

Albany Medical College - Graduate Studies Program
Undergraduate Summer Research Program 2008

Workshop on Biomedical Interdisciplinary Research (BIR)

All sessions will be at 8:30 - 10:00 am in room MS-227

Course director - Dr. Margarida Barroso

5/27/2008

Session #	Date	Speaker	Contact Email	Seminar Title	Institution	Department
Session 1	June 16	Nathaniel Cady	ncady@uamail.albany.edu	"Nanofabrication Technology for Biological Applications"	SUNY	Nanotech
Session 2	June 18	John Nelson & Andrew Torres	nelsonj@research.ge.com	"DNA sequencing and molecular imaging as examples of interdisciplinary research in industry"	GE-CRD	Molecular & Cellular Biology
Session 3	June 23	Margarida Barroso	barrosm@mail.amc.edu	Nano-imaging in drug discovery and disease diagnostic	AMC	Cardiovascular Sciences
Session 4	June 25	David Isaacson	isaacd@rpi.edu	"Problems arising in the diagnosis and treatment of Breast Cancer."	RPI	Mathematics
Session 5	July 7	Guohao Dai	daig@rpi.edu	"Applications of Biomechanics in Cardiovascular System"	RPI	Biomedical Engineering
Session 6	July 9	Anand Gadre	AGadre@uamail.albany.edu	"Applications of Nanotechnology in Biology, and Biomedicine"	SUNY	Nanotech
Session 7	July 14	Mark Holmes	holmes@rpi.edu	"A Mathematician's Role in Understanding How We Hear: Development and Analysis of Mathematical Models for Mechanopreception in the Auditory System"	RPI	Mathematics
Session 8	July 16	Peter Fiset	peterfiset@opthera.com	"Preparing to Invent, Expecting the Unexpected"	Opthera, Inc.	UV LED Phototherapy Systems
Session 9	July 21	Joseph Cheer	cheerj@mail.amc.edu	"Neural mechanisms underlying motivated behaviors"	AMC	Neuropharmacology & Neuroscience
Session 10	July 23	Yubing Xie	YXie@uamail.albany.edu	Nanoporous Membrane-based Cell Therapy: an Engineering Approach to Immune Rejection	SUNY	Nanotech
** Session 11	July 28	Badri Roysam	roysam@ecse.rpi.edu ; contact Laraine Michaelides laraine@ecse.rpi.edu	"The FARSIGHT Project: Quantifying Associations in Complex and Dynamic Biological Microenvironments from 4D/5D Microscopy Data"	RPI	Electrical, Computer & Systems Engineering
Session 12	July 30	Xavier Intes	intesx@rpi.edu	Application of optical techniques for biomedical imaging in pre-clinical and clinical settings.	RPI	Biomedical Engineering
Session 13	August 4	Deanna Thompson	thompd4@rpi.edu	"Repair mechanisms of the nervous system to develop new treatment strategies for nerve injuries"	RPI	Biomedical Engineering

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Technological innovation has caused a renaissance in both biology and mathematics. Concurrent advances in quantitative and analytical techniques and computational capabilities enable researchers to explore hypotheses and evaluate conclusions with unprecedented power.

To use this information we need to train and equip the next generation of scientists and engineers with interdisciplinary tools to both intellectually synthesize mathematical models and implement and understand technology driven data acquisition. This is the spirit of the Cross-Training Program for Engineering and Math majors at AMC.

The workshop includes lectures by preeminent scientists on current technological and quantitative issues in the life sciences. Some of the topics may include mathematics, computer science and statistics, and how to apply these to the diverse field of biomedical sciences. Other topics are about designing instruments, devices, and software, to apply technological and engineering knowledge to solve clinical and biomedical problems. We are also very interested in the applications of nanotechnology to biomedical research.