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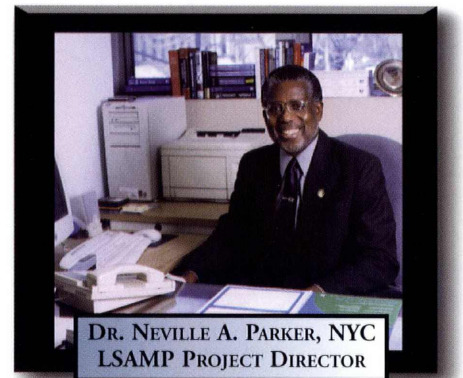
ROAD TO THE CUNY CONSORTIUM

In 1992, CUNY entered into a cooperative agreement with the National Science Foundation, to double the number of minority – African-American, Hispanic-American, Native-American, and Native Pacific Islander – graduates in science, mathematics, engineering and technology (SMET). This joint investment, spearheaded by the New York City Louis Stokes Alliance for Minority Participation (NYC LSAMP), has returned over 5,800 graduates, and 40,000 enrollees in restructured gatekeeper courses in calculus, chemistry and physics. While the goal of doubling the annual graduation rate has not been reached, we can be proud of the 74% increase from the baseline of 434, to the 2000-2002 output of 755, particularly given the decline in overall enrollment at CUNY from 233,000 to 195,000 in this period. Nevertheless, if CUNY were producing

SMET graduates at rates comparable to those for the non-minority population, that number would be approaching 1500. Is this a reasonable goal, and if so, what's our charge?

CUNY is the greatest urban public university in America. As the largest Minority Serving Institution, it is imperative that it lives out its promise as an institution for all the people of this city. Indeed, from its location in America's gateway to liberty, CUNY, of all academic institutions in this nation, is best poised to fulfill that promise to all the people of this nation. Underrepresentation, in any field of endeavor, but in SMET particularly, should no longer be a discussion in America, still the world's best, if not the only continuing experiment in multiculturalism.

There exists a considerable range of opportunities in New York City, the tri-state region, and the nation, to reach for quantum increases in investment toward the continuing development of minority SMET education and industry professionals. The School of Engineering, at the City College, has been a leading producer of African-American and Hispanic engineers in the nation over the last decade. Investments from major foundations, the NSF, NASA and now NOAA and the NIH, are evidence of the unique and important role that the School of Engineering plays within New York City, as well as nationally. That role



must be maintained and indeed by solidifying permanent pathways from New York City high schools and the Community Colleges within CUNY. Proactive and aggressive recruiting, advising, counseling and exposure to career building experiences must have continued priority.

Major investments from the National Institute of Health in CUNY preceded the RCMS (a precursor to LSAMP) and the Alliance programs. For over two decades, NIH-funded biomedical student research programs (MARC and MBRS) have been present on CUNY campuses. Graduates of these programs are now part of a national pool of future faculty members, post-doctoral candidates and administrators, with expertise and training, prepared to contribute to the university's mission.

At the K-12 level, the presence of STEP, Upward Bound, Liberty Partnerships, Campus High Schools and College Now activities form a

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**NATIONAL SCIENCE FOUNDATION,
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Matthew Goldstein Chancellor
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Chancellor for
Academic Affairs
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PROJECT DIRECTORS

Neville Parker City
Leon Johnson Medgar Evers
Louise Squitieri City

PROJECT ADMINISTRATOR

Claude Brathwaite City

SENIOR ADMINISTRATIVE ASSISTANT

Jeanette Schnabel City

ADMINISTRATIVE ASSISTANT

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Cheryl Smith York

New York City Alliance News

Editor: Claude Brathwaite
Design/Printing: 3D Studios

Individuals wishing to be added to the mailing list should contact Jeanette Schnabel at (212) 650-8854, fax (212) 650-8855.

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CONSORTIUM *continued from page 1*

network of state, city and federally funded programs that teach, train and shape a significant number of minority youngsters. As we face unique challenges in the 21st Century, a comprehensive recruiting plan must be adopted to reap the benefits of these investments, and facilitate and encourage participation in the SMET enterprise. All of these agency-supported initiatives enjoy complementary private sector financial support from industry partners, such as the Carver Foundation, Pfizer Corporation and Bristol Myers Squibbs. National research entities, such as Brookhaven, Argonne and Los Alamos National Laboratories, also provide support, particularly in the form of summer research opportunities.

These programs, now firmly in place across CUNY, and indeed, across the country, have generated a pool of minority SMET graduates and post-doctoral fellows, from among whom we may affirmatively and aggressively recruit for our graduate and doctoral programs, as well as for instructional staff and tenure track faculty. To be successful, it would be necessary to track not only our own graduates and cultivate their interests in returning to CUNY, but also those from other Minority Serving Institutions, Historically Black Colleges and Universities, and Hispanic Serving Institutions. It is incumbent upon CUNY to offer attractive fellowship

packages to graduate students, and clear roadmaps and mentorship for the achievement of tenure to post-doctoral candidates. This could be achieved by effective leveraging of the resources available to us, regionally and nationally.

As the NYC LSAMP completes its tenth year and Phase II of NSF funding, we have applied for a Phase III grant. This funding resource would anchor the "final institutionalization" – to quote the NSF -- of the structures and environment to sustain the march toward the goal of effective representation of minorities in SMET. The NYC LSAMP will press forward with its efforts to establish a CUNY Consortium for Minority Participation in Science, Mathematics, Engineering and Technology (CCMP-SMET) as that institutional home for LSAMP and other like programs. The NSF demands this, in some form, New York City and the nation need it, and CUNY most certainly can deliver on it. Do we have the will and the staying power to strive to this end? The Project Directors do; the Steering Committee Members do; the Governing Board Members do; the Activity Coordinators do; the students do; and some 165 LSAMP faculty mentors across CUNY do. The achievements made thus far affirm that there is no reason why the promise that is CUNY cannot be fulfilled.

Happy 10th Anniversary!!

