## Arts and Sciences, College of

### Archaeology & Anthropology, SC Institute of

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Sponsor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Jackson, South Carolina, Cultural Resources Program for the Cooperative</td>
<td>Department of the Army</td>
<td>103,800</td>
</tr>
<tr>
<td>Ecosystem Studies Unit - (21300-FA82)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Smith, Karen</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Years: 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Smith, Steven

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Sponsor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preserving Fields of Conflict: Battlefield Preservation Workshop - (21300-FJ02)</td>
<td>National Park Service/American Battlefield Protection Program/DOI</td>
<td>42,790</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-PI: Smith, Steven</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Years: 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Spirek, James

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Sponsor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charleston Harbor Stone Fleets Survey - (21300-FA83)</td>
<td>SC Department of Archives and History/National Park Service/DOI</td>
<td>17,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deming, Ashley</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Years: 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Biological Sciences

### Chen, Hexin

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Sponsor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>HER2 and the Link between Inflammation and Cancer Stem Cells - (13010-FC27)</td>
<td>National Cancer Institute (NCI)/NIH</td>
<td>294,899</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-PI: Chen, Hexin</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AWARD PROJECT_AMT. IF AVAILABLE: 1,179,596</td>
<td>PROJECT YEARS: 5</td>
<td></td>
</tr>
</tbody>
</table>

| AWARD PROJECT_AMT. IF AVAILABLE: 103,800                                     | PROJECT YEARS: 1                                                        |          |
Chemistry & Biochemistry

Angel, S.
Sponsor: National Science Foundation (NSF)  
Co-PI:  
AWARD_PROJECT_AMT. IF AVAILABLE: 441,500  
PROJECT_YEARS: 3

Ferry, John
Reaction Networks in Environmental Systems: Connecting Reactive Oxygen Species Generation and Particle Formation during the Oxidation of Ferrous Iron. - (13020-FC34)  
Sponsor: National Science Foundation (NSF)  
Co-PI: Shaw, Timothy  
AWARD_PROJECT_AMT. IF AVAILABLE: 50,000  
PROJECT_YEARS: 3

Karthikeyan, Mythreye
Investigating the TGFB Superfamily as Therapeutic Targets in Ovarian Cancer - (13020-KA94)  
Sponsor: Ovarian Cancer Research Fund  
Co-PI:  
AWARD_PROJECT_AMT. IF AVAILABLE: 111,211  
PROJECT_YEARS: 3

Earth and Ocean Sciences

Bulusu, Subrahmanyam
New Approaches to understanding the MJO using Satellite Altimetry and Aquarius Salinity in the Tropical Oceans - (13040-FC15)  
Sponsor: National Aeronautics & Space Administration (NASA)  
Co-PI:  
AWARD_PROJECT_AMT. IF AVAILABLE: 95,237  
PROJECT_YEARS: 3
Voulgaris, George
Benthic Boundary Layer Processes and Sediment Transport during Hurricane Sandy on Fire Island, NY - (13040-FC14)

Sponsor: U.S. Geological Survey (USGS)/DOI
Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Geography
Emrich, Christopher
2010 Census Update of the Enhancement of the Social Vulnerability Index (SOVI) for Use in Assessing Coastal Risk - (13540-FL01)

Sponsor: National Oceanic and Atmospheric Administration (NOAA)
Co-PI: Gall, Melanie

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Hiscox, April
Regional Models for Used in Understanding Maimaiga Outbreaks - (13540-FB14)

Sponsor: US Forest Service/USDA
Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Mathematics
Sun, Yi
Multiscale Computational Methods with Applications in Materials Science and Tissue Engineering - (21400-FA23)

Sponsor: National Science Foundation (NSF)
Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 3

McKissick Museum
Przybysz, Jane
SCAC Folklife Partnership - (34000-GL02)

Sponsor: SC Arts Commission
Co-PI: Taylor, Saddler

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1
Puchner, Edward  
*Created Equal: America's Civil Rights Struggle - ( 34000-KL03 )*   
1,200  
*Co-PI*: Przybysz, Jane  
*Sponsor*: The Gilder Lehrman Institute of American History

---

**Physics & Astronomy**  
Avignone, Frank  
*Participation in the Construction and Operation of the CUORE and Majorana Neutrinoless Double-Beta Decay Experiments - ( 13070-FB26 )*   
332,500  
*Co-PI*: Creswick, Richard  
*Sponsor*: National Science Foundation (NSF)

---

**Public Service & Policy Research, Institute for**  
Oldendick, Robert  
*Surveying Consumers to Identify the Types of Information Needed about the Health Care Reform Law - ( 21100-GL25 )*   
22,200  
*Co-PI*:  
*Sponsor*: SC Department of Health & Human Services

---

**Business, Moore School of**  
Thatcher, Sherry  
*VOSS Collaborative Research: I Want You to Know Who I Am: Identity Communication and Verification in Virtual Teams - ( 15000-FA04 )*   
81,225  
*Co-PI*:  
*Sponsor*: National Science Foundation (NSF)
Education, College of

