

NEW YORK CITY ALLIANCE NEWS



VOLUME X ISSUE IV

AUGUST 2003

Team AMP

Alliance collaborations across CUNY remains at the heart of our system wide and campus models. These collaborations cut across all academic levels (K-12 through Post Doctoral), disciplines, and programs, to ensure a network of inter-

locking programs with overlapping missions. The City University of New York team of Chancellor, Senior University Administrators, Presidents, Steering Committee, Faculty Mentors, Activity Coordinators, Learning Center Tutors, and Research Assistants is now over four hundred members strong, and constitutes a formidable force for STEM education across the university.

During Phase II, we saw up to a five fold increase in the number of Research Scholars, expansion of the Faculty mentoring pool CUNY wide, and similar expansion of LSAMP Summer research activities. In this issue, we highlight aspects of the CUNY LSAMP experience that continue to be critical components of AMP. Early identification of scholars, collaborations with funded research institutes and centers, dedicated and committed faculty, and a team of activity coordinators spread across sixteen units of the university.

AMP Facts

DURING THE 2002-2003 ACADEMIC YEAR

- Seven LSAMP Scholars received Ph.D. degrees
- Seven LSAMP Scholars received MS degrees
- Eight LSAMP Carver Scholars graduated with BS degrees
- Forty three BS degrees were awarded to LSAMP Scholars
- Pre-collegiate participants of Phase II (1998-2002) are among the 2003 graduates
- Over twenty five sites served as hosts for fifty-seven Alliance Scholars in Summer 2003
- Fifty LSAMP Scholars participated in the LSAMP Summer 2003 Research Program

August marks the end of another academic year, and we congratulate degree and award recipients on their accomplishments. August is also a month of transition for a number of Alliance participants. New doctoral recipients will be moving into post doctoral positions, or their first faculty appointment, community college students will be transitioning into senior colleges, graduates will be at their new home campus for graduate study or entering the work force, our summer interns will be returning to the university, and new LSAMP scholars will begin work on their projects with CUNY faculty mentors.

IN THIS ISSUE:

Team AMP	Cover
Alliance Faculty	Page 2
LSAMP Activity Coordinators at the Graduate Level	Pages 4-5
CUNY Research Institute - COSI	Page 6
LSAMP Scholar Pathway	Page 7
Upcoming Conferences	Page 8

ALLIANCE FACULTY

NATIONAL SCIENCE FOUNDATION, LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

A. James Hicks Program Director

CUNY CENTRAL ADMINISTRATION

Matthew Goldstein Chancellor
Louise Mirrer Executive Vice
Chancellor for
Academic Affairs

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

Maria Colabella City

STEERING COMMITTEE

Dennis Slavin Baruch
Sadie Bragg BMCC
Marcia Keizs Bronx CC
Rosamond Welchman Brooklyn
Joe Barba City
Leonard Ciaccio College of Staten Island
Gail Smith CUNY Graduate School
Carlos Molina Hostos CC
Ann Henderson Hunter
Loretta Taras Kingsborough CC
Bruce Hoffacker LaGuardia CC
Christopher Gerry Lehman
Doris Withers Medgar Evers
Phyllis Sperling NYC College of Tech.
Thomas Streaks Queens
Arthur Corradetti Queensborough CC
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.

The New York City Louis Stokes Alliance for Minority Participation is funded under a cooperative agreement with the National Science Foundation.

Dr. Steve Greenbaum is a Professor of Physics at Hunter College in the City University of New York (CUNY) and a member of the CUNY Graduate Center Doctoral Faculty in both Physics and Chemistry. Dr. Greenbaum earned his undergraduate degree in physics from Clark University and his doctorate in experimental condensed matter physics from Brown University. Dr. Greenbaum was a National Research Council (NRC) Postdoctoral Fellow at the Semiconductor Branch of the United States Naval Research Laboratory, a Fulbright Scholar at the Weizmann Institute of Science, and a NASA/NRC Senior Research Fellow at the Jet Propulsion Lab, California Institute of Technology. He has published over 125 peer-reviewed journal and proceedings articles.

Mentoring Awards

- 2001 recipient of the Roosevelt Gold Medal for Science, bestowed by the New York Council of the United States Navy League.
- 2002 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, awarded jointly by the National Science Foundation and the White House Office of Science and Technology Policy.
- 2003 Richard. Nicholson Award for Excellence in Science Teaching from the Quality in Education for Minorities Network.

