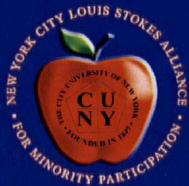


# ANNUAL REPORT

2000 2001

# *New York City Louis Stokes Alliance*



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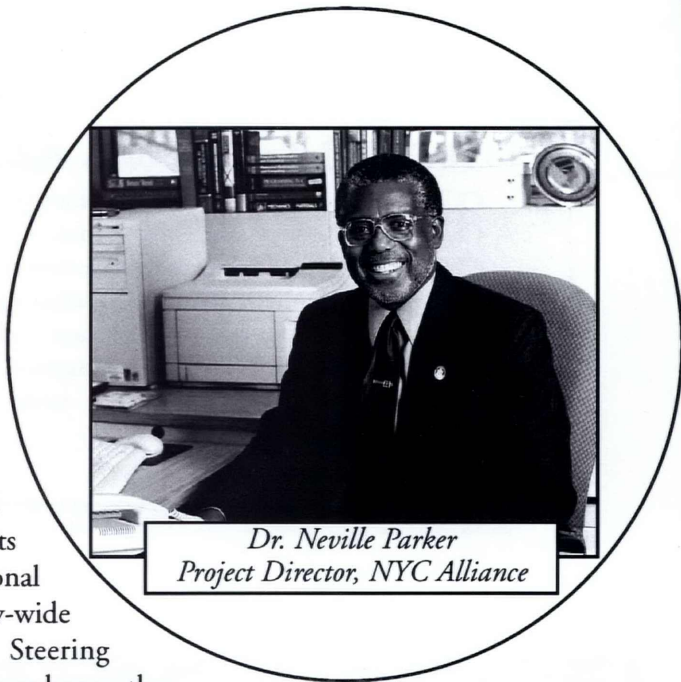
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 Design/Printing: 3D Studios

# The

## *New York City Louis Stokes Alliance*

has operated under the concept of an Integrated City University of New York for close to a decade driven by its mission of substantially increasing the number of underrepresented minorities enrolling and graduating in the SMET disciplines. To accomplish its objectives we have established a hierarchical organizational structure consisting of a Governing Board, a University-wide Steering Committee, and College-wide Campus Steering Committees. We have enhanced, and will continue to enhance the atmosphere for seamless academic transitions from community colleges to senior colleges. LSAMP has initiated the restructuring of gatekeeper calculus, chemistry and physics courses across the university, and has established or facilitated the establishment of Science and Mathematics Learning Centers on each of the 16 partner campuses. LSAMP has also entrenched an undergraduate student and faculty research program across College boundaries.



*Dr. Neville Parker  
Project Director, NYC Alliance*

We have started the movement towards becoming a permanent constituent of the University structure, to ensure the continuation of the Alliance mission and goals. We believe that a University-wide Consortium would be the most appropriate successor instrument. By the policy guidelines of CUNY

