennifer de Coste jdecoste@clarkson.edu 315.268.3785

Cornell University DiOnetta Jones Dj62@cornell.edu 607.255.5227

Monroe Community College Joann Santos jsantos@monroecc.edu 585.292.2584

Onondaga Community College Drake Harrison harrisod@sunyocc.edu 315.498.2307

Rensselaer Polytechnic Institute Isom Herron herroi@rpi.edu 518.276.3060

Rochester Institute of Technology Eulas Boyd Eulas.boyd@rit.edu 585.475.4705

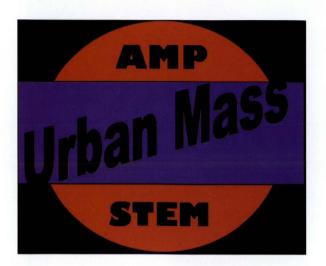


Upstate Alliance



The Upstate LSAMP alliance is dedicated to increasing the number of underrepresented minority students in the fields of science, technology, engineering, and mathematics. Our seven institutions have joined forces to support our underrepresented minority students' success. Together we offer funding, research opportunities, tutoring, and mentoring services. Our goal is to provide students with experiences that will enhance both their resumes and graduate school applications, and help build a strong foundation for their future careers.

For more information visit the Upstate LSAMP website at www.ulsamp.org



Urban Massachusetts Louis Stokes Alliance for Minority Participation

LEAD INSTITUTION

Winston Langley, Co-Principal Investigator 617-287-6800, winston.langley@umb.edu

Marshall Milner, LSAMP Program Director 617-287-4057, <u>marshall.milner@umb.edu</u>

UMLSAMP Website in Development http://mysite.verizon.net/milnerm

University of Massachusetts Boston 100 Morrissey Boulevard Boston, MA 02125-3393

ALLIANCE MEMBERS

University of Massachusetts Boston Joan Becker, Co-PI 617-287-5840, joan.becker@umb.edu

University of Massachusetts Dartmouth Bruce Rose 508-999-8712, brose@umassd.edu

University of Massachusetts Lowell Charlotte Mandell 978-934-3448, charlotte mandell@uml.edu

Wentworth Institute of Technology Sandra Pascal 617-989-4478, pascals@wit.edu

Bristol Community College Peter Schuyler 508-678-2811, x2214, peter.schuyler@bristocc.edu

Bunker Hill Community College Katherine Gustafson 617-228-2181, kgustafs@bhcc.mass.edu Middlesex Community College Darcy Orellana 781-280-3559, orellanad@middlesex.mass.edu

Roxbury Community College Brenda Mercomes 617-541-5383, brendam@rcc.mass.edu

MISSION

The Urban Massachusetts Louis Stokes Alliance for Minority Participation (UMLSAMP) within its alliance of eight member institutions will increase the quality and quantity of underrepresented minority students completing baccalaureate degrees in science, technology, engineering, and mathematics (STEM) fields. The UMLSAMP students and faculty will collaborate with the vibrant 21st century industries in the state of Massachusetts to provide high quality technical and research training and career opportunities for regional and national competitive advantages.

ACTIVITIES, SERVICES, & PROGRAMS

- Learning Communities
- Summer Bridge Programs
- Summer and Academic Year Research Programs
- Facilitated Study Groups
- Peer and Faculty Mentoring
- Practicing Professionals Coaching
- Career Fairs and Advisement
- Graduate School Preparation

ALLIANCE PARTNERSHIPS

The Urban Massachusetts Louis Stokes Alliance for Minority Participation will seek and grow collaborations with PK-12 local school districts; nonprofit STEM related organizations, and corporations committed to effectively establish and support the 'Pipeline' of motivated young people who will attain their education and training in our state and in our and other institutions of higher learning.



