School of Electrical Engineering and Computer Science Grant Awards

Project Title	Agency	PI-CoPI(s)	Start Date	End Date	$$ Funded
International Research Experience for Students in Photovoltaic Based Power Electronics Conversion Systems	NSF	**Batarseh**	05/15/07	12/31/11	$137,033
US-TAMUQ - Workshop: Recent Research and Educational Activities in Power Electronics and Drives	NSF	**Batarseh**	08/01/08	12/31/12	$49,370
US-UAE Workshop: Energy Developments, Addressing the Need of the Energy Industry,n Abu Dhabi, UAE	NSF	**Batarseh**	01/01/11	12/31/11	$48,000
Development of Modular Interactive Learning and Assessing Tools for Electrical Circuit Core Courses for Engineering Students	NSF	**Batarseh** **Shen** **Sundaram** **Wu, Annie**	07/01/09	06/30/12	$199,994
Photovoltaic Power Electronics Research Initiative (PERI) for Developing Low Cost, Ultra-compact, Three-ohase Micro Inverters or "AC Bricks"	US Dept of Energy/Golden Field Office	**Batarseh** **Wu, Thomas** **Shen**	09/01/10	12/31/12	$700,000
Non-Linear Characterization of the Stretch Reflex Arc and Its Neuromodulation	National Institutes of Health	**Behal** Hickman Molnar	04/01/09	06/30/12	$255,937
RCTA - H10 Dynamics of Operating withing Social Environments (PO Task# 034)	General Dynamics	**Boloni**	04/28/11	10/31/11	$14,727
Trust Models for Vulnerability Assessment in Wireless Cyberspace	State University of New York - Institute of Technology	**Chatterjee**	08/01/11	12/31/11	$30,000
PROFIT: Pictures Represent Opportunities for Inspiration in Technology	NSF	**da Vitoria Lobo** Dixon Gresham **Shah**	12/01/07	11/30/12	$1,200,000
Three-Dimensional Site Modeling: Model Generation from Laser Scanned Data	Boeing Company	**da Vitoria Lobo** **Shah**	01/01/02	12/31/12	$30,000

IH: Scalable Programming Techniques for the New Multicore Architecture HPC	UCF/In House	**Dechev**	05/01/11	05/01/12	$7,500
Modeling and Tracking Human Activities in Sports Events	Electronic Arts	**Foroosh**	05/01/08	04/30/13	$30,000
Student Support Services for SCC Advance	Seminole Community College	**Georgiopoulos**	02/24/10	12/31/11	$15,000
New and Emerging Research/Subsidized Employment for Undergraduates	Workforce Central Florida	**Georgiopoulos** Aldarondo-Jeffries Ford Parkinson	08/23/10	06/30/12	$100,000
STEM Persistence and Female Mentorship Program for Undergarduates	Workforce Central Florida	**Georgiopoulos** Dagley Parkinson Young	08/23/10	06/30/12	$147,000
New and Emerging Research/Subsidized Employment for Undergraduates	Workforce Central Florida	**Georgiopoulos** Aldarondo-Jeffries Ford Parkinson Dressler Herold	08/23/10	06/30/12	$600,000
UCF STEP Pathways to STEM: From Promise to Prominence	NSF	**Georgiopoulos daVitoria Lobo Richie Turgut et al**	01/01/06	12/31/11	$1,797,360
Young Entrepreneur and Scholar (YES) Scholarship Program	NSF	**Georgiopoulos** Ducharme Massi Young	09/01/08	08/31/13	$600,000
Collaborative Research: SCC Advance: Strengthening the Foundation of STEM Education for Seminole Community College	NSF	**Georgiopoulos** Geiger Hagen Morrison-Shetlar Parkinson Young	01/01/09	12/31/11	$50,000

