

NEW YORK CITY ALLIANCE NEWS



ALLIANCE FOR MINORITY PARTICIPATION IN SCIENCE, ENGINEERING AND MATHEMATICS

Interim Chancellor Christoph M. Kimmich Chairs the First Phase II Meeting of AMP's Governing Board

At the April meeting of AMP's Governing Board, Interim Chancellor Christoph Kimmich heard Principal Investigator Neville Parker sum up the New York City Alliance's Phase I accomplishments and describe the program's goals and challenges as it enters Phase II.

In his report, Dr. Parker cited 16 learning centers, 275 research scholars, 37 restructured SMET courses, a growing peer and faculty mentoring program, and the inception of the Teacher Preparation Initiative as the hallmarks of success of AMP's Phase I. Most importantly, these reforms are being institutionalized by CUNY's central administration and its individual colleges. Tax levy funds to support the project increased from \$304,100 in 1993-1994 to \$879,700 in 1997-1998. They now cover the AMP Central Office, Research Scholar stipends, and Activity Coordinator salaries. Dr. Parker acknowledged that AMP had fallen short of its Phase I goal of increasing SMET baccalaureate degrees at CUNY by 100%, but pointed out that the 52% increase achieved "might be considered a success given the obstacles and challenges we had to face." During Phase I, SMET enrollment of minority students increased from 4216 to 6391 and degree production from 404 to 612. Dr. Parker stressed that campus-based steering committees (*see article page 3*) and careful attention to CUNY-initiated internal and external formative evaluations will be critical in erasing the Phase I "deficit" in SMET baccalaureate degree production and in achieving a further doubling of degrees over the next five years.



Interim Chancellor Christoph M. Kimmich

Dr. Parker outlined an ambitious program for Phase II. It builds on the successful innovations of Phase I and will continue to reform and strengthen recruitment, education and retention of SMET students at CUNY. Its major initiatives include:

Continuation of the Teacher Preparation Initiative to increase the number of underrepresented minority students who gain teaching positions and to enhance the knowledge base of pre- and in-service teachers in science content, research training and innovative pedagogical approaches;

Expansion of the Undergraduate Research Program into a high school to graduate school pipeline, providing research stipends each year for 160 undergraduates, 40 high school students and 60 graduate students;

Establishment on each participating campus of at least one Research Center or "mini-institute" in which students and faculty from high school, college and graduate school work together on a dominant research theme;

Creation of the NYC Urban Alliance Institute, a component of the AMP Virtual Institute (*see article page 2*).

"AMP has had a dynamic effect on the University. It has set new standards in a national effort to increase enrollment and degree production in the SMET disciplines and, in the process, moved CUNY to new levels of cohesion and effectiveness. The patterns of cooperation between its sixteen participating campuses will benefit many other programs in the years ahead. I appreciate the role that faculty mentors have played in these achievements. It is important that, as we move to the next phase, we offer due recognition for what these mentors have accomplished, and I should be pleased to serve as co-sponsor for an event that does so.

I'm excited about the initiatives planned for Phase II — creating a SMET pipeline from high school to graduate school and putting even greater emphasis on teacher preparation. We must do all we can to promote the sciences among our minority as well as non-minority students. Introducing high school students to AMP research-based instruction is an excellent way of motivating them to further study, and building a cadre of teachers knowledgeable in their subject and able to communicate the excitement of laboratory-based projects is essential."