Research Interest

Spectroscopic studies of disordered solids by magnetic resonance and synchrotron x-ray absorption centered on materials for electrochemical energy conversion.

Reflections

...on lithium batteries and fuel cell technology

When I left NRL to begin my academic career at Hunter, the semiconductor field was becoming saturated with brilliant scientists and no new significant infusions of money. Fortunately I chose then to switch fields – into lithium battery research, and later I added fuel cells to my research activities. Here was a field in which new ideas and new multidisciplinary approaches were needed. I enjoyed bringing my physics training into an area that is dominated by chemistry, and over the years my most rewarding and fruitful collaborations have been with chemists world-wide. It is only through concerted materials science research that we will someday have affordable electric cars, powered

by either lithium batteries or fuel cells, or most likely in the future a combination of both. My general interest in alternative energy scenarios remains as strong as ever. I was recently privileged to teach a special Hunter Honors class on Energy and Environment, sharing the course with my colleague from the Economics department, Dr. Temisan Agbeyge, a native of oil-rich Nigeria and an expert on oil pricing policies. The student response to this course was very gratifying and we will run it again next term.

I enjoyed bringing my physics training into an area that is dominated by chemistry, and over the years my most rewarding and fruitful collaborations have been with chemists world-wide.

continued on next page

ALLIANCE FACULTY *continued from page 2*



DR. RITA COLWELL (HEAD OF NSF) AND DR. JACK MARBURGER (PRESIDENT'S SCIENCE ADVISOR) TAKEN AT THE AWARD CEREMONY

...on over fifteen years of mentoring in CUNY from High School through the Professorial level

All of my research students, from summer high school to doctoral-level, have seen my enthusiasm for energy-related materials research. My most satisfying and proud moments are the special occasions when former students, several of whom are now distinguished scientists, come to visit and meet with my current students. You can almost see the baton being passed.

I strongly believe that CUNY must lead the way in hiring qualified minority scientists, mathematicians, and engineers, as it has led the way in creating opportunities for students.

...on methods that worked for the research group and the students involved

In mentoring students, one must always set the example of maintaining the highest possible scientific and intellectual standards. This goes directly to issues of credibility because students know when they're being given "phony" projects. In my lab, there simply isn't time to manufacture student research projects, so they get sucked right into the vortex of our ongoing activities funded by DoD, DoE, NIH, and

NASA. In the long run, this is best for the student and best for the agencies that underwrite our research.

...on your tenure as the NYC LSAMP Faculty Representative to the Governing Board

These meetings always reinforce my impression that CUNY is the place that brings together an enormous wealth of academic talent and creates opportunities for motivated students. Though the demographics have changed in the last century, CUNY's mission has not.

...on the role you see CUNY and programs such as MARC, MBRS, McNair, RISE and LSAMP playing in the next five to ten years

The agencies that fund MARC, MBRS, McNair, and LSAMP (and other such programs) are doing an excellent job in providing students access to research experience. It is only through such experience that students gain the most important element leading to the pursuit of a science career – love of science. Classroom learning experiences can be quite rewarding and intellectually stimulating, but nothing really compares to being "in the game" of original inquiry. I still recall my undergraduate research, and it can become a lifetime addiction.

I strongly believe that CUNY must lead the way in hiring minority scientists, mathematicians, and engineers, as it has led the way in creating opportunities for students. CUNY's record in minority faculty hiring is not as good as it could be. After all, what message are we sending to the minority scholars who leave here with great fanfare but no jobs for which they've been trained? And what kind of example are we setting for colleges and universities nationwide?

