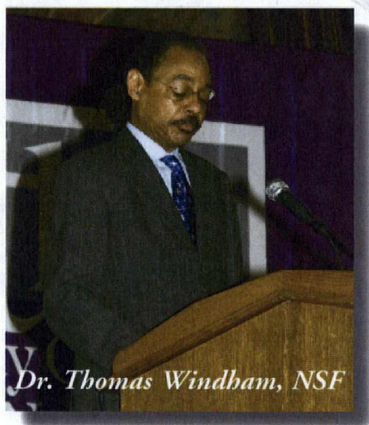




new york city alliance NEWS

Broadening Participation

(Highlights of Keynote Address Transitions 2005, City College April 15)



Dr. Thomas Windbam, NSF

The National Science Foundation has four overarching strategic outcome goals- People, Ideas, Tools and Organization Excellence. Each is directed toward and responsive to the needs of the nation. Several performance indicators have been identified for each strategic goal. Key indicators include:

- 1) Promoting greater diversity in the science and engineering workforce through increased participation of underrepresented groups and institutions in all NSF programs and activities (People).
- 2) Enabling people who work at the forefront of discovery to make important and significant

research, and the power of critical mass, i.e., 12 or more LSAMP students per Bridge to the Doctorate Center.

To the University

The university's job is to practice, demonstrate and disseminate effective strategies for recruiting, retaining, educating and training well-informed, highly competitive PhDs. They must have benefited from appropriate research experiences; robust coursework; individual and group mentoring; workshops on scientific writing, communication strategies and research proposal writing; and travel to student and professional conferences to network and present original research.

To pursue the frontiers of science and engineering we must discard outmoded structures and concepts, try new approaches, and take appropriate risks.

Education has always been vital to the success of individuals, families, communities and nations. And now, more than ever, our nation's future depends more and more on the quality of our new ideas, the vitality of our intellectual discourse, and the innovative use of new knowledge generated through our research and education enterprise. This is the bedrock that underpins our prospects for economic prosperity and well being.

NEW YORK CITY ALLIANCE

A. James Hicks Program Director

CUNY CENTRAL ADMINISTRATION

Matthew Goldstein Chancellor

PROJECT DIRECTORS

Neville Parker City
Leon Johnson Medgar Evers
Louise Squitieri Bronx CC

PROJECT ADMINISTRATOR

Claude Brathwaite City

SENIOR ADMINISTRATIVE ASSISTANT

Jeanette Schnabel City

ADMINISTRATIVE ASSISTANT

Maria Colabella City

STEERING COMMITTEE

Dennis Slavin Baruch
Sadie Bragg BMCC
Jason Finkelstein Bronx CC
William Tramontano Brooklyn
Joe Barba City
Gail Simmons College of Staten Island
Donald Robotham CUNY Graduate School
Carlos Molina Hostos CC
Robert Greenberg Hunter
Jose Morin John Jay
Stuart Suss Kingsborough CC
Marcia Caton LaGuardia CC
Robin Kunstler Lehman
Mohsin Patwary Medgar Evers
Robin Bargar NYC College of Tech.
Thomas Strekas Queens
Paul Marchese Queensborough CC
Panayiotis Meleties York

To the Bridge Scholars

Minority students must participate in rigorous, disciplinary study and interdisciplinary training that facilitates effectively transitioning into the larger scientific community. You must be proactive; your behavior must be intentional. It is highly important that you carefully choose your research area, thoroughly investigate the programs to which you are applying, and obtain experiences in labs where you are being mentored by Principal Investigators who are a part of a larger network of researchers, such as in a National Laboratory or the National Academies of Sciences or Engineering.

To the Nation

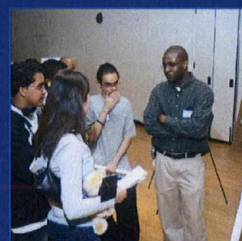
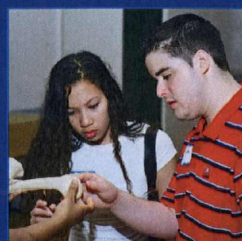
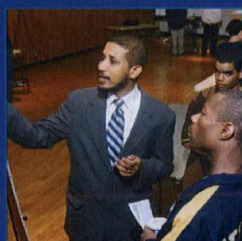
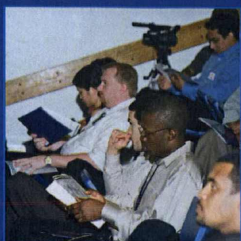
We must constantly be reminded that any American left behind is a signal that many Americans, families and communities are being left behind and that our nation is sowing the seeds for losing ground in the international market of ideas. These lost ideas will directly impede the progress of American ingenuity, science and technology and slow if not stagnate our national health, prosperity, welfare and defense. I am talking about the national need to extend opportunities for individuals, particularly individuals from underrepresented groups and underserved communities but, also ways to create expanded, reasonable opportunities for the United States to nurture and sustain its competitive edge and economic prosperity.

Doctoral Parity Ratios

My colleagues and I at the University of Colorado at Boulder observed that from 1985-2003, the percentages of doctoral degrees awarded to non-American students from abroad increased from roughly 27% to about 45% for the natural sciences and engineering (NS&E). Roughly 7,500 of the 17,500 doctoral NS&E degrees were awarded to students from abroad. Of the total 17,500 doctoral NS&E degrees awarded in 2002, about 750 were awarded to Americans from underrepresented, underserved populations - notably African American, American Indian and Chicano-Hispanic-Latino. The all time high was in 1998 and 1999 when 784 NS&E PhDs were awarded to underrepresented minorities (URMs).

While the numbers are low, we did note dramatic increases in PhD NS&E degrees awarded to URMs between 1985 and 2000, from approximately 300 in 1985 to 751 in 2002. We found that despite these dramatic increases in NS&E PhDs awarded, URMs still earn less than half as many NS&E bachelor's degrees as whites and the fraction of URMs with NS&E bachelor's degrees who earn PhDs is 70% the

NEW YORK CITY ALLIANCE



corresponding number for whites. These differences have changed little over the past 20 years.

This is unacceptable! Although broadening participation in science and engineering is by no means a new objective, circumstances of our times have given it new salience that strengthens year by year. A heightened sense of urgency now accompanies the task of adopting fresh attitudes and behaviors, and identifying and implementing new learning, teaching and institutional strategies that will help us undo the harmful disequilibrium that is our legacy of institutional segregation, racism and apartheid. The portals of science and engineering must be opened to the full diversity that is the face of America.

In our research, we found that common data presentations did not easily inform vigorous, reasonable policy. Our method documents the underrepresentation of URMs with whites, the “majority” group, on a per population basis using **bachelor degree** and **doctoral degree parity ratios**.

The **bachelor degree parity ratio** is 100% when URMs receive the same number of S&E bachelor degrees per population of 24 year-olds, as do whites. Age 24 represents the average age of college completion.

The **bachelor degree parity ratio** is increasing in most fields, but is still less than 60% in all fields. In 2001 the ratio was 43% for natural science and engineering fields. In other words, on a per population basis, URMs received 43% as many NS&E bachelor’s degrees as did whites in 2001.

