

Fall 9-2016

## September 2016 ORED Communicator

Office of Economic Research and Development, Florida International University

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## CARTA-SCIS Collaboration leads to FIU I-CAVE

Through a joint collaboration, FIU's College of Communication, Architecture and the Arts (CARTA) and the School of Computing and Information Sciences (SCIS) in the College of Engineering and Computing (CEC) established a timely new resource that is available to all FIU faculty and students, the Integrated – Computer Augmented Virtual Environment Lab (I-CAVE). By enabling creation of dynamic and interactive 2-D and 3-D visual environments with high-resolution graphics, the I-CAVE laboratory presents exciting new opportunities for FIU research projects, training initiatives, and data visualization.



Extensive research was conducted to ensure that the technical capabilities of the I-CAVE are comparable to virtual reality facilities at other major research universities across the nation and overseas. FIU's I-CAVE is only the second Virtual Reality Environment laboratory in the State University System of Florida; the University of Central Florida's Institute for Training & Simulation is home to the first.

Located in a large (15' x 11') room in the Engineering and Computer Science (ECS) building on the MMC campus, the I-CAVE laboratory comprises five integrated LED flex screens, five digital video projectors, and a surround-sound system integrated to generate virtual reality experiences. High-end workstations generate multidimensional virtual worlds in images and sound. Hardware and software track movement in the space and coordinate with displayed images so that users, wearing 3D glasses, are immersed in the simulated environment, reacting and responding to computer-generated sensory stimuli with user-controlled feedback devices.

The I-CAVE introduces new research possibilities to FIU. With its state-of-the-art imagery and user-friendly technology, the I-CAVE will enable FIU faculty and students to create simulations and models to test hypotheses, train researchers and project staff on research procedures and methodologies, conduct studies of

virtual reality environments, and visualize project data. Among the many areas in which virtual research laboratories are integrated into studies at other research institutions are engineering (e.g., prototype design and manufacturing, building and construction), medicine/biomedical engineering (e.g., robotics), chemistry/biochemistry/material sciences (e.g., molecular modeling), and economics/social sciences (data simulation and visualization).

To expand capabilities to its full potential, the I-CAVE will be joined with a new digital fabrication facility in spring of 2017. This will create one of the few innovative facilities of its kind in the country as it will enable seamless transition between digital and analog information. The combined facilities will support diverse and innovative ways of using high end visualization equipment for digital fabrication as well as advancing fabrication technologies and tools through visualization. The lab will create numerous possibilities by presenting a myriad of the latest and newest technologies. These include Robotic Arms, 3D Scanning Devices, Laser Cutter, CNC Milling Machine, and 3D Printers for printing hard and flexible material as well as biological matter.



More information on the I-CAVE website is available at <http://icave.fiu.edu>. Information about the I-CAVE's workstation specifications, tracking system, capacity, and availability for research or training may be obtained by contacting Shahin Vassigh, PhD, Professor of Architecture and Associate Dean of Faculty Development, CARTA, by email ([svassigh@fiu.edu](mailto:svassigh@fiu.edu)) or telephone (305-348-3032) or Shu-Ching Chen, PhD, Eminent Scholar and Professor, SCIS, at [Shu.Chen@fiu.edu](mailto:Shu.Chen@fiu.edu) or 305-348-3480.

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HAVE A

FUN & SAFE  
Labor Day!



