

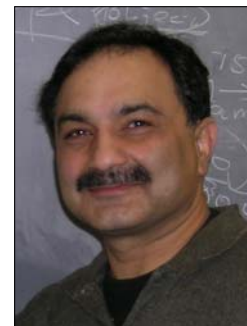
## Nobel Prize Winner Visits New Staten Island Center - CART

Professor Nan-Loh Yang (center), Director of the Management Team of the new Center for Engineered Polymeric Materials (CePM) at the College of Staten Island/CUNY, is pictured with Dr. Alan G. MacDiarmid (left), winner of the 2000 Nobel Prize in Chemistry, and Dr. Robert R. Alfano (right) Director of the IUSL. Dr. MacDiarmid, who is Blanchard Professor at the University of Pennsylvania, was the Keynote Lecturer at the Inauguration of the CART CePM on March 10, 2005. Dr. Yang is also a member of the CUNY-CAT faculty. The CART CePM will serve as a framework to expand collaborative efforts with the private sector to advance New York State's polymeric material industries. CART, which stands for the College Applied Research and Technology program, is a New York State initiative to encourage greater collaboration between industry and colleges through a college-based industry-academic economic development program, promote collaborative research with industry along with workforce development, and encourage outreach through partnerships.



## Pioneer Ph.D. Candidate

Doctoral student Masood Siddique has passed his Ph.D. dissertation defense and thesis, the final step before receiving his Doctor of Philosophy degree in electrical engineering. His thesis is entitled "Ultrafast Optical Pulse Interactions in Active Disordered Condensed Matter." This research, involving lasers,



random photon propagation and photodetection, is at the cutting edge of the "hot", active and rarely pursued field of Random Lasing. Mr. Siddique was one of the early pioneers and the first to show lasing can occur in "tissues" embedded within active dye. His vast experience and knowledge in photonics and electronics prompted Dr. Robert R. Alfano to offer him

one of the lead positions in the Compact Photonic Explorers Program (CPE) at the IUSL. CPEs are compact, remote-controlled mobile photonic sensing devices that will have a range of diagnostic applications, including remote health monitoring, bacterial detection and cancer screening.

Mr. Siddique has been mentored by Dr. Alfano, who is Distinguished Professor of Science and Engineering at CCNY and Director of the IUSL. The Dissertation Committee is composed of Dr. Alfano (Chair); Professor Ping-Pei Ho (Electrical Engineering); Professor Leslie L. Isaacs (Chemical Engineering); Professor Vladimir Petricevic (Physics); Dr. Wubao Wang (IUSL, Senior Scientist); and Professor Nan-Loh Yang (Chemistry, College of Staten Island).

## CUNY-CAT SHINES *Continued from page 3*

through collaborations with nearly 60 companies. It has generated \$50 million in new revenues and cost savings for State businesses, helped create or retain over 160 industrial jobs, and generated over \$10 million in industrial support for CUNY-CAT projects. Over 250 papers have been published by CUNY-CAT scientists and the Center has been awarded over 50 U.S. patents.

New York State companies provided strong support for CUNY-CAT's renewal. These include Quantronix, Northrop Grumman, the Infotonics Technology Center, Mediphotonics Development Corp., Mediscience Technology Corp., Corning, Applied NanoWorks, Lockheed Martin, and Computer Instruments Corporation.

For more information about CUNY-CAT, please visit [www.cunyphotonics.com](http://www.cunyphotonics.com) or contact Alan Doctor, Business Development Manager, at 212-650-8265; e-mail: [doctor@ee.ccny.cuny.edu](mailto:doctor@ee.ccny.cuny.edu) ■

## EXECUTIVE VICE CHANCELLOR *Continued from page 2*

Massachusetts' Boston campus. Her most recent book is entitled *Engendering Citizenship in Egypt*.

Prior to joining the University of Massachusetts she spent nine years on the faculty of the College of the Holy Cross in Worcester, Massachusetts. Dr. Botman earned her bachelor's degree, *cum laude*, from Brandeis University; holds a B.Phil in Middle Eastern Studies from Oxford University; and a master's in Middle Eastern Studies and doctorate in History and Middle Eastern Studies from Harvard University. ■



## Reserve the Date!

Thursday, April 21<sup>st</sup> will be a noteworthy day for CUNY's photonics researchers, with two important events at the Graduate Center:

- **Combined CUNY-CAT Scientists Meeting and Photonics Industry Networking Event** Dr. Myron Wecker, the CAT's Deputy Director for Administration, and Mr. Alan Doctor, Deputy Director for Business Development, will discuss new CAT programs in which you can participate, progress at the CAT, and future plans. Members of CAT's Industrial Advisory Board and State photonics Industry reps will offer updates on developments in the industry and strategies for expanding your research through commercialization. Informal discussion and Q&A will follow. The CUNY Graduate Center, 365 Fifth Avenue (between 34<sup>th</sup> & 35<sup>th</sup> Streets), Ninth Floor Suite, 9 AM to Noon.
- **The 3<sup>rd</sup> CUNY Photonics Initiative Symposium**, featuring research presentations by recently hired photonics faculty. This event is open to the CUNY community. The Graduate Center, Skylight Room, 1:30 PM to 3:30 PM.