VIRGINIA/NORTH CAROLINA **A L L I A N C E** for Minority Participation at the UNIVERSITY // VIRGINIA



The Virginia-North Carolina Louis Stokes Alliance for Minority Participation (VA-NC LSAMP)

PARTNER

INSTITUTIONS:

Bennett College for Women Dr. Cristina Moreira 336.517.2293 cmoreira@bennett.edu

Elizabeth City State University Dr. Ali Khan 252.335.3242 aakhan@mail.ecsu.edu

George Mason University Dr. Bernard White 703.993.1511 bwhite@gmu.edu

Johnson C. Smith University Dr. Sunil Gupta 704.378.1154 sgupta@jcsu.edu

Saint Augustine's College Dr. Gloria Payne 919.516.4151 gpayne@st-aug.edu

University of Virginia Ms. Carolyn Vallas 434.924.0614 cv5d@virginia.edu

Virginia Commonwealth University Ms. Ruba Alkhasawneh 804.909.9347 alkhasawnera@vcu.edu

Virginia Polytechnic Institute and State University Ms. Inga Adams 540.231.5023 isadams@vt.edu Ms. Cathy Fernandez-Weston cef20@vt.edu VA-NC LSAMP is an alliance of eight partner institutions in Virginia and North Carolina whose goal is to double the number of underrepresented minorities earning STEM degrees by 2012. Through synergistic partnerships VA-NC LSAMP offers summer bridge programs, summer research experiences, annual symposia, common reading experiences, mentoring, and tutoring.

VA-NC LSAMP HIGHLIGHTS

 VA-NC LSAMP held its first annual research symposium on the campus of Saint Augustine's College on March 31, 2008. Representatives from all eight institutions convened for this event.

 The management team developed a website, http://www.virginia.edu/amp/, for VA-NC LSAMP which links to programmatic websites at each of the partner institutions.

 Principal investigator, Dr. William B. Harvey, conducted site visits at each partner institution.

VA-NC LSAMP Management Team

Principal Investigator: Dr. William B. Harvey, wbh6z@virginia.edu

Co-Principal Investigators: Dr. Marcus L. Martin, mlm8n@virginia.edu Dr. Nickolas Garber, njg@virginia.edu Ms. Carolyn Vallas, cv5d@virginia.edu

Dr. A. James Hicks, Ms. Jade Jones, Dr. William B. Harvey

Fiscal Administrator/Office Manager: Ms. Debra White, djt@virginia.edu

Program Coordinator: Ms. Kristin Pickering, klm3q@virginia.edu (P) 434.243.6660, (F) 434.982.2110 Office for Diversity & Equity,

P.O. Box 400280, Charlottesville, VA 22904

http://www.virginia.edu/amp/



Principal Investigator Interim Provost and Chief Academic Officer Dr. Alvin Thornton

Executive Director/Co-PI Dr. Clarence M. Lee

Office Mgr/ Admin. Assistant Ms. Reba Brewington 202-865-8565

> Data Analyst/Spec Asst Ms. Ella Kent 202-865-8566

Partner Institutions Howard University Dr. William Gordon 202-865-8568 wgordon@howard.edu

Bowie State University Dr. Elaine Davis 301-860-3329 edavis@bowiestate.edu

Hampton University Dr. Elaine Eatman 757-727-5278 Elaine.eatman@hamptonu.edu

Morgan State University Dr. John Wheatland 443-885-3864 jawjr@eng.morgan.edu

Norfolk State University Dr. Sandra Deloatch 757-823-8561 sdeloatch@nsu.edu

Virginia State University Dr. Dilip Sen 804-524-6919 dsen@vsu.edu

University of the District of Columbia Dr. Ester Ososanya

202-274-4631 eososanya@udc.edu



Steven Omoijuanfo, Univ. of DC Dept. of Mechanical Eng. working on Renewable Energy Project

