

# **The City University of New York**



**Testimony of Gillian Small, Vice Chancellor for Research  
The City University of New York  
New York City Council Higher Education & Civil Rights Committees  
Decade of Science at CUNY  
June 16, 2009**

Joint Hearing New York City Council Higher Education Committee and Civil  
Rights Committee

June 16, 2009

Committee Room, City Hall

My name is Gillian Small and I am the Vice Chancellor for Research at the City University of New York. I appreciate the opportunity to testify today about the work we are doing under the umbrella of The Decade of Science at CUNY.

Many of you will have heard over the past several years, from a variety of sources, that students' participation and proficiency in science, technology, engineering, and mathematics fields is on the decline in the US – and that our country's preeminence in the science education and innovation is in question. Indeed, two years ago the National Academies convened a panel of experts that produced an important document entitled, "Rising above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future" – this report makes an urgent plea to increase this country's scientific competitiveness. One of the recommendations in the report stated that we must:

***"Make the United States the most attractive setting in which to study and perform research so that we can develop, recruit, and retain the best and brightest students, scientists, and engineers from within the United States and throughout the world.***

*Prior to this, in a 2000 report the National Science and Technology Council noted "As minority groups increase as a percentage of the US population, increasing their participation rate in science and engineering is critical if we are to maintain the overall participation rate in science among the US population".*

Our Chancellor, Matthew Goldstein, taking note of these national trends, designated the years 2005 to 2015 the "Decade of Science" at CUNY. This

designation is renewing the University's commitment to creating a healthy pipeline to science, math, technology, and engineering fields by advancing science at the highest levels, training students to teach in these areas, and encouraging young people, particularly women and minorities, to study in these disciplines.

CUNY has a history of excellence in research and the sciences, as evidenced by the 12 CUNY Nobel laureates in areas including Economics, Physics, Medicine, and Chemistry. Research remains strong at the University, and we have faculty who have won prestigious awards, including memberships in the National Academy of Sciences.

These and other awards indicate the high quality of faculty research at CUNY and the lead role that our faculty (some of whom will testify here today) play in advancing science at every level within the University.

But – we understand the pressing need to do more -- In this 21<sup>st</sup> Century we need to be *more* competitive in recruiting the best faculty, providing them with the most up-to-date equipment and facilities that will enable both our faculty and our students to perform cutting-edge research – hence the Decade of Science.

Our Decade of Science is moving forward on several fronts:

Over the next several years, we will be expending in excess of \$1 billion across the University on the construction and modernization of science facilities at many of our campuses. In addition, we are building a CUNY-wide Advanced Science Research Center (or ASRC) concentrating on emerging disciplines, such as nanoscience, neuroscience and environmental sciences.

The ASRC will provide high-end instrumentation that will allow many scientists and their students from across the CUNY campuses to progress with their research endeavors and it will facilitate the development of integrated research

collaborations.

We have also recently established the CUNY Energy Institute, located at City College, that is focusing its attention on developing clean fuel technologies, including flow battery applications for use in buildings and transport.

Planning is also under way to create the first public Graduate School of Public Health in New York City, to be located at Hunter College. We understand the need for such a School since approximately half of the world's population is now in urban areas. These urban environments are already facing major health challenges: AIDS, obesity, diabetes. A center of public education will address these and other issues through research and education.

CUNY's extensive College Now program in the public schools, that prepares students for college enrollment, continues to run summer science programs. In an exciting development, for the past two years CUNY has partnered with the New York City Department of Education to run The New York City Science and Engineering Fair. This is the city's largest high school research competition. Each year, several hundred high school students from throughout the five boroughs of New York City present their research projects to expert judges and compete for a variety of prizes. The NYC Science and Engineering Fair is an Intel International Science and Engineering Fair-affiliated regional fair.

What are the results of these efforts thus far – I think you will hear from some of our faculty and students today – but let me just give you some numbers. In 2008 17,139 students enrolled in STEM (science, technology, engineering and mathematics) majors at CUNY, which is a 57% increase over the number for the year 2000. In fact, just since 2005 when we initiated our Decade of Science, we have seen a 30% increase in enrollment to STEM majors.

Given that our student body is extremely diverse, with approximately 48% having a native language which is not English, and that African American and Hispanic undergraduates each comprise more than a quarter of the total – I believe that we are succeeding in our mission to train the next generation of scientists and engineers and to ensuring that this body is as diverse as is New York City is itself.

Thank you.

My name is Jill Bargonetti and I am a Professor of Biological Sciences at Hunter College. Public education has been and continues to be an important part of my life. I am a New Yorker and I was a student of Hunter Elementary School, Hunter High School until 8th grade and then the Bronx High School of Science. I followed that by getting my Bachelors degree from the State University of NY at Purchase.

As a former public school student I, and many others like me, welcome investment into the "Decade of Science" in the CUNY system. This is a visionary plan to enrich science education and research. It is a wise investment and I am proud to be a part of the process and the vision.

I work at Hunter, studying the p53 gene, which plays a key role in 70 percent of cancers. In my laboratory we carry out experiments on human cancer cells and worms, but eventually the therapies and molecular pathways we discover may be tested on humans. The p53 gene is a tumor-suppressing gene. In seventy percent of cancers, the gene product isn't working properly. We look at ways to reactivate it or to kill cells where it isn't functioning. We also try to understand why it might not kill the cancer cells sometimes.

The Decade of Science is important for my research but it is also important for the next generation of scientists who I mentor. I pride myself in being a mentor

for all individuals and I have attracted people of multi-ethnic backgrounds to my laboratory. I didn't come from a family of academics, but two professors during my undergraduate years were mentors to me. They put the application for graduate school in front of me and made me fill it out. Today, I want to be the mentor who does this for students. I thought it would be especially good for students of color to see someone like me in a role as a researcher, geneticist, and teacher. Many of the students in my classes and in my laboratory are participants in the NIH funded Minority Access to Research Careers program. Each student who works with me be it undergraduate or graduate student has his or her own part of the project. I help them design their experiments. We study human cancer cells derived from patients and the germ cells in microscopic worms. Germ cells are a special type of cell that divides quickly, like cancer cells do. We treat the human cancer cells and the worms with chemotherapeutic drugs to see how the drugs affect their germ cells. The chemotherapeutic drugs change the DNA of cancer cells and the germ cells of the worms. Then we study what happens to the ability of the cells to die as a result of the chemotherapy.

