

***DISTINGUISHED
LECTURER SERIES***

***VCU
MECHANICAL ENGINEERING***

***Emerging
Medical
Problems,
Engineering
Solutions***



*Ronald C. Merrell, MD
Professor of Surgery,
VCU*

16 October 2006

Social Hour 11:30-12:00 noon

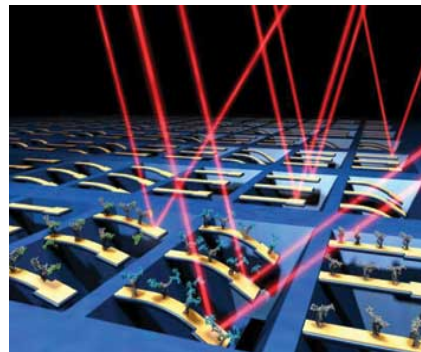
Seminar: 12:00-1:00 pm

Room 106

Engineering Building

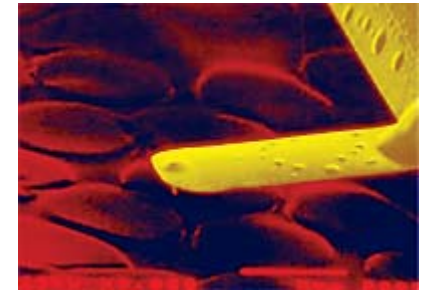
ABSTRACT

The great challenges of medicine include the matter of aging populations, degenerative disease, diminishing health care work force, and restricted resources. The hospital model fails to satisfy projections. Home health with autonomous medical systems and highly efficient electronic disease management can meet the need. The systems to accomplish such a radical change in health care are in fact engineering systems of sensors for event capture, signal analysis and response, data management, transmission with wireless technology and personnel trained to provide traditional medical expectation in a new technical construct. The systems also require massive interaction with a better-informed public. Lessons from precedent setting work, electronic game design, entertainment, telecommunications industry and education combine to make this area a dynamic and rapidly moving area of investigation and translational research where medicine may provide the questions but the engineering will provide the collaborative answers.



BIO

Dr. Ronald C. Merrell leads the Medical Informatics and Technology Applications Consortium (MITAC), a research partnership center at Virginia Commonwealth University dedicated to telemedicine and medical informatics. The portfolio of research includes projects for NASA, the Department of Defense and Homeland Security. The integration of telecommunications, information systems and medical databases seems destined to form the foundation of medicine in the coming century. MITAC addresses this fusion in the development of sensors, telecommunications protocols, effector software/middleware/hardware and process simulators. MITAC utilizes test beds for evaluating technology and validates medical procedures that rely upon informatics. Dr. Merrell has been awarded numerous citations by NASA including its public service medal three times. He is Professor of Surgery at VCU. From 1999 to 2003,



Medicine. education and research. In Texas, Dr.

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