Our findings demonstrate that slow increases in the bachelor’s parity ratio are influenced by demographic changes among 24 year-olds. The population of 24 year-old whites dropped precipitously in the 1980’s and 90’s, a decrease of about one million or 31%. During this period, the population of URMs remained relatively stable. Over the next four decades we expect the population of whites to continue its decrease, though less dramatically, and the population of URMs to increase dramatically.

We developed the **doctoral degree parity ratio** to answer the question, “For a particular group, what percentage of bachelor’s degree recipients goes on to receive PhD’s?” We divided the number of doctoral degrees conferred by the number of bachelor’s degrees conferred eight years earlier because eight years best represents the average time from bachelor to PhD degree completion. We recognize that this statistic does not exactly answer the question since some people change fields for their doctorate however, it is a close approximation. When the doctoral parity ratio is 1.0, the percentages of URM and white bachelor degree recipients that go on to receive a PhD is equal.

From 1985 - 2003, the NS&E doctoral parity ratio increased from 50% to 63%. In other words, among bachelor’s degree recipients, 63% as many URMs go on to receive PhDs as do their white counterparts. These analyses allow us to recognize a double –filtration system along the path to receiving the PhD. On a per population basis, fewer URMs earn bachelor’s degrees, and fewer URM bachelor degree recipients earn PhDs. This is not the case in social science and psychology. There the bachelor’s parity ratio is 55-60 per cent and the doctoral parity ratio is near 100 percent. Thus, while we can note some progress, we can see more clearly that promoting equity calls for our continued attention to progress at the undergraduate level, the transition from a bachelor’s degree to graduate school, and the graduate school experience.

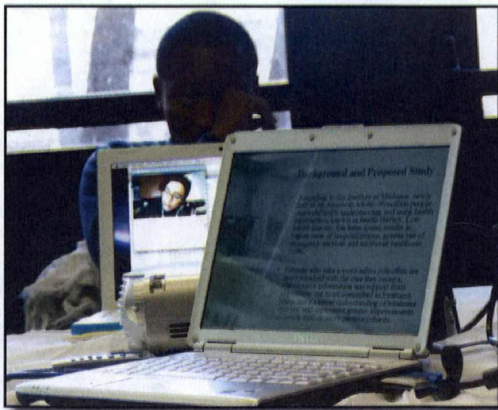
NEW YORK CITY ALLIANCE



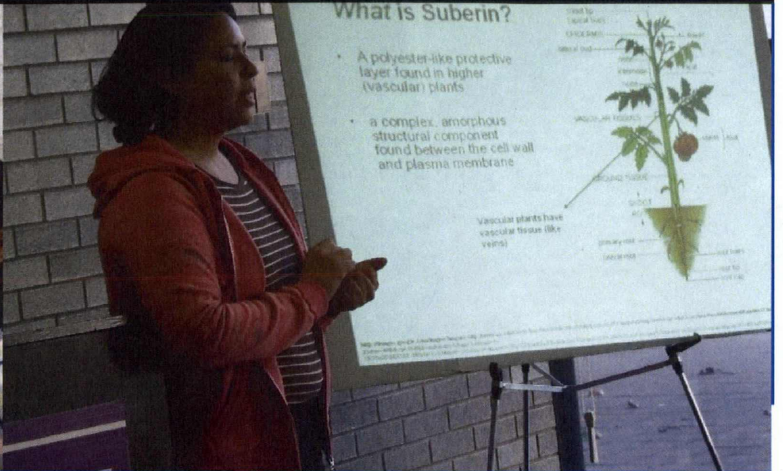
Bridge to the Doctorate Cohorts 1, 2, 3, 4 and 5

A series of activities were designed and implemented to ensure the transition to doctoral programs. These activities serve to create a learning community of scholars across the campuses given the fact that the participating students take courses and conduct research at different campuses. Senior LSAMP Scholars are allowed to participate in Bridge activities and are encouraged to apply directly to doctoral programs nationally and to compete for Graduate Research fellowships. Bridge scholars act as peer mentors and role models to undergraduate LSAMP Scholars.

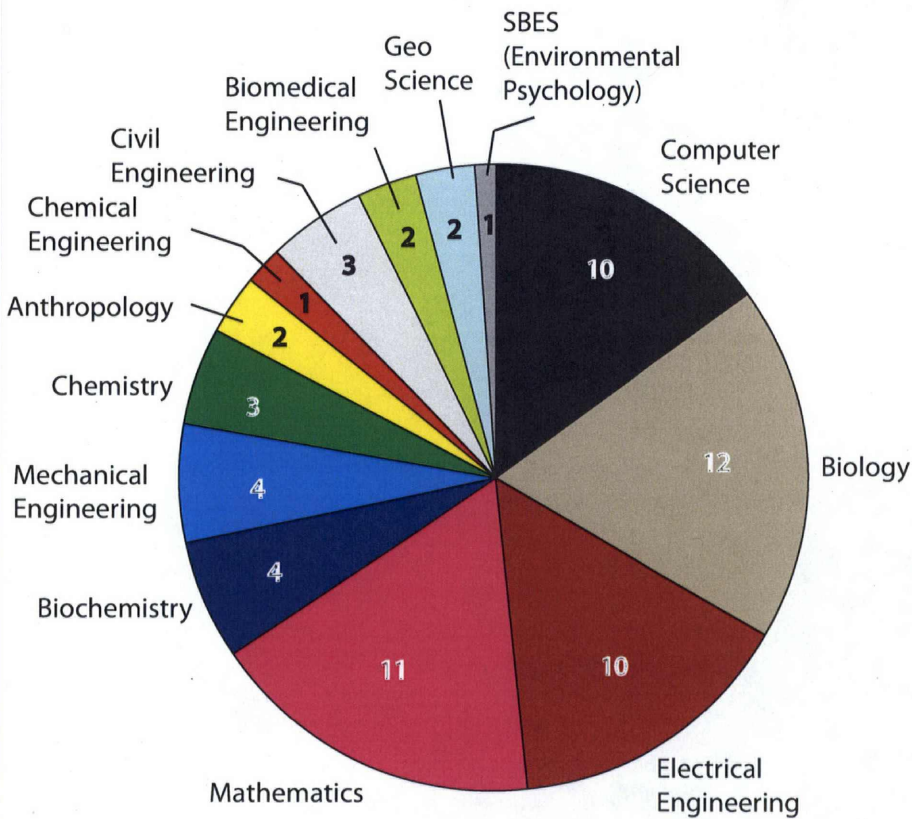
Seventeen Bridge Scholars who elected to pursue the Doctoral degree in CUNY, have been awarded support by the Graduate Center and their respective home campuses. Bridge students on acceptance to the doctoral program at the Graduate Center are eligible for funding by the AGEP program, and other NSF funded programs such as CREST, GK-12, and IGERT programs. In addition, the LSAMP Office works closely with Bridge Mentors, CUNY Research Institutes and Centers to provide competitive support packages via the LSAMP Graduate Research Assistantship award. The Office of Educational Opportunity and Diversity Programs (OEODP) offers a number of awards to Bridge Scholars beyond the first two years of the Bridge award.



