Columbia to Host Forum on Technical Implications of WTC Collapse; Panel Will Include Engineering Leaders, Structural Assessment Team

BY SUZANNE TRIMEL

The Fu Foundation School of Engineering and Applied Science on Monday, Nov. 12, will host an all-day forum with the top engineers of the World Trade Center, members of the structural assessment team at Ground Zero and leaders of the emergency response and recovery of Sept. 11. Their purpose will be to gather first-hand information that could lead to improvements in building design and operations to help cope with extreme hazards like the terrorist attacks.

The forum, “The Technical Implications of the World Trade Center Collapses,” is open to the public and will take place from 9:00 a.m. to 5:00 p.m. at the Roone Arledge Auditorium of Alfred Lerner Hall.

There will be no admission charge but attendees are asked to register in advance online at: http://www.civil.columbia.edu/wtcforum/#reg

The forum will address four aspects of the destruction of Sept. 11: what specific mechanisms caused the towers to collapse; what structural and geotechnical consequences have been observed in adjacent buildings and foundations; what technical problems were encountered in the emergency response and recovery, and what are the implications of this extreme event on the assessment of hazards and risk in future building design.

Among the participants will be Leslie Robertson of Leslie Robertson Associates, the engineer of record for the Twin Towers; Frank Lombardi, chief engineer for the Port Authority of New York and New Jersey, the controlling authority for the World Trade Center, and Raymond E. Sandiford, chief geotechnical engineer for the Port Authority; Commissioner Kenneth Holden of the New York City Department of Design and Construction, and representatives of the Federal Emergency Management Administration, the Mayor’s Office of Emergency Management and the Fire Department.

In addition, leading engineers who are assessing damaged buildings around Ground Zero and others with expertise in structural design will participate. They include: Robert Smolikowski of Weidlinger Associates, a leader in blast-resistant buildings; Charles Thorn-ton, chairman, and Richard Tomasetti, president, of the Thornton-Tomasetti Group Inc., the structural design firm for the Petronas Towers, the world’s tallest building in Singapore, which is the lead firm.

A ground level view of one of the “Twin Towers” which used to stand in lower Manhattan.

CCS Asks Campus to Help Neighborhood Programs

At a time when New York City has responded with overwhelming generosity to those immediately affected by the World Trade Center disaster, the Columbia Community Service (CCS) Annual Appeal, which began last week, reminds Columbians to also include in their thoughts those in need who live in our own neighborhood. Faculty and staff who wish to contribute this year, will receive donation cards in the mail soon.

In announcing the 55th Columbia Community Service Annual Appeal on Oct. 25, President George Rupp, who has made strengthening ties to neighborhoods surrounding campus a University priority, said: “We must not forget, that here in our neighborhood the effects of an economic downturn that began prior to Sept. 11 will only continue to deepen. Those who are being hurt the most are those who can least afford any more difficulty: the elderly, the ill; low income women with infants and children, the homeless and the hungry. These are precisely the people who are helped by Columbia Community Service.”

Last year, more than $223,000 in contributions from the faculty and staff of Columbia, Barnard and Teachers College was distributed to 56 community service programs within a 35-block radius of the campus to help fund summer and after-school art, music and educational activities for inner city youth, nursery school, and kindergarten scholarships for children from low-income families, social work services for the elderly and meals and shelter for the homeless. This year’s campaign will be underway until the amount of last year’s contributions is exceeded.

Co-chairs for the 55th Appeal are Patricia L. Fran-cy, treasurer and controller; Martha C. Howell, professor of history; President Arthur Levine of Teachers College, and President Judith R. Shapiro of Barnard College. David W. Leebron, dean of the Faculty of Law is president of CCS.

—Lauren Marshall

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NSF Awards CU $23 Million for Research in Digital Archeology

BY SUZANNE TRIMEL

A Columbia research group involving computer scientists, environmental engineers, archaeologists, art historians, classicists and preservationists is developing new computer modeling techniques that promise to open historic structures and archaeological sites to more visually detailed and efficient methods of examination and analysis.

The team, led by the principal investigator, Professor Peter Allen, a computer scientist at the Fu Foundation School of Engineering and Applied Science, received $2 million in funding over five years this month from the National Science Foundation to develop the computer modeling tools, which will be tested at Columbia’s new excavation at Amheida in Egypt’s Dakhleh Oasis in the western desert and at the Cathedral of St. John the Divine, near the Columbia campus.

The Dakhleh Oasis site, because it is undamaged, of significant size and previously unexcavated, promises to be one of the most important digs in Egypt, providing a unique opportunity to understand the peoples and cultures of western Egypt and the central issues of Egyptian settlement and archaeology.

Allen, whose research focuses on robotics and computer vision and who has been named a Presidential Young Investigator by the National Science Foundation, said the new computer technique uses a laser scanner mounted on a mobile robot that can be used as an intelligence sensing device over a large area. “The robot gives us the ability to explore the site and scan its measurements both above and below ground,” said Allen.

The data collected can provide a realistic, three-dimensional model of the historic site or building quickly and efficiently. “Typically in the past, researchers have had to use hand techniques—taking data measurements by hand—to create a 3-D model. You (Continued on Page 2)