Collaborative Research: REU Site: Advances in Machine Learning Theory and Applications (AMALTHEA)	NSF	**Georgiopoulos** Morrison-Shetlar **Wahid**	03/01/07	02/29/12	$138,750
STEM Research/Subsidized Employment for Undergraduates	Workforce Central Florida	**Georgiopoulos** Parkinson	08/23/10	06/30/12	$130,850
STEM Persistence and Female Mentorship Program for Undergarduates	Workforce Central Florida	**Georgiopoulos** Young	08/23/10	06/30/12	$110,500
Linguistic Preprocessing and Tagging for Problem Report Trend Analysis	NASA JSC	**Gomez**	03/12/08	08/15/12	$600,000
CAREER: Next-Generation Ultra-Low-Cost Phased Arrays	NSF	**Gong**	08/01/09	07/31/14	$400,000
FCAAP Online, In-Situ Monitoring Combustion Turbine Wireless Passive Ceramic Sensors	US Dept. of Energy	**Gong** Xu An	10/01/09	12/31/12	$811,193
Collaborative Research: Towards Lifelike Computer Interfaces that Learn	NSF	**Gonzalez, A.** **DeMara**	02/15/07	01/31/13	$584,343
REU Supplement to Collaborative Research: Towards Lifelike Computer Interfaces that Learn	NSF	**Gonzalez, A.** **DeMara**	06/05/08	01/31/13	$42,000
Supplement to Collaborative Research: Towards Lifelike Computer Interfaces that Learn	NSF	**Gonzalez, A.** **DeMara**	09/18/09	01/31/13	$44,500
Dependable Systems International Research and Educational Experience (DeSIRE2)	Embry-Riddle Aeronautical University	**Gonzalez, A**. Stebbins	09/01/08	08/31/12	$56,200
Undergraduate Computer Security Course Enhancement	NSF	**Guha, R.** **Bassiouni** **Guha, A.**	05/15/09	04/30/12	$150,000
BRIGE: Computational Identification of Gene Regulatory Netwroks in Microalgae	NSF	**Hu**	08/15/11	07/13/13	$174,654
NeTS: Small: Scalable Wireless Mesh Network Technology at the Edge for Efficient Mobile Video Data Access on Demand	NSF	**Hua**	08/01/09	07/31/12	$420,000
EAGER: Efficient Control and Transmission of Digital Puppetry	NSF	**Hughes**	09/01/10	08/31/12	$199,754

TeachME	Old Dominion University Research Foundation	Dieker Hynes **Hughes**	07/01/10	06/30/12	$7,998
TeachME	Western Michigan University	Dieker Hynes **Hughes**	01/01/11	12/31/11	$8,000
TeachME Classroom Sessions and Software Program	West Virginia University	Dieker Hynes **Hughes**	09/01/10	07/31/12	$7,998
NCMR Scholarships: EAGER: Efficient Control and Transmission of Digital Puppetry	NSF	**Hughes** Tappen	09/01/10	08/31/12	$20,000
SHB: Small: Collaborative Research: Reducing Alcohol Use Among College Students using Virtual Role Playing	NSF	**Hughes** Hall	09/01/11	08/31/14	$257,721
Improved Aquarius Salinity Retrievals using Auxillary Products from the Microwave Radiometer	NASA	**Jones**	10/01/09	09/30/13	$339,143
Inter-Satellite Radiometric Calibration for the GPM Constellation	NASA	**Jones**	03/18/10	03/17/13	$300,195
Improved Active/Passive Ocean Vector Wind Retrievals	NASA	**Jones**	07/22/10	07/21/14	$209,557
Observations of Ocean Surface Wind Speed and Rain Rate with the Hurricane Imaging Radiometer (HIRAD)	NASA Marshall Space Flight Center	**Jones**	02/04/11	02/03/16	$102,000
Career: Mathematical Sketching: Pen-based Tools for Conceptual Understanding in Mathematics and Physics	NSF	**LaViola**	05/01/09	04/30/12	$270,897
REU Supplement to: Major: Enhancing Creativity and Authoring in STEM Education-Based Virtual Worlds through Concept-Oriented Design	NSF	**LaViola**	07/01/09	06/30/12	$24,000
SHF: Large: A Working Set Approach to Integrated Development Environments	Brown University	**LaViola**	08/01/10	07/31/12	$104,380