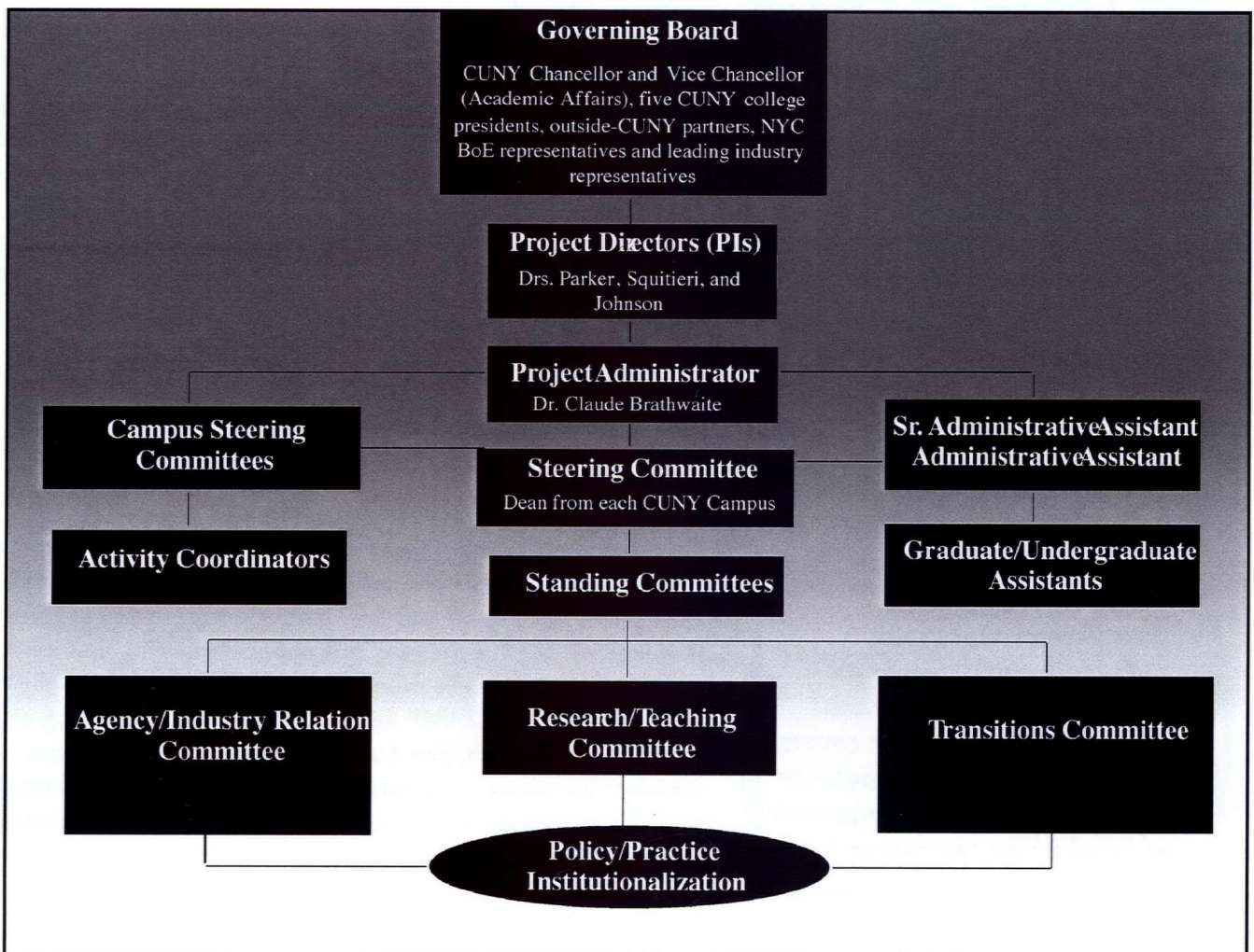
'A consortium is an organizational unit of the University formed by several campuses, institutes and/or centers, whose mission is to coordinate the efforts of its individual components and in which no component leads.'

*A consortium is an organizational unit of the University formed by several campuses, institutes and/or centers, whose mission is to coordinate the efforts of its individual components and in which no component leads.*

Our continuing challenge to achieve parity in the number of underrepresented minorities receiving baccalaureate degrees at CUNY requires an output of about 1,500 underrepresented minority baccalaureate degrees per year, and our achievements thus far is one we as a University can be proud of. Continued attention to this issue must survive the LSAMP beyond Phase II, and looking ahead, Phase III. The University faculty who mentor our students, the Activity Coordinators, campus Steering Committee members, and the College Presidents who provide leadership and the operational muscle for the LSAMP/CUNY enterprise achieving its mission, will continue to be most critical as we proceed through the near future towards final institutionalization in CUNY.

# ORGANIZATIONAL STRUCTURE AND MANAGEMENT

**The NYC Louis Stokes Alliance** has a number of committees which foster CUNY wide consistency. These committees include: LSAMP Governing Board (chaired by Chancellor Goldstein/members include CUNY's Vice Chancellor for Academic Affairs, five CUNY college presidents, BoE representatives, and industrial representatives), LSAMP Steering Committee, LSAMP Activity Coordinator's Committee, Course Restructuring Committee (calculus, chemistry, and physics), and individual Campus LSAMP and course restructuring committees. Campus steering committees have been established on all participating. Three sub-committees were established with the overarching charge of LSAMP program institutionalization.