*Christoph M. Kimmich,
CUNY Interim Chancellor*

National Science Foundation, Alliance for Minority Participation

A. James Hicks, *Program Director*

CUNY Central Administration

Christoph Kimmich, *Interim Chancellor*

Louise Mirrer, *Vice Chancellor
for Academic Affairs*

Project Directors

Neville Parker	<i>City</i>
Louise Squitieri	<i>NY City Technical</i>
Leon Johnson	<i>Medgar Evers</i>

Project Administrator

To Be Named

Senior Administrative Assistant

Jeanette Schnabel	<i>City</i>
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Administrative Assistant

Maria Colabella	<i>City</i>
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Steering Committee

Sadie Bragg	<i>BMCC</i>
Diane Call	<i>Queensborough</i>
Clifton Clarke	<i>LaGuardia</i>
David Entin	<i>NY City Technical</i>
Norman Goldman	<i>Queens</i>
Louise Hainline	<i>Brooklyn</i>
Ted Hanley	<i>York</i>
Marcia Keizs	<i>Bronx</i>
Charles Malerich	<i>Baruch</i>
Thelma Malle	<i>Kingsborough</i>
Robert Marino	<i>Hunter</i>
Joseph Rachlin	<i>Lehman</i>
Dennis Weiss	<i>City</i>
Doris Withers	<i>Medgar Evers</i>
Martel Zeldin	<i>College of Staten Island</i>
To Be Named	<i>Hostos</i>

New York City Alliance News

Editor: Helena Leslie

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 Alliance for Minority Participation is funded by a grant from the National Science Foundation.

In Phase I, AMP began attracting **outside funds** through SEMRAP (Science, Engineering and Mathematics Research Articulation Program). In Phase II, SEMRAP will be expanded significantly, and the CUNY Office of Development has begun approaching funders from industry to support other aspects of the Alliance.

CUNY AMP Begins Work on the Urban Education Component of the AMP Virtual Institute

In March, Professor Lawrence Muller of LaGuardia Community College's Computer Information Systems Department was chosen by NYC AMP to spearhead the *Urban Education* component of the Alliance Virtual Institute (AMP-VI). In addition to Urban Education, AMP-VI focuses on five other areas. They are *Technology in Education, SMET Undergraduate Curriculum, Student Retention in 4-Year Institutions, Articulation Between Community/Junior Colleges and Universities, and Formative Evaluation*. Each web site is the responsibility of a university participating in the AMP program. "AMP-VI is generating integrated information systems on best practices in SMET recruitment, education, and retention," says Professor Muller. "We will address urban education issues through the NYC AMP Urban Alliance Institute, which will reflect the fruitful work done in this area at CUNY. The institute will use the World Wide Web to provide information and support for other urban and non-urban Alliances."

Professor Muller, whose field is telecommunications, has already met with the five other AMP-VI facilitators under NSF auspices in Washington, D.C. Their early discussions centered on what the web sites should contain and how they should look. The six facilitators have continued to meet electronically and plan to see each other again in Texas in May. They will share the progress they have made and choose a format which will unify the six web sites. Professor Muller hopes that the Urban Alliance site will be well along by July.

The Urban Alliance component will disseminate NYC AMP activities and principles which have led to an increase in underrepresented SMET student enrollment and baccalaureate degrees and systemic change at CUNY. These include demonstrations, training, and materials relating to the workshop approach to SMET course restructuring; information on articulating community and senior colleges and undergraduate and graduate schools; and models for an urban undergraduate research experience program and for the formation of science and mathematics learning centers. The web site will share NYC AMP strategies for selecting and training workshop leaders and faculty mentors. It will present faculty development programs and distribute course restructuring materials and an urban alliance operation procedural manual. It will provide leadership in developing collaborations with other institutions and in preparing grant proposals to enrich opportunities for urban alliance students and faculty.

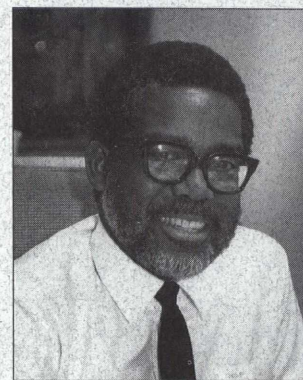
"In the Urban Alliance site we will address the issues in urban education which NYC AMP has worked on for the past six years. The material provided by the five other Alliances will allow the AMP-VI to create a comprehensive, interactive resource devoted to the latest thinking and the most current information on SMET educational issues," says Professor Muller. "We will bring people together across the country. It won't be long before a student who cannot find an appropriate mentor at his or her university will be able to consult an AMP-VI directory and work with a scholar at another Alliance institution."

