SPONSORED PROGRAMS and RESEARCH
SPH Award Activity - April, 2004

Education, College of

**Education**

**Michaels, David**
* Reading First Data Warehouse - (15200-FL01)  
  **Sponsor:** SC Department of Education/USDE  
  **Amount:** $25,515

**Educational Psychology**

**Yell, Mitchell**
* State Improvement Partnership Grant - (15240-FL01)  
  **Sponsor:** SC Department of Education/USDE  
  **Amount:** $25,000

**Instruction & Teacher Education**

**Battle-Bailey, Lora**
* Increasing Second and Third Grade Teachers’ Mathematics Knowledge using Standards-Based Instructional Strategies and Homework - (15250-GJ04)  
  **Sponsor:** SC Commission on Higher Education  
  **Amount:** $70,856

**Brown, Mac**
* Graduate Coursework and Certification for Early Childhood Faculty and Mentors - (15250-FJ05)  
  **Sponsor:** SC Department of Health & Human Services/HHS  
  **Amount:** $125,843  
  **Co-PI:** Freeman, Nancy

**DeFord, Diane**
* SCRI Continuing Contact Professional Development - (15250-GJ09)  
  **Sponsor:** SC Department of Education  
  **Amount:** $10,000

Engineering & Information Technology, College of

**Chemical Engineering**

**Amiridis, Michael**
* Fundamental FTIR Studies of the Mechanism of NOx Reduction under FCC Regeneration Conditions - (15510-JA35)  
  **Sponsor:** USCRF/W.R. Grace & Co.  
  **Amount:** $58,000

**Balbuena, Perla**
* Ab Initio-Molecular Dynamics Investigations of Reaction Mechanisms for Catalysis and Electrocatalysis - (15510-FQ01)  
  **Sponsor:** USCRF/Department of the Army/DOD  
  **Amount:** $200,880
Chemical Engineering
*  Modeling Lithium-Ion Conducting - (15510-FA23)  
  **Sponsor:** USCRF/University of Dayton Research Institute/DOD  
  **$35,000**

Ploehn, Harry
*  Modeling Efforts for the Advanced Alternate Power Source - (15510-FA28)  
  **Sponsor:** USCRF/US Government (USG) - General  
  **$82,176**

Ritter, James
*  Development of an Adsorption Process Simulator for Extraterrestrial Applications - (15510-FA51)  
  **Sponsor:** USCRF/National Aeronautics & Space Administration (NASA) - General  
  **$20,000**

Weidner, John
*  REU Site: Novel Technologies for Pollution Prevention - (10060-FA00)  
  **Sponsor:** National Science Foundation (NSF) - General  
  **$107,492**

Computer Science & Engineering
Eastman, Caroline
*  REU Site: Multidisciplinary Research in Computing - (15590-FA21)  
  **Sponsor:** USCRF/National Science Foundation (NSF) - General  
  **Co-PI:** Bowles, John  
  **$149,890**

Electrical Engineering
Dougal, Roger
*  S3D: Integrative Environment for Design of Dynamic Ship Systems -  
  **Sponsor:** USCRF/Florida State/ONR  
  **Co-PI:** Monti, Antonello  
  **$782,163**

Santi, Enrico
*  CAREER: Modeling, Control and Stability Investigation of Multiple Power Converter Systems - (15530-FA33)  
  **Sponsor:** USCRF/National Science Foundation (NSF) - General  
  **$396,557**

Seminario, Jorge
*  Design of Programmable Molecules and Molecular Chips - (15530-FQ01)  
  **Sponsor:** USCRF/Department of the Army/DOD  
  **$295,000**

Sudarshan, Tangali
*  Lapping and Polishing of Silicon Carbide Wafers - (15530-LA00)  
  **Sponsor:** USCRF/Various Sponsors  
  **$5,200**
Mechanical Engineering
Giurgiutiu, Victor
* Predictive Methodologies for the Design of Lamb-Wave Piezoelectric Wafer Active Sensors for Structural Health Monitoring, Damage Detection and Failure Prevention - (15540-FA42) $189,999
  Sponsor: USCRF/National Science Foundation (NSF) - General

Sutton, Michael
* CNT Size Effects on Polymer Composite Properties - (15540-FA28) $116,072
  Sponsor: USCRF/National Aeronautics & Space Administration (NASA)
  Co-PI: Reynolds, Anthony; Myrick, Michael

Law, School of
Law, School of
Morris, Carolyn
* Status Offender Project - (15800-FL18) $155,683
  Sponsor: SC Department of Public Safety/DOJ

Liberal Arts, College of
Criminology & Criminal Justice, Department of
Brame, Robert
* A Group-Based Method for Analyzing Development - (12200-FA06) $10,192
  Sponsor: USCRF/Carnegie Mellon University/NIH