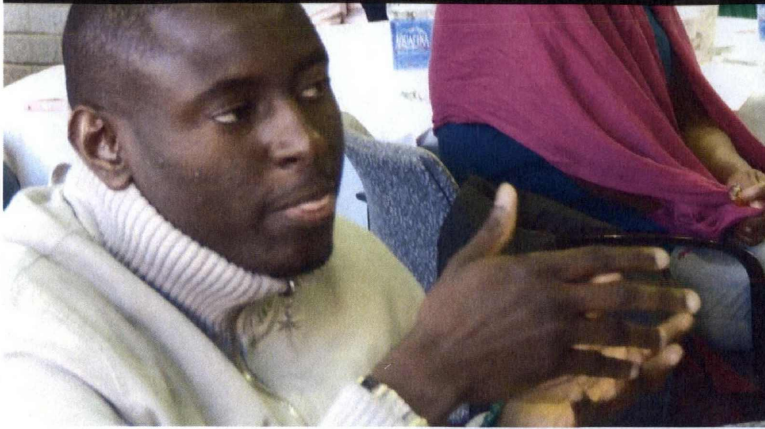
NEW YORK CITY ALLIANCE



NYC LSAMP Bridge Scholars by Discipline

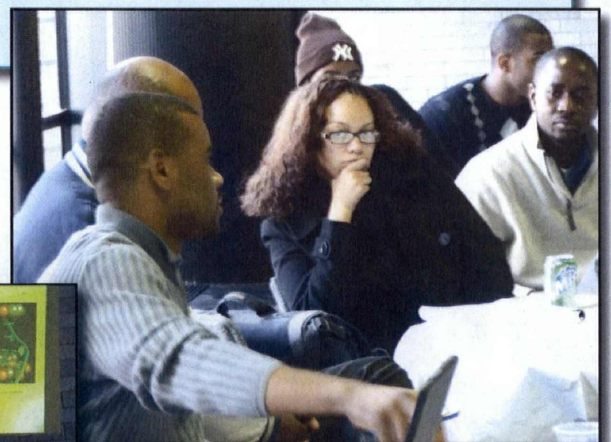
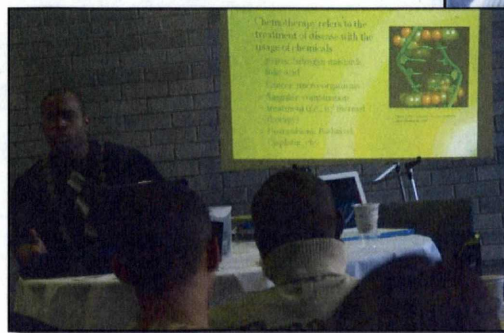


NEW YORK CITY ALLIANCE



Major Outcomes: Bridge to the Doctorate Cohorts 1, 2, 3, 4 and 5

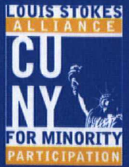
- Thirty four (52 %) Bridge to the Doctorate Scholars have gained acceptances to Doctoral programs
- Seventeen (26 %) BD Scholars are currently enrolled in MS programs
- Six (9 %) are currently seniors completing the Baccalaureate Degrees
- Three (5 %) completed MS degrees and did not enroll in Doctoral programs as of 9/2008
- Four (6 %) completed the undergraduate degree and have not yet enrolled in graduate school
- Seventeen (17) Bridge Scholars successfully matriculated into doctoral programs at the Graduate Center
- Twelve (16) Bridge Scholars matriculated into Doctoral Programs outside of CUNY
- Three Bridge Scholars from Cohort 5 have gained acceptances to Doctoral programs
- Twelve Bridge to the Doctorate Scholars are currently receiving/received AGEP support to pursue doctoral study
- Three Bridge Scholars have successfully obtained NSF Graduate Research Fellowship Awards
- Thirty four Bridge Scholars started their studies at a Community College or graduated from a Comprehensive College of CUNY
- Sixteen Bridge to the Doctorate Scholars started studies at a Community College.
- Over forty faculty members participated as Bridge to the Doctorate mentors
- Seven Bridge Mentors are directors of research Institutes or Centers at CUNY



NEW YORK CITY ALLIANCE



A unique and distinguished intellectual partnership, The Graduate Center is the doctorate-granting institution for The City University of New York (CUNY). Here, 4,000 students and 1,600 faculty join in the shared enterprise of exploring and expanding the boundaries of knowledge within 32 doctoral programs in the humanities, social sciences and sciences.



Bridge to the Doctorate Coordinator - Claude Brathwaite - 212-650-8850 • cbrathwaite@ccny.cuny.edu



Dr. Neville Parker, NYC LSAMP PI,
City College • 138th & Convent Ave., Marshak J14, NY, NY
10031 212-650-8854
ampcc@ccny.cuny.edu

"The Bridge to the Doctorate program will provide the necessary incentive to enable the New York City LSAMP program to build the critical mass needed to remain catalytic, recruiting and retaining top LSAMP Research Scholar graduates to pursue graduate studies through to completion of the Ph.D."

There are more than forty (40) chartered CUNY Institutes or Centers conducting STEM research, with six (6) led by minority faculty members. Bridge to the Doctorate participants will benefit from a rich research environment with superb training facilities, access to distinguished research-active STEM faculty, and opportunities to conduct research at Brookhaven National Labs.

Cohort I: 2002-2003 Bridge to the Doctorate Scholars

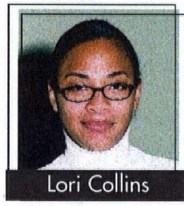


Eva Atia

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

Graduate Major
Comp.Sci.
College of Staten Is.

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

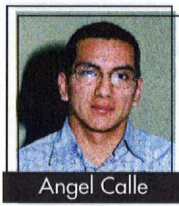


Lori Collins

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

Graduate Major Computer
and Information Science
Brooklyn College

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

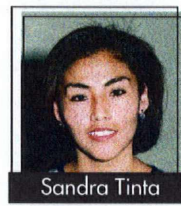


Angel Calle

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

Graduate Major
Electrical Engineering
City College

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



Sandra Tinta

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

Graduate Major
Comp.Sci.
Lehman College

Career Goal:
Obtain a PhD in software
engineering, gain
experience in an Industrial
setting and utilize it in an
Academic setting.