Washington/Baltimore/Hampton Roads-Louis Stokes Alliance for Minority Participation Program (WBHR-LSAMP)

www.howard.edu/lsamp

HISTORY and GOALS

Howard University is the lead institution among seven partner institutions that are the recipients of a cooperative grant from the National Science Foundation to establish the Washington Baltimore Hampton Road Louis Stokes Alliance for Minority Participation Program (WBHR-LSAMP). Established in 1993, the program seeks to increase the number of minority students matriculating in and graduating from science, technology, engineering, and mathematics (STEM) disciplines. In addition to Howard, the three other initial partner institutions that comprised the WBHR-LSAMP Alliance are the University of the District of Columbia (UDC), Hampton University (HaU), and Morgan State University (MSU). During 2000, an expanded alliance began with three additional partners, including Bowie State University (BSU), Norfolk State University (NSU), and Virginia State University (VSU). Dr. Alvin Thornton (Interim Provost and Chief Academic Officer at Howard University) serves as the Principal Investigator for this project. Dr. Clarence M. Lee of Howard University serves as the Executive Director for the WBHR-LSAMP and Dr. William Gordon, also of Howard University, serves as the Alliance Coordinator. At each partner institution, the Provost and /or Vice President for Academic Affairs serve as the Co-Principal Investigators and a prominent STEM faculty member serves as the Project Coordinator.

Over the past 15 years, more than 60,500 minority students have enrolled in STEM fields at the WBHR Alliance. More than 15,000 students have graduated from these institutions with B.S. degrees in the STEM fields. In addition, we have accepted five classes of Bridge to the Doctorate students

The WBHR-LSAMP focus on number of minorities who in STEM major strategy number of who complete fields. Undergraduate WBHR-LSAMP involved in



continues to increasing the underrepresented choose careers fields. Its is to double the undergraduates successfully training in STEM

students at institutions are research during

Dr. Shawn Abernathy and Students at Brookhaven National Laboratory the academic year and summers. Many of these students have participated in hands-on research at their own institutions during the academic year and at national or industrial laboratories during the summers; or they have participated at national or industrial laboratories during the academic year as a regular part of their academic program, and as a part of independent study.

WBHR Students at research during the academic year and at internships around the country.



Quadri Sumari performing research during summer internship



ExxonMobile Summer Camp participants at Bowie State University



WESTERN ALLIANCE TO EXPAND STUDENT OPPORTUNITIES (WAESO)

http://www.asu.edu/WAESO Email: waeso@asu.edu

The LSAMP-Western Alliance to Expand Student Opportunities (WAESO) is now engaged in Phase IV of operations. After exceeding our goals of doubling the number of baccalaureate degrees per year within the STEM disciplines during Phases I, II and III, our goal for Phase IV is to once again, double the number of graduates within our region. WAESO will continue to increase the quality and quantity of underrepresented minority students receiving degrees in science, technology, engineering and mathematics throughout our region which includes institutions in Arizona, Colorado, New Mexico, western Texas (El Paso Community College), Nevada and Utah.

LSAMP - WAESO activities in which students participated include:

- peer study groups (local and over the Internet)
- summer bridge programs
- faculty-directed undergraduate research projects
- · graduate preparation institutes, mentoring, and research conference



MGE@MSA/WAESO students presenting their posters at the Annual Student Research Conference at Arizona State University.

The Louis Stokes Alliance for Minority Participation Phase IV WAESO is a comprehensive, concerted, sequenced effort that uses LSAMP NSF and non-NSF funding for the undergraduate portion of the program, non-NSF funds to support pre-college students and partners with MGE@MSA to use AGEP NSF and non-NSF funds to help hundreds of graduate students and graduates of Ph.D. or Master level programs. We have found that faculty will seek out and mentor undergraduate students in successful academically enriching activities when case studies and strategies are provided and when both faculty and student are recognized for their efforts. More importantly, we have shown that the financial support for these activities can be modest in order to ensure large-scale institutionalization and for sustaining the momentum of LSAMP for Phase IV.