McKissick Museum
Williams, Jay
* COURAGE Project - (34000-FA05) $9,000
  Sponsor: The Humanities Council/NEH

Political Science
Angel, Robert
* Collaborative Research: Oceanic Application of Laser Induced Breakdown Spectroscopy - (13020-FA61) $75,000
  Sponsor: USCRF/National Science Foundation (NSF) - General

Psychology
Allen, Gary
* Higher Education Mathematics Partner (HEMP) - (17110-FL24) $4,000
  Sponsor: SC Department of Education/USDE
Psychology
Kelly, Sandra
* FIBR: Planning for Grant Proposal on Cortical Organization and Limits of Human Potential - (13580-FA31)  
$34,676
Sponsor: USCRF/National Science Foundation (NSF) - General
Co-PI: Morris, Robin

Kilmann, Peter
* GA: Lexington School District Two - (13580-HP11)  
$3,600
Sponsor: Lexington School District Two

Public Service & Policy Research, Institute for
Oldendick, Robert
* Tobacco Growers Survey - (21100-FL14)  
$54,565
Sponsor: USCRF/Wake Forest/NIH

Medicine, School of

Cell & Developmental Biology & Anatomy
Goldsmith, Edie
* Role of Discoidin Domain Receptor 2 in Valvulogenesis - (18020-FA17)  
$335,274
Sponsor: USCRF/National Institutes of Health (NIH) - General
Co-PI: Potts, Jay

Family & Preventive Medicine
McDermott, Suzanne
* The South Carolina Disability and Health Project - (18130-FL06)  
$454,545
Sponsor: USCRF/Centers for Disease Control (CDC)/HHS

Microbiology & Immunology
Fox, Alvin
* Proteomics and Advanced Bio-Analytical Instrumentation for Microbial Characterization - (18060-FA10)  
$18,166
Sponsor: SC Universities Research and Education Foundation (SCUREF)/WSRC/DOE

Pathology & Microbiology
Wargovich, Michael
* Prostate Cancer Consortium Award "Nutrition Project" - (18060-FA11)  
$5,646
Sponsor: University of NC at Chapel Hill/DOD
Pediatrics/Developmental Disabilities, Center for

Derrick, C. Warren

* South Carolina Children's Advocacy Medical Response System - $416,036
  Sponsor: USCRF/The Duke Endowment

Neuberg, Ronnie

* National Children's Cancer Foundation Research Project - (18140-FA04) $6,657
  Sponsor: National Childhood Cancer Foundation/NIH

* Per Case and Specimen Reimbursement Agreement - (18140-FA05) $2,000
  Sponsor: USCRF/National Childhood Cancer Foundation/NIH

Pharmacy, College of

Basic Pharmaceutical Sciences

Zhu, Bao

* 2-Methoxyestradiol and Hormonal Cancer - (11110-FA08) $207,338
  Sponsor: USCRF/National Cancer Institute (NCI)/NIH

Public Health, Arnold School of

Communication Sciences & Disorders

Healy, Eric

* Flexibility in Research Design using Current Experimental Control Mechanisms - (11560-KA02) $5,645
  Sponsor: MUSC/James E. & Pamela Knowles Foundation

Epidemiology & Biostatistics

Hebert, James

* Self-report Dietary Data: Influence of Bias and Imprecision on Intervention Effect Estimates - (11520-KA04) $16,859
  Sponsor: SC Nutrition Research Consortium/SCRA
**Epidemiology & Biostatistics**

**Vena, John**
- *Impact of Physical Fitness and Exercise on Health* - (11570-FA47)
  **Sponsor:** Cooper Institute/NIH  
  **Amount:** $17,096

**Health Services & Policy Research, Center for**

**Phillips, Evelyn**
- *Consultation/Research with Epilepsy Foundation of South Carolina* - (18130-KL00)
  **Sponsor:** USCRF/Epilepsy Foundation/MUSC/CDC  
  **Amount:** $3,488

**Woods, John**
- *Design of a Health Care Pay-for-Performance Program* - (18130-KL00)
  **Sponsor:** USCRF/Fullerton Foundation  
  **Amount:** $50,000

**Health Services Policy & Management**

**Glover, Saundra**
- *African American Public Health Fellowship and Development Program to Address Health Disparities* - (11500-KJ00)
  **Sponsor:** USCRF/W.K. Kellogg Foundation  
  **Amount:** $674,978

**Laditka, Sarah**
- *GA: SC Campaign to Prevent Teen Pregnancy* - (11550-KP11)
  **Sponsor:** SC Campaign to Prevent Pregnancy  
  **Amount:** $108