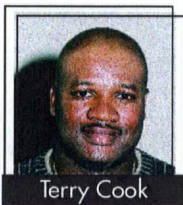


Leah Pride

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

Graduate Major
Biochemistry
City College

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



Terry Cook

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

Graduate Major
Comp.Sci.
Lehman College

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

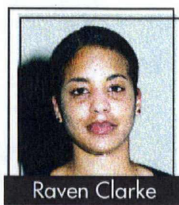


Aria Bowe

B.S. in Biology
Queens College '04

Graduate Major Biology
Queens

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



Raven Clarke

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

Graduate Major
Mathematics

Career Goal:
Eventually I would like to
become a Professor

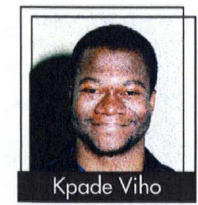


Fouad Nasraddine

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

Graduate Major Earth &
Atmospheric Science
City College

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



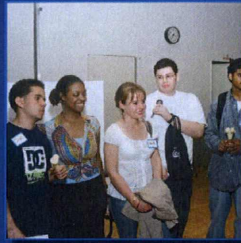
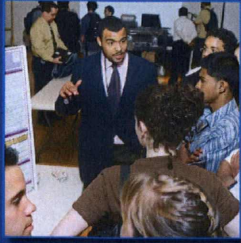
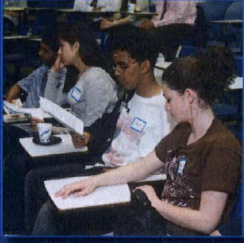
Kpade Viho

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

Graduate Major Computer
Info. Sys. Baruch

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

NEW YORK CITY ALLIANCE



Cohort II: 2003-2004 Bridge to the Doctorate Scholars



B.E. in Electrical Engineering
City College '04

Graduate Major
Electrical Engineering

Career Goal:
My ultimate goal is to become a college professor and utilize my expertise and position to encourage more minorities, especially women to pursue higher degrees in engineering.

Oluwatosin
Ogunwuyi

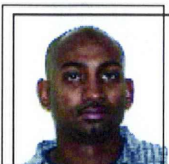


B.A. in Chemistry & Biology
Cheney State '04

Graduate Major
Biomedical Engineering

Career Goal:
I will be pursuing a doctoral degree in the area of Biomedical Engineering.

Richard Able

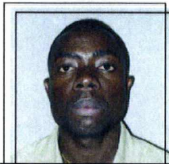


B.E. Electrical Engineering
City College '04

Graduate Major
Electrical Engineering

Career Goal:
Principal Scientist or Design Engineer for analog and radio frequency circuits.

Evelyn Mark



B.E. Mechanical Engineering
Hostos CC/City College '05

Graduate Major
Mechanical Engineering

Career Goal:
Continue research in computational Fluid Dynamics.

Jean-Pierre
Njante



B.A. Environmental Studies
Borough of Manhattan CC/Hunter College '05

Graduate Major
Environmental Studies

Career Goal:
Complete my degree in Environmental Engineering focusing on Environmental Fluid Dynamics and Water Resources

Ivan Ramirez



B.S. Mathematics
Megar Evers College '05

Graduate Major
Mathematics

Career Goal:
Obtain degree in Applied Mathematics focusing on Computer Science and other fields.

Ruben Sylvain



B.E. Electrical Engineering
Lehman College/City College '04

Graduate Major
Electrical Engineering

Career Goal:
Obtain a Ph.D. degree in electrical engineering which will enable me to be good candidate for a broad range of careers.

Jonathan
Cardenas



B.A. Anthropology
Lehman College '04

Graduate Major
Physical Anthropology

Career Goal:
To teach and conduct research in an academic setting such as a university with close connections to a museum.

Jennifer Ross



B.E. Electrical Engineering
North Carolina A&T '04

Graduate Major
Biomedical Engineering

Career Goal:
I am interested in obtaining an MD/Ph.D. to which will allow me to conduct engineering research and applied medical science.

Karla Wyatt



B.S. Chemistry
College of Staten Island '05

Graduate Major
Chemistry

Career Goal:
Pursue a Doctoral degree in the field of Chemistry or Biochemistry.

Adriana Vela



B.S. Biology
Bronx CC/Lehman College '05

Graduate Major
Biology

Career Goal:
A career in Biomedical Research in the field of Neuroscience.

JoAnn Caban



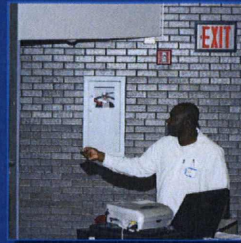
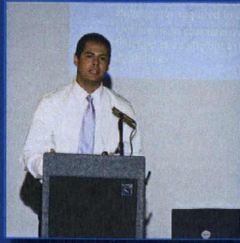
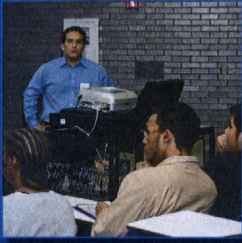
B.E. Civil Engineering
City College '05

Graduate Major
Civil Engineering

Career Goal:
Obtaining a Doctorate in Civil Engineering with application and focus on Industry.

Brent
Lee Shue Ling

NEW YORK CITY ALLIANCE



Cohort III: 2004-2005 Bridge to the Doctorate Scholars

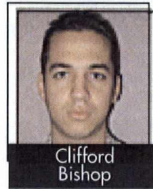


B.A. in Anthropology
Lehman College '05

Graduate Major: Archaeology

Career Goal: I am interested in pursuing a Doctorate in Archaeology.

Roxanne Rivera



B.S. Computer Science
City College '06

Graduate Major: Computer Science

Career Goal: A career in the IT industry working in Database Systems and Software Engineering.

Clifford Bishop



B.S. Biochemistry
City College '06

Graduate Major: Biochemistry

Career Goal: Continue my professional development as a scientist by obtaining a Doctoral degree in Biochemistry.

Silmilly Toribio



B.S. Computer Science
City College '06

Graduate Major: Computer Science

Career Goal: Obtain a Doctoral degree in Computer Science, with a specialization in Database Systems.

Jose Perez



B.S. Biology
Medgar Evers College '06

Graduate Major: Environmental Science

Career Goal: Gain acceptance to a Doctoral program and obtain a degree in Environmental Science.

Inefta Reid

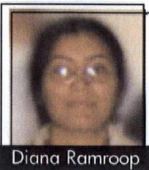


B.S. Computer Science
Lehman College '06

Graduate Major: Computer Science

Career Goal: Obtain a Doctoral degree in Computer Science and teach at the college level.

Katherine Shirley

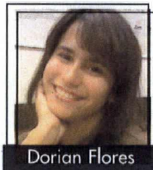


B.S. Biology
Queens College '06

Graduate Major: Biology

Career Goal: Attend graduate school and further my studies in Biology. I am currently interested in the fields of Conservation Biology and Ecology.

Diana Ramroop



B.S. Geology
York College '06

Graduate Major: Geology

Career Goal: Complete graduate school and pursue a position in an organization such as the USGS.

Dorian Flores

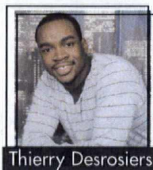


B.S. Environmental Studies
College of Staten Island '05

Graduate Major: Biology

Career Goal: After obtaining a Doctoral degree, I hope to secure a position with a University/Hospital.

Jonathan Blaize

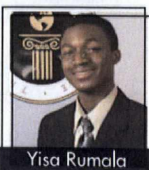


B.S. Mathematics
NYC College of Technology '06

Graduate Major: Mathematics

Career Goal: Earn a Doctoral degree in Applied Mathematics, and work primarily in an Industrial setting.

Thierry Desrosiers

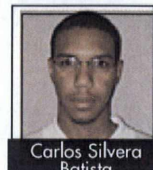


B.S. Physics
York College '06

Graduate Major: Physics

Career Goal: My goal is to obtain a Doctoral degree in the field of Electrical Engineering or Applied Physics.