RSVP to Joseph Tomaras, Administrative Assistant, tel: 212-650-8215; fax: 212-650-8481; [tomaras@ee.ccny.cuny.edu](mailto:tomaras@ee.ccny.cuny.edu)

## Physics Dept Homecoming Date Change

-- NEW DATE: May 6, 2005 --

The first annual *City College Physics Department Homecoming* is being held on Friday, May 6, 2005, at the Robert E. Marshak Science Building, located at 138th Street and Convent Avenue. The homecoming will include tours of the CCNY physics facilities, lectures, opportunities to meet faculty and students, and a luncheon. For more information, please contact: Sue Turner at (212) 650-5516 or [sueturn@sci.ccny.cuny.edu](mailto:sueturn@sci.ccny.cuny.edu).

## CUNY-CAT Shines in Marketing Effectiveness Assessment Survey

There are fourteen Centers for Advanced Technology (CATs) in New York State, located at leading public and private colleges and universities. The CATs initiative is one of New York State's longest standing business assistance and high technology development programs. The CATs are supported by the New York State Office of Science, Technology and Academic Research (NYSTAR), and are intended to encourage greater technological and economic cooperation between industries and New York's research universities.

NYSTAR recently conducted a survey of over 200 economic development experts throughout the State to determine the CATs' success in three broad areas: support of companies in the region; economic impact; and awareness of the existence of the services that are available through the CATs. NYSTAR announced the results recently in its "Marketing Effectiveness Report for 2005."

The City University's New York State Center for Advanced Technology in Photonics Applications (CUNY-

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## Executive Vice Chancellor Selma Botman Visits CUNY-CAT and Other Photonics Initiatives

Photonics and nanotechnology are new frontiers in science, and research in these fields by scientists at The City University of New York may one day have a revolutionary impact in areas ranging from the

diagnosis and treatment of cancer to the development of molecular optical-based computers with storage devices holding trillions of bytes of information. Several important research centers and institutes have

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established CUNY at the forefront of photonics and laser technologies.

To gain an overview of these photonics projects and initiatives, Dr. Selma Botman, the University's new Executive Vice Chancellor for Academic Affairs, visited City College. She was accompanied by Dr. Gillian Small, the University Dean for Research.

Dr. Robert R. Alfano, Distinguished Professor of Science and Engineering at CCNY, offered welcoming remarks and an introduction to the various centers and institutes that comprise the CUNY Photonics Initiative, which he heads. These include:

- The New York State Center for Advanced Technology in Photonics Applications at The City University of New York (CUNY-CAT);
- The NASA Center for Optical Sensing and Imaging (COSI);
- The DoD Center for Nanoscale Photonics;
- The Compact Photonic Explorers Consortium (CPE);
- The Institute for Ultrafast Spectroscopy and Lasers (IUSL).

These entities have pioneered in research utilizing laser light and photonics technology in studying biomedical systems; developing tunable solid state lasers, picosecond lasers and femtosecond lasers; investigating time resolved techniques and their applications to a broad range of studies in biomedical optics as well as primary events in photosynthesis, vision and tissue diagnosis; and studying fundamental energy transfer processes in liquids, semiconductors and solids.

They have received substantial funding and related support from a host of federal, state and private agencies and corporations, including NASA, the U. S. Department of Defense, The State of New York, The City University of New York, Northrop Grumman, Lockheed Martin, Corning, Mediscience Technology Corp., Raytheon, Quantronix, and GER, Inc.

Following Dr. Alfano's introduction there was a presentation by Mr. Alan Doctor, Deputy Director for Business Development of the CUNY-CAT. Mr. Doctor discussed "CUNY-CAT Company Sponsorship and Business Development."

After Mr. Doctor's presentation, Executive Vice Chancellor Botman and Dean Small toured selected photonics research labs and heard reports from scientists on their research, including the following:

- Professor Vladimir Petricevic on "Cr<sup>4+</sup> Laser Development and Crystal Growth";
- Dr. Alvin Katz on "Optical Biomedical and Biological Sensing Technology";
- Dr. Manuel E. Zavallos, on the "Skin Scanner," which may aid in the early detection of surface and subsurface skin



*Pictured above with Dr. Selma Botman (second from right) on her recent visit to CUNY-CAT, are (from left) Dr. Gillian Small, Dr. Robert Alfano and Dr. Vladimir Petricevic.*

lesions such as skin cancer;

- Dr. Iosif Zeylikovich on "Nanoscale Microscopy".

"I was very pleased and proud to host this visit by Executive Vice Chancellor Botman and Dean Small and to be have the opportunity to offer them an overview of the CUNY Photonics Initiative," Dr. Alfano said.

"Dr. Botman expressed deep interest in the various centers and institutes and demonstrated an impressive understanding of the significance of the Photonics Initiative for CUNY. I look forward to working with her to enhance and expand our efforts in this pioneering field."