In order to this cutting edge research we need cutting edge facilities for our teams of students and Professors. We need groups of people from many walks of life educated in the science and human aspects of gene therapy and at the table making decisions. These decisions have to be on a case-by-case basis. We need teamwork on these types of issues! The Decade of Science is to inspire the

multitude of CUNY students to consider the importance of science in our day-to-day lives.

Part of the Decade of Science important for Hunter College and for me concerns the possibility of our new science building, which will allow for clinical and basic research to happen side by side. More nursing students will be able to join our program. More clinical collaborations will result. Our students may be the ones finding new treatment and prevention alternatives. They could be the ones writing future laws. The prospect of a new, unified Hunter Science and Health Center in this, one of the best biomedical research neighborhoods in the world, would open up exciting possibilities for research at Hunter and for our students futures. It will benefit Hunter students, NYC and the future diversification of the science work force in our nation. The Decade of Science is a visionary plan to enrich public education and science training in NYC.

Testimony: Mandē Holford, PhD –Assistant Professor of Chemistry  
CUNY-York College and the Graduate Center

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Hello Committee Members,

**I.** My name is Mandē Holford. I am a recent Assistant Professor of The City University of New York at York College and the Graduate Center. I would like to speak with you today about my experience both as a CUNY alum and as a new faculty.

**II.** I am a New Yorker. I went to a science high school, Brooklyn Tech, I got my BS from a CUNY college, York College actually where I'm now a professor, and I did my PhD training at The Rockefeller University. Science and New York City are intricately linked for me. Having traveled to conduct research in other cities such as Paris, Berlin and Panama City, Panama, I'm in the unique position to appreciate what a career in science in New York offers. In one word, it offers Diversity.

Especially at CUNY. CUNY offers diversity in student and faculty population, in scientific expertise, and in scientific facilities. Science is usually driven by the questions being asked. If you have a diverse scientific community, the questions will vary - this will in turn innovate the techniques created, which will lead to advancement of the field. As an example consider the actions of Rita Caldwell, former Director of the National Science Foundation. Upon visiting countries ravished by cholera. Rita realized the expensive water filtration devices being produced in the West couldn't work for the impoverished villages she visited and devised a low tech solution. Cheesecloth. Strain the water through cheesecloth, which was abundant and cheap for the villagers, and the water was purified enough to reduce cholera infection. Rita, through her diverse experiences, asked different questions and came up with new solutions.

**III.** My research involves investigating the evolutionary history of marine snails and their toxins in order to find new tools for manipulating signaling in the nervous system. The long-term impacts of my research would be the discovery of novel therapeutics for disorders affecting the nervous system such as chronic pain, or epilepsy. That's the big money day we're working towards... but for now it's basic research to identify the structure and function of peptide toxins.

As a new hire in CUNY's Decade of Science Initiative, I am very excited about the possibilities to collaborate with colleagues CUNY wide. At York I have established collaborative projects with Drs. Emmanuel Chang and Shao Ying Hua. I hope to collaborate with Wayne Harding at Hunter College on the synthesis of peptide analogs, and possibly Jorge Gonzalez at City College in the area of small business initiatives. The ASRC being constructed will be an excellent opportunity to access state of the art equipment and train the next generation of science PhD and undergraduates. Last week I attended the National Science Foundation Joint Annual Meeting for programs such as the Louis Stokes Alliance Minority Program. There were so many eager and excited graduate and undergraduate students there. It inspired me to want to create the best laboratory I can. Which means one that is at the intersections of top science and top people from diverse cultures with diverse scientific questions to ask. Exactly what can be found at CUNY.

**Testimony to the New York City Council on Higher Education  
Joint Hearing with the Civil Rights Committee  
June 16, 2009**

Good Afternoon, Chairman Barron, Chairman Seabrook, members of the New York City Council on Higher Education, and the Civil Rights Committee. I am humbled and thankful for the opportunity to stand before you today to testify about my experiences as a student at the City University of New York and the ways in which the Decade of Science has impacted me. I am also grateful for your steadfast support and leadership of CUNY, which has made stories like mine possible.

My name is Catherine Garcia and I am a graduating senior of Hunter College. I am majoring in Environmental Science, with minor concentrations in Chemistry and Urban Planning. I was always a curious child, observant of the world around me, and incessantly pestering my mother with questions. Always encouraging of my inquisitive nature, my mother envisioned her little girl growing up to achieve the dream that she had always dreamed for herself, but never did: that is, completing a college education. The efforts stemming from the Decade of Science at CUNY helped make this dream more attainable than I could have ever imagined. Initially, I attended John Jay College as a Forensic Science major before transferring to Hunter College in the fall of 2006. At Hunter, I continued my academic journey, focusing my studies on renewable energy and environmental health issues. I worked as a volunteer Research Assistant at the CUNY Institute for Urban Systems, examining the reduction of total greenhouse gas emissions through New York City's newly revised building code, and secured several internships, researching renewable energy technologies. But studying the information was not enough – I wanted to use my education to give back. Chancellor Goldstein once said that “science is not made in a laboratory; it is made when a young person gets that initial spark of inspiration.” My personal goal became to inspire other young people to find their own spark. In 2008, my best friend and I co-founded the Hunter Solar Project – an effort to bring a solar energy system to the Hunter College campus, offsetting a portion of the school's non-renewable energy demands, while creating research and teaching opportunities for faculty and students. We created a Solar Tour program where high school

students get the opportunity to visit our solar array for educational tours and hands-on labs. The program's goal is to stimulate interest and encourage them to pursue higher education in vital STEM disciplines, such as engineering, physics and chemistry while keeping in line with our University's flagship research initiative in environmental science. Partnering with administration, faculty, and students, we raised enough funds to cover half the installation costs. For these efforts, the Hunter Solar Project has been recognized by the CUNY Sustainability Task Force, the Center for Sustainable Energy, and was awarded the 2009 Outstanding Student Commitment Award from the Clinton Global Initiative. We expect to pilot our first tours this Fall. As well, the National Hispanic Environmental Council has requested that I serve as a mentor in their 4<sup>th</sup> Annual New York City Minority Youth Environmental Training Institute – an intensive science-based 7 day program that exposes minority high school youth to research and fieldwork in natural resource conservation, geology, plant science, biology and other disciplines. I intend to continue my involvement with this organization in order to bring the same exposure to environmental fields to youth across the city.