Yisa Rumala



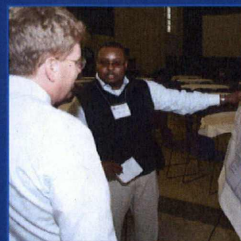
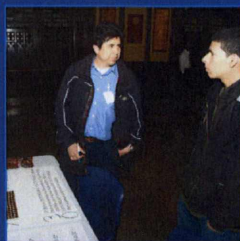
B.E. Chemical Engineering
City College '06

Graduate Major: Chemical Engineering

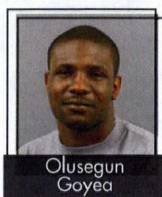
Career Goal: Contribute to the education of the next generation by becoming a Professor.

Carlos Silvera Batista

NEW YORK CITY ALLIANCE



Cohort IV: 2005-2006 Bridge to the Doctorate Scholars

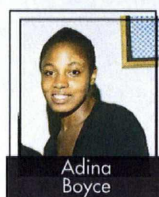


B.E. in Mechanical Engineering
Borough of Manhattan CC/City College '03

Graduate Major: Mechanical Engineering

Career Goal: I am interested in pursuing a Doctoral Degree in Aerospace Engineering

Olusegun
Goyea

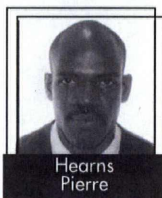


B.E. Civil Engineering
City College '08

Graduate Major: Civil Engineering

Career Goal: Obtain a graduate degree and work internationally.

Adina
Boyce



B.S. Mathematics
Medgar Evers College '07

Graduate Major: Mathematics

Career Goal: A career working in Environmental Science and Engineering.

Hearn
Pierre

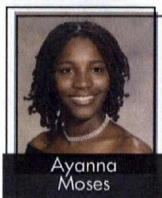


B.S. Mathematics
Medgar Evers College '08

Graduate Major: Mathematics

Career Goal: To become a College Professor.

Reginald
Dorcelly

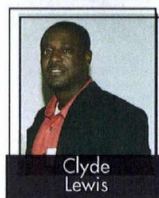


B.S. Math/Computer Science
Medgar Evers College '04

Graduate Major: Chemistry

Career Goal: Obtain a Doctoral Degree in the area of Material Science.

Ayanna
Moses



B.S. Mathematics
Bronx CC/Lehman College '08

Graduate Major: Mathematics

Career Goal: Obtain a Doctoral Degree in Mathematics.

Clyde
Lewis



B.A. Anthropology
Hunter College '06

Graduate Major: Biology

Career Goal: Obtain a Doctoral Degree in Biological Anthropology.

Alicia
Orellana

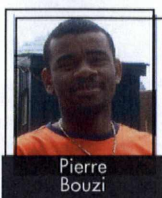


B.S. Mathematics
Bronx CC/Lehman College '08

Graduate Major: Mathematics

Career Goal: Obtain a Doctoral Degree in Mathematics.

Erica
Fells



B.E. Electrical Engineering
City College '08

Graduate Major: Electrical Engineering

Career Goal: Obtain a Doctoral Degree in Electrical Engineering.

Pierre
Bouzi

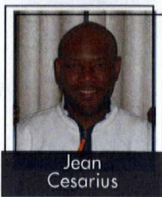


B.S. Biochemistry
College of Staten Island '07

Graduate Major: Biochemistry

Career Goal: Obtain a Doctoral Degree in Biochemistry

Francoise
Sidime

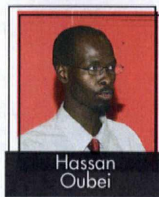


B.S. Mathematics
York College '07

Graduate Major: Mathematics

Career Goal: Obtain a Doctoral Degree in Mathematics and become a Math Professor.

Jean
Cesarius



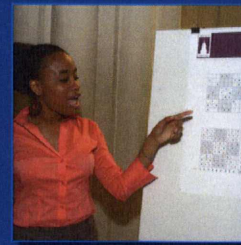
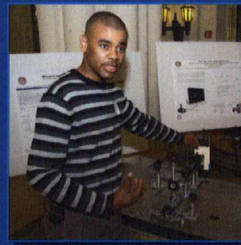
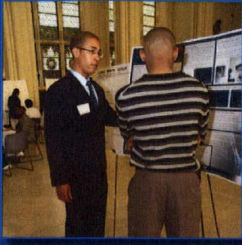
B.E. Electrical Engineering
York College '07

Graduate Major: Chemical Engineering

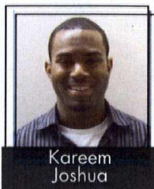
Career Goal: To become a College Professor.

Hassan
Oubei

NEW YORK CITY ALLIANCE



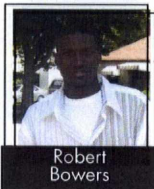
Cohort V: 2007-2008 Bridge to the Doctorate Scholars



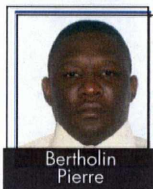
B.E. in Biomedical Engineering
City College '07
Graduate Major: Biomedical Engineering
Career Goal: Obtain a Ph.D. and conduct research in a government agency such as the NIH.



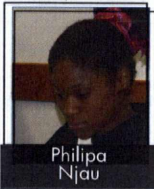
B.E. Electrical Engineering
City College '08
Graduate Major: Electrical Engineering
Career Goal: Obtain a Ph.D. in Electrical Engineering.



B.S. Chemistry
University of Houston '07
Graduate Major: Chemistry
Career Goal: Become a College Professor .



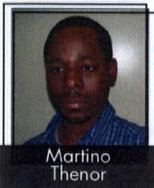
B.S. Biology
Medgar Evers College '07
Graduate Major: Biology
Career Goal: Obtain a Ph.D. and continue working as a professor at an academic institution.



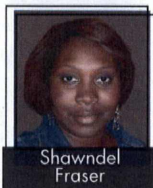
B.S. Chemistry
City College '07
Graduate Major: Chemistry
Career Goal: Career in Research and Teaching.



B.A. Geography
Hunter College '08
Graduate Major: Geography
Career Goal: To be an educator at the high school or college level in earth science.



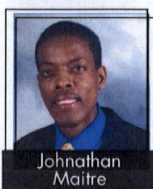
B.S. Computer Science
NYC College of Technology '07
Graduate Major: Computer Info Systems
Career Goal: Obtain a Ph.D., and work in the field of computer security.



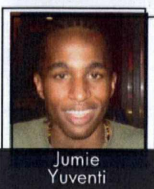
B.S. Psychology
Brooklyn College '07
Graduate Major: Environmental Psychology
Career Goal: Complete a Ph.D. teach and conduct research at the college level.



B.A. Computer Science
Hunter College '04
Graduate Major: Urban Education/Technology
Career Goal: Career in Computer Science and Technology Education, Design/ Development.



B.S. Mathematics
Medgar Evers College '07
Graduate Major: Mathematics
Career Goal: Obtain a doctoral degree in the mathematical sciences and teach at the College level.