Evolving New Administrative Priorities to Fit the Challenges of Phase II, Some Thoughts from the Principal Investigator, Dr. Neville A. Parker

During Phase I, we successfully instituted the AMP program at CUNY. Learning Centers staffed by Activity Coordinators are up and running on all campuses; course restructuring and peer tutoring are well underway; mentoring is being institutionalized; articulation between community and senior colleges is improving dramatically. During Phase II, we must ensure that these initiatives continue to succeed and prosper. With the AMP Central Office well established and running smoothly, it is time for the Project Directors and the new Project Administrator, who will join us shortly, to spend much more time in the field, on participating campuses. We must be in tune with the AMP program as it develops and matures so that we can apply our expertise to ensuring optimal performance.

One of the hallmarks of Phase II is that individual AMP Steering Committees have been established at each college. The committee members will be the real champions of AMP on CUNY campuses. It is our intention to work closely with them, and site visits by the Project Directors have begun. After these visits, the new Project Administrator will follow up on concerns we have identified, helping us to nip problems in the bud. This higher level of Project Director and Administrator involvement in the individual AMP programs will be positive and proactive. It is not an attempt at fault-finding, but a way of demonstrating that we are serious about having a highly productive, professional program. We will act as troubleshooters, brainstorming issues with campus Steering Committees and applying our expertise to resolving them.

Through our hands-on involvement we will build loyalty to the project and esprit de corps. For example, the Activity Coordinator positions have been institutionalized and are now on individual college payrolls. It is essential, however, that the Activity Coordinators remain accountable to the CUNY-wide AMP program and that they continue to share and implement the AMP philosophy of collaborative learning. We will also work to make the transition from community to senior colleges seamless. Articulation agreements are establishing the principle of cooperation between colleges, but we look forward to the day when they are no longer necessary and when the conversation between senior and community colleges is second nature. We will encourage the college-based AMP Steering Committees to focus on the needs and objectives which community and senior colleges share rather than on their differences. During Phase II, AMP's Project Directors and Administrator will devote particular attention to the issue of cross-University cooperation to ensure the increasingly smooth progress of SMET students to the baccalaureate level and beyond.

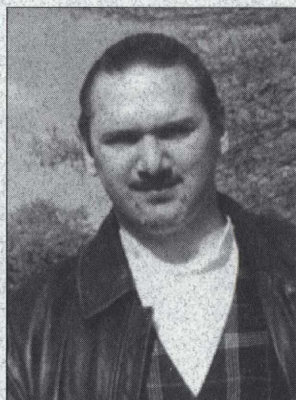


*Dr. Neville A. Parker,
NYC AMP Principal
Investigator*

AMP STUDENTS IN THE NEWS

Carlos Ventoso, Queensborough Community College

For Carlos Ventoso, AMP has made a dramatic difference. "Tutoring," he says, "was an incredible experience. Students asked a lot of good questions. Every time you tutor you approach the material differently, and it makes you appreciate it in a new way. I had to find ways for my tutees to understand things, and that got me interested in the learning process. It gave me a true respect for people who write textbooks, and," he adds, "I can now do most calculus problems in my sleep."