*"Dr. Charles Maldarelli is like my academic father. Not only did he teach me math, chemistry, and physics, but also how to interact with others, how to behave effectively, how to remain diplomatic while getting my point across."*

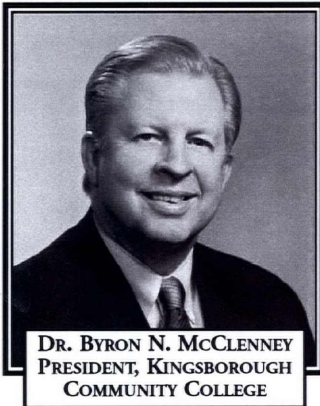
Jose Lorenzo  
Ph.D Graduate



JOSE LORENZO AND  
DEAN ALEXANDRATOS

*"I was very impressed with the caliber of the science and engineering students were doing and with the thorough understanding of their research which they demonstrated in our conversations. I could see what a first-rate program LSAMP is by the excitement in students' eyes as they shared their research with me."*

Dean Alexandratos  
University Dean for Research



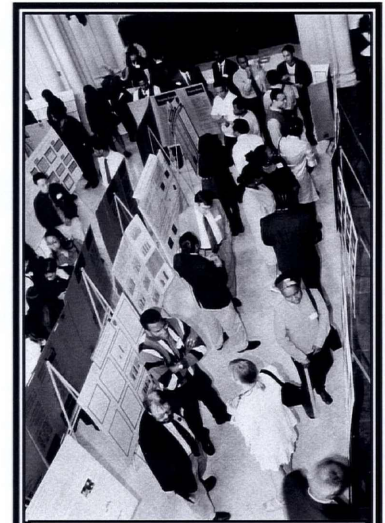
DR. BYRON N. MCCLENNY  
PRESIDENT, KINGSBOROUGH  
COMMUNITY COLLEGE

*The SMET pipeline at CUNY is functioning well, and LSAMP plays an important part in making that happen."*

President Byron N. McClenney

*"The collaboration between LSAMP and NASA GISS is an excellent example of LSAMP's dramatic impact at York," she says. "We have students working directly with Goddard on climate modeling. Thanks to the LSAMP/GISS connection, courses in meteorology are being offered at York for the first time in years."*

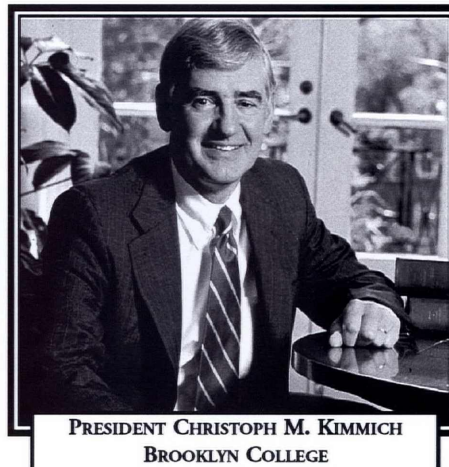
Dr. Cheryl Smith  
Asst. Vice-President for  
Academic Affairs



URBAN UNIVERSITY SERIES 2001

*"By talking to each other, LSAMP activity coordinators from different campuses create an important synergy," he says. "This has helped us expand our collaboration with Kingsborough, which is essential if we want to get students interested in the sciences early enough to succeed. LSAMP adds positive qualities to what we do in the sciences."*

President Kimmich



PRESIDENT CHRISTOPH M. KIMMICH  
BROOKLYN COLLEGE

# SMET DEGREES AND SMET ENROLLMENT

SMET DEGREES	1991-92	1992-93	1993-94	1994-95
Baseline* Minority(BA/BS)	284	351	393	442
Expansion** Minority(BA/BS)	404	488	514	575
Baseline* Non-Minority(BA/BS)	442	461	536	443
Expansion** Non-Minority(BA/BS)	775	821	863	803
Community College (AS)	110	98	156	96

SMET DEGREES	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Baseline* Minority(BA/BS)	379	437	457	465	448	508
Expansion** Minority(BA/BS)	549	612	616	646	688	755
Baseline* Non-Minority(BA/BS)	509	510	515	509	520	622
Expansion** Non-Minority(BA/BS)	884	959	933	998	1128	1145
Community College (AS)	176	186	195	181	178	148