URBAN UNIVERSITY SERIES SPEAKERS

DR. RITA COLWELL, DIRECTOR NATIONAL SCIENCE FOUNDATION

DR. CLIFTON POODRY, MORE DIVISION, NIH

CHANCELLOR MATTHEW GOLDSTEIN

PRESIDENT GREGORY WILLIAMS, THE CITY COLLEGE

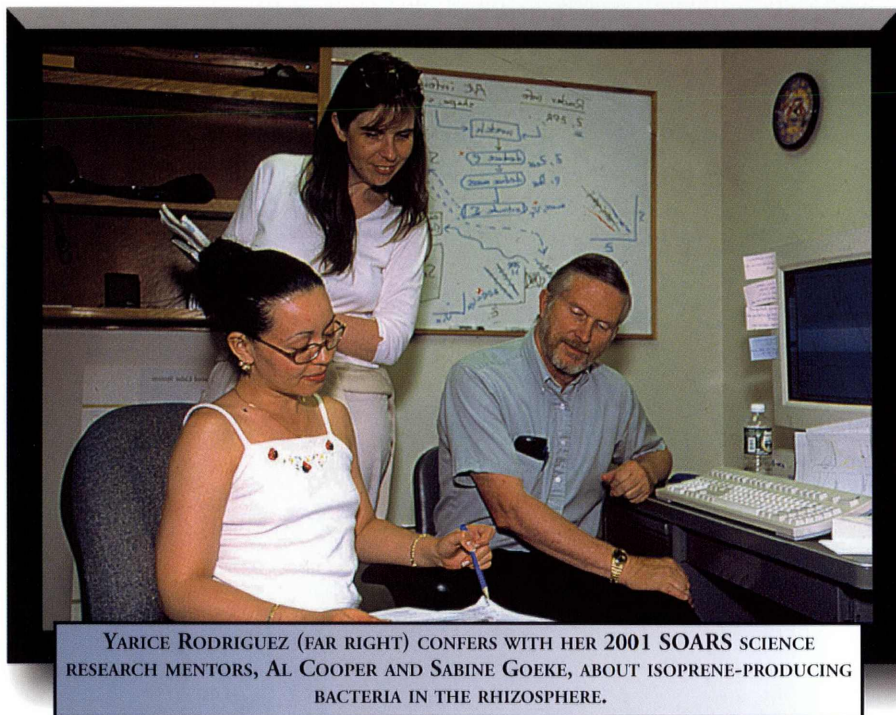
DR. SPIRO ALEXANDRATOS

DR. NEVILLE PARKER, LSAMP PROJECT DIRECTOR

DR. CARLOS CASTILLO-CHAVEZ, CORNELL UNIVERSITY

STUDENT OPPORTUNITIES WITH THE NYC LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION AND SOARS: A PARTNERSHIP ENCOURAGING SUCCESS

By Amy Stevermer for the NYC LSAMP



YARICE RODRIGUEZ (FAR RIGHT) CONFERS WITH HER 2001 SOARS SCIENCE RESEARCH MENTORS, AL COOPER AND SABINE GOEKE, ABOUT ISOPRENE-PRODUCING BACTERIA IN THE RHIZOSPHERE.

Picture an extraordinary backdrop of anvil-shaped mountains and a team of researchers working on an extraordinary idea. Picture yourself as part of that team. Is the picture blurry? The Significant Opportunities in Atmospheric Research and Sciences (SOARS) program can help make that picture a clear reality. Each summer up to 24 students, including students in the Louis Stokes Alliance for Minority Participation program, spend 10 weeks in Boulder, Colorado, as SOARS protégés participating in research projects at the National Center for Atmospheric Research (NCAR).

Pauline Datulayta, a junior computer science major at Queens College, is a NYC LSAMP student who will be returning to Colorado for her second SOARS summer. Pauline credits the AMP program and SOARS with helping her pursue research in atmospheric science and says, "Being exposed to a laboratory and working with scientists has given me an appreciation for the people who dare to ask the questions and try to figure out the answers themselves. I have seen that, especially with science, the main motivation that helps

you succeed is the passion you have that goes into what you're doing."

Pauline's summer 2001 experience with science research mentor Chin-Hoh Moeng involved modeling pollution dispersion in different types of turbulence. Like all SOARS protégés, she also participated in a series of workshops to learn effective ways to write and speak about her research methods and results. "The writing workshops really helped to develop my thoughts and objectives, in the process of presenting my research as clearly and concisely as possible," says Pauline. Pauline's SOARS experience resulted in a very successful showing at the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) 2001 National Conference. Pauline presented her research during the graduate student oral session and won a \$2500 award for first place.

SOARS and the Alliance for Minority Participation have an existing relationship which benefits students by allowing them to learn from and share with both programs. NYC LSAMP project administrator Claude Brathwaite speaks

highly of this interaction: "SOARS is a model of the multiyear interactions that the NYC LSAMP is encouraging with a number of programs having exceptional track records. It offers a programmatic structure that complements what the LSAMP does during the academic year." During the academic year, students can participate in AMP-sponsored research at their home institutions. SOARS' intensive summer program then provides an opportunity for 10 weeks of learning-oriented research at NCAR or other national laboratories. The tools and experience that students acquire during the SOARS summer experience can greatly benefit their academic year studies, just as the knowledge accumulated during the academic year can provide a valuable introduction to the sciences and scientific research. These experiences can be essential to the student's further success in the professional world or in graduate school.

NYC LSAMP alumna Yarice Rodriguez graduated from Hunter College in May 2000 with majors in geography and energy/environmental policy. A two-time SOARS protégé who plans to return for her third summer in 2002, Yarice says of her SOARS and AMP experiences, "AMP research gave me the experience and exposure to apply and be accepted to SOARS and graduate school. I am still carrying my AMP undergraduate research with me and will hopefully combine my AMP and SOARS research into a graduate school thesis. Without AMP I would not have been able to explore science. The program supplied me with the confidence to do scientific research, an environment of supportive mentoring, and professor support from different disciplines."

Like Yarice, Pauline feels strongly that AMP and SOARS have positively influenced her preparations for the future. "I plan to go to graduate school.