MARK YOUR CALENDAR

7TH ANNUAL URBAN UNIVERSITY CONFERENCE

APRIL 23, 2004, LEHMAN COLLEGE

**For more information call or email us at
212-650-8854 or ampcc@cunyvm.cuny.edu**

LSAMP ACTIVITY COORDINATORS

THE LSAMP ACTIVITY COORDINATOR

LSAMP Activity Coordinator Graduates 1998-2003

Name	Discipline (College)	Degree	Current Position
Sabine Jaques*	Biology (City College)	MS	Industry
Stephen Providence*	Computer Science GSUC/Lehman	Ph.D.	Assistant Professor NC A&T
Seong Son*	Engineering (City College)	MS	Academia
Samira Daheer	Mathematics (Queens College)	MS	Academia
Derire Meissein*	Physics (Hunter College)	MA	Academia
Lima Desir*	Engineering (City College)	MS	Agency
Mustafa Mohammed	Engineering (City College)	MS	Agency
Winzi Mani*	Engineering (City College)	MS	Agency
Ivan Baez*	Engineering (City College)	MS	Agency
Judith Brooks*	Biology (City College)	MS	Agency (K-12)/MD
Ricky Kissoon*	Chemistry (City College)	MS	Agency (K-12)
Clemente Conciello	Engineering (UCLA)	MS	Agency (K-12)
Eddie Naseem *	Mathematics (College of SI)	MA	Agency (K-12)
Magalie Bruneus*	Biochemistry (City College)	MS	Agency (Research)
Jorge Morrales *	Biology (City College)	MS	Doctoral Study
Sharon Lall	Chemistry (Queens College)	MS	Doctoral Study
Maria Meyer	Earth & Atmospheric Sciences (City College)	MS	Doctoral Study
Yvette Beckles	Engineering (City College)	MS	Doctoral Study
Alicia Joseph*	Environmental Sciences	MS	Doctoral Study
Michael Jean Pierre	Computer & Info. Systems (Baruch)	MA	Industry
Walter Griegg *	Chemistry (Brooklyn)	MS	Doctoral Study
Rodolfo Fortich	Electrical Engineering	MS	Doctoral Study
Barbara Alexander*	Computer Science (City College)	MS	Industry
Bernard Pierre*	Engineering (City College)	MS	Industry
Jean Marc Carre*	Engineering (City College)	MS	Industry
Wilson Salazar	Engineering (City College)	MS	Industry
Beatriz Salazar	Engineering (City College)	MS	Industry
Jason Morrero*	Physics (Hunter College)	MA	Industry

* indicates students who received the BS degree in CUNY

Opportunities to network with other LSAMP/AGEP programs at student centered conferences such as FG-LSAMP, LA-LSAMP, Project 1000, CUNY Conference in Science & Engineering, EMERGE, ABRCMS and SACNAS.

Opportunities to talk about their research work, practice their communication skills, discuss conference presentations, and create opportunities for cross campus collaborations between CUNY researchers (undergraduate, graduate and faculty) at all levels.



LSAMP Activity Coordinators and Project Directors 2001

Opportunities to sharpen their scientific/engineering writing and other communication skills via review of abstracts, project reports, poster presentations, preparing the Campus LSAMP Annual Report, and organizing LSAMP Borough wide forums.

LSAMP Activity

A MODEL AT THE GRADUATE LEVEL

MEETINGS AND ACTIVITIES PROVIDE:



Coordinators Retreat 2001

Opportunities for the Project Directors to bring keen insight on professionalism as scientists, navigating the MS/Ph.D. track, starting an academic career, and higher education survival skills.



LSAMP Activity Coordinators honored at the 1999 Urban University Series, City College

Learning center activities accounts for a significant amount of the enrichment, peer tutoring, workshop activities, academic and career advisement for STEM students. Activity coordinators at participating campuses have been institutionalized and are also a part of the CUNY STEM pipeline .

Opportunities to witness first hand, mentoring styles and effective mentoring.

LSAMP Activity Coordinators 1998-2003 continuing to the Ph.D. level

For the 2001-2003 period, ten of the sixteen activity coordinators were NYC LSAMP Research Scholars or Peer tutors.

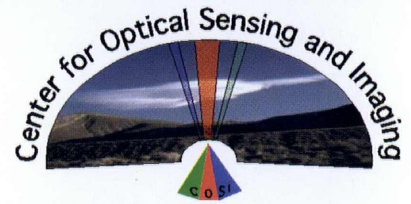
Name	Discipline (College)	Degree Completed	Current Position
Ranjan Takir	Computer Science (College of SI)	MS	Doctoral Study, CUNY
Stephen Providence*	Computer Science GSUC/Lehman	Ph.D.	Asst. Professor N.C. A&T
Derire Meissein*	Physics (Hunter College)	MA	Doctoral Study Stevens Inst. of Tech.
Jorge Morales *	Biology (City College)	MS	Doctoral Study, CUNY
Sharon Lall	Chemistry (Queens College)	MS	Doctoral Study, CUNY
Maria Meyer	Earth & Atmospheric Sciences (City College)	MS	Doctoral Study, CUNY
Yvette Beckles	Engineering (City College)	MS	Doctoral Study, CUNY
Walter Griegg *	Chemistry	MS	Doctoral Study, CUNY
Rodolfo Fortich	Engineering (City College)	MS	Doctoral Study, CUNY
Diomaryl Padilla	Earth & Atmospheric Sciences (City College)		Doctoral Study, CUNY
Omar Santiago *	Mechanical Engineering		Doctoral Study, CUNY
Alicia Joseph*	Environmental Sciences	MS	Doctoral Study Johns Hopkins Univ.