**About Dr. Selma Botman:**

Prior to becoming CUNY's Executive Vice Chancellor for Academic Affairs, Dr. Botman was Special Assistant to the Chancellor at the University of Massachusetts Lowell, where she had a wide-ranging portfolio. In addition to teaching courses on the Middle East and on international development, she crafted a model of civic engagement for the campus that involved faculty, staff and students in meaningful outreach to the community.

Before that, she was Vice President for Academic Affairs at the University of Massachusetts, serving as the chief academic officer of the five-campus University System. She worked closely with faculty and administrators on academic and strategic initiatives, encouraged inter-campus collaboration, evaluated and approved new campus-based academic programs and degrees and reviewed all tenure cases. Dr. Botman also worked closely with the University's Board of Trustees, providing policy recommendations, and assistance.

Dr. Botman also played an active role in efforts to increase student diversity at the University of Massachusetts, and worked with the Raytheon Corporation on a project to increase the number of women and minorities in the engineering field. She also taught seminars in Modern Middle Eastern Politics at the University of

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**Dr. Myron S. Wecker, CUNY-CAT's New Deputy Director for Administration**

Dr. Myron S. Wecker has been named Deputy Director for Administration of the Center for Advanced Technology in Photonics Applications at The City University of New York (CUNY-CAT). The announcement was made by the Center's Director, Dr. Robert R. Alfano, who is also Distinguished Professor of Science and Engineering at CCNY.

Dr. Alfano noted that Dr. Wecker has had extensive experience in the corporate world, where he managed a wide range of U.S. and worldwide technical support and business leadership programs at IBM.

"He also initiated and led collaborative ventures with universities, research institutes and business partners," Dr. Alfano said. "That background will serve him well at CUNY-CAT, which is part of a major New York State initiative to encourage greater technological and economic cooperation between industry and New York's research universities."

He succeeds Ms. Masada Disenhouse as Deputy Director for Administration. Ms. Disenhouse plans

to pursue other professional and career possibilities.

In his new post, Dr. Wecker is responsible for managing grant reporting, public and university relations, and grant administration for CUNY-CAT. The Deputy Director for Administration also assists the Center's scientists in researching new grant opportunities, responding to grant solicitations and managing other state, federal, and industry grants.

Dr. Wecker had a distinguished career at IBM, where his positions included International Program Executive for Global Services, in Paris, France; Program Director for International Operations; Program Director for Services Relationship Management; Manager of Scientific and Technical Computing; and Manager of Global Account Sales and Sales Support. He developed and led the transformation of mission critical business processes at IBM and created and managed worldwide strategy to enhance sales performance and results. Dr. Wecker received IBM's highest corporate recognition award for outstanding achievement and leadership.

Since leaving IBM, he has served as a consultant to Nassau County, where he developed plans for the establishment of a laboratory training center and a new business incubator in the life sciences.

Dr. Wecker received his Ph.D. in astrophysics and applied physics from Polytechnic University, having performed research on radiative gas dynamics and hypersonic flow there and at Princeton University, Cornell University, NASA's Jet Propulsion Laboratory, General Applied Science Laboratories, and Grumman Aerospace Corporation. He earned his bachelor's degree in aeronautical engineering *summa cum laude* from Polytechnic University, and his master's in aeronautical engineering from Cornell. ■



**CUNY-CAT RANKED FIRST**

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CAT) is ranked first in four out of five categories. The categories in which CUNY-CAT ranked first are: Overall Score; Total Impact; Business Assistance; and Economic Impact. In addition, CUNY-CAT ranked second in Awareness/Visibility.

The Center conducts research in areas ranging from less invasive cancer imaging to nanoscale photonic materials, and transfers the technology to its industry partners for development. CUNY-CAT is presently focusing its research and development capabilities on areas that improve human health and enhance homeland defense. Key photonics technologies include: optical medical diagnostics, optical imaging, laser development, ultrafast laser technology, optical semiconductor materials and devices, nanoscale photonic materials and devices, compact photonic devices, optical communications, biological sensing and processes, optical computing and optical bio-defense.

CUNY-CAT is having a significant human impact through its work with hospitals and medical centers in the area of mediphotonics, utilizing spectroscopic techniques

for minimally invasive *in situ* early detection for oral, cervical, prostate and other cancers, as well as safer breast cancer imaging technology.

The Center was established by New York State at CUNY in 1993, and is headed by Dr. Robert R. Alfano, Distinguished Professor of Science and Engineering at City College. CUNY-CAT was among ten Centers for Advanced Technology in New York State that were newly designated or renewed by NYSTAR. The Center will receive \$10 million over the next ten years.

CUNY-CAT also receives support from The City University. Facilities and equipment are available on five senior college campuses and the Center brings CUNY scientists together to work collaboratively on research projects. Approximately 20 faculty from the science and engineering departments at CCNY, Queens, Brooklyn, Staten Island and Hunter Colleges are affiliated with CUNY-CAT.

Over the past decade the Center has had a beneficial economic impact on New York State

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