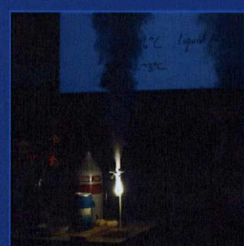
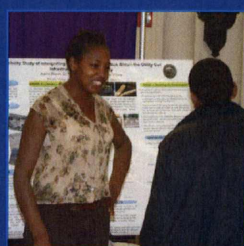
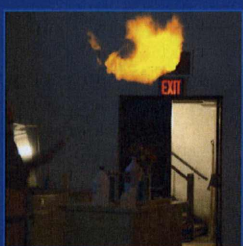
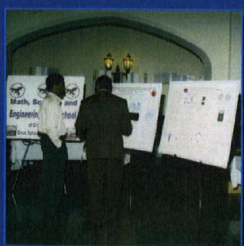
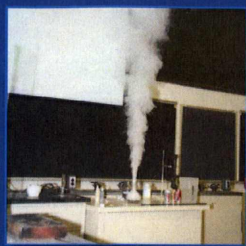


B.E. Electrical Engineering
City College '08
Graduate Major: Electrical Engineering
Career Goal: Obtain a Ph.D. in Electrical Engineering.

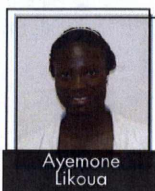


B.S. Mathematics/Biology
Medgar Evers College '08
Graduate Major: Biomedical Engineering
Career Goal: Become a Biomedical Engineer/Research Scientist.

NEW YORK CITY ALLIANCE



Cohort VI: 2008-2009 Bridge to the Doctorate Scholars



B.S. in Biology
Medgar Evers College '07

Graduate Major: Biology

Career Goal: Ultimate desire is to attend graduate school and complete a Ph.D. degree in Molecular Biotechnology.

Ayemone
Likoua



B.S. Biochemistry
Cheyney State University '04

Graduate Major: Biochemistry

Career Goal: I hope to focus on Education and Research in Biochemistry.

Ryan
Willis



B.S. Geology
York College '08

Graduate Major: Geology

Career Goal: Obtain a Doctoral degree in Geology and combine my love for Teaching and Geology Research.

Charren
Cabaroy

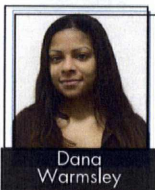


B.S. Biology
Medgar Evers College '09

Graduate Major: Biology

Career Goal: Attend graduate school and pursue a Doctoral degree in Biology.

Kiyva
Davis

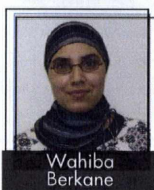


B.A. Mathematics
Hunter College '08

Graduate Major: Mathematics

Career Goal: My ultimate goal is to become a Mathematics Professor and combine my interests in Economics, Black Studies and Mathematics. I hope to focus on the Achievement Gap.

Dana
Warsley



B.A. Mathematics
Hunter College '07

Graduate Major: Mathematics

Career Goal: After completing the joint BA/MA degree at Hunter I hope to complete my Ph.D. degree and add something significant to the field of Science.

Wahiba
Berkane



B.S. Biology
Queens College '08

Graduate Major: Biology

Career Goal: Obtain a joint DDS/Ph.D. degree and focus on oral diseases.

Evelyn
Teran



B.S. Physics/Science Education
Chicago State University '05

Graduate Major: Physics/Science Education

Career Goal: With a long interest in Education, I hope to complete my doctoral degree and continue conducting Research and Teaching.

Geraldine
Cochran

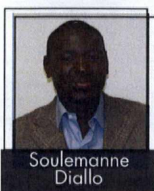


B.S. Biochemistry
College of Staten Island '08

Graduate Major: Biochemistry

Career Goal: Immediate plans include completing a graduate degree in Biochemistry and obtaining a MD/Ph.D. degree.

Kristina
Foulis

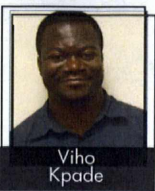


B.S. Neuroscience
College of Staten Island '08

Graduate Major: Neuroscience

Career Goal: My hope is to enter the Ph.D. program in Neuroscience and continue working as a researcher on completion of the degree.

Soulemmane
Diallo

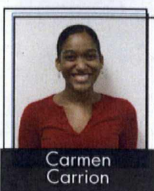


B.A. Computer Information Systems
Baruch College '04

Graduate Major: Computer Information Systems

Career Goal: Pursue my doctorate degree, and with all my energy and resources make a difference in this world.

Viho
Kpade



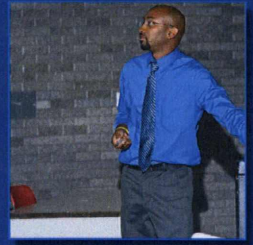
B.S. Neuroscience/Psychology
Brooklyn College '08

Graduate Major: Neuroscience/Psychology

Career Goal: With perseverance and skills learned eventually obtain a doctoral degree in Neuroscience/Psychology.

Carmen
Carrion

NEW YORK CITY ALLIANCE



Sandra Tinta

Sandra Tinta, a Bridge to the Doctorate scholar at Lehman College, is working on achieving her master's degree in Computer Science. She graduated Cum Laude in 2002 with a Bachelor of Science degree in computer science from the same institution. As an undergraduate at Lehman College, she realized the importance of applying the skills she garnered in the classroom to the real world. Sandra was selected, based on her academic merit, for an internship at IBM's T. J. Watson Research Center.

While at the T.J. Watson Research Center, Sandra took part in many diverse projects that gave her "great insight about software development." She worked on web-based application development where she was able to make practical use of the skills she acquired as a student.

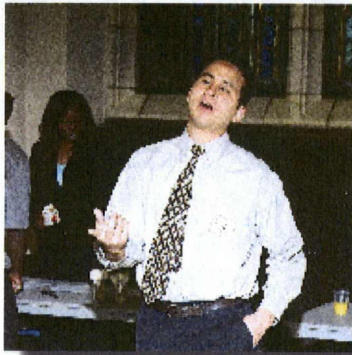
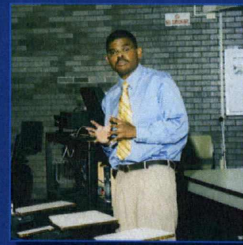
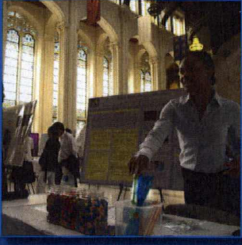
"I learned that some of the most important aspects of a project are the methodologies used for the design [of the project], and the technology used for its development," she stated about her internship experience. "This experience provided an opportunity for me to understand the importance of those issues when planning a project."

Sandra is continuing her research in computer science under the guidance of her mentor Professor Nancy Griffeth, of Lehman College and the Graduate Center of CUNY. Sandra and her mentor meet regularly to discuss problems or employ new procedural initiatives to improve and expand their research involving computer network testing. "Network testing is a crucial step before a computer network system is deployed. Ensuring the proper functionality of a computer network under all circumstances is a hard task to accomplish, because the behavior of a computer network is dynamic and depends on states and interaction of different network components," stated Sandra.