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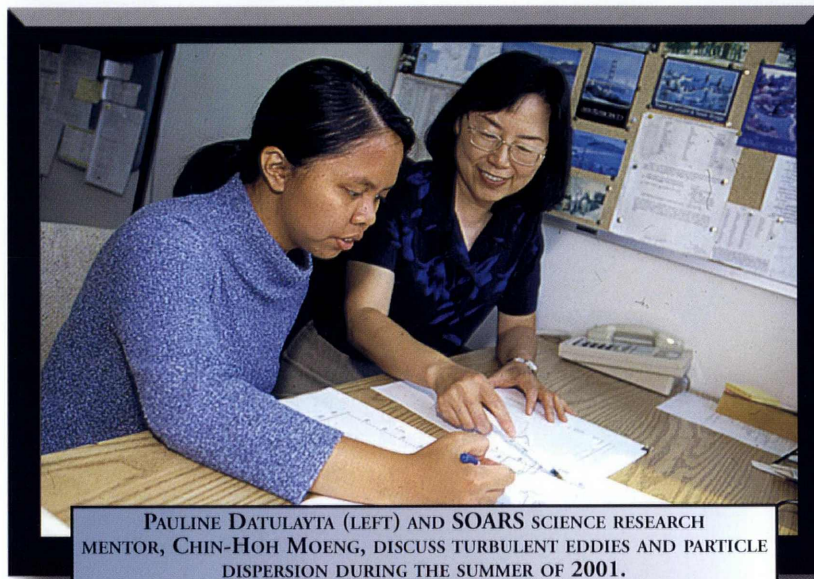
SOARS *continued from page 3*

The combined experience from SOARS and AMP has exposed me to graduate-type research and made me more confident and aware of the type of research I would like to concentrate in when I attend graduate school. Knowledge gained from participating in both AMP and SOARS, continuous programs intending to keep the students in the "pipeline", has given me tremendous advantage in terms of research experience and graduate school opportunities."

LSAMP students and others involved in SOARS speak highly of their experiences, and their successes demonstrate the program's quality. Since its inception in 1996, 62 protégés have participated in SOARS, and none have left college or university without completing an undergraduate degree in science, mathematics, engineering or a related field. Several have co-authored papers published in referred journals, and 28 are currently enrolled in graduate programs or in the scientific workforce. Graduate schools report that SOARS protégés are very well prepared for admission to these often-competitive programs. In the words of Colorado State University professor Tom Collett, "The research experience gained by SOARS protégés, as a result of their participation in the SOARS summer program, makes them particularly strong candidates for appointment as graduate research assistants."

Pauline says that SOARS has not only helped her prepare for her future career, but also provided a very collegial

environment. "The interaction with the SOARS protégés was very uplifting. Being able to meet students who were so hard working, devoted and passionate about their field of work really inspired me. And of course, the great friendships formed after ten weeks were only natural."



PAULINE DATULAYTA (LEFT) AND SOARS SCIENCE RESEARCH MENTOR, CHIN-HOH MOENG, DISCUSS TURBULENT EDDIES AND PARTICLE DISPERSION DURING THE SUMMER OF 2001.

...research is enriched when the broadest possible range of people participate. Especially at times of national crisis, we need all of our best minds working together to bring science and technology to bear on urgent issues.

-Rita Colwell, NSF Director

"SOARS incorporates some unique ingredients to help ensure a learning-oriented, student-centered experience," says Thomas Windham, program director. One of these ingredients is SOARS' team mentoring approach, a reversal of the one-mentor-to-several-student ratio of many internship programs. SOARS provides each student with a team consisting of a science research mentor, a scientific writing mentor, and a community mentor. First-year students are also assigned a peer mentor who has been in the program for a year or more. The team-mentoring approach works especially well, says Pauline. "The students have the luxury of having four individuals that serve as a resource. I considered my mentors as supportive, generous and guiding individuals who truly wanted me to succeed."

Another ingredient is the longevity of

SOARS' commitment. SOARS provides very strong incentives to continue in the science and technology fields, offering up to four years involvement with the program and 50% support for the first two years of graduate training. Educators and administrators agree that programs offering these types of personal attention, community focus, flexibility, and multiyear support are indispensable. According to Rita Colwell, director of the National Science Foundation (NSF), "...research is enriched when the broadest possible range of people participate. Especially at times of national crisis, we need all of our best minds working together to bring science and technology to bear on urgent issues."

In December 2001, SOARS was one of ten institutions selected to receive the sixth annual Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. SOARS is sponsored by the University Corporation for Atmospheric Research (UCAR), the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center, and the National Oceanic and Atmospheric Administration (NOAA) Office of Global Programs.

SOARS encourages applications from interested NYC LSAMP students. For more information, please visit <http://www.ucar.edu/soars>.

Amy Stevermer is an Associate Scientist with the Cooperative Institute for Research in the Environmental Sciences at NOAA, Boulder, CO. Her most recent publication is Recent Advances in Meteorology (ORXY Press, 2002). She serves as a writing and communications mentor in the SOARS program.

ANNUAL BIOMEDICAL RESEARCH CONFERENCE FOR MINORITY STUDENTS (ABRCMS)**"PREPARING SCIENTISTS FOR THE 21ST CENTURY"** *By Irene Hulede for the NYC LSAMP*

In July 2000, the National Institute of General Medical Science (NIGMS), Division of Minority Opportunities in Research (MORE) awarded the American Society for Microbiology (ASM) a five-year grant to manage the Annual Biomedical Research Conference for Minority Students (ABRCMS), formerly the MARC/MBRS Symposium.

The ABRCMS is a national conference designed to encourage students to pursue advanced training in the biomedical sciences and provides faculty mentors and advisors with the resources for facilitating students' success. Through scientific presentations, professional development workshops, poster and oral session competitions, numerous networking opportunities with faculty and administrators from graduate schools, government agencies, scientific societies and foundations, the Conference brought together the best and brightest, minority students committed to advance training and careers in the biomedical sciences.

The first ABRCMS, held in Orlando, Florida on October 31 – November 3, 2001, was a resounding success. More than 1800 individuals, including approximately 1200 students and 600 faculty and administrators in higher education were in attendance. During the three-day conference, more than 750 students participated in poster and/or oral presentations. The presentations represented nine subdisciplines in the biomedical sciences. Representatives from professional scientific societies sponsored awards, offering \$250 to the top poster and oral student presentations. Award recipients from the City University of New York (CUNY) system included Ivelise Rijo and Mark Nuqui from City College of New York, Emily Greene, Candice Etson and Fatima S. Johnson from Hunter College, and Stephanie Thomas from City University of New York, Jamaica.