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WAESO is sponsored in part by a cooperative agreement with the National Science Foundation (NSF)

WAESO Participating Institutions

Arizona:

Arizona State University Cochise College Maricopa Community College System Dine (Tsaile Campus) Pima Community College University of Arizona

New Mexico and Western Texas:

Eastern New Mexico University Dine College New Mexico Highlands University New Mexico Institute of Mining and Technology Northern New Mexico Community College Santa Fe Community College University of New Mexico Western New Mexico University El Paso Community College

Nevada:

Northern Nevada Community College University of Nevada, Las Vegas University of Nevada, Reno

Colorado:

Community College of Aurora Mesa State College Pikes Peak Community College Regis University

Utah:

Brigham Young University Salt Lake Community College Southern Utah University University of Utah Utah State University Utah Valley State College Weber State University

WAESO CONTACT INFORMATION

Dr. Antonio Garcia Project Director and Principal Investigator, WAESO/Professor, Harrington Department of Bioengineering, Ira A. Fulton School of Engineering/Associate Director, Hispanic Research Center P.O. Box 87- 5403 Tempe, AZ 85287 (480) 965-0840



Key Personnel

PI: Patrick Farrell

Co-PI: Molly Carnes **Douglass Henderson**

Co-PI & Director: Manuela Romero

Contact Information:

University of Wisconsin - Madison 2107 Mechanical Engineering 1513 University Avenue Madison, WI 53706 Phone: (608) 262-7764 Fax: (206) 265-5290

Website: http://wiscamp.engr.wisc.edu



Beloit College student conducting research on Lukemia in Japan.

The Wisconsin Alliance for Minority Participation (WiscAMP) is a consortium of 21 colleges and universities throughout Wisconsin that aims to increase the number of underrepresented minority (URM) students who receive bachelor's degrees in the science, technology, engineering and mathematics (STEM) disciplines.



College of Menominee Nation students on a tour of UW-Madison.

What Does WiscAMP Do?

Gives Voice to Issues of URM students in STEM



Provides Funds for New or Enhanced Programs **Encourages Partnerships between Institutions Enables Further Grant Opportuntities**

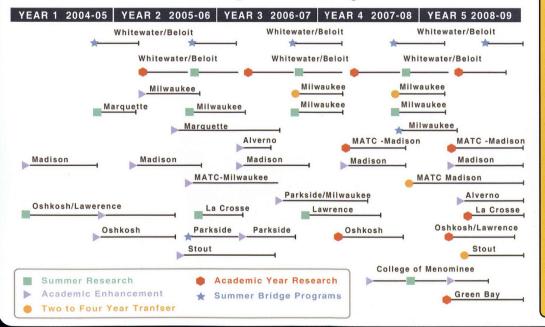


UW-Green Bay students conducting fieldwork.



Students from Engineering and Computer Science Exploration III at UW-Milwaukee.

WiscAMP Sponsored Programs



Member Institution

College of Menominee Nation

Nicolet Area Technical College Milwaukee Area Technical College Madison Area Technical College

Alverno College Beloit College Lawrence University Marquette University

UW-Eau Claire **UW-Green Bay UW-La Crosse UW-Madison** UW-Milwaukee UW-Oshkosh **UW-Parkside UW-Platteville UW-River Falls UW-Stevens Point UW-Stout UW-Superior UW-Whitewater**

Louis Stokes Alliances for Minority Participation 59



NATIONAL SCIENCE FOUNDATION

4201 Wilson Boulevard Arlington, VA 22230

Dr. Arden L. Bement, Jr., Director (703) 292-8000 • (703) 292-9232 (Fax) abement@nsf.gov

Dr. Wanda E. Ward, Assistant Director (Acting) Directorate for Education and Human Resources (703) 292-8600 · (703) 292-9179 (Fax) weward@nsf.gov

Dr. James Wyche, Division Director Division of Human Resource Development (703) 292-8640 · (703) 292-9018 (Fax) jwyche@nsf.gov

PROGRAM DIRECTOR

Dr. A. James Hicks (703) 292-8640 • (703) 292-9019 (Fax) ahicks@nsf.gov

LSAMP Lead Program Specialist Margie Johnson (703) 292-7007 • (703) 292-9018 (Fax) mcjohnso@nsf.gov