Sandra Tinta is ready to further her education at the doctoral level, and she has already gained acceptance into the Computer Science program at Stony Brook University. Her academic focus is on "becoming a well-rounded and well-grounded researcher" in the field of computer science. She is proud of her many accomplishments and has been awarded the Turner fellowship at Stony Brook, which will fund her education and "make it possible to pursue a Ph.D. without financial worries." Her tireless research efforts on computer networks will ensure that Sandra nets from all of her works.



NEW YORK CITY ALLIANCE



Fouad Nasraddine

Water is essential to life on planet Earth; moreover, it is the most abundant molecule found in living cells, accounting for approximately 70 to 90 percent of the mass of each cell. All living organisms are dependent upon water for their continued existence, so it remains a vital concern of environmental scientists to preserve and protect the fresh and potable water supply. Maintaining the potable water supply is an arduous task, due in most part to environmental pollution, weathering of geological formations, anthropogenic activities and seawater intrusion.

The necessity for having potable drinking water was recognized by Congress in 1974 when the Safe Drinking Water Act was passed, and that act is regulated by the provisions set by the Environmental Protection Agency. The purpose of the act is to ensure that the public's drinking water supply is safe.



Despite efforts to safeguard the water supply, halide ions such as chloride and bromide, as well as nitrogenous compounds such as ammonia, are becoming more prevalent. These different elements have been found to be ubiquitous in fresh water supplies all throughout the United States and may be mutagenic (causing mutations) as well as carcinogenic (causing cancer).

Fouad Nasraddine, a Bridge to the Doctorate student at City College, under the tutelage of his mentor Dr. Vasil Diyamandoglu, is researching Ammonia photo-oxidation of water, which is a method of reducing the amount of ammonia in drinking water by using Ultraviolet (UV) irradiation from low pressure mercury lamps.



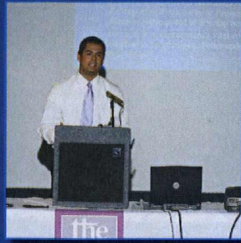
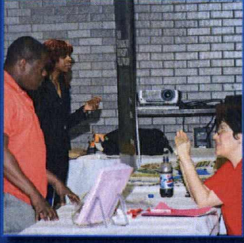
"I receive continuous guidance from my mentor [Professor Diyamandoglu] through continuous consultations regarding experiments to be conducted and results interpretation. We also discuss the short- and long-term goals of the project and our expectations," stated Fouad when asked about the expertise and guidance provided by his mentor.

Fouad emigrated from Casablanca, Morocco in 1996, and within the next year, was enrolled at LaGuardia Community College. He received his A.S. degree in Liberal Arts Mathematics and Science and went on to pursue a B.S. in Physics at Stony Brook University. After attaining his four-year degree, he immediately enrolled in the master's program in Civil Engineering, specializing in Environmental Engineering, at City College. To further follow his academic studies he will head to Colorado State University, where he has already been accepted into the Environmental Engineering doctoral program.

Fouad fully understands the importance of his research involved in maintaining potable water and wants to educate the citizenry about safe drinking water. "I am interested in conducting a public service to discuss and explain the water treatment processes to high school and college students at different institutions," he vehemently stated. He also wants to ensure that research measures to protect drinking water and the environment remain at the forefront of science and are not forgotten.



NEW YORK CITY ALLIANCE



Jennifer Ross

Scientists approximate that 95 percent of all species that ever existed are now extinct. Of the five great extinction episodes that have occurred in Earth's history, the Permian-Triassic Extinction, 250 million years ago, is responsible for decimating close to 90 percent of living species.

Even today, it is conjectured that several species are lost daily to extinction, and many more are in danger of meeting that same fate. This is a grim outlook for many of Earth's species; however, researching the evolutionary lineage of an extinct South African species of baboon — *papio robinsoni* — has contributed to the thriving evolution of a student and her mentor.

Jennifer Ross, a Bridge to the Doctorate scholar at Lehman College, has flourished under the guidance of her research mentor Professor Eric Delson. As a physical anthropology major, Jennifer is specializing in non-human primate morphology, and her mentor has helped to guide her in ongoing research. Professor Delson has several functioning capacities within CUNY. He is the Chairperson of the Anthropology Department at Lehman College, directs the physical anthropology component of the Anthropology doctoral program, and leads the New York Consortium in Evolutionary Primatology (NYCEP). Moreover, he has known Jennifer since she was an undergraduate student at Lehman, and has "several reasons for wanting to see Jenn succeed and for working with her."

As an undergraduate at Lehman, Professor Delson selected Jennifer as one of eight students to be part of the Undergraduate Biology and Mathematics (UBM) initiative. This NSF funded program allowed four anthropology students and four computer science students to integrate their respective disciplines, by developing phylogenetic trees using computational methodology.

Initially, Jennifer participated in a guided research project studying primate skulls in the American Museum of Natural History's Division of Paleontology — a program with which her mentor is also affiliated. And last summer, Jennifer and several other students, accompanied by Professor Delson, voyaged to central France to work first-hand at a 2-million-year-old mammalian fossil site.

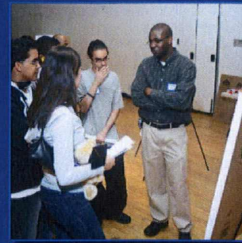
Professor Delson continued to guide Jennifer after she received her bachelor's degree, suggesting that she should further pursue her studies by taking graduate-level classes as a non-matriculated student. Jennifer excelled, was subsequently accepted in the Bridge program and started researching the 2.5 million-year-old *papio robinsoni* baboon, at the behest of her mentor.

"I think that the Bridge program is a wonderful way to aid minority students in their quest for the doctorate," stated Professor Delson. "Giving them financial independence from a regular job, as well as support for course tuition, GRE training and the chance to meet colleagues in other institutions, steps that would be impossible without this program."

Jennifer Ross has evolved as a student by being a dedicated researcher and by employing all of the research skills that she has acquired. Moreover, she has been accepted into two of the best physical anthropology doctoral programs, at Duke University and Stony Brook University.



NEW YORK CITY ALLIANCE

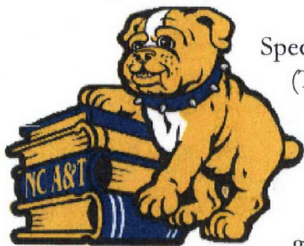


Karla Wyatt

Karla Wyatt is a Biomedical Engineering (BME) student working toward her Master of Science degree at City College. She is fascinated by her discipline because it “bridges medical science with engineering.” Through her academic travels, she has learned much about making transitions. Karla, originally from Syracuse, New York, has spent the last four years as an undergraduate at North Carolina Agricultural and Technical State University earning her B.S. in Electrical Engineering. Venturing back to New York — New York City — was initially a difficult transition for her.

“It took me a while to figure out the subway system and the different Boroughs,” Karla said. “But, being lost was definitely worth it, in the long run.”