Major: Enhancing Creativity and Authoring in STEM Education-Based Virtual Worlds through Concept-Oriented Design	NSF	**LaViola** Bowers Cannon-Bowers	07/01/09	06/30/12	$755,845
SHF: Small: Collaborative Research: Specification and Verification of Safety Critical Java	NSF	**Leavens**	07/15/09	06/30/12	$249,981
SHF: Small: Collaborative Research: Specification Language Foundations for Modular Reasoning	NSF	**Leavens**	08/01/09	07/31/12	$249,981
SHF: Small: Collaborative Research: Balancing Expressiveness and Modular Reasoning for Aspect-Oriented Programming	NSF	**Leavens**	08/15/10	07/31/12	$241,029
Failure Criteria Metric under ESD Stress Conditions	Analog Devices	**Liou**	05/01/07	08/31/14	$675,000
Joint Korea-USA Project on the Development of Advanced Electrostatic Discharge (ESD) Protection Solutions for Nanowire-Based Integrated Circuits	Pohang University of Science and Technology	**Liou**	03/01/10	12/31/11	$60,000
Design, Characterization, and Optimization of High Voltage (20 to 70 volts) Electrostatic Discharge (ESD) Protection Elements for Power Management Integrated Circuits	Intersil Corp.	**Liou**	05/01/11	04/30/13	$40,000
RF-Development of Standardized Methodology to Correlate System ESD Pulses at Connector to ESD Pulses at IC to Enable IC design	National Semiconductor Corp.	**Liou**	09/01/11	08/31/12	$60,000
OFC Saw tag/sensor	NASA Langley Research Center	**Malocha**	09/01/08	08/31/12	$18,977
Wireless, Passive Encoded Saw Sensors and Communication Links - Phase II	Mnemonics, Inc.	**Malocha**	07/01/09	12/31/11	$225,000
SAW Sensor Parameter Detection Using Coherence Techniques	Florida Space Grant Consortium	**Malocha**	05/02/11	05/02/12	$15,000

NASA STTR Phase 1: Wireless SAW Sensor Strain Gage & Integrated Interrogator Design	Mnemonics, Inc.	**Malocha**	02/28/11	05/31/12	$18,000
Wireless, Passive Strain Sensor for Space Applications - GSRP: James Humphries	NASA	**Malocha**	08/22/11	08/21/12	$30,000
I-4: Wireless SAW Interrogator and Sensor System	UCF/I4	**Malocha**	07/01/11	06/30/12	$10,000
NASA SBIR Phase I: Wireless SAW Interrogator and Sensor System	Mnemonics, Inc.	**Malocha**	02/28/11	12/31/11	$30,647
NASA SBIR Phase I: High-Temperature SAW Sensor Development	Krystal Engineering LLC	**Malocha**	05/01/11	10/31/11	$17,000
ARRA: Using Mixed Reality to Build Peer Resistance Skills in Latina Middle Schoolers	National Institutes of Health	Norris **Hughes**	03/15/10	02/29/12	$132,842
Computer Programming Team	Eustace-Kwan Family Foundation	**Orooji Batarseh**	08/01/08	04/15/12	$293,774
STEM Research/Subsidized Employment for Undergraduates	Workforce Central Florida	Parkinson Jeffries **Georgiopoulos**	08/29/11	06/30/12	$274,500
DoD STTR Phase 2: Innovative Application of Urban ISR Imagery for High Fidelity Training Devices	CG2, Inc.	**Pattanaik**	08/11/11	02/24/12	$54,000
CGV: Medium: Collaborative Research: A Unified Approach to Material Appearance Modeling	NSF	**Pattanaik**	06/01/11	05/31/12	$101,212
I4 Match to Petra Solar: Grid Stability with Distributed Generations and Varying Topologies	UCF/I4	**Qu**	09/14/09	06/30/12	$97,192
Grid Stability with Distributed Generations and Varying Topologies-Phase II	Petra Solar	**Qu**	02/01/10	05/30/13	$480,000
University of Central Florida and Harris Corporation Joint Senior Design Wave Energy Projects	Florida Energy Systems Consortium	**Qu**	02/23/11	02/22/12	$5,000