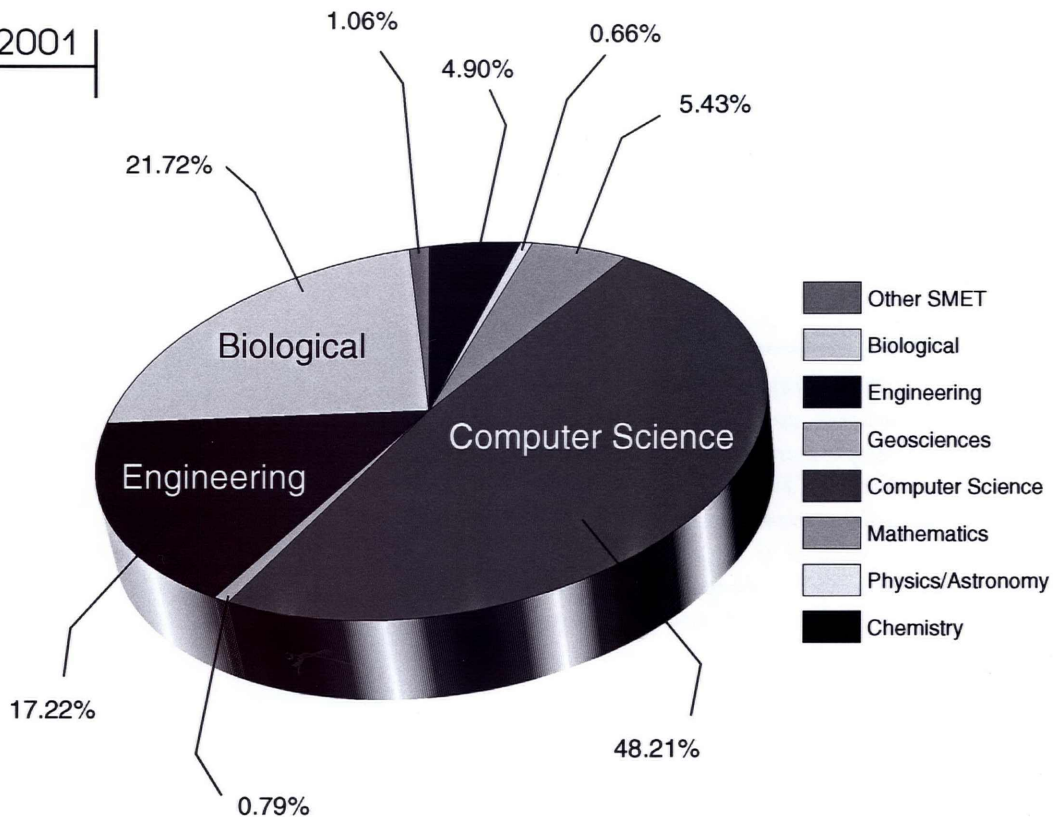
SMET ENROLLMENT	Fall '92	Fall '93	Fall '94	Fall '95
Minority Enrollment	4216	4905	5335	5788
Non-Minority Enrollment	3195	3357	3714	3612

SMET ENROLLMENT	Fall '96	Fall '97	Fall '98	Fall '99	Fall '00	Fall '01
Minority Enrollment	6290	6391	6619	6807	6584	6976
Non-Minority Enrollment	3579	3588	4019	3998	4731	8121

\* Baseline: Brooklyn, City, Hunter, Lehman, Medgar Evers, and New York City Technical Colleges

\*\* Expansion: Six Baseline Campuses; Baruch, Staten Island, Queens, and York Colleges.