**Prevention Research Center**

**Hooker, Steven**
- *Department of Insurance Focus Group Review Project* - (11570-FL05)
  **Sponsor:** Office of Research & Statistics/HRSA  
  **Amount:** $12,800

**Public Health, Arnold School of - Dean**

**Pastides, Harris**
- *Columbia Area Public Health Professional Partnership* - (11500-K200)
  **Sponsor:** Robert Wood Johnson Foundation  
  **Amount:** $73,431

**Walker, Samuel**
- *Use of Integrated Remote Sensing and Field Techniques for Assessing and Managing the Distribution of Invasive Plants of Southeastern Estuaries* - (11510-FA55)
  **Sponsor:** USCRF/National Oceanic & Atmospheric Administration (NOAA)/DOC
  **Co-PI:** Porter, Dwayne  
  **Amount:** $20,000
Science and Mathematics, College of Baruch Institute

Lewitus, Alan
* The Effectiveness of Vegetative Buffers in Reducing Nonpoint Source Pollution in Stormwater Detention Ponds - (21600-FA63)
  Sponsor: SC Sea Grant Consortium/NOAA
  $66,083

Biological Sciences

Ely, Berten
* REU Site: Undergraduate Research in Integrative Evolutionary Biology - (13010-FA21)
  Sponsor: National Science Foundation (NSF) - General
  $13,250

Mousseau, Timothy
* Collaborative Research: Reproductive Behavior and Immune Disease - (13010-FA48)
  Sponsor: USCRF/National Science Foundation (NSF) - General
  $6,000

Quattro, Joseph
* Zoogeography of the Centrachidae of the South Atlantic Slope -
  Sponsor: SC Department of Natural Resources
  $10,000

Sawyer, Roger
* Workshop to Establish a Middle School Science Teachers Summer Institute - (13000-FL01)
  Sponsor: SC Department of Education/USDE
  Co-PI: Singer, Jonathan
  $4,000

Chemistry & Biochemistry

Angel, S. Michael
* An Investigation of Enhanced Laser-Induced Spark Emission and Material Ablation Following Sequential Laser Pulse Excitation - (13020-FA49)
  Sponsor: USCRF/National Science Foundation (NSF) - General
  $220,000

Dawson, John
* Editing: Journal of Inorganic Biochemistry - (13020-J400)
  Sponsor: Elsevier Science, Inc.
  $2,834

Ferry, John
* Developing South Carolina's Ability to Write Center-Level Environmental Proposals: An Expert Seminar - (13020-GA06)
  Sponsor: SC Research Authority/EPSCI
  $10,000
Chemistry & Biochemistry

Morgan, Stephen
* Analysis of Fiber Dyes by Raman Spectroscopy - (13020-FA31)  
  ** Sponsor:** USCRF/Federal Bureau of Investigation/DOJ  
  ** Amount:** $159,198

Murphy, Catherine
* REU Site: Undergraduate Research in Nanoscience - (22040-FA15)  
  ** Sponsor:** USCRF/National Science Foundation  
  ** Amount:** $59,612

  Co-PI: zur Loye, Hans-Conrad

Myrick, Michael
* CNT Size Effects on Polymer Composite Properties - (13020-FA38)  
  ** Sponsor:** USCRF/National Aeronautics & Space Administration (NASA)  
  ** Amount:** $123,208

  Co-PI: Scrivens, Walter

Sodetz, James
* Purified Human Complement Proteins - (13020-JA05)  
  ** Sponsor:** USCRF/Advanced Research Technologies  
  ** Amount:** $7,500

Wuthier, Roy
* Role of Matrix Vesicles in Calcification - (13020-FA35)  
  ** Sponsor:** USCRF/National Institute of Arthritis & Musculoskeletal & Skin Diseases (NIAMS)/NIH  
  ** Amount:** $60,000

zur Loye, Hans-Conrad
* Structural Investigations of Complex Oxides Using Synchrotron Radiation - (13020-FA60)  
  ** Sponsor:** USCRF/US Department of Energy (DOE) - General  
  ** Amount:** $149,978

* Structural Investigations of Complex Oxides Using Synchrotron Radiation - State Match for 13020-FA60 - (13020-GA07)  
  ** Sponsor:** South Carolina Research Authority  
  ** Amount:** $13,003

Geological Sciences

Cohen, Arthur
* Strategic Improvement Plan Educational Activity: Environmental Science Research/Training Activities in the Everglades of Florida - (13040-FJ01)  
  ** Sponsor:** SC Research Authority/SC EPSCoR Program/EPA  
  ** Amount:** $2,190