I-4: Modeling and Control of Unmanned Aerial Vehicles	UCF/I4	**Qu**	07/01/11	06/30/12	$13,332
Modeling and Control of Unmanned Aerial Vehicles	L3 Communications	**Qu**	07/01/11	12/31/11	$40,000
I-4: Unmanned Aircraft System Operations in National Air Space: A Feasibility Study at Daytona Beach International Airport	UCF/I4	**Qu**	07/01/11	06/30/12	$25,000
ARRA: Computer Assisted Identification and Volumetric Analysis of Enhancing Components	National Institutes of Health	**Shah**	05/01/09	04/30/12	$355,763
Taming Crowded Visual Scenes	US Army	**Shah**	05/12/09	05/11/12	$371,469
Taming Crowded Visual Scenes	US Army	**Shah**	05/12/09	05/11/12	$8,700
Evaluation of Tracking Algorithms on ISIS Video Data for the Wide Area Surveillance Project	Pacific Northwest National Laboratory	**Shah**	09/14/09	02/28/12	$340,398
Consumer Video Indexing	Eastman Kodak	**Shah**	10/01/06	04/15/13	$100,000
I4 Match to Harris: Automated Video Processing Research - Option Year 1	UCF/I4	**Shah**	07/01/10	06/30/12	$60,000
Computer Vision Algorithms for Crowd Analysis and Imaging through Turbulence	EOIR Technologies	**Shah**	09/24/09	10/31/11	$250,000
Persistent Stare Exploitation and Analysis System (PerSEAS)	Kitware	**Shah**	09/07/10	06/30/12	$373,750
RF-Video Action Recognition in SLIPstream	Intel Corporation	**Shah**	07/20/10	04/15/14	$25,000
Video Image Retrieval and Analysis Tool (VIRAT) - Phase II	Kitware	**Shah**	09/07/10	11/23/11	$166,406
Sarnoff: Content Extraction for IARPA Aladdin Program	Sarnoff Corporation	**Shah**	02/17/11	02/29/12	$375,000
BBN Technologies: Content Extraction for IARPA Aladdin Program	Raytheon BBN Technologies	**Shah**	02/14/11	02/29/12	$300,000

Installation of Visual Inspection/Detection Equipment in the new HiRail Vehicle	Florida Department of Transportation	**Shah**	06/20/11	12/31/11	$2,450
REU Site: Research Experience for Undergraduates in Computer Vision	NSF	**Shah** **Da Vitoria Lobo** **Tappen**	05/01/09	04/30/12	$300,000
RET Supplementto REU Site: Research Experience for Undergraduates in Computer Vision	NSF	**Shah** **Da Vitoria Lobo** **Tappen**	09/30/09	04/30/12	$52,400
Students Actualizing Talent at Education's Subsequent Stages (STATESS)	NSF	**Shah** **da Vitoria Lobo** Li Moore	01/01/10	12/31/13	$599,973
Student Support - Boyi Yang	Texas Instruments	**Shen**	06/01/10	06/01/12	$150,000
NASA SBIR Phase II: High-Temperature, Wirebondless, Ultra-Compact Wide Bandgap Power Semiconductor Modules for Space Power Systems	APECOR	**Shen**	07/01/11	10/30/11	$24,988
RCTA - H8 Dynamics of HR Military Teams & Organizations (PO Task# 032)	General Dynamics	Shumaker **Wu, A.**	04/28/11	10/31/11	$80,063
Collaborative Research: Patient-Adaptive Feedback Control of Rotary Heart Assist Devices	NSF	**Simaan**	08/01/08	04/30/12	$193,328
Supplement to Collaborative Research: Patient-Adaptive Feedback Control of Rotary Heart Assist Devices	NSF	**Simaan**	08/23/09	04/30/12	$33,963
Pilot: Assisted Musical Composition through Functional Scaffolding	NSF	**Stanley**	08/15/10	07/31/13	$295,229
Stanley Research Support - Various	Dr. Charles Bailey	**Stanley**	03/03/08	04/15/13	$26,850
Stanley Research Support - Various	Toyota USA Foundation	**Stanley**	03/03/08	04/15/13	$45,000
Stanley Research Support - Various	Global Institute for Scientific Thinking, Inc.	**Stanley**	03/03/08	04/15/13	$102,500
DARPA CSSG Phase III: Real-world Scalable Multiagent Learning for Coordinated UGV Operations	DARPA	**Stanley**	08/20/11	08/19/12	$249,347