Education Leadership & Policies
Hudgins, James
2013-14 SC Technical College Leadership Academy - (15230-GL18) 10,000
Sponsor: SC State Board of Technical and Comprehensive Education
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Engineering & Computing, College of

Chemical Engineering
Jabbari, Esmaiel
Microengineered Osteoinductive and Vasculogenic Scaffold - (15510-FC28) 340,422
Sponsor: National Institute of Arthritis & Musculoskeletal & Skin Diseases (NIAMS)/NIH
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE: 668,700
PROJECT_YEARS: 5

Matthews, Michael
Trulite Product Testing - (15510-FC25) 47,629
Sponsor: Engenuity SC/HUD
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Ploehn, Harry
I-Corps: Measuring Parallel Permeation of Gases through Barrier Packaging Materials - (15510-FC26) 20,000
Sponsor: National Science Foundation (NSF)
Co-PI: Chen, Xiaoming
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1
Williams, Christopher  
*IGERT: Functional Nanomaterials for Sustainable Energy Solutions* - ( 15510-FC27 )  
**Sponsor:** National Science Foundation (NSF)  
**Co-PI:** Lauterbach, Jochen  
Chen, Donna  
Sandberg, William  
AWARD_PROJECT_AMT. IF AVAILABLE: 3,000,000  
**PROJECT_YEARS:** 5

**Civil & Environmental Engineering**  
**Berge, Nicole**  
*NUE: Nanotechnology LINK: An integrated approach for nanotechnology education:* End-of-life management of nanomaterial-containing wastes - ( 15520-FB12 )  
**Sponsor:** National Science Foundation (NSF)  
**Co-PI:** Pierce, Charles  
Caicedo, Juan  
Matta, Fabio  
Yoon, Yeomin  
AWARD_PROJECT_AMT. IF AVAILABLE: 197,943  
**PROJECT_YEARS:** 2

**Saleh, Navid**  
*Collaborative Research: Fate, Transport, and Organismal Uptake of Rod-Shaped Nanomaterials* - ( 15520-FB24 )  
**Sponsor:** National Science Foundation (NSF)  
**Co-PI:**  
AWARD_PROJECT_AMT. IF AVAILABLE: 119,016  
**PROJECT_YEARS:** 3

**Computer Science & Engineering**  
**Bakos, Jason**  
*Kernel Library Development for the Texas Instruments Keystone-II DSP Architecture* - ( 15590-JA05 )  
**Sponsor:** Texas Instruments  
**Co-PI:**  
AWARD_PROJECT_AMT. IF AVAILABLE: 61,000  
**PROJECT_YEARS:** 3

**Ali, Mohammod**  
*Reconfigurable Pixel Based Conformal Load Bearing Antenna Structures (CLAS)* - ( 15530-FB49 )  
**Sponsor:** Universal Technology Corporation/USAF/DOD  
**Co-PI:**  
AWARD_PROJECT_AMT. IF AVAILABLE: 56,020  
**PROJECT_YEARS:** 1
Zhang, Bin
A Lithium-Ion Battery Health Monitoring System - (15530-KA20) 18,653
Sponsor: Southeastern Center For Electrical Engineering Education (SCEEE)
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE: 1

Mechanical Engineering
Farouk, Tanvir
An Experimental and Modeling Study of NOx-CO Formation in High Hydrogen Content (HHC) Fuel Combustion in Gas Turbine Applications - (15540-FC46) 500,000
Sponsor: Department of Energy (DOE)
Co-PI: Padak, Bihter
AWARD_PROJECT_AMT. IF AVAILABLE: 3

Huang, Kevin
Unraveling the Mechanisms of Superior Oxygen Reduction Reaction Kinetics Promoted by Molten Carbonates: Implications for Low Temperature Solid Oxide Fuel Cells - (15540-FC45) 260,685
Sponsor: National Science Foundation (NSF)
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE: 3

Kidane, Addis
Effect of Microstructure and Interface Layer on the Fracture and Thermal Behavior of Nanocomposites - (15540-FC44) 174,986
Sponsor: National Science Foundation (NSF)
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE: 2

Wang, Guiren
Collaborative Research: Deciphering Induced-Charge Electrokinetics: Multiscale Simulations and Nanoscale Flow Characterization - (15540-FC47) 137,374
Sponsor: National Science Foundation (NSF)
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE: 1
Hospitality, Retail & Sport Management, College of

Hospitality, Retail & Sport Management - (Dean)
Hudson, Simon

Measuring Travel Effect on Education - (14000-KA06)  54,955

Sponsor: United States Travel Association

Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Medicine, School of

Cell Biology & Anatomy
Tang, Dongqi

Reversal of Diabetes by Pdx1-VP16 and Pax4-Induced Islet Regeneration - (18020-FB19)  109,944

