



## **“Ethical Challenges in Biomedical Engineering Research”**

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**Friday, November 30, 2012**

**LECTURE: 9:00 AM - 10:00 AM**

**ENGINEERING CENTER**

**ROOM EC 2300**

**10555 WEST FLAGLER STREET**

**MIAMI, FL 33174**

### **Abstract:**

During the last fifty years, the field of biomedical engineering has been largely responsible for the dramatic advances in modern medicine. These include advanced therapeutic and diagnostic techniques (e.g., total joint replacements, heart-lung machines, artificial heart, computed tomography and magnetic resonance imaging) and that in turn has significantly improved the life span and quality of life of our patients. However, biomedical technology has also contributed to new ethical dilemmas and has challenged some of our moral values.

Some of the areas that have shown immense promise but also raised public concern are Nanobiotechnology, stem cell research, cloning, genetic engineering and synthetic biology. Other topics that also often face ethical scrutiny are animal research, clinical trial and conflict-of-interest. A discussion of ethical issues associated with these topics will be presented.

### **Biography:**

Dr. Subrata Saha is presently Director of the Biomedical Engineering Program and the Director of Musculoskeletal Research and Research Professor in the Department of Orthopaedic Surgery & Rehabilitation Medicine at SUNY Downstate Medical Center in Brooklyn, New York.

Dr. Saha received a BS in Civil Engineering from Calcutta University in 1963, an MS in Engineering Mechanics in 1969 from Tennessee Technological University, and Engineering and PhD degrees in Applied Mechanics from Stanford University in 1972 and 1974, respectively. He has been a faculty member at Yale University, Louisiana State University Medical Center, Loma Linda University, Clemson University, and Alfred University. Dr. Saha has received many awards from professional societies, including Orthopedic Implant Award, Dr. C. P. Sharma Award, Researcher of the Year Award, C. William Hall Research Award in Biomedical Engineering, Award for Faculty Excellence, Research Career Development Award from NIH, and Engineering Achievement Award. He is a Fellow of The Biomedical Engineering Society (BMES), The American Society of Mechanical Engineers (ASME), and the American Institute for Medical and Biological Engineering (AIMBE). Presently he chairs the Ethics Committees of International Federation for Medical and Biological Engineering (IFMBE) and American Association for Dental Research (AADR).

He has received numerous research grants from federal agencies (NIH and NSF), foundations, and industry. Dr. Saha is the founder of the Southern Biomedical Engineering Conference Series. He also started the International Conference on Ethical Issues in Biomedical Engineering. Dr. Saha has published over 115 papers in journals, 45 book chapters and edited volumes, 378 papers in conference proceedings, and 140 abstracts. His research interests are bone mechanics, biomaterials, orthopedic and dental implants, drug delivery systems, rehabilitation engineering, and bioethics.

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**Map:** <http://campusmaps.fiu.edu/Engineering Center>