# Upcoming Events

## September 2016

- **September 6, 3:30 to 4:30 pm, AHC4 #402, *Adventures in Academic Drug Discovery***, presented by [Philip Arlen](#)
- **September 7, 2:30 to 3:30 pm, AHC1 #110 (CCF), *Brain Development and Public Policy, Translating What We Discover Into What They Do***, presented by [Pat Levitt](#)
- **September 7, 10 am to 12 noon, AHC4 #402, *IRB Part 1 (Obtaining IRB Approval)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register
- **September 9, 2 to 4 pm, AHC4 #402, *IACUC (Obtaining and Managing IACUC Approval)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register
- **September 13, 12 to 1 pm, AHC3 #101, *Behavioral and Pharmacological Interventions for Childhood ADHD: Studies of Dosing, Combining and Sequencing Treatments***, presented by [William E. Pelham](#), please **RSVP** by 9/12
- **September 13, 3:30 to 4:45 pm, GC 243, *Faculty Mentor Program Orientations*** for tenured/tenure track faculty at FIU. If you would like to be a faculty mentor or mentee, please rsvp at [Mentor Program RSVP](#)
- **September 14, 3:30 to 4:45 pm, AHC4 #402, *Faculty Mentor Program Orientations*** for tenured/tenure track faculty at FIU. If you would like to be a faculty mentor or mentee, please rsvp at [Mentor Program RSVP](#)
- **September 16, GC 150, 1:30 to 3:15 pm, GC 150 *Faculty Mentor Program Orientations*** for tenured/tenure track faculty at FIU. If you would like to be a faculty mentor or mentee, please rsvp at [Mentor Program RSVP](#)
- **September 30, 11 am to 12 pm, TBA, *Design and synthesis of novel anti-infective and anti-cancer agents***, presented by [Dianqing Sun](#)
- **September 30, 2 to 3 pm, ECS 241, *Convergence of Emerging Technologies to Address the Challenges of the 21<sup>st</sup> Century***, presented by [Asad Madni](#)

## October 2016

- **October 3 to October 5, 8 am to 5 pm, DoubleTree Orlando Airport, *4<sup>th</sup> International Conference on HIV/AIDS, STDs and STIs***, registration required
- **October 3, 2 to 4 pm, AHC4 #402, *IRB Part 2 (Managing your Approved Study)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register
- **October 4, 12 to 1:30 pm, Faculty Club, *Faculty Mentor Program Lunch***
- **October 5, 10 am to 12 noon, AHC4 #402, *IRB Ethics (fulfills RCR Continuing Education hours)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register.
- **October 7, 2 to 3 pm, ECS 241, *Intelligent Video Systems***, presented by [Bir Banu](#)
- **October 11, AHC3 #101, “*TSPO: A Molecular Biomarker of Neuroinflammation and Neurodegeneration in Preclinical and Clinical Studies*”**, presented by [Tomas R. Guilarte](#), please **RSVP** by 10/12
- **October 24, 3 to 4 pm, WC-130, *Specificity of specialized damage-bypass DNA polymerases for different types of DNA damage***, presented by [Penny Beuning](#)
- **October 28, 1:30 to 2:30 pm, TBA, *Cell Mechanics in 3D***, presented by [Robert Ross](#)

## November 2016

- **November 2, 3 to 4:30 pm, AHC4 #402, *IACUC Ethics (fulfills RCR Continuing Education hours)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register
- **November 4, 10 am to 12 noon, AHC4 #402, *Informed Consent (fulfills RCR Continuing Education hours)***, kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register
- **November 4, 2 to 3 pm, ECS 241, *SmartGeo: Toward the Development of Intelligent Geosystems***, presented by [Tracy Camp](#)
- **November 8, 12 to 1 pm, AHC 3 #101, *Bayesian Big Data Analytics in Biomedical Research: Understanding Gene-Gene and Gene-Environment Interactions in Brain Tumor***, presented by [Changwon Yoo](#), please **RSVP** by 11/7
- **November 9, 3 to 4:30 pm, AHC4 #402, *Biosafety Protection and Research with rDNA/SNA (IBC)—fulfills RCR Continuing Education hours***—kindly contact Elvia (Eva) Molina at [molinae@fiu.edu](mailto:molinae@fiu.edu) to register

## *Awards Received—July 2016*

FIU researchers were awarded \$7, 875,332 in July 2016. Below is a listing of awards received.

