



# NEW YORK CITY ALLIANCE NEWS



ALLIANCE FOR MINORITY PARTICIPATION IN SCIENCE, ENGINEERING AND MATHEMATICS

## New York City Alliance Students Take Top Honors at the Fourth Annual NSF/AMP Student Research Conference

Representatives from twenty Alliances for Minority Participation congregated in July at Florida A&M University in Tallahassee, Florida for the conference *"Education & Research: Parallel Path to Excellence."* The event provided a forum for Alliance students to share successes and solutions to the problems which they face as minorities pursuing careers in science, engineering, and mathematics. It aimed to showcase AMP student research; expose students to successful minority scientists, engineers, and scientific community leaders; and motivate them to pursue Ph.D. degrees in SEM disciplines.

Four New York City Alliance Research Scholars, Donald K. Stennett, Kenneth Arroyo, John D. Romo, and Reggie Parker, took part in the conference. The response to their presentations was a testimonial to the quality of the student research program at New York City AMP. As Project Directors Louise Squitieri and Leon Johnson and Project Administrator Frank Scalzo looked on, Principal Investigator Neville Parker presided over the conference's Awards Ceremony in which two New York students were honored for their performance in the poster and oral presentation events. In commenting on the Research Scholarship Program, Dr. Louise Squitieri said, "Thanks to AMP, CUNY students



AMP Representatives at the NSF conference in Tallahassee. Standing, from left to right: Dr. Leon Johnson, Donald Stennett, Dr. Louise Squitieri, Reggie Parker, and Dr. Neville Parker. Front, from left to right: Kenneth Arroyo and Stephen Providence.

*"Three years ago when Dr. Leon Johnson and Professor William Harris informed me that I was accepted into the AMP program, I was extremely excited. I knew that AMP would put me one step closer to my goal of becoming a professional computer scientist and researcher. At the time, I was like a lump of clay. I was without form or definite shape, but I had infinite potential. I was in need of a potter's wheel and pottery makers who would help to shape and mold me into what I wanted to become. The AMP program was the potter's wheel, and the NSF and AMP Program Directors and Coordinators were the pottery makers. They collectively helped to shape and mold me into what you see today...."*

*Now as a result of being in the AMP program I have been able to conduct research and speak at several conferences. Sometimes I think of myself as being quite tall, mentally. But it only takes a moment of meditation or personal reflection to bring me back to reality. In reality the perception I have of myself as being tall is only an illusion. I only appear to be tall in my eyesight because I stand on the shoulders of giants. I am only a little giant. But I exist in the capacity of a little giant because the NSF and AMP Program Directors and Coordinators cared about a lump of clay, and for that I thank you all."*

**Reggie Parker,**  
New York City Alliance Research Scholar  
speaking at the Fourth NSF/AMP  
National Research Conference



