



Seminar

Date: 2 October 2009 (Friday)

Time: 11:00 am - 12:00 pm

Venue: FJ 303, The Hong Kong Polytechnic University

Fast Forward: Transforming the Institutions of the New Millennium – A BioNanoMaterials Pathway

Prof. Jag Sankar

NC A&T State University (NCAT), Greensboro

Abstract:

Advanced materials and nanoscale science and engineering are impacting the human race through next-generation technology, ranging from structural materials to smart structures, and from microelectronics to medicine. Universities and basic research organizations are pushing the frontiers of the bionanotechnology envelope, while a rapidly mushrooming stream of innovative entrepreneurs is taking these technologies to the marketplace. With the world becoming increasingly flat, the economic success and impact of any future society depends on the rise of young brains with advanced interdisciplinary knowledge, entrepreneurial skills and global perspective. This overview talk will focus on the paradigm shift in advanced materials and nanotechnology research as a pathway to educational institutional transformation, the goal is that this model will blaze a path other STEM areas to follow.

The presentation will also discuss some of the recent advances in engineering and the enabling sciences providing an unprecedented opportunity for revolutionary developments in biological interface materials and nanotechnologies. The whof the recent NCAT- ERC for Revolutionizing Metallic Biomaterials (RMB) is to transform current medial and surgical treatments by creating "smart" implants. The mission is to deliver on the potential of bioengineering and nanotechnology to dramatically improve treatments for cardiovascular, orthopedic and craniofacial. The promise is that new kinds of implants and biodegradable metals may be used that can grow and adapt to the human body they are implanted in and eventually dissolve when no longer needed. That would spare patients from pain and expense of the multiple procedures used to implant, then later remove, refit and re-implant the current geof devices. The intellectual merit is being achieved through the intertwining development activities on a global level among its partner institutions: University of Pittsburgh (Pitt), University of Cincinnati (UC), global research partner Hannover Medical School (MHH), Germany and other industrial partners, innovators, state and local government entrepreneurial networks and global cultural partners.

Biosketch:

Professor Sankar sacrifice and energy over the past 25 years has developed a high-profile, internationally recognized, advanced materials and nanotechnology activities at NC A&T State University (NCAT), Greensboro, NC. In 1997, he established the NSF-funded multi-million dollar Center for Research Excellence in Science and Technology (CREST) Program. In 2003, he was funded to establish Army's Center for Multifunctional Materials for Homeland Security. In 2004 - present, he established the Center for Nanoscience and Nanomaterials for the Office of Naval Research. He is the site-coordinator of NSF-Nanoscale Science Engineering Center (NSEC, 2003-2013).

Professor Sankar has received many recognitions including one of the first Distinguished University Professors title at NCAT, White House Millennium Researcher title from the White House, 2004 AAAS Mentor Award- publisher's of "Science", ORNL/DoE recognition, Best Teacher, Highest Researcher Award, recognitions from ASME etc. The Business Journal of the Greater Triad area recognized him as "one of the most influential persons for 2009" in the Greater Triad Region.

* Refreshment will be served after the seminar.