This summer, I will be the first member in my family to graduate college and am looking forward to pursuing a PhD in Environmental Health. Today's global issues command solid scientific knowledge and the ability to convey this knowledge across barriers and disciplines. My story attests to the dedication CUNY provides its students to engage and prepare them to face these issues through its Decade of Science Initiatives. I speak for the thousands of students who share my story of opportunity across the University when I say: the greatest lesson I take with me from CUNY is that no dream is too big to dream.

My name is Jaime Farrington and I am a physics Ph.D. student at Hunter and the Graduate Center. In 2001 I came to New York with my wife and son from Puerto Rico. Having started a physics major at UPR-Mayaguez, I wanted to continue my studies in New York, but I was not sure in which institution. The institution needed to be of excellent academic standards and affordable, since we were living with very limited financial resources. As I talked with more and more people, the CUNY System, specifically Hunter, seemed to be a perfect fit. Actually, a dean at NYU recommended Hunter to me.

When I met professor Greenbaum at Hunter and he showed me all of the academic and professional opportunities available, I made my choice. In addition, he helped me get the necessary financial aid to complete my degree. I was accepted to the MBRS/MARC program, which was not only a great honor, but also a relief since at the time I was supplementing my finances with loans. With the opportunities available, I was able to present at several scientific meetings and get involved in research in places such as Brookhaven National Laboratory.

Besides the professional opportunities, I greatly enjoyed the cultural diversity of the student population at CUNY. I have had the opportunity to forge long lasting friendships with people from all around the world. On the personal level several the faculty and staff at the university became like an extended family, which honestly made it easier for me to adapt to a new city in a foreign country.

After I graduated, I was accepted to the Masters-PhD Program in applied physics at Columbia University. Due to family circumstances, I had to leave the program once I got my Masters. I always kept in contact with the people at CUNY and after some time after my Masters, Professor Greenbaum offered me the chance to join the CUNY Physics Doctoral program and his research group. Because of my positive experience at CUNY I accepted. As it is said, the rest is history. Currently I am on track to finish my doctoral studies early next year.

Over the past years as a CUNY graduate student, I have benefitted from many programs through the Decade of Science Initiative. For example, I had the opportunity to attend and present in several conferences. I participated in various seminars including the Entrepreneurship seminar held by the CUNY Technology Transfer office and professional development courses at the Graduate Center of CUNY. In addition I have had the opportunity to

attend workshops and seminars outside CUNY such as the *Idea to IPO* Course at the New York Academy of Sciences and a fuel cell workshop that I will be attending in July.

After I finish my PhD studies there are very good chances that I will join a renewable energy startup in Puerto Rico or work as a postdoc at a National Laboratory. I feel optimistic about my professional future, since I see several great opportunities thanks to my preparation at CUNY.

Overall I have had a great nurturing experience at CUNY. This is the reason why I am actively involved in recruiting students from Puerto Rico for the CUNY physics program. I want to help other students to pursue their dreams as I have had the opportunity at CUNY.



## GEP News

*Vita Rabinowitz, Acting Provost and GEP*, will discuss institutional changes that have resulted from Hunter's NSF ADVANCE award during the *Transforming Academic Science and Engineering, Advancing Women Faculty* session at the American Council on Education's 89th annual meeting in Washington, DC, February 10 – 13, 2007.

*Virginia Valian and Annemarie Nicols-Grinenko, Psychology and GEP*, offered a 3-hour workshop, *Advancing your academic career: How to get the job you want* on November 8, 2006. This was the inaugural event of CUNY's new Postdoctoral Program.

*Erica Chito Childs, Sociology*, was one of only 6 faculty CUNY-wide to be awarded a fellowship from the 2007 CUNY Faculty Fellowship Publication Program. Childs will use the award to begin an ethnography of the race and gender dynamics in two New York City kindergarten classrooms.

*Margaret Chin, Sociology*, received an honorable mention in the Thomas and Znaniecki Book Award from the American Sociological Association's International Migration Section and an award from the Chinese section of the Coalition for Labor Union Women for her book, *Sewing Women: Immigrants and the New York City Garment Industry*.

*Rupal Oza, Geography and Women's Studies*, published a new book, *The Making of Neoliberal India: Nationalism, Gender, and the Paradoxes of Globalization*, which uses the discourses of identity and belonging in 1990s India to explain how cultures of neoliberalism become dominant.

## GEP Highlights

The GEP and the Provost's Office conducted a survey of natural and social science faculty. While Hunter is doing well on many measures of gender equity (e.g., the number and percentage of women scientists at all academic ranks and in leadership positions), the survey revealed more subtle gender differences in the sciences. The GEP will present the results of the survey at a meeting of the science faculty on February 14, 2007.

GEP Co-Director Virginia Valian has been interviewing successful scientists to determine the "hallmarks of success" in science disciplines. She has discovered that there is overwhelming consensus on at least one point: the importance of attending conferences throughout one's career. The GEP has prepared a brochure that summarizes the benefits of attending conferences and provides techniques for making the most of conferences. The brochure is posted on the GEP website.

The GEP has produced a video to assist in its efforts to sustain the Sponsorship Program once NSF funding ends. In addition to presenting an overview of how the program works, the video offers clips of women scientists discussing their research and the ways in which they, and their students, have benefited from the program. The video is posted on the GEP website.

## GEP Receives New NSF Grant to Offer Workshops CUNY-wide

The GEP was recently awarded a new 3-year \$500K grant from the NSF. GEP Co-Director and Distinguished Professor Virginia Valian is PI on the grant. Co-PIs include Hunter College President Jennifer Raab, CUNY Executive Vice Chancellor for Academic Affairs and University Provost Selma Botman, GEP Co-Director and Acting Provost Vita Rabinowitz, and GEP Director of Programs and Research Annemarie Nicols-Grinenko.

The GEP will partner with CUNY's central administration on two initiatives that will involve 8 CUNY campuses: 1) A series of *professional development workshops for junior faculty (male and female) in the sciences* will address the techniques, skills, strategies, and knowledge necessary for professional success. The workshops will integrate material on the impact of gender and race on careers of faculty and discuss how to develop individual, institutional, and discipline-level solutions to the underrepresentation of women and minority-status scholars. 2) A *comprehensive grant-writing assistance program for women scientists* who are applying for federal funding for the first time, or who want to apply for funding in a new area. The program will provide a course release (funded by CUNY), along with individualized grant writing assistance from the GEP and experts in the scientific area of the proposal.