**National Science Foundation,  
Alliance for Minority Participation**

William McHenry, *Program Director*

**CUNY Central Administration**

W. Ann Reynolds, *Chancellor*  
Anne L. Martin, *Acting Vice Chancellor  
for Academic Affairs*

**Project Directors**

Neville Parker *City*  
Louise Squitieri *Bronx*  
Leon Johnson *Medgar Evers*

**Project Administrator**

Frank Scalzo *Queensborough*

**Senior Administrative Assistant**

Jeanette Schnabel *City*

**Administrative Assistant**

Maria Colabella *City*

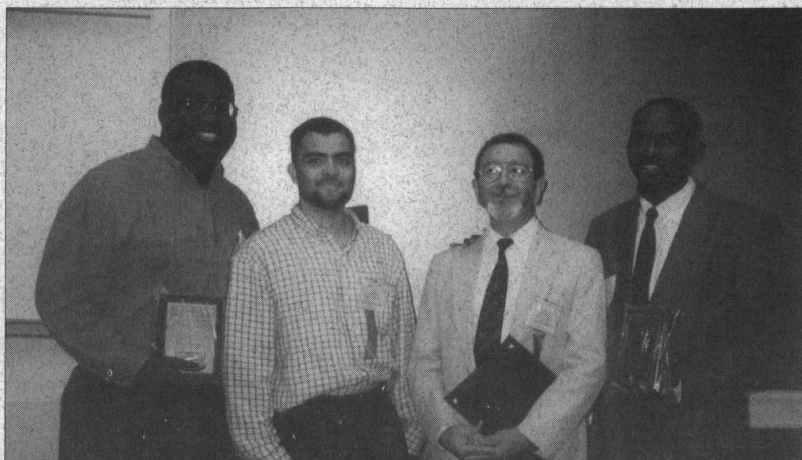
**Steering Committee**

Sadie Bragg *BMCC*  
Miguel Cairo *Queensborough*  
Humberto Canate *Hostos*  
John Chute *Lehman*  
Clifton Clarke *LaGuardia*  
David Entin *NY City Technical*  
Erwin Fleissner *Hunter*  
Norman Goldman *Queens*  
Ted Hanley *York*  
Louise Hainline *Brooklyn*  
Thelma Malle *Kingsborough*  
Carl Polowczyk *Bronx*  
Edward Tucker *Baruch*  
Charles Watkins *City*  
Doris Withers *Medgar Evers*  
Martel Zeldin *College of Staten Island*

**New York City Alliance News**

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*AMP Research Scholars at the NSF conference. From left to right: Donald Stennett, Kenneth Arroyo, John Romo, and Reggie Parker.*

now have access to immense mentoring resources. The program has engendered university-wide cooperation so that Project Directors and faculty members are available to mentor students from all colleges, and students can look beyond their own campuses for the expert training which they need.”

New York City AMP congratulates:

**Donald K. Stennett, Borough of Manhattan Community College**  
**First Place**  
for **Poster Presentation in Mathematics and Computer Science**  
for “*Animated Taylor Functions of Trigonometric Functions*”

**Reggie Parker, Brooklyn College**  
**Second Place**  
for **Oral Presentation in Mathematics and Computer Science**  
for “*Identification of Imaged Objects in Turbid Media*”

AMP also commends:

**Kenneth Arroyo, Brooklyn College**  
for his poster presentation  
“*Development of Overburden and Geologic Maps*”

**John D. Romo, City College**  
for his oral presentation  
“*Next Generation Helicopters*”

The New York City participants found the conference exciting and worthwhile. Conferees were able to tour the National High Magnetic Field Laboratory. They heard distinguished speakers including Dr. Norman E. Thagard, a former NASA astronaut and the first American to be launched into space aboard a Russian rocket. And, perhaps most importantly, the event provided numerous opportunities for student interaction. A panel of SEM graduate students, including Lehman College Activity Coordinator Stephen Providence, shared their experiences with AMP undergraduates, and a discussion in the round brought AMP students together with Drs. Luther Williams, Roosevelt Calbert, and William McHenry of the NSF.



## STEERING COMMITTEE PROFILES

### Dean Erwin Fleissner, Hunter College

Professor Erwin Fleissner is Dean of Sciences and Mathematics at Hunter College. A former Rhodes Scholar with a Ph.D. in biochemistry from Columbia University, Dr. Fleissner had a leadership position in the Sloan-Kettering Institute for Cancer Research before coming to Hunter in 1987.