120 graduate programs at U.S. colleges and universities as well as government agencies, foundations and professional societies comprised the conference exhibits program.

The majority of students who attended the 2001 ABRCMS were supported by NIGMS' programs, which include the Minority Biomedical Research Support (MBRS), the Minority Access to Research Careers (MARC) and BRIDGES to the future programs. Other students were sponsored by professional scientific societies, national minority programs, and foundations, such as the National Science Foundation Alliance for Minority Participation Program, the U.S. Department of Education Ronald McNair Program, the Howard Hughes Medical Institute, the NIH Predoctoral Fellowship Program, the American Chemical Society Scholars Program, and the American Society for Microbiology Minority Undergraduate Research Fellowship Program.

Plans are well underway for the 2002 ABRCMS, scheduled for **November 13-16, 2002 in New Orleans, Louisiana**. The year 2002 marks the **40th anniversary of NIGMS and the 30th anniversary of the Minority Access to Research Careers (MARC) and Minority Biomedical Research Support (MBRS) programs**. Confirmed speakers for the 2002 ABRCMS include:

- Dr. Bernard Harris (Former Astronaut and First African American to Perform a Space Walk),
- Dr. Antonia Novello (Commissioner for New York State Health Department and Former U.S. Surgeon General),
- Dr. Francis Collins (Director, Human Genome Institute),
- Dr. Ruth Kirschstein (Acting Director, NIH),
- Dr. John Ruffin (Director, NCMHD),
- Dr. Lydia Villa-Komaroff (Vice President, Northwestern University),
- Dr. Alfred Gilman (1994 Nobel Prize Winner in Physiology or Medicine) and
- Dr. Thomas Cech (1989 Nobel Prize Winner in Chemistry).

In addition, the Honorable Louis Stokes, Former U.S. Congressman, will be giving the Keynote address during the Anniversary Celebration.

The 2002 ABRCMS preliminary program, call for abstract will be available by March 15. For further information, please visit the ABRCMS website at www.abrcms.org or contact ABRCMS staff, Irene Hulede at ihulede@asmusa.org / 202-942-9295 or Joelle Roth at jroth@asmusa.org / 202-942-9228.



HUNTER COLLEGE STUDENT CONTINGENT AT ABRCMS 2001.

LSAMP STEERING COMMITTEE PROFILES *By Helena Leslie for the NYC LSAMP***Dean Jose Torres,
College of Staten Island**

With degrees from the National University of Mexico, the University of Aston in the United Kingdom, and Dartmouth College, Dr. Jose Torres brings an international background to the College of Staten Island, where he has been Dean of Science and Technology since 2000. Dr. Torres's prior professional experience is no less varied. His first deanship was at the University of the Americas in Mexico. He then served as Vice President of Academics at Indiana Institute of Technology and came to CUNY from Marist College where he was Dean of the School of Computer Science and Mathematics.

A chemical engineer and computer scientist, who is steeped in educational issues, Dr. Torres will present a paper on international exchange programs at the 2002 meeting of the American Society for Engineering Education in Montreal, Canada. He is deeply committed to increasing the number of minority students on campus and to bringing them into the SMET fold.

"There is great respect for technical education in the Latino community, and acquiring qualifications in SMET disciplines is an important door-opener. This is the fastest growing segment of our population and we should tap that talent," he says. "In Indiana, where I implemented programs which encouraged minority high school students to go on to college, we enlisted all the minority professors in the area as role models. At CSI, our students serve as our role models and ambassadors: Our Discovery Center supports graduate students to teach in Staten Island high schools, and many go on to teaching careers."

Dr. Torres is also working on improving and expanding CSI's articulation with other CUNY colleges. "We have excellent programs at CSI," he says. "including one of the two engineering baccalaureates

in the university. Part of our challenge in attracting students from other parts of CUNY is our geographical location. We are the only campus which is not on the subway. We are taking practical steps, such as express bus services, to make ourselves more accessible. We hope these measures will increase the number of minority students on what is CUNY's most suburban campus."

"LSAMP plays an important role in bringing minority students to CSI and to SMET disciplines," says Dr. Torres. "Often the hurdle is economic, and even a small amount of financial help can make a crucial difference. Some of our most prestigious programs, such as polymer chemistry and computer science, commend LSAMP for its accomplishments at the college. I am pleased that I can support LSAMP at CSI and contribute to keeping it going at CUNY."

**Vice President Robert M. Kahn,
Queensborough Community
College**

"I consider my time as an administrator to be an extended sabbatical from the classroom," says Dr. Robert M. Kahn, Queensborough's Vice President for Academic Affairs. "You must never lose the faculty perspective, and some day I will go back to teaching." Dr. Kahn, who holds a doctorate in political science from Indiana University in Bloomington, came to Queensborough in 2001 with ten years of community college experience. He has served as Assistant Dean of Instructional and Community Services and then Dean of Professional Studies at Rockland Community College and as Dean of Business, Mathematics, and Social Sciences at Bergen Community College. In 1996, Dr. Kahn attended Harvard University's Management Development Program, which he describes as "a tremendous opportunity to meet and share ideas with people from all areas of university administration."

Dr. Kahn is very enthusiastic about his

post. "One of the reasons that I am here is the changing demographics at Queensborough," he says. "This is an exciting, dynamic, diverse place. You see the face of the world on our campus. We have high aspirations for our students, and we challenge them. First, we make sure that they are college-ready in terms of their math and language skills, helping them where necessary. Then, we turn them over to our faculty, a remarkable group of people and our true capital."

According to Dr. Kahn, "LSAMP is right on target. It is a marvelous opportunity for community college students. It provides real research experiences and real mentoring. Our students present their work at professional conferences and are inspired to go on to higher degrees and research careers. LSAMP has led to a drastic improvement in minority participation in SMET at Queensborough. The resources which it brings to the table permit our instructors to spend more time with SMET students and allow us to do our best."