* indicates students who received the BS degree in CUNY

From 1997-2003, thirty four of the selected activity coordinators received undergraduate degrees in STEM from CUNY, and twenty-seven have obtained Masters degrees from CUNY.



CENTER FOR OPTICAL SENSING AND IMAGING



With support from a five-year \$6 million University Research Center Program grant from the National Aeronautics and Space Administration (NASA), City College has established a Center for Optical Sensing and Imaging (COSI) designed to provide benefits in the technical, scientific and social fields.

The Center's primary goal is to develop improved sensing and imaging instruments and techniques that will contribute to NASA research and future NASA missions. It will also attract and train under-represented minority students in related science and engineering disciplines.

COSI is headed by the renowned Dr. Robert R. Alfano, Distinguished Professor of Science and Engineering at CCNY, and Dr. Sam Ahmed, Herbert G. Kayser Professor of Electrical Engineering.

"The high quality research, economic and social impacts that this program will produce will be of significant value to the people of New York State and could aid in the recovery of New York City," said Dr. Alfano, who is also heads CCNY's Institute for Ultrafast Spectroscopy and Lasers, and directs New York State's CUNY Center for Advanced Technology in Ultrafast Photonics and Applications.

Dr. Alfano said COSI promises many tangible benefits, including increased educational opportunities for minority students; a better-trained technical workforce; discoveries that improve lives; and commercial innovations to help local businesses improve efficiency and stay competitive.

The new Center will enable CCNY to expand its efforts in training and graduating minority US students in the sci-

ences and engineering by establishing a strong research, education and outreach program to recruit, retain, mentor and train students.

CCNY is an important Other Minority University (OMU) and Hispanic Serving Institution (HSI) with a strong record of training and educating talented students from underrepresented ethnic groups for careers in the sciences and engineering.

"The program will train a minimum of 16 graduate and 10 under-graduate students annually, and will also institute a vigorous K-12 science education program," said Dr. Manuel Zevallos, COSI's Administrative and Technical Coordinator.

The scientific and technological objectives of COSI include development of optical techniques and instruments (for both in-situ and ground- and satellite-based remote applications) for:

- * Development of lasers and detectors for use in remote sensing and optical communications;
- * Imaging targets and transmitting optical signal through clouds, fog, ice, and rain;
- * Detection of vegetation and land cover and measurement of the temperature of ocean waters;
- * Atmospheric and ocean monitoring;
- * Sensing microorganisms (e.g., bacteria) in the environment.

The Center brings together the teams of two major existing NASA institutional programs at City College: NASA IRA (Tunable Solid State Lasers) of the Institute for Ultrafast Spectroscopy and Lasers (IUSL), and NASA PAIR (Remote Sensing and Environmental/Climate Studies) of the

International Center for Environmental Resources and Development (ICERD), to form a complementary multi-disciplinary University Research Center.

CCNY also is home to the New York State Center for Advanced Technology in Ultrafast Photonics and the NOAA Cooperative Center for Remote Sensing Science and Technology.

Other CCNY researchers participating in the Center include Dr. Swapan Gayen, Dr. Vladimir Petricevic, Dr. Alvin Katz, Dr. Wubao Wang, Dr. Mikhail Sharonov and Dr. Shengkun Zhang (Physics); Dr. Barry Gross, Dr. Fred Moshary and Dr. Ping-Pei Ho (Electrical Engineering); Dr. Jeffrey Steiner (Earth and Atmospheric Sciences), and Dr. Reza Khanbilvardi (Civil Engineering). Dr. Charles B. Watkins, Herbert G. Kayser Professor of Mechanical Engineering, is COSI's Educational and Outreach Coordinator.

The CCNY researchers will maintain their close collaboration with NASA scientists and engineers, as well as with partners from industry such as Lockheed Martin, Raytheon, and GER Inc. to keep the research focused on NASA and real-world needs, and to facilitate transfer of dual use technology to the marketplace.

Dr. Alfano said that COSI would enjoy strong support from CCNY and the City University of New York (CUNY) and was a welcome new component to strengthen CUNY's Photonics Initiative.