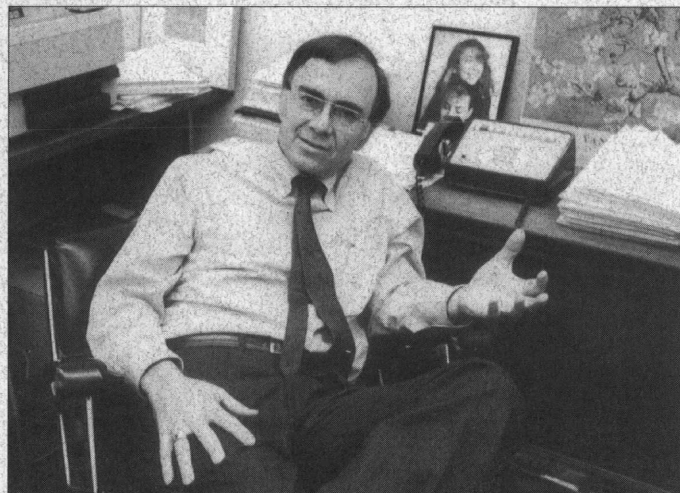
When speaking of his Hunter career, Dean Fleissner recalls the interview he had, prior to joining the college, with faculty member Jim Wyche. Dr. Wyche, who spearheaded the NIH Minority Biomedical Research Support (MBRS) Program at Hunter, spoke glowingly of the talent in the minority student population. "I picked up on that spirit," says Dean Fleissner, "and knew that I wanted to be part of bringing minority students into the scientific community."

"AMP has played a key role in my nine year CUNY experience," says Dean Fleissner. "It is an example of wholehearted cross-university collaboration in which participating colleges put aside their individual concerns to accomplish common goals." "Under AMP," he continues, "colleagues from CUNY campuses have been meeting in a very natural, unforced, and unstricted spirit of cooperation."

In addition to his responsibilities on the AMP Steering Committee, Dean Fleissner directs the NIH-funded Research Centers at Minority Institutions (RCMI) Program at Hunter. He is Program Director of Hunter's MBRS Program and Co-Principal Investigator of the NSF New York Collaborative for Excellence in Teacher Preparation in Mathematics, Science and Technology.

From his vantage point as a leader in so many nationally-funded initiatives, Dean Fleissner feels that AMP has created a template for harmonious cross-university collaboration which has been essential to the formulation and execution of other significant grants.

When asked about the effects of AMP on his home



*Dean Erwin Fleissner of Hunter College*

campus, Dean Fleissner points to the impact on Hunter's physics department of contacts with Borough of Manhattan Community College, Lehman College, and Medgar Evers College. "In physics," he says, "departments across the country are seeing a low number of majors, particularly among minority groups. Through contacts with other colleges, which lead students who are interested in research done by our faculty to connect with Hunter, we have greatly enriched the department." He also speaks of the importance of AMP's Research Scholarship stipends in allowing students to concentrate on their academic work and develop to their full potential. "We have had some extraordinary AMP students at Hunter, including one young woman who is currently pursuing her Ph.D. in astronomy and astrophysics at the University of Michigan," says Dean Fleissner. "She holds one of fewer than twenty NSF pre-doctoral fellowships awarded nationwide in this field. Having such students go through as undergraduates affects the whole tone of a department."

In addition to his administrative responsibilities, Dean Fleissner periodically teaches the course "Modern Biology and Human Nature" in Hunter's Honors Program.

## MEET THE PROJECT ADMINISTRATOR

### Dr. Frank Scalzo, Queensborough Community College

Dr. Frank Scalzo has devoted his entire career to education. He holds three degrees in mathematics, a B.A.

and an M.A. from Jersey City State and an M.S.T. from Fordham University. His Ph.D., also from Fordham, is in curriculum and teaching with a specialization in computer assisted mathematics. Dr. Scalzo spent the first four years of his career in the junior high and high school classroom.

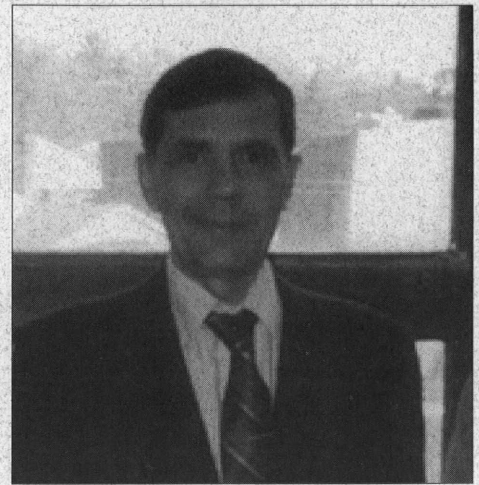


In 1970 he joined Queensborough Community College as an instructor in mathematics. QCC has remained his home campus. He has been a full professor of mathematics and computer science since 1981.