Information about applying to these programs will be posted on the GEP website and distributed to all eligible faculty within the next few months.



**P**amela Stone, an Associate Professor in the Sociology Department and associate in the GEP Sponsorship Program, has a new book coming out in May 2007. *Opting Out? Why Women Really Quit Careers and Head Home*, which will be published by the University of California Press (<http://www.ucpress.edu/books/pages/10348.html>), addresses whether high-achieving, professional women who leave their careers to become full-time mothers are really *choosing* to abandon their careers to return home. Based on in-depth interviews with women who returned home after working as scientists and other professionals, Stone finds – contrary to

many media perceptions – that these women are not opting out, but are instead being pushed out of the workplace. *Opting Out?* outlines concrete ideas for redesigning workplaces to make it easier for high-achieving women and men to attain their goal of living rewarding lives that combine families and careers.

*Lynn Chancer, Sociology*, was given this year's Distinguished Scholar award by the Division on Women and Crime of the American Society of Criminology for contributions that have pushed the frontiers of feminist analysis in exciting new directions.

*Godfrey Gumbs, Physics*, has been named a CUNY Distinguished Professor in recognition of a lifetime of contributions to theoretical physics. In addition to being an extraordinarily active and productive scientist, Dr. Gumbs has made outstanding contributions to many College programs, including efforts to recruit and support minority students.

*Makram Talih, Mathematics and Statistics*, was awarded a New Researchers Fellowship by the Statistical and Applied Mathematical Sciences Institute, which allowed him to participate in the institute's program, *High Dimensional Inference and Random Matrices*.

## Sex Comparisons in the Sciences

### The Hunter College Science Faculty Survey

**T**ogether with the Provost's Office, the GEP surveyed faculty in the natural and social sciences during the Fall 2006 semester. Of 187 science faculty members, 88 completed the survey consent form and 59 completed the entire survey.

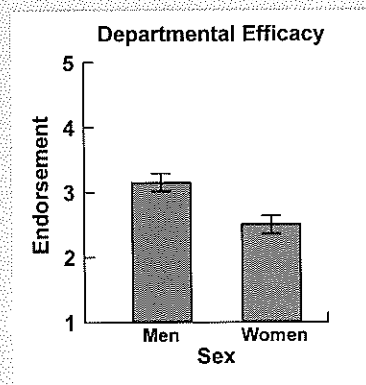
The pattern of results is extremely consistent. Compared to men, women report

- less control over what happens in their departments (Figure 1)
- less acceptance in their departments
- less collegiality in departments
- less recognition from their colleagues and chairs for their teaching, research, and committee work
- less satisfaction with the tenure and promotion process

Compared to men, women also

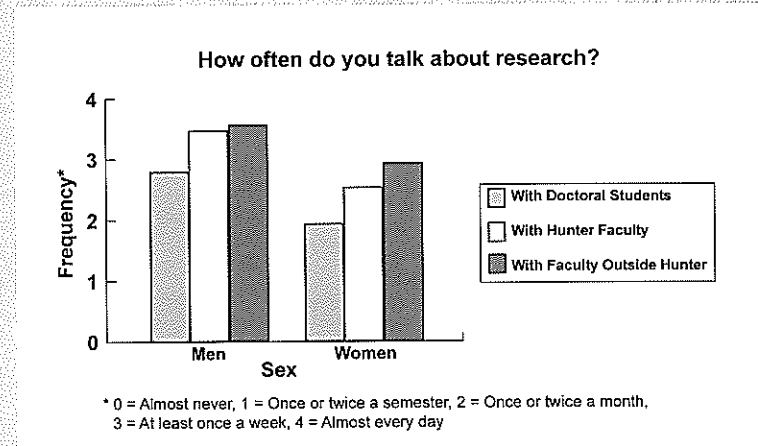
- are less identified with Hunter
- are more likely to report not knowing the rules and procedures for distributing departmental resources and responsibilities
- talk less about teaching with colleagues and chairs, but more with undergraduate students
- talk less about research with Hunter faculty, faculty outside Hunter, and doctoral students (Figure 2)
- ask colleagues less often to collaborate on research projects and grants
- are asked by colleagues less often to collaborate on research projects and grant

Figure 1



While Hunter is doing well on many measures of gender equity, hidden and subtle sex differences still appear to be a part of life in science departments at the College.

Figure 2





## GEP News

*Gender EquiTeas* – The GEP invites all Hunter faculty, administrators, post-doctoral fellows, and graduate students to share news and ideas in an informal setting. Tea, coffee, and sweets will be provided from 3:30 to 4:30 pm in 509TH on February 2nd, March 2nd, April 6th, and May 4th, 2006.

*Darlene DeFour* and *Roseanne Flores*, *Psychology*, presented papers about the effects of community violence on girls at “Violence and Exploitation Against Women and Girls,” a New York Academy of Sciences workshop.

*Tracy Dennis*, *Psychology*, is lead PI on a \$68,000 CUNY collaborative grant to examine affective, cognitive, and physiological predictors of emotion regulation in children.

*Philip Kasinitz*, *GEP Sponsor*, is president-elect of the Eastern Sociological Society, the largest regional association of sociologists. He is also Executive Officer of the Sociology doctoral program at the Graduate Center, a member of the Hunter faculty, and associate director of the CUNY Center for Urban Research.

*Haydee Salmun*, *Geography*, was recently promoted to Associate Professor. She also had a paper, “Progress in Modeling: The Impact of Land Cover Change on the Global Climate” accepted for publication in *Progress in Physical Geography*, one of *Geography’s* top journals.

*Pamela Stone*, *Sociology*, recently had her 1981 article, “The Dictionary of Occupational Titles as a Source of Occupational Information,” recognized as one of the top 100 most highly cited articles published in the *American Sociological Review*, the ASA’s flagship journal.

*Yujia Xu*, *Chemistry*, received a NSF MRI instrument grant in the amount of \$372,229 for the purchase of an analytical ultracentrifuge.