Carlos Ventoso

Carlos, who graduated from Queensborough in science and mathematics is continuing at the college for the spring semester taking pre-engineering courses. As

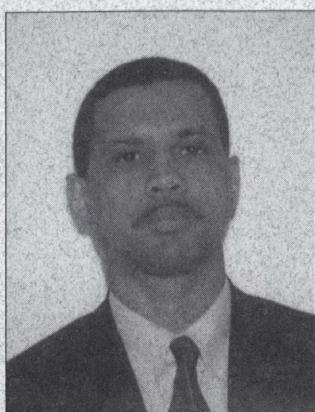
an AMP research scholar, he is working with Dr. Alan Barnes exploring the gravitational force of X-rays and problems related to the linear distribution of masses. Carlos will transfer to Queens College in the fall where he will major in engineering or physics. "I enjoy studying theory," he says. "I have not yet chosen what to specialize in, but I know that I want to go into industry, and my AMP work is really prepping me for a career."

Trevor Moshett, New York City Technical College

This spring, Trevor Moshett will graduate with a bachelor's degree in telecommunications from New York City Technical College. Trevor, who works fulltime as a network administrator, managing computer networks and maintaining user software, started his college career in electromechanical engineering. While finishing his associate's degree, he took part in the AMP Undergraduate Research Program under the mentorship of Dr. Seymour Blank. He has found his project, "Assessing Cardiovascular Salt Sensitivity with Wideband External Pulse Recording," interesting in two ways. First using the WINDAQ

program to analyze the data collected by Dr. Blank gave him valuable experience in manipulating computer software. Second, the scientific nature of the information he was handling was fascinating in itself and broadened his intellectual horizons.

Trevor plans to continue his career in computers and is considering a master's degree in computer science or management. He says that New York City Technical College and AMP have prepared him well for the challenges of his demanding job.

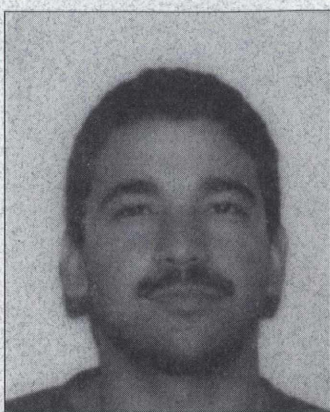


Trevor Moshett

Isolin Stalin Guilamo, LaGuardia Community College

Stalin's AMP research, conducted under Professor James Frost, has used electronics and computer science to develop a simple, innovative way to measure the pollution in the earth's atmosphere.

The premise of his project is that gases in polluted air absorb the rays of the sun and that a computer chip, which he could program to measure the intensity of the rays, would provide valuable information on levels of pollution in the aerosol layers of the atmosphere. Using Electronic Workbench, Stalin constructed a circuit including a chip and a display to show the strength of the sun's rays at different times of the day. "I never thought," he says, "that building such a simple circuit could provide so much information." Taking into account the temperature and the position of the sun, Stalin was able to compare his data with that gathered through other devices in previous years and gage changes in the level of pollution in his part of Manhattan.



Isolin Stalin Guilamo

With his associate's degree in Applied Science almost completed, Stalin is looking towards a BS degree in programming or computer science. He plans to enroll at City College or Pace University this fall.

STEERING COMMITTEE PROFILES

Vice-President Marcia V. Keizs, Bronx Community College

Dr. Marcia V. Keizs, Vice-President for Academic Affairs at Bronx Community College, brings to the AMP Steering Committee the perspective of a senior administrator with wide CUNY experience. Dr. Keizs holds a B.A. from the University of Manitoba in Winnipeg, Canada, an M.A. and an Ed. D. from Teachers College, Columbia University, and a Certificate in Educational Management from the Harvard Graduate School of Education. She joined CUNY as a professor of English at Queensborough Community College. Her administrative posts have included serving as CUNY's Acting Vice-Chancellor for Student Affairs and as Acting President of Borough of Manhattan Community College and York College.



