

Research Awards & Grants: August/September 2004

(Listed by agency)

Air Force Research Laboratory

K. Arkoudas, S. Bringsjord, Y. Yang; Third Generation Wargame; \$74,981

Albany Medical College

M. Wentland; Impropgan-Like Non-Opioid Analgesics; \$71,555

Booz Allen Hamilton, Inc.

S. Bringsjord, W. Gray; National Imagery and Mapping Agency's Novel Intelligence from Massive Data (NIMD); \$100,000

California Institute of Technology Jet Propulsion Laboratory

D. Whittet; Research and Support Agreement; \$116,500

Crystal IS Inc.

L. Schowalter; Letter of Agreement; \$143,335

DARPA (Defense Advanced Research Projects Agency)

S. Bringsjord, K. Arkoudas; Poised for Learning and the Mechanization Thereof (through MARMML); \$399,626

Electric Power Research Institute

D. Steiner; Participation in US/DOE Matching Grant Program; \$60,000

Health and Human Services: National Institute of Arthritis and Musculoskeletal and Skin Diseases

J. Xu; Regulation of Cell Activities by Collagen and Fibrin in Three Dimensional Structure; \$231,798

Health and Human Services: National Institute of Biomedical Imaging and Bioengineering

D. Isaacson, J. Newell, G. Saulnier; Breast Cancer Diagnosis by Electrical Impedance Imaging; \$313,445

Intel Corporation

T. Zhang; Novel Device Simulation Capability Development and Analyses; \$112,505

Lockheed Martin Company Knolls Atomic Power Laboratory

R. Block, Y. Danon; Differential Scattering Neutron Detector; \$140,397

K. Jansen, R. Lahey; The Analysis of Annular Two-Phase Flows; \$75,64

Los Alamos National Laboratory

A. Kapila; Studies of Subscale Detonation Models; \$112,938

NIST (National Institute of Standards and Technology)

K. Rajan; Materials Data Interoperability and Materials Informatics Tools; \$120,000

NIH (National Institutes of Health)

G. Plopper, K. P. Bennett; Focal Adhesion Kinase and Stem Cell Differentiation; \$619,751

N. DePaola; Endothelial Compartmentalization in Disturbed Flows; \$258,081

J. McLaughlin, A. Maniatty; Methods for High Resolution Imaging of Shear Stiffness; \$222,452

B. Barquera; Na⁺-pumping NADH: quinine oxidoreductase of *V.cholerae*; \$189,459

J. Stenken; Quantitative Biocompatibility of Implanted Materials; \$50,000

National Science Foundation

M. Goldberg, M. Krishnamoorthy, M. Magdon-Ismael, W. Wallace, B. Yener; ITR: Study of Dynamically Evolving Social Groups in Communication Networks; \$100,000

P. Ajayan; Inter-American Materials Collaboration: Large-Scale Synthesis of N-Doped Carbon Nanotubes for the Fabrication of Novel Polymer Composites and Related Low-Dimensional Materials; \$53,000