## GEP Highlights

After three years of collaborative effort between the GEP and the Hunter administration, we are very pleased to report that gender equity benchmarks have been now been institutionalized at Hunter. What does “institutionalization” mean? It means that as of this year the Office of Institutional Research (IR), with assistance from the Department of Human Resources (HR), has taken over the annual responsibility of analyzing and posting data on hiring, progress through the ranks, and other measures of the advancement of men and women in the 11 science departments at Hunter. The 2004-2005 gender benchmarks can be viewed on the IR website (<http://www.hunter.cuny.edu/ir/>). Until this year, the GEP had obtained and analyzed data from HR and the Offices of the Provost and the Deans in order to report these benchmarks to NSF and the Hunter community. NSF required a commitment from Hunter to conduct and present the analyses annually. Thanks to the combined efforts of Joan Lambe, Director of IR, Katen Ho, Data Manager of IR, and Robert McGarry, Director of HR, Hunter is now leading the way in making hiring and retention results transparent.

The GEP’s multimedia designer, Monica Hopenwasser, has conducted, edited, and posted more video interviews with Hunter’s outstanding women scientists on the GEP website. Jill Bargonetti, Margaret Chin, Dana Draghicescu, Laurel Eckhardt, Susan Epstein, Dixie Goss, Vanya Quiñones-Jenab, and Marianna Pavlovskaya are current participants in this ongoing project. If you would like to be interviewed, please contact the GEP.

The GEP, together with the Provost’s Office, is preparing a new initiative to investigate overall quality of life for scientists at Hunter. The survey addresses issues of resource allocation, faculty influence, and faculty beliefs about the value and recognition of teaching, research, and service. Within the next few weeks Hunter faculty will receive information about participating in this confidential online survey. Everyone is encouraged to share their observations and judgments via the survey.

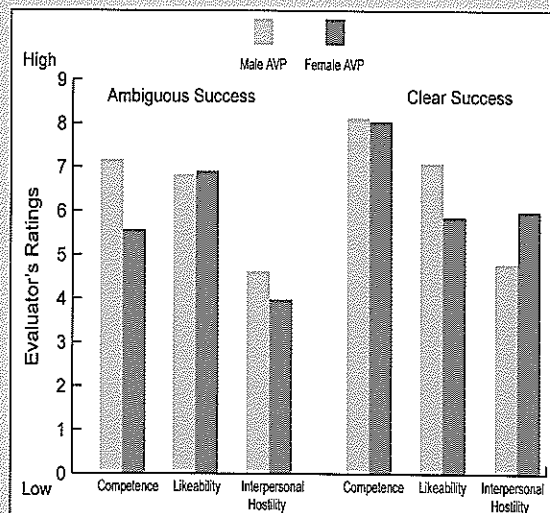
## Highlight on Research

### *Penalties for Success: Reactions to Women who Succeed in Male-Dominated Fields*

Male and female evaluators read background information about an Assistant Vice President (AVP) in an aircraft company. In half the cases, the evaluators did not know how well the AVP was doing on the job (ambiguous success condition). The remaining AVPs were described as being stellar performers (clear success condition).

- In the ambiguous success condition, evaluators rated the male AVP as more competent and more hostile than the female AVP. No gender differences were seen in likeability.
- In the clear success condition, evaluators rated the male and female AVPs as equally competent, but they rated the woman as much more hostile and much less likeable than the man.
- Male and female raters did not differ.

Women pay a price for success in a male-dominated field; both men and women see a clearly competent woman as less likeable and more hostile than a comparable man.



Heilman, M.E., Wallen, A.S., Fuchs, D., & Tamkins, M.M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology*, 89, 416-427.

For abstracts of more articles visit <http://hunter.cuny.edu/genderequity/equitymaterials.html>

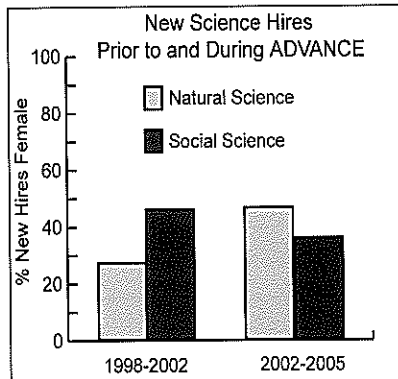
## GEP Spotlight: Wenge Ni-Meister

Wenge Ni-Meister, an Assistant Professor in the Geography Department and associate in the GEP Sponsorship Program, together with three NASA and Harvard scientists, has received a three-year, \$1,500,000 grant from NASA to develop ENT, a global dynamic terrestrial ecosystem model for terrestrial ecosystem-climate interaction studies at seasonal to century time scales. ENT is envisioned as a tool for understanding the conditions and signatures of habitability of the Earth and, ultimately, as a foundation for searching for life on other planets. Ni-Meister's primary role on this project will be to develop a model to represent the interaction between vegetation and solar radiation, which drives the biogeophysical/biogeochemical functions of the terrestrial ecosystem.

Ni-Meister also recently received \$80,000 from NASA to attract outstanding Hunter undergraduates to the study of Earth System Sciences. The award will allow Ni-Meister to fund students while providing them with the opportunity to conduct cutting-edge research using satellite remote sensing data.



## Sex Comparisons in the Sciences at Hunter



Prior to Hunter's ADVANCE award, 27% of new natural science hires were women. During the first three years of the GEP this has increased to 46%. In the social sciences there has been no significant change.

To learn more visit  
[www.hunter.cuny.edu/genderequity/benchmarks.html](http://www.hunter.cuny.edu/genderequity/benchmarks.html)

## Tutorials for Change: Gender Schemas and Science Careers

Virginia Valian, Distinguished Professor of Psychology and Linguistics and GEP Co-Director, has developed Tutorials for Change, a series of four web-based slide presentations with voice-over narration. A grant from the National Science Foundation to Valian supported the creation of these tutorials; a recent supplement from the NSF provides funding for the creation of additional tutorials. In her book, *Why So Slow? The Advancement of Women* (MIT Press, 1998), Valian asks why so few women are at the top of their profession. To provide an answer, Valian integrates research from psychology, sociology, economics, and neuropsychology. The data and theory from *Why So Slow?* are the starting point for the tutorials. Students and educators are largely unaware of relevant research concerning the role of gender in science. The goal of the tutorials is to remedy that lack. The tutorials provide undergraduates, graduate students, post-doctoral researchers, faculty, and administrators with current data and theory in an informative and accessible format. You can access the tutorials through the GEP's web site at <http://www.hunter.cuny.edu/gendertutorial> or <http://www.hunter.cuny.edu/genderequity/relatedlinks.html>.