Dr. Marcia V. Keizs

Dr. Keizs has taken a team approach to her AMP leadership at Bronx Community College. She works closely with AMP veteran Professor Nasser Abellatif and an AMP Campus Steering Committee which includes representatives from the engineering, chemistry, and mathematics faculties. "As we bring CUNY

graduate students on board as Activity Coordinators, the Campus Steering Committees must provide guidance, expertise, and authority. That is certainly happening at Bronx," she says. She commends the Chemistry, Physics and Technology Departments for their early efforts at recruiting students and developing active AMP programs and is pleased at current initiatives in the Mathematics Department. She also stresses how fortunate AMP is in the enthusiastic support it receives from the Bronx Community College administration. "The Activity Coordinator and peer tutors are now on the college payroll," she points out. "This is an important step in institutionalization."

As AMP goes into Phase II, Dr. Keizs identifies faculty mentoring as an essential element which must be nurtured. "Incentives and recognition are key in encouraging instructors to undertake the demanding role of mentoring. AMP must stress these in the future and should continue to lead the way in developing faculty to faculty collegiality," she says. Dr. Keizs is very enthusiastic about the role of teacher preparation in Phase II. "As a teacher myself," she says, "I am thrilled that AMP is playing a role in generating interest in the profession."

In addition to her Steering Committee responsibility, Dr. Keizs has taken on the important task of chairing the search for the next AMP Project Administrator. "We are looking for a strong administrator, conversant with at least one of the sciences, adept at preparing grants and reports, and eager to work with individual campuses to strengthen the AMP program at the grass roots level.

She or he will be instrumental in balancing the roles of the Campus Activity Coordinators and Steering Committees and the AMP Central Office.” The search committee is narrowing the field of candidates and hopes to present names to the Principal Investigator for his consideration in early May. The task has been complex, but Dr. Keizs points out that as AMP enters Phase II, the new administrator will be key to ensuring that a program which has had great impact at CUNY continues to fulfill its promise.

Dean Gail Smith, CUNY Graduate School and University Center

Dr. Gail Smith, Acting Associate Dean for the Office of Educational Opportunity and Diversity Programs (OEODP) at the CUNY Graduate School and University Center, joined the AMP Steering Committee this semester. Dr. Smith’s presence on the committee will be invaluable as AMP fulfills its Phase II goal of establishing a high school to graduate school SMET pipeline. In Phase I, AMP generated a new level of cooperation between its sixteen participating CUNY colleges. In Phase II, it is building bridges to the Graduate School and to New York City high schools. Dr. Smith brings to AMP her vast knowledge of graduate programs and her expertise in dealing with the issues which confront minority students as they work towards the Ph.D.

Dr. Smith’s experience at OEODP is highly relevant to the AMP agenda. The office sponsors academic support programs designed to promote the success of minority doctoral students in their fields of study and to prepare promising undergraduates for doctoral

work. It provides pre-application and fellowship information and engages in outreach to undergraduates on CUNY campuses through the **CUNY Pipeline Program**. For CUNY graduates, OEODP offers the **Bridges to the Doctorate Program** which prepares students for doctoral studies and careers in biomedical research. OEODP’s **MAGNET (Minority Access/Graduate Networking Program)** is the comprehensive fellowship program for minority doctoral students. In addition to providing fellowship stipends, MAGNET creates a network linking minority students to one another.

Dr. Smith vigorously supports the concept of an AMP SMET pipeline. “If you want to be strong in an area,” she says, “it is important to start early. This is certainly true of math and science. Often students who have tremendous talent lack structure and a vision of what they can accomplish. A high school to graduate school pipeline will provide a mechanism to help them get from step to step.” Dr. Smith also points out the importance of stipends which allow students to do research. “Time is students’ most precious commodity,” she says. “Programs like AMP allow them to do research rather than seek jobs unrelated to their studies. Being in the laboratory builds students’ credibility and allows them access to the scientists who can help them.” Of her new position at AMP, Dr. Smith says, “It is a good fit and a comfortable match with the other things that I do. I am very pleased to have been asked to participate.”

AMP TRANSITIONS

Dean Thelma Malle

After thirty-two years as a faculty member and administrator, Dean Thelma Malle is retiring from Kingsborough Community College. In the course of a distinguished career, she has served as Professor of Mathematics and Computer Science, Associate Dean of the Faculty, and Dean of Academic Programs.