Dr. Scalzo has been part of AMP since its inception. He served as the QCC AMP Campus Coordinator from 1992 to 1994, when he was appointed Project Administrator. He brings to the job a wealth of highly relevant experience including nine years as coordinator of QCC's Computer Assisted Mathematics Laboratory and the project directorship of two NASA grants on sensor redundancy management.

What sets Dr. Scalzo's current post apart from the rest of his career is his almost full-time involvement in administration. Though he still mentors six to eight students a year and continues to speak on FORTRAN programming, computer assisted statistics, and computer algebra systems, Dr. Scalzo's impact now is at the institutional level. "As an instructor," he says, "I influenced students through one on one contact. Through AMP, I am creating opportunities for large numbers of students through innovative programming, in particular by providing opportunities for them to do research and by creating a pathway for community college students to major in SEM disciplines at senior colleges." When asked if he misses teaching, Dr. Scalzo says, "Of course, but the rewards of my work at AMP are great. Through programs like SEMRAP, we are encouraging community college instructors to become involved in research and to take that research back to their classrooms. Much of what we do is on the Internet, and we are impacting colleges all across the country."

Dr. Scalzo has been a key participant in the AMP partnership with NASA's Goddard Institute for Space Studies since the joint venture began four years ago. His previous work on NASA grants made him a natural for the project



*AMP Project Administrator Dr. Frank Scalzo*

as did his vast knowledge of computer assisted mathematics and his long history of mentoring minority students.

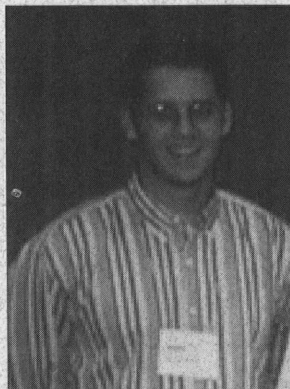
Looking to the future, Dr. Scalzo sees expanded horizons for AMP as the project plans for a second phase and for the AMP/GISS partnership as it continues to bring cutting edge research to CUNY campuses and New York City public schools. He looks forward to being part of both.

## AMP TRANSITIONS

### **An AMP Engagement: David Vargas and Monica Hernandez**

The AMP program has yielded its first scientific power couple: David Vargas of New York City AMP is engaged to Monica Hernandez of The University of Texas at El Paso AMP. The couple, who met in 1995 at the AMP Research and Scientific Exhibit and Presentation Competition at the University of California at Irvine, plan to wed in 1997.

Mr. Vargas, an AMP Research Scholar, began his university career at Queensborough Community College. He is currently pursuing his studies at Polytechnic University, and



*David Vargas*

will receive his B.S. degree in mechanical engineering in May of 1997. His research at NASA/GISS has provided a constant thread in his work, both at Queensborough and Polytechnic. The project he has been working on entails developing a computer program to track storms across the Northern Hemisphere by calculating vorticity cells from wind data. Ms. Hernandez will receive her B.S. in electrical engineering in May of 1998. She too has been involved with NASA. Her work centered on designing a cannister, now in space, which contains experiments relating to the effects of zero gravity on construction materials.

### **Sonya Warren Speaks at City Tech Commencement**

In a proud moment for AMP, Sonya Warren, who has participated in the program as a calculus tutor and Research Scholar, delivered a stirring speech at New



York City Technical College's 1996 commencement.

Ms. Warren cited the 1993 AMP National Conference on Diversity in the Scientific and Technological Workforce as a turning point in her life. It was there that she presented research which has since been published in three scientific journals. It was also at the conference that she heard a speech by Dr. Guion Bluford, the first African-American astronaut and determined that she would one day follow in his footsteps and enter the nation's space program.