Sponsor: National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK)/NIH

Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Family & Preventive Medicine
McDermott, Suzanne

DDSN Data Management Biostatistical Contract - (18130-GL25)  15,000

Sponsor: SC Department of Disabilities & Special Needs

Co-PI: Mann, Joshua

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Genetics
Edwards, Janice

Universal Carrier Screening Task Force - (18210-KL00)  20,000

Sponsor: Perinatal Quality Foundation

Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1
Office of Research  
IT and Data Management Office  
August, 2013   New Awards

**Medicine Library**

McConnaughy, Rozalynd  
*InfoAble Portal - Follow-up Award - ( 18280-FL12 )*  
5,783  
*Sponsor:* University of Maryland/National Library of Medicine/NIH  
*Co-PI:* Wilson, Steven  
AWARD_PROJECT_AMT. IF AVAILABLE:  
PROJECT_YEARS: 1

**Pharmacology, Physiology & Neuroscience**

Frizzell, Norma  
*Detection of S-(2-succino)cysteine (2SC) as a Biomarker of Mitochondrial Disease - ( 18080-FA33 )*  
68,500  
*Sponsor:* National Institute of Child Health & Human Development (NICHD)/NIH  
*Co-PI:*  
AWARD_PROJECT_AMT. IF AVAILABLE: 137,000  
PROJECT_YEARS: 2

**Public Health, Arnold School of Communication Sciences & Disorders**

Richardson, Jessica  
*2013-2014 Advancing Academic-Research Career (AARC) Award - ( 11560-KA16 )*  
5,000  
*Sponsor:* American Speech-Language-Hearing Association (ASHA)  
*Co-PI:*  
AWARD_PROJECT_AMT. IF AVAILABLE:  
PROJECT_YEARS: 1

Werfel, Krystal  
*2013-2014 Advancing Academic-Research Career (AARC) Award - ( 11560-KJ05 )*  
5,000  
*Sponsor:* American Speech-Language-Hearing Association (ASHA)  
*Co-PI:*  
AWARD_PROJECT_AMT. IF AVAILABLE:  
PROJECT_YEARS: 1
Health Promotion, Education & Behavior
Blake, Christine
Snacking in Young Children: Parental Definitions, Goals, and Feeding Practices - (11590-FA62) 5,000
Sponsor: Temple University/NIH
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 2

Social Work, College of
Families in Society, Institute for
Smith, Bradley
Effects of NASA’s STEM Program On Middle School Students' Academic Performance - (10010-FA57) 7,966
Sponsor: SC Space Grant Consortium/NASA
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Social Work, College of
Nguyen, Huong
Study tour from Vietnam Ministry of Labor, Invalids, and Social Affairs - (15900-LJ01) 41,460
Sponsor: Vietnam Ministry of Labor, Invalids, and Social Affairs
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1

Wooten, Nikki
Early Identification of Substance Use and Psychological Problems in Army Women Veterans - (15900-FA39) 44,689
Sponsor: Brandeis University/NIH
Co-PI:
AWARD_PROJECT_AMT. IF AVAILABLE:
PROJECT_YEARS: 1
USC Beaufort

USC Beaufort - Academic Affairs

Montie, Eric

Passive Acoustics and Visual Surveys to Monitor the Health of Fish and Bottlenose Dolphin Populations in the May River - (17210-KA10)

Sponsor: Palmetto Bluff Conservancy

Co-PI: AWARD_PROJECT_AMT. IF AVAILABLE:

PROJECTYEARS: 1

USC Greenville School of Medicine

Medicine, School of - Greenville Campus

Egan, Brent

Outpatient Quality Improvement Network (OQUIN) and Care Coordination Institute - (16000-FA00)

Sponsor: Medical University of SC/DHEC/CDC

Co-PI: Davis, Rob

AWARD_PROJECT_AMT. IF AVAILABLE:

PROJECTYEARS: 1

USC Lancaster

USC Lancaster

Criswell, Stephen

Master Potters of the Catawba Indian Pottery Tradition - (17550-FL26)

Sponsor: National Endowment for the Arts (NEA)

Co-PI: AWARD_PROJECT_AMT. IF AVAILABLE:

PROJECTYEARS: 1

USCL Native American Studies Center Artist-in-Residence Project: Caroleen Sanders, Catawba Potter - (17550-GA01)

Sponsor: SC Arts Commission

Co-PI: AWARD_PROJECT_AMT. IF AVAILABLE:

PROJECTYEARS: 1
USC Upstate

Gibb, Katharine

Promise of Nursing School Grant--Faculty Development: A Key to Nursing Education's Future - (17880-KJ05)

Sponsor: Foundation of the National Student Nurses' Association, Inc.

Co-PI:

AWARD_PROJECT_AMT. IF AVAILABLE:

PROJECT_YEARS: 1

Report Total: $7,366,324