Dean Malle joined the AMP Steering Committee during the program’s second year, and has found its impact beneficial to both Kingsborough and CUNY. “AMP,” she says, “has awakened faculty interest in restructuring curriculum in mathematics and science. It has provided students with the opportunity to tutor with compensation. It has furthered the CUNY mission by bringing faculty and administration from senior and community colleges together to work towards a common goal.” Though Dean Malle officially retired in January, she has stayed on for the spring semester specifically to promote AMP at Kingsborough. She heartily endorses the college’s full participation in and support of the program.

In retirement, Dean Malle looks forward to returning to the study

of mathematics and to working with organizations which support public education in New York City. She is keenly interested in the Algebra Project and in furthering the implementation of the National Council of Teachers of Mathematics curriculum in the public schools. A staunch proponent of undergraduate research, Dean Malle is very pleased that Kingsborough is establishing a scholarship in her name to honor a student who engages in research in mathematics or science.

Dean Norman Goldman

This past January, Dr. Norman Goldman, a long-serving AMP Steering Committee member, retired from his post as Dean of the Faculty for the Division of Mathematics and Natural Sciences at Queens College. Dean Goldman, who joined Queens in 1961, is a former chair of the Department of Chemistry. In retirement he will maintain his affiliation with the college, teaching chemistry and working on other projects.

During the spring semester Dean Goldman continued to represent Queens on the AMP Steering Committee. Looking back on Phase I, he stresses the impact AMP has had through its Undergraduate Research Experience Program. “AMP has succeeded in getting

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students into research earlier than would otherwise have been possible, often replacing routine off-campus jobs with a career enhancing experience,” he says. “This has given a big boost to their ambitions and to their ability to achieve in the sciences. It would not have happened without AMP.” “I am very excited,” he continues, “about the AMP Phase II grant. It provides new opportunities for the program to support students, extending its benefits to the precollege and graduate levels.”

Dean Goldman speaks very positively about the AMP Phase II policy of employing CUNY graduate students as Campus Activity Coordinators. The current coordinator at Queens, Sharon Lall, was one of his teaching assistants. She is a master’s student in chemistry who is going on to the Ph.D at CUNY. Dean Goldman feels that she works very well with all the student and faculty participants in the AMP-sponsored activities.

Dean David Entin

Dean David Entin is leaving New York City Technical College to become Vice-President for Academic Affairs at Holyoke Community College in Holyoke, Massachusetts. Dean Entin, whose academic background is in sociology, began his career in civil rights and anti-poverty work and later moved into higher education. Since 1994, he has been Dean of Arts and Sciences at New York City Technical College and for the past three years has

been a valued member of the AMP Steering Committee.

“I am very enthusiastic about AMP,” he says, “and my focus at City Tech has been to get people involved.” To increase faculty participation and enhance AMP’s profile at the college, Dean Entin created a Campus Steering Committee. The group has been meeting three times a semester, reviewing AMP initiatives at City Tech and keeping abreast of information from the AMP Central Office. It has been so effective that AMP’s Project Directors have extended the concept to the entire program, and Campus Steering Committees have been formed at all sixteen participating colleges. Also at Dean Entin’s behest, City Tech began comparing the performance of students in AMP and non-AMP sections of mathematics and chemistry. The findings were that the AMP sections, which included a two-hour compulsory workshop component, had a quantifiable, positive impact on students’ grades.

“Looking back,” says Dean Entin, “I realize that I never missed an AMP Steering Committee meeting. I found the program compelling and have been impressed with its accomplishments at City Tech. For instance, over the last four years, the number of AMP Research Scholars has increased from three to eight, forever changing those students’ academic lives. In addition, over one thousand students have benefitted from the special AMP workshop sessions in mathematics and the physical sciences.”