Training a Multiagent Hive Brain for Coordinated UGV Operations	ARO	**Stanley**	09/15/11	12/15/12	$150,000
Engineering Global Leaders	US Dept. of Education	Stebbins **Gonzalez, A.** Kassab	08/01/08	07/31/12	$224,862
CAREER: Modeling Group Dynamics in Multi-agent Systems	NSF	**Sukthankar**	07/01/09	06/30/14	$434,943
Improving Synthesis and Recognition of Crowded Scenes using Statistical Models of Group Behavior	Air Force Research Lab	**Sukthankar**	07/01/09	11/30/11	$259,110
Exploiting Social Context for the Anticipatory Analysis of Human Movement	DARPA	**Sukthankar**	06/25/10	06/24/12	$400,000
RF - Preparation of Boron Carbon Nitride (BCN) Films by RF Sputtering using Dual Target Approach	Intel Corporation	**Sundaram**	08/01/09	07/31/12	$24,000
HCC: Medium: Collaborative Research: Computer Vision and Online Communities: A Symbiosis	NSF	**Tappen**	07/15/09	06/30/13	$399,149
RI: Small: Learning-Based Systems for Single-Image Photometric Reconstruction	NSF	**Tappen**	08/15/09	07/31/12	$363,005
NCMR Scholars Applications for RI: Small: Learning-based Systems for Single-Image Photometric Reconstruction	NSF	**Tappen**	09/18/09	07/31/12	$30,000
Journey Beyond the Fairs	National Endowment for Humanities	Walters **Hughes** Hughes, Darin	03/01/11	02/29/12	$49,715
CPA-ACR: Fast Recovery using Optimal and Near-Optimal Parallelsim in Data-Intensive Computing	NSF	**Wang**	09/01/08	08/31/12	$273,992
REU Suppplement to: CPA-ACR: Fast Recovery using Optimal and Near-Optimal Parallelsim in Data-Intensive Computing	NSF	**Wang**	09/01/08	08/31/12	$16,000

CAREER: Data-Intensive HPC Analytics: A systems approach through extended interfaces, data restructuring and data-centric scheduling	NSF	**Wang**	03/15/10	02/29/12	$101,659
CSR: Small: DSA-Cloud: Data Semantics Aware Clouds for High Performance Analytics	NSF	**Wang**	09/01/11	08/31/14	$374,973
Cost Analysis of Bariatric Surgery in an Employee-based Healthcare System Following Surgery Coverage	Florida Hospital	**Windyga**	06/30/08	11/15/11	$123,000
CAREER: Algebraic Approach to the Design of Novel Quantum Algorithms	NSF	**Wocjan**	02/01/08	01/31/12	$320,000
A Distributed Approach to Self Organization thru Variation and Probabilistic Specialization	Office of Naval Research	**Wu, A**	07/01/09	06/30/12	$233,029
High-efficiency, High-temperature DC-DC Converter Optimization and Testing	APECOR	**Wu, T.**	09/01/10	08/31/12	$40,000
Induced Power System Simulation Model Project	Siemens Energy, Inc.	**Wu, T.**	09/01/11	12/31/11	$14,428
Dynamic Heat Generation Modeling and Thermal Management of Electromechanical Actuators	AFRL	**Wu, T.** Chow	01/21/09	01/20/12	$154,000
Support for Yuan Nanoelectronics Reliability Lab	Jun, Ma	**Yuan**	05/31/10	04/15/14	$20,000