## GRADUATES BY FIELD 2001



## INCREASES IN CUNY MINORITY SMET DATA

SMET DEGREES	1992-93	1993-94	1994-95	1995-96
Baseline*BA/BS Degrees	23.6%	38.4%	55.6%	33.5%
Expansion** BA/BS Degrees	20.8%	27.2%	42.3%	35.9%
Community College AS Degrees	-10.9%	41.8%	-12.7%	60.0%

SMET DEGREES	1996-97	1997-98	1998-99	1999-00	2000-01
Baseline*BA/BS Degrees	53.9%	60.9%	63.7 %	57.7 %	77.8%
Expansion** BA/BS Degrees	45.8%	52.5%	59.9 %	70.3 %	86.8%
Community College AS Degrees	61.2%	77.3%	64.5 %	61.8 %	34.5%

\* Baseline: Brooklyn, City, Hunter, Lehman, Medgar Evers, and New York City Technical Colleges

\*\* Expansion: Six Baseline Campuses; Baruch, Staten Island, Queens, and York Colleges.

## CUNY GRADUATION AND ENROLLMENT 1992-2001

CUNY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Degrees	404	488	514	575	549	612	616	646	688	755
Enrollment	4216	4905	5335	5788	6290	6391	6619	6807	6584	6976

## EVIDENCE OF INSTITUTIONALIZATION

The New York City Alliance's Governing Board formulated an NYC LSAMP Institutionalization Policy Commitment Statement and the academic deans from each of the 16 partner campuses prepared an LSAMP Individual Campus Institutionalization:

The LSAMP Central office, the Project Administrator position, Campus Activity Coordinators, learning center tutors and over 150 Research Assistantships were provided CUNY with institutional support. Gatekeeper course restructuring and institutionalization is evidenced by the

continued increases in the number of students enrolled in these courses, faculty professional development, CUNY dissemination of the restructuring efforts and the expansion at the community college and senior college levels.

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
NSF	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)
CUNY	\$1,165,249	\$1,058,560	\$1,121,429	\$1,308,303	\$1,479,207	\$1,999,923	\$2,023,281	\$2,141,737
CUNY(tax levy funds)	(\$304,100)	(\$350,000)	(\$350,000)	(\$350,000)	(\$879,700)	(\$400,000)	(\$400,000)	(\$430,000)
NASA GISS (ICP&GCV)		\$333,000	\$418,889	\$387,441	\$939,775	\$939,775	\$939,775	\$350,000
Outside Agencies			\$60,000	\$60,000	\$60,000	\$60,000	(\$195,000)	(\$195,000)
<b>TOTAL</b>	<b>\$1,165,249</b>	<b>\$1,451,560</b>	<b>\$1,600,318</b>	<b>\$1,755,744</b>	<b>\$2,478,982</b>	<b>\$2,999,698</b>	<b>\$2,963,056</b>	<b>\$2,491,737</b>

In the fourth year of LSAMP Phase II the NYC LSAMP provided \$1,051,421 of direct student support.

ALLIANCE SUMMER activities have grown to include a CUNY based SUMMER RESEARCH LSAMP and CARVER SCHOLARS, NASA RESEARCH AND TEACHING COMPONENTS, TRANSITIONING FRESHMEN AND TRANSFER STUDENTS, (PROJECTO ACCESS AND CUNY PIPELINE PROGRAMS). COMPONENTS INCLUDE COLLABORATIONS WITH BROOKHAVEN AND OTHER DEPARTMENT OF ENERGY RESEARCH SITES. OVER THE PAST FEW YEARS, THERE HAVE BEEN MANY OPPORTUNITIES AROUND THE COUNTRY AT VARIOUS UNIVERSITIES, INDUSTRY SETTINGS. THREE SCHOLARS PARTICIPATED IN MIRT PROGRAMS.



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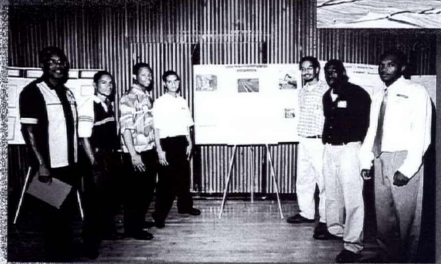
IN RESEARCH AND OPPORTUNITIES AROUND THE COUNTRY AT VARIOUS UNIVERSITIES, INDUSTRY SETTINGS. THREE SCHOLARS PARTICIPATED IN MIRT PROGRAMS.