PRINCIPAL INVESTIGATORS Alabama LSAMP

Dr. Louis Dale Vice President for Equity and Diversity The University of Alabama at Birmingham 401 Campbell Hall • 1300 University Blvd. 1530 3rd Avenue South Birmingham, AL 35294-1170 (205) 934-8762 • (205) 934-1650 (Fax) ldale@uab.edu Project Manager Dr. M. Carolyn Braswell (205) 934-8762 · (205) 934-1650 (Fax) cbraswel@uab.edu

All Nations LSAMP

Ms. Zetra Wheeler Salish Kootenai College P.O. Box 70 52000 Highway 93 Pablo, MT 59855 (406) 275-4800 · (406) 275-4807 (Fax) zetra_wheeler@skc.edu Project Director Steve Dupuis (406) 275-4996 • (406) 275-4807 (Fax) steve_dupuis@skc.edu

California LSAMP

Dr. Michael V. Drake, Chancellor University of California, Irvine The Chancellor's Office 510 Administration Irvine, CA 92697-1900 (949) 824-5111 • (949) 824-2087 (Fax) chancellor@uci.edu Project Manager Marjorie DeMartino (949) 824-4813 • (949) 824-3048 (Fax) dmartino@uci.edu

California State University LSAMP Dr. Joseph Sheley

Dr. Joseph Sheley Califonia State University, Sacramento 6000 J Street, Sequoia Hall 226 Sacramento, CA 95819-6119 (916) 278-6331• (916) 278-7648 (Fax) sheleyj@csus.edu Project Director Dr. Juanita Barrena (916) 278-6519 • (916) 278-4640 (Fax) ibarrena@csus.edu

Colorado LSAMP

Dr. Omnia El-Hakim Colorado State University 100 Sage Hall

Fort Collins, CO 80523-1879 (970) 491-2656 · (970) 491-3421 (Fax) Omnia.Elhakim@colostate.edu **Project Coordinator** Dr. Beverly Marquart (970) 491-6686 • (970) 491-3421 (Fax) Beverly.Marquart@colostate.edu

Florida-Georgia LSAMP Dr. Ralph W. Turner FGLSAMP Central Office Florida A&M University 1540 South Adams Street, Suite-A Tallahassee, FL 32307 (850) 561-2467 • (850) 561-2684 (Fax) Ralph.turner@famu.edu Program Manager Program Manager Mr. Byron Greene (850) 561-2467 · (850) 561-2684 (Fax) Jackson.greene@famu.edu

Georgia LSAMP

Dr. Carlton E. Brown, President The Office of the President Clark Atlanta University 223 James P. Brawley Drive, S.W. Atlanta, GA 30314 (404) 880-8566 • (404) 880-8995 (Fax) cbrown@cau.edu **Program Director** Dr. Melvin R. Webb (404) 880-6978 · (404) 880-6843 (Fax) mwebb@cau.edu

Houston LSAMP

Dr. John L. Bear, Dean University of Houston Natural Sciences & Mathematics 214 Science & Research Bldg. 1, Room 214C Houston, TX 77204-5008 (713) 743-2618 · (713) 743-8630 (Fax) jbear@uh.edu Executive Director Craig Cassidy (713) 743-9220 • (713) 743-8630 (Fax) ccassidy@uh.edu

Illinois LSAMP

Dr. Sandra Westbrooks Dr. sandra westbrooks Chicago State University Cook Admin. Building , Room 306-308 9501 S. King Drive Chicago, IL 60628 (773) 995-2411 • (773) 995-3584 (Fax) swestb31@csu.edu Project Director Dr. LeRoy Jones, II (773) 995-3296 • (773) 995-2966 (Fax) ljones27@csu.edu