As she spoke of her accomplishments and ambitions, Ms. Warren emphasized the three responsibilities which she has shouldered during her college career, those of full-time mother, student and researcher. She enjoined her classmates to take up the gauntlet of ensuring that the world is a better place for future generations, no matter what the personal obstacles, and to build on the foundation they received at City Tech. "My point here today," she said, "is that the acceptance of responsibility opens the doors of opportunity." "Let us take hold of the future with both hands and mold it into paradise," she continued. "Never let anyone tell you that because of your gender or your race there is something you can't do. There is no such word as can't."

Ms. Warren's City Tech degree is in telecommunications complemented by courses in computer science and electrical and mechanical engineering. Her AMP research, which ultimately took her to AT&T Bell Labs, centered first on the origins of magnetism and then on sudden storm commencement, the phenomenon through which magnetic storms affect the atmosphere and throw satellites and space shuttles out of line.

Ms. Warren is currently hard at work on several fronts. A job in data entry generates income, work in the City Tech computer center gives her continuity, and studying for her Novell Computer Certified Engineer qualification provides a challenge and a path to a bright economic future. Ms. Warren also looks at the Novell training as another string to the bow which she will need when she applies to the space program.



Sonya Warren

## A Gala Day at GISS Marks the ICP's Third Year

The NASA Goddard Institute for Space Studies was the place and August 9, 1996 was the day for a conference and open-house marking the successful completion of a remarkable three-year pilot program, the Institute on Climate and Planets. The innovative venture, co-sponsored by NASA/GISS and CUNY/AMP, melded students and faculty from CUNY junior and senior colleges and New York City public high schools and NASA scientists into teams doing world class climate and planetary research. The project was made possible by the deep commitment of GISS scientists to enhancing education

in their New York City community. The yield of their efforts has been enormous. They have integrated mentoring into daily research, producing outstanding student-scientists, and created partnerships with faculty which open the door to exciting interdisciplinary research and curriculum development.

The conference's theme was "Integrating NASA Research into the Math, Science, and Technology Curricula." It reflected the project's goal of infusing the work done at NASA into high school and university classrooms to enrich science education and groom the next generation of scientists. This will be accomplished through workshops, seminars, Internet access to NASA research and multimedia courseware. Ultimately, students will be able to participate in research projects through GISS "satellite" programs at their schools.

The day's events included workshops, seminars, poster sessions, and computer demos led by ICP participants. These were designed to educate, motivate, and involve visitors in the research conducted at GISS. They also showed practical



Professor James Frost of LaGuardia conducting a workshop on polarization, highlighting curriculum which he will take back to his electronics class at LaGuardia.



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*Recent QCC graduate Corey Holder (left) and QCC Professor Bruce Naples conduct a computer demonstration of software developed to introduce students to the study of atmospheric aerosols and the use of a sunphotometer instrument to learn more about their characteristics, properties, and impact.*

ways student and faculty research experiences are used to develop curriculum based on science problems related to improving our understanding of the Earth's environment and other planets.

The presenters included a roll-call of AMP's finest: students who have worked at an extraordinarily high level for three years,

developing expertise they only dreamed of when they entered CUNY, and faculty members who now enhance their teaching with cutting edge research experience.

Mary Cleave, retired U.S. Astronaut and Project Manager of NASA's soon to be launched SeaWIFS Satellite, delivered the keynote address. The day also featured speeches by James Hansen, Head of GISS; Joseph Rothenberg, Director of NASA Goddard Space Flight Center; and Bettie White, Director of NASA Minority University Research and Education Office.

As the project drew to a close, Project Director Leon Johnson and Project Administrator Frank Scalzo were able to say with conviction that it had helped them further AMP's goal of providing minority students with the skills they need to earn baccalaureate and graduate degrees in the sciences and to qualify for positions in today's high-powered technological workforce.