Kellogg, James
* Editorship of Elsevier Science Ltd: Journal of South American Earth Sciences - (13040-J400)  
  ** Sponsor:** Elsevier Science Ltd.  
  ** Amount:** $5,200
Geological Sciences
Lakshmi, Venkataraman
* Modeling the Influence of Plant Cover on Water and Energy Cycling at the Land-Atmosphere Interface: Constraints from Satellite and Ground Data - $6,308
  Sponsor: USCRF/National Aeronautics & Space Administration (NASA)

Prokopenko, Alexander
* Collaborative Research: Holocene Climatic Changes in the Mongolian Plateau - (13040-FA76) $1,200
  Sponsor: USCRF/National Science Foundation (NSF) - General

White, Scott
* Collaborative Research: Hydrothermal System Response to Magma Supply and Crustal Thickness Gradients Along the Galapagos Spreading Center, 89.5-94W - (13040-FA77) $77,583
  Sponsor: USCRF/National Science Foundation (NSF) - General

Yogodzinski, Gene
* Primitive Plutonism in an Island Arc - (13040-FA75) $31,172
  Sponsor: USCRF/National Undersea Research Program/NOAA

Mathematics
DeVore, Ronald
* Collaborative Research: Compression of Geometry Datasets - (13060-FA02) $75,000
  Sponsor: USCRF/National Science Foundation (NSF) - General

* Mathematical Analysis for Date and Image Processing in an Integrated Computational Environment - (13060-FQ01) $71,235
  Sponsor: USCRF/Department of the Army/DOD

Physics & Astronomy
Blanpied, Gary
* Pilot Course for Physical Science Companion - (13070-GJ00) $14,152
  Sponsor: SC Department of Education

Johnson, Joseph
* Maintenance, Upgrades, and Fixes for Geologic Computer Systems - $1,320
  Sponsor: USCRF/Tramontane, Inc.

Kunchur, Milind
* Transport Behavior of Superconductors at High Dissipative Currents - (13070-F129) $72,965
  Sponsor: US Department of Energy (DOE) - General
Statistics
Grego, John
* Modeling the Impact of Reservoir Management on Important Ecosystem in the Santee River Basin - (13080-FA15)
  
  Sponsor: Clemson University/USGS/DOI

Piegorsch, Walter
* Low-dose Risk Bounds via Simultaneous Confidence Bands - (13080-FA16)
  
  Sponsor: USCRF/SC Department of Health & Human Services/NIH
  West, Webster

Senior and Regional Campuses

USC Aiken
Priest, Jeffrey
* 2004 Advanced Placement Teacher Institute - Follow-Up - (17110-GL20)
  
  Sponsor: SC Department of Education

* 2004 Advanced Placement Teacher Institutes - (17110-GL19)
  
  Sponsor: SC Department of Education

USC Salkehatchie
Chavous, Warren
* Salkehatchie Summer Scholars 2004 Camp - (17660-KL12)
  
  Sponsor: USCRF/Gaylord & Dorothy Donnelley Foundation

USC Spartanburg
Davis, Thomas
* Electrodialysis of Caustic Electrolyte Waste - (15510-JA36)
  
  Sponsor: USCRF/Gibbs Energy, LLC

Ferrell, Jim
* Palmetto Professorship - (17880-K128)
  
  Sponsor: Carolina Piedmont Foundation

* St. Francis Learning Resource Center at UCG - (17880-KL05)
  
  Sponsor: Carolina Piedmont Foundation, Inc.

Rogers, Susan
* USCS Achieve Program (Union) - (17880-FJ10)
  
  Sponsor: Spartanburg County/DOL
USC Spartanburg
* USC Achieve Program - (17880-FJ09)  $5,000
  ** Sponsor:** Spartanburg County/DOL

Turner, Jack
* Dynamic of Lake Blalock - (17880-HA00)  $7,850
  ** Sponsor:** Spartanburg Water System

**Social Work, College of**

Social Work, College of
DeHart, Dana
* Ethics in Victim Services - (15900-FJ12)  $100,842
  ** Sponsor:** USCRF/Valor/DOJ

Ginsberg, Leon
* GA: Child Abuse Prevention Services, Inc. - (15900-LP32)  $4,032
  ** Sponsor:** Child Abuse Prevention Services, Inc.

* GA: Research Associates - (15900-JP20)  $2,136
  ** Sponsor:** Research Associates

  ** Sponsor:** Research Associates

* GA: Senior Primary Care - (15900-LP30)  $2,000
  ** Sponsor:** Senior Primary Care

Philp, Joel
* Training HIV Prevention Staff in Evaluation - (15900-FJ11)  $28,000
  ** Sponsor:** SC Department of Health & Environmental Control/CDC

**Grand Total**  $7,187,671