**LSAMP  
SUMMER  
RESEARCH  
CONFERENCE**



**SUM  
20**

THE NYC LSAMP UNDERGRADUATE RESEARCH PROGRAM CONTINUES TO BE THE HEART OF THE NYC ALLIANCE. THE APPROACH INCLUDES



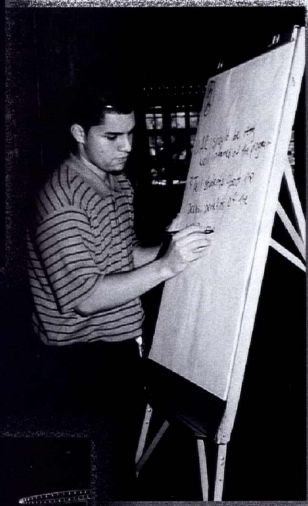
PRE-RESEARCH EXPERIENCES ON OR OFF CUNY CAMPUSES, RESEARCH ENRICHMENT AND CAREER DEVELOPMENT, AND RESEARCH. THE 2001 LSAMP CUNY SUMMER RESEARCH COMPONENT DREW PARTICIPATION FROM 50 LSAMP SCHOLARS. FROM INCEPTION, 230 LSAMP SCHOLARS HAVE EARNED BA OR BS DEGREES. IN 2001, 200 AMP RESEARCH SCHOLARS WERE INSTITUTIONALIZED.

**THE NASA  
GODDARD'S  
INSTITUTE FOR  
SPACE STUDIES  
(GISS)**





PARTICIPATION COMPONENT FOR  
 AND BRIDGE ACTIVITIES FOR  
 NY COLLABORATIONS WITH  
 5. CUNY LSAMP OFFSITE  
 HAVEN NATIONAL LABS AND  
 FORTY STUDENTS PARTICIPATED  
 INTERNSHIP  
 COUNTRY AT  
 AND AGENCY  
 PARTICIPATED



**ACTIVITY  
 COORDINATOR  
 RETREAT**

29 OF THE SELECTED ACTIVITY  
 COORDINATORS RECEIVED UNDERGRADUATE  
 DEGREES IN SMET FROM CUNY, AND  
 15 HAVE OBTAINED MASTERS DEGREES  
 FROM CUNY. 17 ARE CURRENTLY  
 PURSUING MS DEGREES. FOR THE 2000-2001  
 ACADEMIC YEAR, 15 OF THE SEVENTEEN ACTIVITY COORDINATORS  
 WERE NYC LSAMP RESEARCH SCHOLARS OR PEER TUTORS. FROM  
 1997-2001, 1 HAS COMPLETED A DOCTORAL DEGREE AND 4 ARE  
 CURRENTLY PURSUING PH.D. DEGREES IN CUNY IN CHEMISTRY,  
 CIVIL ENGINEERING, AND EARTH AND ATMOSPHERIC SCIENCES.



SUMMER  
 01



NYC LSAMP, AND CUNY'S COOPERATIVE AGREEMENT  
 FOR THE NASA GISS INSTITUTE ON CLIMATE AND  
 PLANETS (ICP) HAS BEEN IN OPERATION SINCE 1994. THE  
 NASA-ICP IS SEEN AS A MODEL FOR THE NASA  
 INTERACTION WITH MINORITY UNIVERSITIES ON THE  
 NATIONAL LEVEL. THE ICP INVOLVES NYC LSAMP  
 STUDENTS AND FACULTY FROM FIVE CUNY CAMPUSES

AND MINORITY STUDENTS AND  
 FACULTY FROM NEW YORK CITY  
 HIGH SCHOOLS IN RESEARCH  
 PROJECTS WITH NASA SCIENTISTS.  
 NASA DATA AND MULTIMEDIA  
 COURSEWARE BASED ON ICP  
 RESEARCH FINDINGS ARE BEING  
 PLACED ON THE INTERNET FOR  
 DISSEMINATION TO ALL CUNY  
 CAMPUSES AND NYC HIGH  
 SCHOOLS, AS WELL AS FOR  
 NATIONAL DISTRIBUTION  
 ([HTTP://ICP.GISS.NASA.GOV/](http://icp.giss.nasa.gov/)).

