

ICTAS Awards 2007

The Institute for Critical Technology and Applied Science recently held an open competition for awards to seed new interdisciplinary research. The competition brought forward many new ideas through the 68 proposals submitted. The Institute is pleased to announce that fifteen (15) proposals have been selected to receive support.

Roop Mahajan, Director of the Institute for Critical Technology and Applied Science, said having the competition and funding these proposals is critically important to the Institute mission, which centers on fostering interdisciplinary research toward enhancing societal quality and sustainability. "Our expectation is that these funded efforts will enable us to be successful in garnering externally funded programs in the near future that will form the basis of continuing research and new initiatives for the institute and the university" Mahajan said.

The selected proposal titles (in alpha order) and the Principal Investigators are listed below:

Autonomous Personal Transportation (APT)

Akshay Sharma School of Architecture and Design, Robert Dunay School of Architecture and Design, Richard Goff Mechanical Engineering, and Michael Fleming TORC Technologies

Bio-based Materials Center (BBMC) at Virginia Tech

F. Agblevor-Biological Systems Engineering, Justin Barone-Biological Systems Engineering, Kevin Edgar-Wood Science and Forest Products, Alan Esker-Chemistry, Paul Gatenholm-Materials Science and Engineering, Sean McGinnis-Materials Science and Engineering, Abby Morgan-Materials Science Engineering and Chemical Engineering, Scott Rennekar-Wood Science and Forest Products, Maren Roman-Wood Science and Forest Products, Zhiyou Wen-Biological Systems Engineering, Percival Zhang-Biological Systems Engineering.

Bone Healing Grafts Fabricated by Nanoscale Assembly of Biological Building Blocks

P. Gatenholm-Materials Science and Engineering, F. Agblevor-Biological Systems Engineering, J-H. Bohn-Mechanical Engineering, A. Esker-Chemistry, A. Goldstein-Chemical Engineering and Biomedical Engineering, K. Lu-Materials Science Engineering, L. O'Rourke-Biomedical Sciences and Pathobiology, I. Puri-Engineering Science and Mechanics, G. Wang-Biomedical Systems Engineering

Chemosensory Evaluation of Training and Oxidative Stress in Long-Distance Runners

P. Mallikarjunan-Biological Systems Engineering, P. G. Brolinson-Virginia College of Osteopathic Medicine.

Constructing Building Blocks (Recombinant Thermophilic Enzymes) and Investigating Their Interactions: A Novel Carbohydrate-Based Hydrogen Production by Synthetic Biology

P. Zhang-Biological Systems Engineering, Liwu Li-Biological Sciences

Continuous Plasma Torch Production of Fullerenes and Trimetallic Nitride Endohedral Metallofullerenes

H. Dorn-Chemistry and CSAND, W. O'Brien-Mechanical Engineering

Development of Trimetallic Nitride Templated Endohedral Metallofullerenes and Peapod Structures for Imaging Therapeutic Applications

N. Rylander-Mechanical Engineering and SBES, H. Dorn-Chemistry, S. Huxtable-Mechanical Engineering, C. Rylander-Mechanical Engineering and SBES

Evaluation of a Nanoscale Targeted Antioxidant Delivery System in an Equine Model for Human Asthma and Pulmonary Inflammation

C. Thatcher-Biomedical and Veterinary Science, B. Lepene-Biomedical and Veterinary Science.

Implantable μ -Oncologists

M. Agah-Electrical and Computer Engineering, R. Davalos-Biomedical Engineering and Sciences, P. Gatenholm-Materials Science Engineering, I. Lazar-Virginia Bioinformatics Institute, L. Nazhandali-Electrical and Computer Engineering, S.Raman-Electrical and Computer Engineering, I. Puri-Engineering Science and Mechanics, G. Wang-Biomedical Systems Engineering.

Interdisciplinary Design of Engineering Muscle Tissue

T. Long-Chemistry, D. Baird-Chemical Engineering, J. Freeman-SBES, A. Goldstein-Chemical Engineering.

Microbial-driven Electrical Currents in Nanobiofilms

J. Falkinham-Biological Sciences, A. Dietrich-Civil and Environmental Engineering, I. Puri-Engineering Science and Mechanics

Nanoparticle Markers for High-Efficiency Non-Linear Microscopy: Combining Cancer Imaging and Treatment

H. Robinson-Physics, R. Davis-Chemical Engineering, Y.W. Lee-SBES

Neural Tube Defects in Mice from Tap Water

T. C. Hrubec-Biomedical Sciences and Pathobiology, VCOM, D. J. Blodgett-Biomedical Sciences and Pathobiology, College of Veterinary Medicine, F. A. Etzkorn-Chemistry

Newcastle Disease Virus Bionanoparticles for Tumor-Selective Targeting and Oncolysis

E. Subbiah-Biomedical Science, J. Riffle-Chemistry

Synthesis and Characterization of New Reverse Osmosis and Nanofiltration Membranes for Water Purification

J. McGrath-Chemistry

The Institute for Critical Technology and Applied Science at Virginia Polytechnic Institute and State University is an interdisciplinary research institute devoted to investigation in the physical sciences, engineering, biological, behavioral, computation and cognitive sciences.

For more information, please contact:

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