Looking to the future, Dr. Kahn vigorously supports the Chancellor's commitment to making connections between high schools, community colleges, four-year colleges, and graduate schools. "There are tremendous advantages to the integrated university," he says. "We are on the verge of a truly dynamic pipeline." He would also like to see LSAMP grow on campus. "I hope," he says "that the consortial effort brings about an even stronger program with more faculty mentors who can serve a larger number of students."

**Provost Anthony J. Garro,
Lehman College**

Dr. Anthony J. Garro, Lehman's Provost and Vice President for Academic Affairs came to the college in 2001 from UMDNJ-New Jersey Medical School, where he served as Vice Dean and Professor of Microbiology and Molecular Genetics. Prior to that, his

LSAMP STEERING COMMITTEE PROFILES

distinguished career in research, teaching, and administration included being Professor and Head of Microbiology at the Sophie Davis School of Biomedical Education/ CUNY Medical School and an appointment on the faculty of the Mt. Sinai School of Medicine. Dr. Garro earned his doctorate at Columbia University. His research has focused on the biochemical and molecular bases for the increased cancer risk and birth defects associated with alcohol abuse.

Though, before he came to Lehman, Dr. Garro had always worked at the graduate level, he is acutely aware of the pipeline issues which are so critical to CUNY and to LSAMP. "I have always had undergraduates and high school students and teachers in my laboratory," he says. "During the ten years I spent in a medical school environment, one of the biggest challenges we faced was increasing the number of underrepresented minority students."

"At a national level," Dr. Garro continues, "medical schools were admitting every qualified minority student who came to them, but we were still not meeting our goals. Ten years ago the Association of American Medical Colleges initiated Project 3000 by 2000, with the objective of enrolling 3000 underrepresented minority students by the year 2000. To accomplish this, medical schools had to get involved at pre-college levels to increase the pool college students who would eventually apply. We faced the same issues that the SMET pipeline is addressing. The programs we put in place at the New Jersey Medical School were recognized nationally, and we were honored with the community service award of the Association of American Medical Colleges."

"When I arrived at Lehman," Dr. Garro says, "I found programs like LSAMP, MARC, and M-RISE which were dedicated to supporting minority students in SMET disciplines. One of my goals has been to increase communication between these programs on the Lehman

campus and to help them work together to maximize outcomes. It was gratifying to learn that, at Lehman, LSAMP played a role early on in helping to restructure curriculum and provided the initial funding that helped establish the Science Learning Center, which is run by the LSAMP coordinator in conjunction with our Academic Center of Excellence. LSAMP funding also has been an important source of support in providing research experiences for our students."

Dr. Garro's other goals are also in tune with LSAMP. They include enhancing the immediate pipeline to ease the transfer of students from Bronx and Hostos Community Colleges to Lehman and draw them into the sciences; recruiting more minority faculty in physics and mathematics; and strengthening the advising process.

"LSAMP's mission and CUNY's are concordant," Dr. Garro concludes. "When I was at Columbia, my two mentors were CCNY graduates. In fact, half the department had gone to CCNY. LSAMP is dedicated to continuing that tradition of excellence. I myself am the first member of my family to go to college. I understand the challenges facing students at Lehman and what LSAMP is trying to accomplish. I am comfortable and happy to be in this environment. This is what I want to do."

**Dean Ann Shirley-Henderson,
Hunter College**

Dr. Ann Henderson, Hunter's acting Dean for Arts and Sciences, is a CUNY veteran with a distinguished career in teaching and research. A biochemist who holds a doctorate in genetics and molecular biology from the University of North Carolina, Dr. Henderson came to Hunter in 1983. As well as being a professor of biological sciences on that campus, she is Professor of Biology and Biochemistry at the CUNY Graduate Center. She is a member of Hunter's prestigious Institute for the Study of

Gene Structure and Function and serves on the CUNY Committee for Doctoral Education in the Sciences. In addition to being a leading scientist, Dr. Henderson brings to LSAMP a wealth of experience from other funded programs. These include MARC, MBRS and the NIH Bridges Program at LaGuardia Community College.

Dr. Henderson, whose own research field is human genetics, wholeheartedly embraces the LSAMP mission of engaging students in the sciences through research. "We are not good teachers unless we do research," she says. "Research is the one thing that keeps you on your toes. It makes you learn what you need to teach your students." And, she adds, "It is our responsibility to find laboratories for our students, encourage them to do research and promote grantsmanship." She praises LSAMP for its tutorial component. "The program's informal one-on-one process is interesting and very effective. So far at Hunter most of the students who have taken part have been in chemistry and physics. Now that I am so closely involved, I intend to extend LSAMP's reach into biology and biopsychology." Dr. Henderson points out that the Learning Center, which is very ably managed by LSAMP Activity Coordinator Angela Padilla, is being spiffed up with better computers and new software.

The articulation between community and senior colleges is of particular interest to Dr. Henderson. She serves as the liaison for the NIH Bridges program at LaGuardia and finds that LSAMP plays an important role in bringing two- and four-year colleges together. "It is very useful," she says, "to work with administrators from every college in CUNY. Being part of LSAMP helps me, as a senior college administrator, enter into what the two-year colleges are doing." Looking to the future, Dr. Henderson finds that the dialogue which LSAMP promotes in SMET disciplines across

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CITY COLLEGE TO START NEW BIOMEDICAL ENGINEERING DEPARTMENT AND UNDERGRADUATE DEGREE PROGRAM

On January 28, 2002 the CUNY Board of Trustees unanimously approved a proposal from the City College School of Engineering to establish a new department and undergraduate degree program in biomedical engineering.

This will be the first new department in the School of Engineering since the Department of Computer Science was established in 1968 and the first new engineering department since Chemical Engineering was established in 1937. The new department will augment the CUNY Ph.D. and City College M.S. programs in biomedical engineering that were approved by New York State in 1999 and 2000, respectively.

Funds for the creation of the new degree

program were largely obtained from \$3.7 million in external infrastructure grants that were received from the National Institutes of Health (NIH), Whitaker and Sloan Foundations and the U.S. Department of Education since the fall 2001. The largest of the grants, a \$2.2 million award from NIH for undergraduate minority education in a life science, was one of just two such awards nationally.