## BROOKHAVEN NATIONAL LABORATORY

Brookhaven National Laboratory (BNL) is an established leader in educational outreach. Through BNL's longstanding partnership with CUNY colleges, students from the New York City Alliance have participated in its superb academic year and summer programs, which offer first-hand experience of modern day scientific research. The association with BNL and its overlap in research areas with CUNY produce opportunities for CUNY graduates at every level, including postdoctoral opportunities. Several CUNY graduates are already at BNL.

## NASA GISS

Every day we are challenged to think more critically about our research. We are gaining the ability to be objective about climate change, a problem that is making the news and requiring average citizens to form opinions about decisions concerning the environment and our lifestyles.

*NASA ICP Research Assistants*

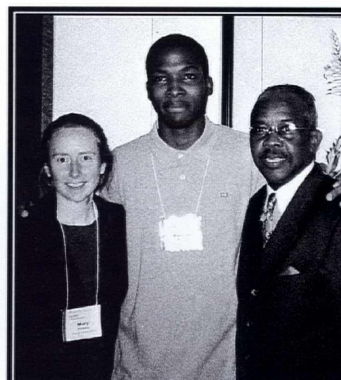


## 2001 SACNAS CONFERENCE



Dr. Claude Brathwaite, Pauline Datulayta (Queens College), Yarice Rodriguez (Hunter College), Angel Calle (Borough of Manhattan CC), Evelyn Silva (Queens College), Mohammed Bangura (Medgar Evers College), Lois Johnson (NYC Technical College), and Dr. Thomas Windham (SOARS Program)

## SMITHSONIAN



MS. MARY SANGREY, KONRAD WRIGHT, DR. A. JAMES HICKS

"I did not know what to expect, I found a business-like atmosphere where everyone was enthusiastic and encouraging."

*Konrad Wright*

## COMMUNITY COLLEGE PARTICIPATION

"There are so many advantages for students who participate in the AMP program that go beyond a simple internship. Students learn how to do research under the mentorship of a professor from any CUNY College; they receive financial support in the form of stipends, and they have the opportunity to make new friends. The most valuable part of the program is the possibility of gaining experience in your area of interest so that you could be better prepared for the challenging and demanding job market of New York --and eventually, the entire country."

*Ketty Joseph / LSAMP Scholar Queensborough Community College*

**The Alliance Course Restructuring** for gatekeeper calculus, chemistry, and physics courses include an emphasis on collaborative learning, a non-competitive approach to problem solving, and workshops conducted by specially trained peer tutors and faculty members. For the academic year 1999-2000, CUNY enrolled over 13,340 students in NYC LSAMP institutionalized or restructured courses. Of note, both community college and senior college campuses continued to replace the entire Mathematics and Chemistry first year sequences with institutionalized or restructures courses. At the City College, Queens College and New York City Technical College, second year chemistry utilizing the collaborative/workshop approach is in the experimental stage.

**The NYC LSAMP Undergraduate Research Program** continues to be the heart of the NYC Alliance. The four-pronged program includes: pre-research courses for community college students, research experiences on or off CUNY campus, research enrichment and career development, and research. The LSAMP CUNY Summer Research component drew participation from 50 LSAMP Scholars. Faculty participation increased to 177 CUNY faculty mentors. From inception, 230 LSAMP Scholars have earned BA or BS degrees. In 2001, 200 AMP scholars were offered fellowship support by the university.

**Science and Mathematics Learning Centers** supporting students in SMET studies have been established on each of the 16 partner campuses. These centers serve as the hub of all NYC Louis Stokes Alliance activities and provide students with a "home base" which is often lacking in a commuter university. Learning center activities accounts for a significant amount of the enrichment, peer tutoring, workshop activities, academic and career advisement for SMET majors. Activity coordinators at participating campuses have been institutionalized and are also a part of the CUNY SMET pipeline. From 1998-2000, twenty two of the selected activity coordinators received undergraduate degrees in SMET from CUNY, and ten have obtained Masters degrees from CUNY. Five are currently pursuing Ph.D. degrees and eight pursuing MS degrees. For the 1999-2000 academic year thirteen of the seventeen activity coordinators were former NYC LSAMP Research Scholars or Peer tutors. From 1997-2000, ten Activity Coordinators have received Masters degrees, one has completed a Doctoral degree and five are currently pursuing Ph.D. degrees in CUNY.