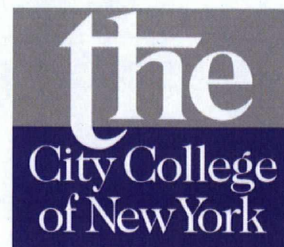
Research is paramount for Karla Wyatt, and similar to learning one’s way around a new milieu, requires adaptive flexibility. Guided by her mentor Dr. Peter A. Torzilli, Karla is delving into arthritis — a disease which afflicts up to 66 million Americans, nearly 1 in every 3 adults, according to the Arthritis Foundation’s website.



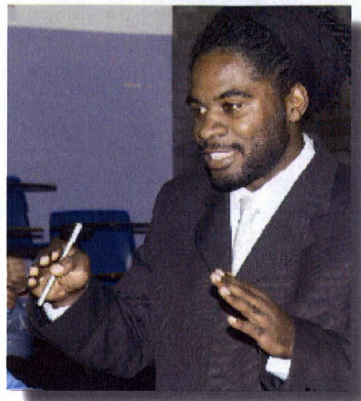
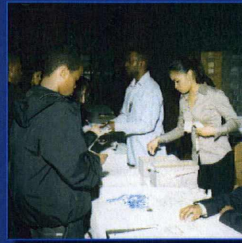
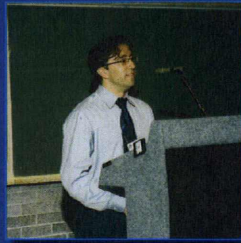
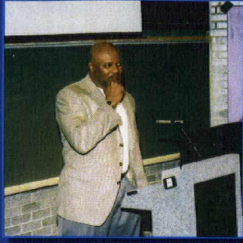
Specifically, Karla and her mentor are researching cleavage of the cartilage (Type I Collagen), found in ligaments and tendons, which is degraded during the onset of arthritis. By studying the effects of tensile strength — the maximum longitudinal stress a substance can bear without tearing — prior to collagen degradation, she hopes to bolster the current knowledge about arthritis and to improve current treatments given to sufferers of the disease.

Dr. Peter A. Torzilli is a mechanical engineer who specializes in soft tissue and cartilage, and is researching bone dynamics. He assists Karla with “correlating the medical and mechanical aspects of the research, and problem analysis.”

Although it took her some time to transition, Karla is now well situated in the Bridge to the Doctorate program and poised to further her education by learning different computer competencies, and by applying to Biomedical Engineering MD-PhD joint degree programs. She recently received a recommendation for the Arthritis Foundation Program sponsored through Weill Cornell Medical College.



NEW YORK CITY ALLIANCE



Nathan Hosannah

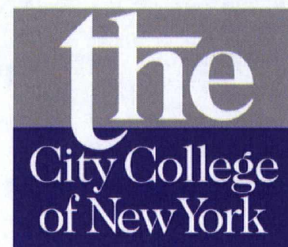
For many people who travel by airplane, the word “turbulence” can conjure up frightening thoughts. When flights experience turbulence, the bumpiness often makes many passengers leery. Turbulence may be caused by several factors: the pressure differential between the upper and lower surfaces of the wing, or by flying in the vicinity of a thunderstorm. When aircrafts cannot recover from turbulent flow fields, a crash and a loss of life may ensue; however, in the majority of passenger flights, these turbulent events only cause brief periods of minor discomfort.

Nathan Hosannah is investigating and better elucidating shockwave interaction with turbulence, which may assist in designing aircraft better suited to handle the damaging effects of turbulence. The research involves simulating shockwaves as they travel through a shock tube and reflect off a wall. He is majoring in Mechanical Engineering at City College and adhering to the tutelage of his two mentors, Professor Charles Watkins and Professor Yiannis Andreopoulos, whose expertise focuses on the structure of turbulence shockwave interactions.

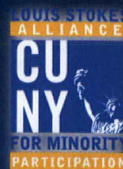
Both mentors guide his research efforts by setting weekly goals that he must attain, and by imparting instructional knowledge that extends beyond the scope of the research. Nathan intimated that his mentor, Professor Watkins, instructs him to “remain marketable in life... to avoid being restricted to one particular path.”

Graduating Cum Laude from City College, with B.E. in Mechanical Engineering, in June of 2004 and subsequently being accepted as a Bridge to the Doctorate scholar are two of Nathan’s proudest accomplishments to date. He also knows the value of the “publish or perish” mantra in academia and has assisted in writing a paper, with Professor Latif Jiji, entitled “How Do Elephants Keep Cool?” This paper was submitted to a couple of nature-related journals and is currently under review.

Nathan is excited about the diversity of topics related to Mechanical Engineering because there are many research avenues that he can travel such as aerodynamics, prosthetics, or energy systems. He is also eager about his research that will help to make “flying the friendly skies” more of a reality.



ProjectSTEM: The New Virtual Research Community



Science is benefited most by an atmosphere that is conducive to sharing research innovations and experimental ideas; this concept, which initially led to the advent of the internet, was applied to the creation of the new LSAMP website entitled "ProjectSTEM." The acronym S.T.E.M. represents the four academic and research disciplines that are the focal point of the Alliance for Minority Participation: Science, Technology, Engineering, and Mathematics.

"The former AMP website PlanetAMP will slowly be phased into the newer ProjectSTEM, however the objective of the site remains unchanged: to facilitate and encourage interactive, collaborative research across STEM disciplines, institutions and agencies by reducing communication impediments," explained Jose Cortes, NYC LSAMP Portal Manager.

"The system provides students, faculty as well as other interested parties with the means to collaborate and communicate with one another on research projects, current events, and other STEM-intensive topics."

Utilizing cutting-edge, open-source interactive and website-building software, teams of computer science research

scholars, directed by Mr. Cortes, has worked extensively to ready a site replete with a bevy of upgrades and innovative features, which include but are not limited to: data integration/management, e-mail marketing, e-newsletters, event registration, e-commerce, campaign/donation oversight, surveys, applications, a career center and online directory.

One of the more significant new features of the site involves user-friendly components similar to the MySpace or Facebook websites with the addition of

a social networking and mentoring component, which will form communicative research and academic ties on the student-to-student level and, most importantly, among students and their professors. ProjectSTEM will enable students to build their own portfolio and keep an organized account of the academic endeavors, research experience, achievements and professional development.

ProjectSTEM can be accessed by visiting: <http://nyc-amp.cuny.edu>.

project.STEM Login | Register Search

Community Research Programs & Events NYC-LSAMP

Welcome
The Online Community for Research in Science, Technology, Engineering and Mathematics. A centralized resource for collaborative research across STEM disciplines, institutions and agencies. Stay updated on the latest current events and student research and internship opportunities.

ProjectSTEM Virtual Institute

Major funding for the NYC-LSAMP and the ProjectSTEM project comes from the National Science Foundation

The New York City Louis Stokes Alliance for Minority Participation is now accepting applications. [Click Here For More Info.](#)

RESEARCH OPPORTUNITIES
 Find the latest available opportunities for students. [MORE](#)

COMMUNITY
 Find members with similar STEM interests and projects. [MORE](#)

EVENTS
 Find info on the latest STEM events and conferences. [MORE](#)

Copyright 2007 by NYC-LSAMP