The new undergraduate degree program is slated to take in its first entering freshman class in the fall 2002. This first class will be limited to 25 students, of whom many will receive full tuition scholarships provided by our NIH and Whitaker grants and the CUNY Honors College.

A special event to publicize the new department and undergraduate degree program was held on March 22, 2002 in the Great Hall at City College. High school assistant principals of science and college advisors from more than 200 high schools in the metropolitan area were invited. The event informed the high schools in the region about the unusual opportunities and scholarships offered by the new program and educated high school faculty about the fields of biomedical engineering and biotechnology.

For more information about the City college's NYCBE and this special event please visit our web site at

<http://www.ccny.cuny.edu/nycbe>

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) FUNDS COOPERATIVE REMOTE SENSING SCIENCE AND TECHNOLOGY (CREST) CENTER AT CITY COLLEGE

The National Oceanic and Atmospheric Administration (NOAA) has provided a grant to fund a multidisciplinary Cooperative Remote Sensing Science and Technology (CREST) Center, with the City College of the City University of New York as the lead institution. The Center brings together, with the City College: Lehman College and Bronx Community College also of the City University of New York, Hampton University, University of Puerto Rico at Mayaguez, Bowie State University, University of Maryland Baltimore County, and Columbia University to form a broad based research team in remote sensing applied to earth,

atmospheric, environmental, and marine sciences.

Partner institutions and individual engineers and scientists will conduct complementary research in atmospheric and coastal studies, and environmental assessment. Their collaboration is enhanced by the diversity of skills of the participants and their complementary geographic locations. The Center's research and training focuses on all aspects of remote sensing including: sensor development, ground-based field measurements, satellite remote sensing, data processing and analysis, modeling, and forecasting.

The goals of the Center are to conduct research consistent with NOAA's missions of environmental assessment, prediction and environmental stewardship; and create a framework to recruit and train graduate students from underrepresented minorities for professional opportunities within NOAA.

For further information about scientific matters, contact Reza Khanbilvardi, P.E., Ph.D., Center Director at (212) 650-8009 or rk@ce.ccny.cuny.edu or Enid Lotstein Ringer, Ph.D., Center Administrator at (212) 650-5465 or ringer@ccny.cuny.edu.

CARVER SCHOLARS INITIATE PUBLIC SERVICE PROJECT WITH NYC PUBLIC SCHOOLS

On January 25, a distance learning session was held between 8th graders at Intermediate School 90 (Bronx), students from Aviation High School (Queens), and Petridies High School

(Staten Island). The distance learning session is a collaborative effort between the NYC Board of Education and the NYC's Department of Information, Technology, and Telecommunication

throughout the City of New York. Moderated by Dr. Lynn Hunter, Distance Learning Coordinator for the Board of Education, Carver Scholars Angel Calle, Pauline Datulayta, and

NEWS SUMMARIES . . .

CARVER (CON'T)

Leah Pride participated in discussions with students at the three schools on a general overview of science, individuals who made significant contributions, and major advances in science. The Carver

Scholars also incorporated into the discussion information on opportunities for minority students in science and shared their experiences as research assistants in the LSAMP program. Further development of the Carver Scholars

High School Outreach public service component is underway. It is anticipated that LSAMP Scholars and other CUNY students will participate in upcoming sessions.

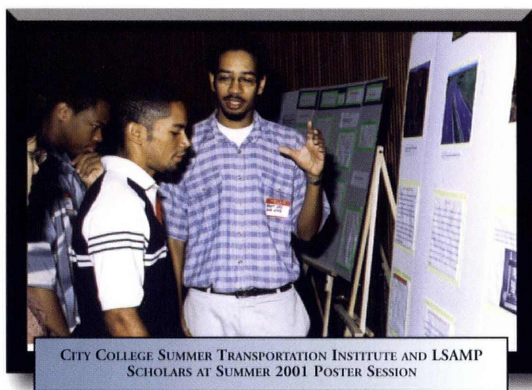
SUNY AND CUNY LEADERSHIP MEETING

LSAMP and AGEP program leaders from the City University of New York and the State University of New York met to discuss strengthening collaborations between the programs. Drs. Ferguson and Parker (Project Directors for the LSAMP and Co Project

Directors for the AGEP programs) committed to working on issues related to a legislative agenda, program funding and institutionalization in both New York systems. Dr. Frank Scalzo, former Project Administrator for the New York City Alliance, and currently Goddard Space Flight Center Educational Specialist for the tri state, area also

participated in the discussions, presenting opportunities on future funding for the 36 member SUNY/CUNY Alliances. Immediate collaborative activities in the upcoming months will include research opportunities for the LAMP participants in summer 2002, participation in upcoming conferences and sharing recruitment activities.

CITY COLLEGE SUMMER TRANSPORTATION INSTITUTE WINS NATIONAL AWARDS



On February 21, 2002, the City College Summer Transportation Institute (STI) received two of the Outstanding Achievement Awards presented nationally by the United States Department of Transportation, in recognition of its four week summer program for high school students. Centered in the CUNY Institute for Transportation Systems (CUNY-ITS), the STI at City College,

from its inception in 1996, uses the complex New York City transportation system as the 'laboratory' that exposes NYC high school students to the transportation industry. The STI has successfully maintained partnerships with NYC High Schools, the Federal Highway Administration, the New York State Department of Transportation, ITS and CUNY faculty. In summer 2001, three LSAMP Scholars attached to the CUNY-ITS served as mentors to four high school student research interns participating in the six-week intern component of the STI program. The LSAMP Scholars were in turn mentored by a Master's degree student, a Ph.D. candidate and the STI Project Director. The multi-layered mentoring relationships developed over the previous five

years, and modeled after the NASA GISS Institute on Climate and Planets, are models for integrating research and education spanning the continuum of K-12 through Ph.D. "The University's support, the participation of CUNY students, and our faculty/staff here in the institute make the program one of the gateways into science and engineering for the high school students. We are now seeing some of the participants from the ICP and the STI enrolling in CUNY", notes Dr. Neville Parker, Director of the CUNY ITS.