Indiana LSAMP

Dr. Beverly Davenport Sypher Associate Provost and Susan Buckley Butler Chair for Leadership and Professor of Communications Office of the Provost Purdue University Hovde Hall, Room 100 610 Purdue Mall West Lafayette, IN 47907-2040 (765) 494-9709 • (765) 496-2031 (Fax) bdsypher@purdue.edu Program Manager Dr. Pamella P. Dale Shaw (765) 496-7967 · (765) 496-2031 (Fax) ppshaw@purdue.edu

Islands of Opportunity

Dr. Rose Tseng, Chancello University of Hawaii at Hilo 200 W. Kawili St. Hilo, HI 96720-4091 (808) 974-7444 · (808) 933-3304 (Fax) rtseng@hawaii.edu Program Director Dr. Dan Brown/Carmen Perez-Frayne

(808) 974-7468 · (808) 933-0705 (Fax) dbrown@hawaii.edu/frayne@hawaii.edu

Kentucky-West Virginia LSAMP

Dr. Lee T. Todd, Jr. University of Kentucky 101 Main Building Lexington, KY 40506-0032 (859) 257-1701 • (859) 257-1760 (Fax) Itodd@email.uky.edu Project Director Project Director Dr. Ingrid St. Omer (859) 257-6143 • (859) 257-3042 (Fax) istomer@engr.uky.edu

Louisiana LSAMP

Dr. Diola Bagayoko Southern University and A&M College Department of Physics P.O. Box 11776 Baton Rouge, LA 70813 (225) 771-2730/2777 • (225) 771-4341 (Fax) bagayoko@aol.com Project Director Brenda McNeely (225) 771-2777 • (225) 771-2311 (Fax) bjmcneely@yahoo.com

Michigan LSAMP

Dr. Mary Sue Coleman, President University of Michigan Office of the President 2074 Fleming Administration Building 503 Thompson Street Ann Arbor, MI 48109-1340 (734) 764-6270 · (734) 936-3529 (Fax) marysuec@umich.edu Project Director Dr. Levi T. Thompson (734) 936-2015 · (734) 763-0459 (Fax) ltt@umich.edu

Mississippi LSAMP

Dr. Abdul K. Mohamed Jackson State University P.O. Box 18119 Jackson, MS 39217 (601) 979-1627 • (601) 979-2025 (Fax) abdul.k.mohamed@jsums.edu **Project Manager** Joan F. Blanton/Martha Tchounwou (601) 979-2076 • (601) 979-2025 (Fax) joan.blanton@jsums.edu / Martha.Tchounwou@jsums.edu

New Mexico LSAMP

Dr. Waded Cruzado-Salas Executive Vice President and Provost Box 30001, MSC 3445 Las Cruces, NM 88003-8001 (575) 646-2127 • (575) 646-6334 provost@nmsu.edu Project Director Dr. Ricardo B. Jacquez (575) 646-3944/1847 • (575) 646-2960 (Fax) rjaquez@nmsu.edu Program Manager Michele Auzenne (575) 646-1168 · (575) 646-3944 (Fax) mauzenne@nmsu.edu

New York City LSAMP

Dr. Neville A. Parker City College of New York 138th Street & Convent Avenue Marshak-Building, Room J14 New York, NY 10031 (212) 650-8854 · (212) 650-8855 (Fax) ampcc@ccny.cuny.edu Project Manager Dr. Claude Brathwaite (212) 650-8854 • (212) 650-8855 (Fax) clbcc@ccny.cuny.edu

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North Carolina LSAMP

Dr. Alton Thompson Interim Provost and Vice Chancellor for Academic Affairs North Carolina A&T State University Dowdy Administration Building 1601 E. Market Street Greensboro, NC 27411 (336) 334-7965 · (336) 334-7136 (Fax) altont@ncat.edu Project Coordinator Marcia F. Williams, MBA (336) 334-7589 · (336) 334-7540 (Fax) marcia@ncat.edu