W. Pearlman, J. Woods; NSF I/U CRC for Next-Generation Video; \$95,800



J. Fish; Adaptive Multiscale Computational Framework for Transient Problems; \$86,525
 T-M. Lu, C. Picu, G.-C. Wang; Testing Mechanical Behavior at the Nanoscale Using Isolated Nanostructures; \$127,967
 S. Kalyanaraman, T-M. Lu, M. Shur, G.-C. Wang, X. Zhang; IGERT: Terahertz Science And Technology - A Studio Based Approach; \$759,046
 J. Fish, A. Maniatty, M. Shephard; Multiscale Systems Engineering Research Center (MSERC); \$550,000
 L. Rachele; Advance Fellows Award: Inverse Problems for Anisotropic Elastic Media; \$348,942
 D. Hess, L. Winner; Sustainable Technology, The Politics of Design and Localism; \$80,000
 C. Breneman, S. Cramer, S. Garde, R. Kane; Prediction and Understanding of Protein Affinity; 384,796
 S. Bringsjord, W.R. Franklin, M. Goldberg, M. Magdon-Ismael, B. Szymanski; Simulation and Analysis of Large Scale Complex Systems; \$55,937
 J. Woods; Motion Compensated Scalable Video Coding for Heterogeneous Networks; \$90,000
 C. Bystroff, M. Zaki; Predicting Protein Folding Pathways and Protein Misfolding; \$75,000
 G. Dvorak, H. Huang ; Mechanics of Sandwich Nanostructures; \$100,000
 D. Gall, H., Huang; Multi-Component Nanopillar Coatings; \$330,000
 T. Abdoun, A. Abouzeid, M. Zeghal; SENSORS: Development of Advanced Sensing Systems for Real-Time Monitoring and Evaluation of Unstable Soil Systems; \$117,472
 G. Korniss; ITR - \(\text{ASE+NHS}\) - \(\text{sim+dmc}\): Non- Equilibrium Surface Growth and the Scalability of Parallel Discrete-Event Simulations for Large Asynchronous Systems; \$550,000
 S. Nayak, N. Koratkar, P. Ajayan, T. Borca-Tasciuc, S. Cramer; NIRT: Miniaturized Chemical Sensors Featuring Electrical Breakdown Near Carbon Nanotube Tips; \$1,300,000
 R. Ganapathiraman, O. Nalamasu; MRI: Acquisition of a Multi-Functional Integrated Dual-Beam System for Nanopatterning and Simultaneous Modification and Imaging of Surfaces/Interfaces with NM Scale Precision; \$500,000
 M. Shephard, C. Carothers, S. Garde, C. Varela, J. Trinkle; MRI: Acquisition of Infrastructure for Research in Grid Computing and Multiscale Systems Computation; \$500,000
 G. Gabriele; Intergovernmental Personnel Act (IPA); \$209,413
 D. Millard, P. Schoch; STEM Learning Modules and Technologies Development; \$178,841
 D. Gornic; Graduate Research Fellowship Program; \$121,500
 G. List, J. Holguin-Veras; Pan American Advanced Studies Institute on Transportation Sciences; \$97,060
 M. Shur; RPI Research Site of Industry/University Cooperative Research Center "Connection One"; \$50,000
 R. Ganapathiraman; Collaborative Research: MEMS from Organized Mesoscale Architectures of Carbon Nanotubes; \$50,000

Naval Research Laboratory

J. McDonald; SiGe HBT BiCMOS Technology for Low Cost 160 Gb/s SERDES for Scalable Massively Parallel Computers; \$155,570

NYSERDA (New York State Energy Research and Development Authority)

A. Dyson, D. N. Borton, M. K. Jensen; Concentrating Photovoltaic Energy Systems for Integrated Intelligent Building Envelopes; \$198,394

NYSTAR (New York State Office of Science, Technology, and Academic Research)

P. Ajayan, B. Benicewicz, R. Bizios, J. Dordick, S. Garde, P. Keblinski, S. Kumar, S. Nayak, L. Peters, G. Ramanath, L. Schadler, W. Siegel; NSF: Nanoscale Science and Engineering Center for Directed Assembly of Nanostructures; \$2,022,119

Northrop Grumman Corporation

L. Schadler; Hierarchical Nanotube/Graphite Fiber/Epoxy Composites With Improved Interlaminar Adhesion and Conductivity; \$75,000
 M. Shur; High-Performance Macroelectronics for Antenna Systems; \$240,291

PEMEAS GmbH

D. Walczyk, R. Puffer, S. J. Derby; Celanese-MEA Phase 4; \$120,000

Procter & Gamble

K. Craig; Electromagnetic Forces Used to Convey/Transport Carriages Mounted to a Rail System; \$50,000

Progressive Machine Design

R. Puffer; Energy Efficient Flexible Manufacturing Processes for High Temperature PEM Fuel Cells; \$51,526

Rutgers University

G. List; Operational Improvements at Traffic Circles; \$50,000

Simmetrix, Inc.

J. Flaherty, M. Shephard; ARO STTR Phase II: Toolkit to Support Parallel Adaptive Computations on Unstructured Meshes; \$80,000

U.S. Department of Education

G. C. Wang; Terascale Electronic and Photonic Materials and Devices; \$332,088

U.S. Department of Energy

J. Flaherty, M. Shephard; The Terascale Simulation Tools and Techniques (TSTT) Center; \$519,000

H. Huang; Nanodesign: From New Kinetics to Nanorods; \$374,958

M. Zaki; High-Performance Data Mining in Bioinformatics; \$115,575

J. Dordick; Armored Enzyme Nanoparticles For Bioremediation Of Subsurface Contaminants; \$55,000

Y. Danon; A Novel Compact Pyroelectric X-Ray and Neutron Source; \$100,000

University of Florida - Gainesville

P. Ajayan, T. Blanchet, L. Interrante, L. Schadler; Multifunctional Tribological Coatings for Space Applications; \$95,100

University of Wisconsin

D. Demers, P. Schoch; Measurements on MST Using an HIBP; \$90,192

Watt-Stopper

M. Rea, R. Leslie; Strategy for Innovation; \$150,000