For more information about CCNY's Center for Optical Sensing and Imaging, please contact Dr. Manuel Zevallos at (212) 650-5531.

LSAMP SCHOLAR PATHWAY

Summer of 1999

- City College Academy for Professional Preparation (CCAMP) immersion program, the City College of New York
- NYC Louis Stokes Alliance for Minority Participation



Fall of 1999

- Engineering Honors Program
- NASA/NACME Scholarship Program

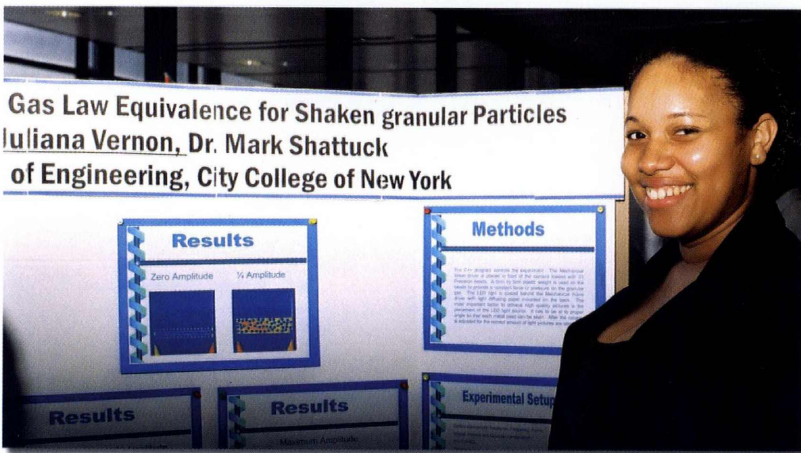
JULIANA VERNON

Cardinal Spellman High School, Bronx
City College School of Engineering
Chemical Engineering Major

Summer of 2000 and 2001

- NASA Marshall Space Flight in Huntsville, Alabama. Drs. Craig Kundrot and Cindy Barnes in the Micro-Gravity Department Testing of flight tubing and protein crystallization

"My protein crystals went up on two space flights in summer 2001. I was even certified to help Dr. Cindy Barnes package the space flight samples."



Gas Law Equivalence for Shaken granular Particles
Juliana Vernon, Dr. Mark Shattuck
of Engineering, City College of New York

Fall of 2001/ Spring 2002

- Dr. Mark Shattuck Levich Institute, City College Granular Material Science.

"I was working much better in my classes and in my lab. In the lab I helped implement a lot of new techniques and in writing numerous programs for our experiments."

Spring 2003

- Oral Presentation at the American Physical Society Meeting, Austin (Texas).

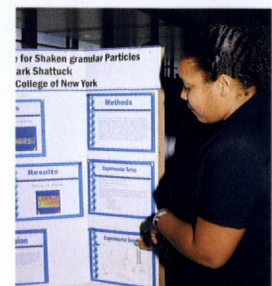
"While giving my presentation I was very nervous. So nervous my pointer was shaking on the screen while I was talking. After ten minutes everything was over. Except for the questions. To my surprise I knew all the answers to the questions and gave a good defense of my work."



Summer 2003

- NASA Marshall Space Flight in Huntsville, Alabama. Drs. Craig Kundrot and Cindy Barnes in the Micro-Gravity Department Purification and crystallization of heat shock proteins

"I only have one more year left to graduate. After graduation I might go back to work for NASA or in industry while I further my education and get my Masters Degree."



UPCOMING CONFERENCES

September 24-27, 2003

LSAMP Southwest Regional Student Research Conference - South Padre Island, TX

www.utep.edu/utampcon.htm

September 25-27, 2003

New Mexico AMP Conference - Las Cruces, New Mexico

www.nmsu.edu/~nmamp/conference

October 2-5, 2003

SACNAS - Albuquerque, New Mexico

www.sacnas.org

October 15-18, 2003

ABRCMS - San Diego, CA

www.abrcms.org

October 30 - November 2, 2003

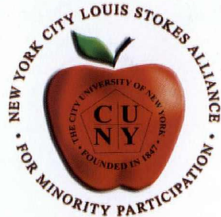
Berkeley Edge Conference - Univ. of California Berkeley

<http://ls.berkeley.edu/diversity/bep/>

November 21-23, 2003

DoE EPSCoR HRD/LS-LAMP Student Research Conference

www.ls-lamp.org - New Orleans, LA



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