Northeast LSAMP

Dr. John Cunningham Office of the Provost The University of Massachusetts, Amherst 362 Whitmore Administration Building **181** Presidents Drive Amherst, MA 01003 (413) 545-2554 • (413) 577-3980 (Fax) jcunningham@provost.umass.edu Project Director Dr. Susan Bronstein (413) 545-4572 • (413) 545-4576 (Fax) sbronstein@acad.umass.edu

North Star LSAMP

Dr. Nancy "Rusty" Barcelo Vice President/Provost for Equity and Diversity The University of Minnesota, Twin Cities 432 Morrill Hall 100 Church Street S.E. Minneapolis, MN 55455 (612) 624-0594 • (612) 626-0397 (Fax) barcelo@umn.edu Project Director Anne Hornickle (612) 626-0043 • (612) 626-1020 (Fax) ahornick@umn.edu

Ohio LSAMP

Dr. E. Gorden Gee Ohio State University 205 Bricker Hall, 190 N. Oval Mall Columbus, OH 43210 (614) 292-2424 • (614) 292-1231 (Fax) gee.2@osu.edu Project Manager Cyndi Freeman-Fail (614) 292-6998 • (614) 292-3656 (Fax) freeman-fail@gradsch.ohio-state.edu

Oklahoma LSAMP

Dr. Cornell Thomas Vice President for Institutional Diversity OK-LSAMP PI and Program Director Oklahoma State University 408 Whitehurst Hall Stillwater, OK 74078 (405) 744-5372 · (405) 744-5576 (Fax) c.thomas@okstate.edu Project Manager Kay Porter (405)744-6710 • (405) 744-4202 (Fax) kay.porter@okstate.edu

Pacific Alliance LSAMP

Dr. Herb Schroeder LSAMP Pacific Alliance The University of Alaska Anchorage School of Engineering 3211 Providence Drive Anchorage, AK 99508 (907) 786-1860 • (907) 786-1079 (Fax) herb@uaa.alaska.edu

Peach State LSAMP

Dr. Michael F. Adams, President The University of Georgia The Administration Building Athens, GA 30602-1661 (706) 542-1214 • (706) 542-0995 (Fax) presuga@uga.edu Project Manager Dr. Ernest L. Brothers (706) 425-3158 • (706) 425-3159 (Fax) ebrother@uga.edu

Philadelphia LSAMP

Dr. Mark Greenberg Senior Vice President and Provost for Academic Affairs Drexel University 3141 Chestnut Street Philadelphia, PA 19104 (215) 895-6321 • (215) 895-1056 (Fax) Mark.lawrence.greenberg@drexel.edu Project Director Mr. Stephen R. Cox (215) 895-6835 · (215) 895-2098 (Fax) srcox@drexel.edu

Puerto Rico LSAMP

Dr. Manuel Gómez The University of Puerto Rico P.O. Box 23334 **UPR** Station San Juan, PR 00931 (787) 764-8369 · (787) 766-1293 (Fax) Mgomez@upr.edu Project Director Dr. Ana C. Piñero (787) 764-8369 • (787) 766-1293 (Fax) a_pinero@prlsamp.org

South Carolina LSAMP

Dr. George E. Cooper, President Office of the President South Carolina State University Campus P.O. Box 7008 Orangeburg, SC 29117-0001 (803) 536-7013 • (803) 533-3622 (Fax) president@scsu.edu Executive Director Dr. Judith Salley (803) 536-8509 • (803) 516-4685 (Fax) djdsalley@scsu.edu

State University of New York (SUNY) LSAMP

Dr. David L. Ferguson State University of New York at Stony Brook Dept. of Technology and Society Harriman Hall 345A Stony Brook, NY 11794-3760 (631) 632-8763 • (631) 632-7809 (Fax) David.Ferguson@stonybrook.edu Project Manager Lucy Gluck (631) 632-9988 · (631) 632-7809 (Fax) Lucille.Gluck@stonybrook.edu