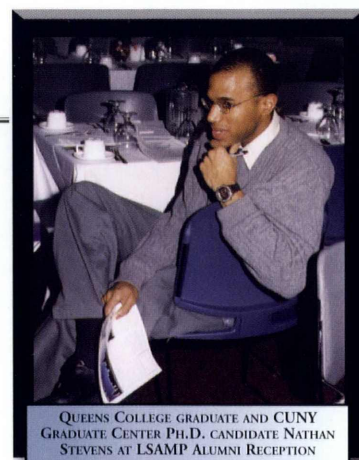
For more information contact the CUNY ITS at 212-650-8057

LSAMP HOLDS ALUMNI RECEPTION

Drs. Neville Parker and Anthony Garro (Provost, Lehman College) addressed a gathering at a reception of twenty LSAMP Alumni at the City College on February 15. LSAMP program participants from Queens, Hunter, City, Lehman, Medgar Evers, Borough of Manhattan CC, Brooklyn and College of Staten Island also attended the event. A number of the graduates were pur-

suing graduate study full time, working in Industry, and teaching in the New York City Public Schools. Reception attendees agreed to continue meeting, networking and providing input to the AMP leadership on further development of an Alumni component.

For upcoming alumni events contact the LSAMP Office at 212-650-8854



ALUMNI UPDATES *By Helena Leslie for the NYC LSAMP*

Ten years on, LSAMP has a growing corps of high-achieving alumni. The four graduates profiled below are pursuing a variety of careers, but, for each one of them, LSAMP was a springboard to success.

Dr. Stephen Providence

When New York City Alliance News caught up with Dr. Stephen Providence, he was on his way to a cluster computing workshop in California from North Carolina Agricultural and Technical State University. Dr. Providence, who served as LSAMP Activity Coordinator at Lehman College from 1993 to 2000, is on a tenure track as Assistant Professor of Computer Science in the university's College of Engineering. A product of the New York City public schools, he holds bachelor's and master's degrees from Lehman College and a doctorate from the CUNY Graduate School and University Center, all in computer science.

Dr. Providence's excitement is palpable as he talks about the challenges of his

dynamic career. He is currently involved in the cutting edge fields of bioinformatics and algorithm design and analysis. In addition to holding classes, he is writing grant proposals with colleagues at the University of North Carolina at Wilmington and North Carolina State University, traveling around the state the way he used to move between CUNY campuses. He is also designing a computational science course for the fall semester and applying for a summer fellowship at NASA and a postdoctoral fellowship at Argonne National Laboratory.

"LSAMP helped me get my doctorate, and for that I am grateful," he says. "I established the Science Learning Center at Lehman, and coordinating the LSAMP program was a demanding job and excellent experience. The tutoring and mentoring which I did were very valuable. They prepare one well for the service component of the professoriate." Dr. Providence invites CUNY colleagues to consult his website at www.cs.ncat.edu/faculty/providence and

to E-mail him at svp@ncat.edu.

Mozella Richardson

"It is not enough to be intelligent, you have to have people who believe in you," says structural engineer Mozella Richardson. A 2000 graduate of the City College School of Engineering, Ms. Richardson works for Bechtel National, Inc. in Richland, Washington where she is part of a \$4 billion project to design, build and commission a vitrification plant. The facility's purpose will be to immobilize radioactive waste, currently stored at Hanford, Washington, thereby protecting the Columbia River.

"I would not be where I am if it were not for Dr. Neville Parker and Dr. Claude Brathwaite," says Ms. Richardson. "They helped me build my confidence and never let it flag. They introduced me to opportunities in LSAMP which were transformative." One such experience was the LSAMP Teacher Preparation Initiative. Though Ms.

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PROFILES *continued from page 7*

the university is one of the most compelling arguments for the proposed CUNY Consortium for Minority Participation in SMET.

Provost David Dannenbring, Baruch College

For Dr. David Dannenbring, a doctorate in Production Systems from Columbia University proved the gateway to a career in academia, first on the faculty at the University of North Carolina, Columbia Business School and Baruch, and, beginning in 1990, in administration. Over the past decade, starting as Associate Dean for Baruch's School of Business, Dr. Dannenbring has held several key posts at the college, and in 2001 was named Provost and Vice President for Academic affairs. Dr. Dannenbring has published numerous scholarly articles and several textbooks, and for 10 years was an editor of the prestigious journal,

Management Science.

"LSAMP has made a huge difference in terms of the university as a whole," he says. Along with the Honors College, it is an important vehicle for making CUNY a coherent university rather than a collection of colleges. The cross-campus activity which LSAMP facilitates is important, and I support the program."

"Because of our heavy emphasis on business, the place where LSAMP can have the greatest impact on our campus is in computer information systems," says Dr. Dannenbring. This is the fastest growing area at the college, and one which is drawing a lot of minority students. LSAMP is about mentoring and research. In the business realm at Baruch, we have a strong tradition of drawing mentors from the New York community. The Financial Women's Association is working with some of our female students, and our Executives on

Campus program brings alumni together with faculty and students for programs which include speakers and discussions on real-world issues. The principles underlying research are universally important. My own responsibilities are primarily administrative, and I know that the best decisions are those based on clear data that show consequences."

"Baruch has a new LSAMP activity coordinator," continues Dr. Dannenbring. "He is Beresford Kirtin. He was an LSAMP student himself and should be an excellent advocate for the program on campus." Mr. Kirtin, a veteran of the LSAMP Teacher Preparation Initiative, could not be a better fit for Baruch. A senior in the CUNY BA/BS program, he is majoring in computer science and business management. His dual interests are teaching and E-commerce. He is recruiting students into the program and already has four new LSAMP research scholars to his credit.

CARVER SCHOLARS...IN THEIR OWN WORDS

By Clinton Byrd for the NYC LSAMP

Life

has not been easy for me, and my direction wasn't always clear-cut. I've had a fairly successful academic life, with a few distractions along the way. I began at the Harriet Tubman elementary school when I lived in the St. Nicholas projects in Harlem. At this time I was young and my discipline at home guided me, while environmental factors were my distractions. My living conditions at this age became the reasons for my respect of school later in life, and helped to give me the drive to succeed and create a plentiful future for myself.