- Tutorial #1: Data and common explanations for sex disparities in salary and rank
- Tutorial #2: Gender schemas and evaluations of others
- Tutorial #3: Gender schemas and our evaluations of ourselves
- Tutorial #4: Remedies: What you can do

If you have data or theory to provide, relevant references, or suggestions for links – send an e-mail to [gender.tutorial@hunter.cuny.edu](mailto:gender.tutorial@hunter.cuny.edu)

## Faculty Development Survey: New Initiative

Hunter College is doing better than most schools when it comes to objective measures of gender equity. However, anecdotal evidence suggests that hidden problems concerning power and resource use and access may persist. Despite widespread acknowledgment of the importance of hidden and subtle gender inequities, few studies have attempted to quantify them. The GEP has developed an online survey instrument to address subtle and hidden gender inequity as well as overall quality of life for faculty in the social and natural sciences at Hunter College. The survey deals with how resources and responsibilities are assigned within departments; with whom faculty members discuss their research and teaching; how faculty interact with other faculty, students, and support staff; beliefs about the value and recognition of teaching, research, and committee work; commitment to and thoughts about leaving Hunter; productivity; individual advising.

We plan to publish our results, in this newsletter and elsewhere, and share them with the Hunter College administration in an effort to improve the overall climate at the college in general and gender equity in particular.

## Other Science Faculty in the News

Jill Bargonetti, *Biological Sciences*, was awarded \$100,000 from the Breast Cancer Research Foundation to study estrogen influences on the p53 tumor suppressor protein in breast cells. The award will allow Bargonetti and her research team, PhD student Nicoleta Catalina Arva and research technician Kathryn Talbott, to explore a potentially new model for breast cancer prevention.

Juan Battle, *Sociology*, is president-elect of the Association of Black Sociologists. His research addresses the intersection of race, gender, and class on a variety of social phenomena.

Hiroshi Matsui, *Chemistry*, will participate in and organize the prestigious 2006 U.S. Frontiers of Engineering, an invitation-only meeting that will bring together outstanding young engineers to discuss leading-edge research. This is Professor Matsui's second such nomination and selection – a fitting recognition of his pioneering contributions in the emerging field of bionanotechnology.

The Center for the Study of Gene Structure and Function was awarded a \$13.2 million grant from the National Institutes of Health. The 5-year grant represents a 55% increase over the 2000-2005 award of \$8.2 million. The Gene Center, founded in 1982 to foster inter-departmental collaboration in genetic research, currently includes 43 professors from departments ranging from chemistry to anthropology.

Be a part of our Fall 2006 newsletter.  
Submit your news by June 1, 2006  
E-mail: [gender.equity@hunter.cuny.edu](mailto:gender.equity@hunter.cuny.edu)



## GEP News

*Vita Rabinowitz, GEP Co-Director*, gave the keynote address at the inaugural meeting of the New York Academy of Sciences' Women Investigator's Network (WIN), which seeks to advance women in science.

*Virginia Valian, GEP Co-Director*, participated in a congressional briefing on Women in Science in Washington, D.C.

*Annemarie Nicols-Grinenko, GEP Coordinator*, presented "Strategies for Change: The Gender Equity Project" at the Academy of Management conference in Honolulu, Hawaii in August 2005.

*Margaret Chin, Sociology*, published a new book, *Sewing Women: Immigrants and the New York City Garment Industry*. It offers a compelling portrait of the work lives of Asian and Latina women who reinvigorated NYC's garment industry in the 1990s.

*Tracy Dennis-Tiwary, Psychology*, received a \$150K grant from NIH as part of the SCORE program to study the emotional modulation of attention and an \$80K CUNY Collaborative Grant to examine whether parenting and control processes predict emotional self-regulation in children.

*Purvi Sevak, Economics*, received a \$25K grant from the U.S. Social Security Administration to investigate differences in asset accumulation by gender and marital status.

*Yujia Xu, Chemistry*, received a \$150K grant from NIH as part of the SCORE program to develop expression systems to produce recombinant collagen fragments in *E.coli* and yeast for the investigation of the mechanisms of molecular assembly of collagen triple helix.

## GEP Highlights

As of Fall 2005, twenty-six women scientists from Anthropology, Chemistry, Economics, Geography, Mathematics and Statistics, Physics, Political Science, Psychology, and Sociology have participated in our Sponsorship Program. Since becoming GEP associates, these exceptional scientists brought in over one million dollars of external funding. Equally important, they encourage future generations of scientists through their work with over 100 undergraduates, 40 MA students, and 22 doctoral candidates.

Institutionalization of Gender Equity benchmarks was a requirement of our NSF ADVANCE Institutional Transformation award. These data are now being collected, analyzed, and reported annually by Hunter's Office of Institutional Research, with the assistance of the Office of Human Resources. The benchmarks are the result of three years of collaborative effort by the GEP, Human Resources, Institutional Research, and the Offices of the Dean, the Provost, and the President.

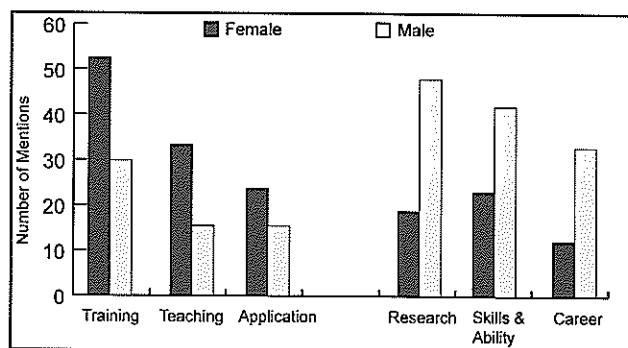
Our partnership with students, staff, and faculty in the Film and Media Department has produced a beautiful new website that features video interviews with some of Hunter's outstanding women scientists, who discuss their work and experiences in science. Check out the video interviews on our website. If you would like to be interviewed, please contact the GEP.

## Highlight on Research

### Systematic Differences in Letters of Recommendation Written for Female and Male Medical Faculty

Trix and Psenka (2003) analyzed 312 letters of recommendation written for successful applicants for faculty positions at a large American medical school from 1992-1995. Of the applicants, 29% were female and 71% were male. Letters written for these female and male medical faculty showed differences in the terms used to describe them and in the length of the letters.