Tennessee LSAMP

Dr. Melvin N. Johnson Office of the President Tennessee State University 3500 John A. Merritt Blvd. Nashville, TN 37209 (615) 963-7401 • (615) 963-7407 (Fax) President@tnstate.edu Project Director Dr. Lonnie Sharpe, Jr. (615) 963-5501 • (615) 963-7492 (Fax) sharpe@coe.tsuniv.edu

Texas A&M University System LSAMP

Dr. Karan L. Watson Dean of Facilities Office Texas A&M University MS 1126, Henderson Hall College Station, TX 77843-1126 (979) 845-4274 • (979) 845-6259 (Fax) watson@tamu.edu Program Director Dr. Karen Butler-Purry (979) 847-9048 • (979) 845-6259 (Fax) klbutler@ece.tamu.edu

University of Texas System LSAMP

Dr. Benjamín C. Flores The University of Texas at El Paso 500 W. University Avenue **Engineering 301** El Paso, TX 79902 (915) 747-6961 • (915) 747-5243 (Fax) bflores@utep.edu Project Director Ariana Arciero, M.P.H. (915) 747-8725 • (915) 747-5243 (Fax) avarcier@utep.edu

University System of Maryland LSAMP

University System of Maryland LSAMP Dr. Freeman A. Hrabowski, III The University of Maryland, Baltimore County 1000 Hilltop Circle Baltimore, MD 21250 (410) 455-2274 • (410) 455-1210 (Fax) hrabowski@umbc.edu Project Director Cynthia M. Hill (410) 455-2445 • (410) 455-1028 (Fax) chill@umbc.edu

Upstate LSAMP

Dr. Eric C. Spina Vice Chancellor for Academic Affairs and Provost Syracuse University Crouse Hinds Hall, Suite 500 Syracuse, NY 13244 (315) 443-2494 · (334) 443-1839 (Fax) efspina@syr.edu Project Director Gabby Chapman (315) 443-3425 · (315) 443-3787 (Fax) ghchapman@syr.edu

Urban Massachusetts LSAMP

Dr. Winston Langley The University of Massachusetts, Boston 100 Morrissey Boulevard Boston, MA 02125-3393 (617) 287-6800 Winston.langley@umb.edu Project Director Marshall Milner (617) 287-4057 marshall.milner@umb.edu

Virginia-North Carolina LSAMP Dr. William B. Harvey Vice President and Chief Officer for Diversity and Equity The University of Virginia Madison Hall P.O. Box 400881 Charlottesville, VA 22904-4881 (434) 243-2079 • (434) 243-2079 (Fax) wbh6z@Virginia.edu Co-Principal Investigator Dr. Nickolas J. Garber (434) 243-6660 • (434) 982-2110 (Fax) njg@virginia.edu

Washington/Baltimore/Hampton Roads LSAMP

Dr. Alvin Thorton Office of the Provost Howard University 2400 6th Street, N.W. Washington, DC 20059 (202) 806-2550 · (202) 806-4971 (Fax) athorton@howard.edu **Executive** Director Dr. Clarence M. Lee (202) 865-8568 · (202) 232-4758 (Fax) cmlee@howard.edu

Western Alliance to Expand Student Opportunities LSAMP (WAESO)

Dr. Antonio Garcia Dr. Antonio Garcia Hispanic Research Center Arizona State University P.O. Box 875403 Tempe, AZ 85287-5403 (480) 965-0840/8798 • (480) 965-8309 (Fax) tony.garcia@asu.edu Michael J. Sullivan (480) 965-0840/5388 • (480) 965-8309 (Fax) michael.sullivan@asu.edu

Wisconsin LSAMP Dr. Patrick Farrell

Provost and Vice Chancellor for Academic Affairs The University of Wisconsin-Madison 2107 ME Building 1513 Engineering Drive Madison, WI 53706 (608) 262-7764 · (608) 265-5290 (Fax) pfarrell@provost.wisc.edu Project Director Dr. Manuela Romero (608) 263-1138 · (608) 265-5290 (Fax) romero@engr.wisc.edu