When I entered High School, this sense of purpose matured as I did. I began devoting my efforts to my academic success as I excelled in high school. By the time I became a senior I had raised my average from the low 70's to mid 80's. I achieved a regent's diploma and a 3 on the AP Calculus exam. I felt mentally prepared to go to college, with the intention of learning computer programming so that I may find a career as a systems analyst.

I was accepted by my first choice on my college application, Baruch College. I was very proud of myself when I received the acceptance letter. Prior to entrance in college, I was approached by the Alliance for Minority Participation (AMP),

and I found yet another positive opportunity for my academic development. During the following summers, my commitment to this program proved to be worth the effort, since they offered introductory classes to different forms of computer programming, which I previously had no experience in since my schools never offered it as a course. This experience gave the program more value than I had previously anticipated and it helped to mold my career expectations.

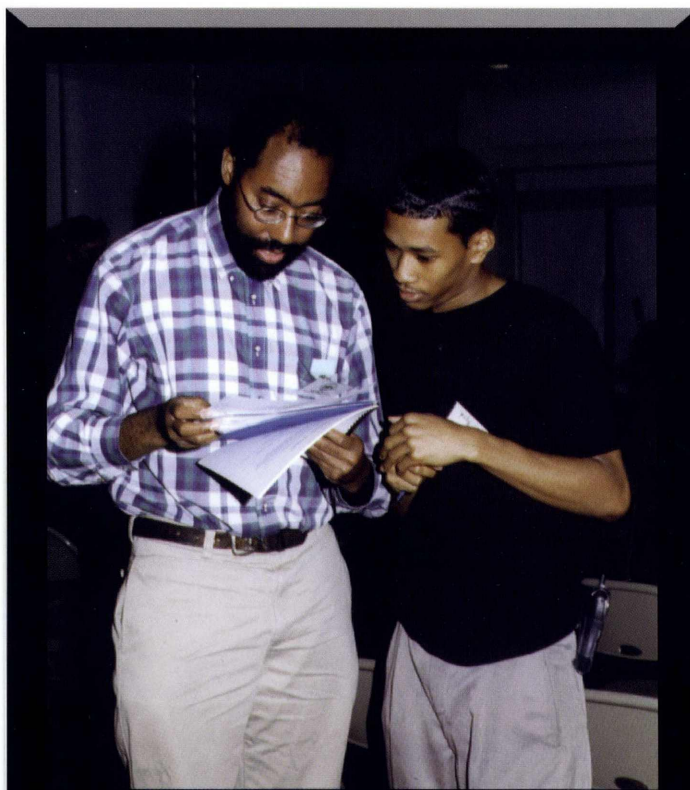
I currently find that as I learn more skills in college, it helps my work at GISS and in turn I become a more valuable and contributing part of the research team.

I was also being presented with the opportunity to work for the NASA GISS establishment on a scientific research project, as a research assistant. This experience gave me a feel of the business atmosphere, and as a part of

the ICP program, my skills of teamwork, goal orientation, and presentation have been nurtured. I currently find that as I learn more skills in college, it helps my work at GISS and in turn I become a more valuable and contributing part of the research team. This growth instills confidence in me, especially as I learn the complex topics involved in the research and communicate with others who have experience in the scientific as well as technical aspects of scientific research.

AMP gave me a steady road along which I can succeed if I devote myself. I find that the advantages of the program are worth the effort. Despite the fact that I have other pressing responsibilities, such as my newfound role as a father of a 2 year old daughter, I find that the AMP program has built my worth and has presented me with opportunities that others at my age and in my circumstances normally might not realize. The staff involved showed that they care about the success of participants of this program, and for this I respect them. I know, from experience, that if any student utilizes this valuable resource (the AMP) and commits to an academic path, he/she will find a more fulfilling and fruitful life in college and in the job market.

Clinton Byrd is a LSAMP Carver Scholar currently conducting research at NASA-Goddard Institute for Space Studies.



DR. ARMANDO HOWARD AND CLINTON BYRD DISCUSS THEIR RESEARCH PRESENTATION AT NASA ICP SUMMER CONFERENCE

ALUMNI *continued from page 5*

Richardson is not currently in the classroom, her prime motivation is to succeed so that she can be a role model for her own two children and other youngsters, especially young minority women. "Much as I love my job," she says, "I almost quit to join Teach for America, but I decided that I could do more for young people by being as successful an engineer as possible."

Ms. Richardson takes every opportunity to work with children. During National Engineering Week, she spoke at a middle school and drew children at the local mall to hear about her profession. She is working to charter an Alumni (Technical Professionals) chapter of the National Society of Black Engineers (NSBE) in her area. The purpose is to develop a cohort of adult mentors for an NSBE Jr. Pre-college Initiative which will encourage Black and Latino children from the Tri-Cities to study math and

science. "Dr. Parker and Dr. Brathwaite made all the difference to my career and to me as a person," Ms. Richardson concludes. "I want to do the same for others, and some day I would like to move back east so that I can give back to City College."

Jason Marrero

Jason Marrero is a true LSAMP veteran. He was a research scholar while an undergraduate in physics at Lehman and served as the program's activity coordinator at Queensborough from 1998 to 1999. After Lehman, Mr. Marrero earned his master's in physics at Hunter where he studied with Dr. Steve Greenbaum. He was two years into his doctorate at the CUNY Graduate Center when he made an important discovery. He realized that doing research was confirming his interest in science, but that communicating his findings was what he found most

satisfying. "What I liked best," he says, "was the interactive part, such as presenting my research at national conferences."

Mr. Marrero determined that he really wanted to be in the classroom, sharing the excitement of science with young students. Today, he is teaching eighth-grade earth science at MS 180 in the Bronx. "This is the job I have been looking for my whole career. I love being one-on-one with the students, and this is a great age. They still have some of the earnestness of childhood, but can already handle complex concepts."

Mr. Marrero credits his stint as an LSAMP activity coordinator with preparing him for the classroom. "LSAMP gave me great contact with a lot of people of different ability levels. I did mentoring and tutoring. The job showed me that I could be a teacher."

**New York City Louis Stokes Alliance**

The City College of New York
Convent Avenue and 138th Street
Building Y - Room 313A
New York, NY 10031