- Letters for females were shorter than those for males, included more phrases expressing doubts, used more "grindstone" adjectives, and mentioned their personal lives more often. Letters for women also included less repetition of standout words like "outstanding," "excellent," and "superb," and included fewer references to research, skills and abilities, and career.



Rank-ordered possessive phrases differed for women ('her training') and men ('his research'). Data are from equal numbers of letters for men and women at similar ranks.

- Letter writers are at risk of underselling the abilities and qualifications of the women they write for and of overselling the abilities and qualifications of the men they write for.

Trix, F., & Psenka, C. (2003). Exploring the color of glass: Letters of recommendation for female and male medical faculty. *Discourse and Society*, 14, 191 - 220.

For abstracts of more articles visit <http://hunter.cuny.edu/genderequity/equitymaterials.html>

## GEP Spotlight: Frida Kleiman

Frida Kleiman, an Assistant Professor in the Chemistry Department and associate in the GEP Sponsorship Program, has received a three-year, \$450,000 SCORE grant from the National Institutes of Health to study how nuclear proteins respond to DNA damage in normal and breast cancer cells.

BRCA1 is identified as a gene that confers susceptibility to early onset of familial breast and ovarian cancers. Increasing evidence has supported roles for BRCA1 in tumor suppression, gene transcription, cell progression, and DNA repair. But determination of a mechanism by which functional loss of BRCA1 promotes tumor formation still constitutes a major challenge. Kleiman is developing a model in which BRCA1 helps to coordinate a ubiquitous cellular response to DNA damage, a response that includes general factors involved in RNA processing and control of gene expression.

Kleiman's studies promise to improve diagnosis of and therapies for breast cancer. Her research is part of the Breast Cancer Research Program, managed by the U.S. Army Medical Research and Material Command.



## Sex Comparisons in the Sciences at Hunter

- To the extent that being a Distinguished Professor (DP) or holding a named chair represents leadership, women scientists are doing well (80% of Hunter's DPs and 50% of Hunter's named chairs are women).
- After removing chairs from the analysis, only 30% of the elected members of the department P&B committee members are women. (The department P&B is composed of the department chair and four elected members.)
- 60% of the new science hires in 2003-2004 and 38% of the new scientists hired in 2004-2005 were women.
- Women scientists were less likely to be retained at the assistant professor level than men during 1999-2004 (24% of women and 3% of men left).
- Women social scientists spend more time as associate professors than do their male colleagues.
- The percentage of men promoted from assistant to associate professor (29%) was higher than that for women (10%) from 1999 to 2004.
- Sex is not a predictor of salary at Hunter. Rank is the strongest predictor, but years since degree is also predictive.

To learn more visit  
[www.hunter.cuny.edu/genderequity/benchmarks.html](http://www.hunter.cuny.edu/genderequity/benchmarks.html)

## Improving Offer Letters at Hunter College

After analyzing offer letters in the eleven GEP departments from 1998 through 2004, the GEP discovered wide disparities in how much relevant information is included in any given offer. To ensure uniform and complete offer letters, the GEP created a checklist of items an offer letter should include, a sample narrative template, and a template organized by category.

The GEP worked on this project in consultation with Provost Pizer, Dean Friedlander, and Dean Henderson. Chairs now receive the checklist and both versions of the template for use in writing offer letters. We will be examining letters further to see if there are differences in letters written to men and women and if the apparent differences represent an interaction among sex, rank, and department.

Item mentioned in Offer Letter	%Women	%Men	%Total
	N = 23	N = 31	N = 54
Effective date of appointment	78	84	81
"Appointment is subject to approval of the Board of Trustees of CUNY and financial ability"	87	84	85
"Terms and conditions of employment are those of CUNY's Bylaws"	70	45	56
Collective bargaining agreement exists between University and PSC-CUNY	70	48	57
Start date of tenure clock	0	13	7
Consideration for early tenure or promotion	4	23	15
Length of contract	43	52	48
Length of appointment	22	16	19
Lab or office space and office equipment specified	13	29	22
Teaching assignment or release specified	30	10	19
Total of all start-up funds	83	84	83
When start-up should be used by	43	32	37

## Hallmarks of Success: New Initiative

The Gender Equity Project is embarking on a new initiative – part basic research and part application – to determine “hallmarks of success” in science disciplines. Our aim is to increase women's success and influence in science. We will review the achievements of successful scientists to create a guide for different science specialities. We expect the hallmarks to include federal grant funding, high-impact journal publications, national conference presentations, and various awards and honors. We will examine sex, age, and specialty differences, among others.

We welcome participation from faculty members in all stages of this project. We can provide some support. We envision a series of steps for each research area that includes:

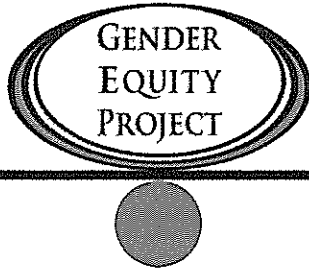
- developing objective indicators of success
- obtaining CVs from successful scientists
- interviewing leaders about successes, failures, and turning points
- developing a coding scheme to arrive at a list of hallmarks
- producing a guide with the hallmarks and how to achieve them

If you would like to contribute to any part of the project, please contact the GEP.

## Other Science Faculty in the News

Derrick T. Brazill, *Biological Sciences*, was one of 58 young scientists to receive the Presidential Early Career Award for Scientists and Engineers (PECASE), the highest national honor for young investigators. Professor Brazill's work contributes to an understanding of how organisms monitor and regulate cell density in different tissues. His use of a simple organism allows him to incorporate his research into several undergraduate laboratory courses in cell biology, providing valuable hands-on experiences to students.

Be a part of our spring newsletter.  
 Submit your news by December 1, 2005  
 E-mail: [gender.equity@hunter.cuny.edu](mailto:gender.equity@hunter.cuny.edu)



## GENDER EQUITY PROJECT

HUNTER COLLEGE DEPARTMENT OF PSYCHOLOGY  
WWW.HUNTER.CUNY.EDU/GENDEREQUITY

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Report on the **Hunter College Gender Equity Project**  
to The New York City Council  
16 June 2009

Virginia Valian  
Distinguished Professor  
Hunter College

[gender.equity@hunter.cuny.edu](mailto:gender.equity@hunter.cuny.edu)  
[www.hunter.cuny.edu/genderequity](http://www.hunter.cuny.edu/genderequity)  
[www.hunter.cuny.edu/gendertutorial](http://www.hunter.cuny.edu/gendertutorial)

The Hunter College Gender Equity Project (GEP) was founded in 2002 through a 5-year award of \$3.75 million from the National Science Foundation (NSF). Vita Rabinowitz, the current Provost of Hunter College, and I were the co-founders, with the support of Hunter's president, Jennifer Raab. The GEP has subsequently received other awards from the NSF, totaling another \$850,000, with the support of President Raab, Chancellor Matthew Goldstein, and Vice Chancellor for Research Gillian Small.