**CUNY Wide Faculty Development Program.** The university has sponsored a number of LSAMP faculty development colloquia or short courses such as: Mentoring in the Urban University, Restructuring of SMET Courses, Multimedia Courseware Development, and NASA/CUNY Collaborative Research. Faculty development forums were held at City College, Queensborough CC, and York College. Workshops focused on Technology Integration in Science Education and Curriculum Development.

**The CUNY Pipeline Program for Careers in College Teaching and Research**, which is sponsored by the Diamond Foundation, includes a summer institute at CUNY's Graduate School and University Center and a three semester program which prepares students for graduate school. Other initiatives from the Office of Equal Opportunity and Diversity Programs (OEODP) include the MAGNET and Humana Scholars Program, Alliance for Graduate Education and the Professoriate (AGEP), and the NIH funded Bridges to the Doctorate program.

**The NYC LSAMP Virtual Institute** will seek to collaborate with, and integrate the NASA GISS/CUNY Collaboration, MASTAP, and MUSPIN into a working model for learning, research, faculty and student development, outreach, dissemination and access to excellence. LSAMP announcements, Activity Coordinator meetings, Summer Research Opportunities, the Urban University Conference Series, abstract submission, links to other LSAMPs and Surveys were available via the NYC LSAMP site (<http://nyc-amp.cuny.edu>).

**LSAMP Scholars** participate by presenting and planning the Urban University Series, Borough wide forums, the CUNY Science conference (held at the GSUC), LSAMP General Assemblies, National MUSPIN conferences, Campus Research Symposiums and Conferences. These activities, along with Campus Newsletter publications and Open House activities serve to showcase student research, disseminate information, provide a forum for the LSAMP Scholar activities, and the recruiting of eligible students.

# NYC Louis Stokes Alliance

- 1992** 13 Colleges of the City University of New York  
Course restructuring in Math Enrolling 1000 Students, workshop approach to gatekeeper courses in Math, Chemistry and Physics  
Undergraduate Research Experience
- 1993** NASA Partnership begins with the Institute of Climate and Planets
- 1994** NYC LSAMP Governing Board Established
- 1995** Other NASA Partnerships: MASTAP and MUSPIN  
NSF Funding for Workshop Chemistry  
SEMRAP Awards
- 1996** Institutionalization Plan for Phase II
- 1997** Phase II Begins  
16 Colleges and the Graduate School and University Center
- 1998** Program named for retiring congressman Louis Stokes
- 1998** 1st Annual Urban University Conference Series
- 1998** Institutionalized courses enrolling 7,303 Students  
198 LSAMP Scholars  
110 Faculty Mentors  
128 Institutionalized Research Scholars
- 1999** Institutionalized and restructured courses enrolling over 11,000 Students  
Over 250 LSAMP Scholars  
142 Faculty Mentors  
165 Institutionalized Research Scholars  
139 Summer Participants  
55 Students participated in the Pre-collegiate program  
18 LSAMP Scholars participate in the Teacher Preparation Program
- 2000** Institutionalized and restructured courses enrolling over 13,300 Students  
Over 200 LSAMP Scholars  
163 Faculty Mentors  
30 Faculty Research Awards from 1995-2000  
194 Institutionalized Research Scholars  
120 Summer Participants in CUNY  
50 Summer ICP Participants at NASA GISS and CUNY Campuses  
47 Students participated in the Pre-collegiate program  
18 LSAMP Scholars participate in the Teacher Preparation Program
- 2001** Inauguration of the LSAMP Carver Scholars Program  
Preliminary discussions on the CUNY Consortium for Minority Participation in SMET (CCMP-SMET)  
Four Borough-wide Forums for the academic year 2000-2001  
Institutionalized and restructured courses enrolling over 14,598 Students  
42 Faculty Research Awards from 1995-2001  
From inception, 230 LSAMP Scholars have earned BA or BS degrees  
50 LSAMP Scholar participants in CUNY Summer Research  
Over 40 LSAMP Scholars participants in research and internships at non CUNY sites