Our mission is to lead the way in demolishing the glass ceiling for women in science, at CUNY and in the nation. I will tell you today of a few of our initiatives and give you data showing their effectiveness. We believe we know how to improve science and scientists at CUNY, through a combination of direct, innovative programs, annual analyses of hiring and promotion patterns, and periodic reviews of institutional procedures.

**Sponsorship Program.** We have prepared a video of our Sponsorship Program, which shows our first signature program. In that program we provided women with funds for research, provided a sponsor – a senior and distinguished person in the woman's field (but not in her department) who received an honorarium in exchange for reading and providing comments on her paper and grant submissions, suggesting conferences and meetings for her to attend, introducing her to other senior people in her field, and providing advice about her career. The GEP also provided workshops to address every aspect of academic life, from the first three minutes of a presentation to handling rejection to balancing one's responsibilities. Finally, the GEP co-directors and senior staff provided professional advice on an on-going basis. Two of the beneficiaries of that program are here today – Regina Miranda and Neepa Maitra. More of those beneficiaries would be here – but they are conducting research in Ghana, giving presentations in South Africa, attending scientific meetings in the United States, or finishing final revisions on papers to journals.

Thirty women faculty in the natural and social sciences participated in the Sponsorship Program between 2002 and 2008. Sixty per cent of the women were women of color. During that period the faculty earned over \$4.9 million in external grant funding; that was more than six

times the amount that the GEP invested in them. Statistical analyses show that they significantly increased their research productivity, as measured by the average number of papers and grants that they submitted.

Finally, the course releases that some women used their research funds gave them time to provide one-on-one attention and mentoring to students, giving students the background they needed to attend graduate school. Of the two women here today, for example, Dr Maitra had an undergraduate who went to Harvard for graduate work and Dr Miranda had a masters student who went to Yale. Students also play a role in the GEP itself, as work-study students, interns, and research assistants at the undergraduate and graduate levels.

We used the Sponsorship Program as a model for two new initiatives – a grant-writing program and a workshops program. We secured funding from the NSF for three years. Both of those programs are open to CUNY faculty at the major senior colleges.

**Grant Writing Assistance Program.** To evaluate the grant-writing program, we compared participants' funding from just before they entered the program in 2007 or 2008 to their funding as of January of this year. In total, the 10 participants earned 23 grants totaling over \$2 million. Three statistical analyses showed that participants submitted more grant proposals, had more grants funded, and published more articles, books, and book chapters after being in the program than when they began. That program was only open to women, because CUNY-wide data showed that women were underrepresented among major grant recipients.

**Workshop Series for Junior Faculty.** Our workshop series – 3 days of workshops – is open to men as well as women. Statistical analyses showed that, one year after participating in the workshops, participants published significantly more articles, books, and book chapters, had more grants funded, made more keynote or invited addresses, and presented at more conferences than when they began.

In short, we have good evidence that our programs provide faculty in the sciences with the resources, skills, and information they need to become successful in their field and develop students' access to research in science. Our major challenge is funding, and we are always looking for support.

**Monitoring and improving institutional practice.** Although the most gratifying part of the GEP is helping to develop the talent of our faculty and students, developing sound institutional practices and reviewing equity benchmarks is equally important. I will give just one example, and refer you to our website for other examples.

We conducted an analysis of offer letters sent to new faculty in the sciences at Hunter and discovered wide disparities from department to department in how much relevant information was included in the letters; there was also some indication of gender differences. To correct that situation, the GEP created a sample narrative template for the letters and a template organized by category. The Offices of the Deans now distribute both versions of the template to all science department chairs and requires that they include all relevant categories in offers made to new hires. The Offices of the Provost and the Deans review all science offer letters to ensure that they include all relevant categories before the letters are sent out. We compared offer letters written before and after introduction of the templates and found that both the overall amount of information in the letters and the amount of information in women's offer letters relative to men's showed improvement. This initiative demonstrates one of our mottoes – gender is a window on institutional effectiveness. When we query whether women and men are receiving equal information and equal treatment, we can discover that the practices need improvement for everyone. What helps women helps everyone.

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Gillian Small

Address: \_\_\_\_\_

I represent: City University of New York (CUNY)

Address: \_\_\_\_\_

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THE CITY OF NEW YORK**

Appearance Card

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 in favor  in opposition

Date: June 16, 2009

(PLEASE PRINT)

Name: Dr. Mandi Horford

Address: \_\_\_\_\_

I represent: The City University of New York - York College

Address: \_\_\_\_\_

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Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_  
 in favor  in opposition

Date: 6/16/09

(PLEASE PRINT)

Name: Catherine Garcia

Address: 136-05 Sanford Ave #5F Flushing NY 11355

I represent: City University of New York

Address: 525 East 80th St NY NY 10025

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THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

Name: Virginia Valian (PLEASE PRINT)

Address: Hunter College

I represent: Hunter College

Address: \_\_\_\_\_

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in favor  in opposition

Date: \_\_\_\_\_

Name: Jaime Farrington (PLEASE PRINT)

Address: \_\_\_\_\_

I represent: CUNY

Address: \_\_\_\_\_

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Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

Name: Regina Miranda (PLEASE PRINT)

Address: \_\_\_\_\_

I represent: Hunter College, CUNY (Gender Equity Project)

Address: \_\_\_\_\_

◆ Please complete this card and return to the Sergeant-at-Arms ◆

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THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Neepa Maitra

Address: Hunter college of CUNY

I represent: \_\_\_\_\_

Address: 695 Park Ave, NY 10065

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

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I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Jill Barganetti

Address: Hunter College 695 Park Ave

I represent: CUNYO NYC 10065

Address: 695 Park Ave 942 HN NYC 10065

Please complete this card and return to the Sergeant-at-Arms