### **Agoulnik, Alexander**

College of Medicine

#### **National Institutes of Health**

Initial

Small molecule agonists of insulin-like3 receptor for osteoporosis treatment \$255, 200

### **Arnowitz, Joann**

Steven J. Green School of International & Public Affairs

#### **Funding Arts Network**

Initial

Stitching History from the Holocaust \$14, 000

### **Attong, Nicole**

Academic Affairs - Other Units

#### **Dan Marino Foundation**

Increase

The Dan Marino Foundation - Summer Living Program \$573

### **Cheng, Michael**

Hospitality and Tourism Management

#### **U.S. Department of Agriculture**

Initial

Cochran Fellowship Program Post Harvest Loss & Food Systems \$8, 000

### **Cheng, Michael**

Hospitality and Tourism Management

#### **U.S. Department of Agriculture**

Initial

Cochran Fellowship Program Post Harvest Loss & Food Systems \$70, 318

### **Clarke, Peter J**

College of Engineering and Computing

#### **National Science Foundation**

Continuation

Collaborative Project: Engaged Student Learning \$207, 315

### **Cramer, Elizabeth**

College of Arts, Sciences & Education

#### **U.S. Department of Education**

Continuation

Project PREPARE: Preparing Rigorous and Effective Professionals as Autism Researchers \$249, 998

### **De La Rosa, Mario R**

College of Public Health Social Work

#### **National Institutes of Health**

Increase

Influence of Adult Latina Daughters on Older Latina Mothers HIV Risk and Protective Behaviors \$18, 588

<b>Degennaro, Matthew J</b> College of Arts, Sciences & Education <b>National Institutes of Health</b> Increase Regulation of juvenile hormone titers in mosquitoes	\$11, 600
<b>Donnelly, Maureen</b> College of Arts, Sciences & Education <b>Fairchild Tropical Botanic Garden</b> Increase The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	\$49
<b>Donnelly, Maureen</b> College of Arts, Sciences & Education <b>Fairchild Tropical Botanic Garden</b> Increase The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	\$6, 000
<b>El-Hage, Nazira</b> College of Medicine <b>National Institutes of Health</b> Initial Impact of opioid receptor (MOR) splice variant interactions with the chemokine receptor CCR	\$181, 250
<b>Espinal Tejada, Carlos Arturo</b> Academic Affairs - Other Units <b>Sanofi Pasteur SA</b> Initial Dengue Vaccine Guidelines Development	\$18, 000
<b>Fernandez Lima, Francisco Alberto</b> College of Arts, Sciences & Education <b>National Institutes of Health</b> Increase Regulation of juvenile hormone titers in mosquitoes	\$145, 000
<b>Fourqurean, James</b> College of Arts, Sciences & Education <b>Environmental Protection Agency</b> Increase Seagrass monitoring in the Florida Keys National marine Sanctuary	\$200, 000
<b>Fourqurean, James</b> College of Arts, Sciences & Education <b>National Park Service</b> Initial Dry Tortugas National Park Seagrass Communities Assessment Project	\$35, 000
<b>Fourqurean, James</b> College of Arts, Sciences & Education <b>National Park Service</b> Initial Florida Bay mudbank vulnerability assessment	\$25, 000

<b>Francisco Ortega, F Javier</b> College of Arts, Sciences & Education <b>Fairchild Tropical Botanic Garden</b> Increase The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	\$49
<b>Francisco Ortega, F Javier</b> College of Arts, Sciences & Education <b>Fairchild Tropical Botanic Garden</b> Increase The Fairchild Challenge for Middle and High Schools at Fairchild Tropical Botanic Garden	\$6, 000
<b>Guo, Hai</b> Steven J. Green School of International & Public Affairs <b>Volcker Alliance</b> Initial Volcker Alliance, Inc. - information from potential university partners	\$83, 063
<b>Ham, Youngjib</b> College of Engineering and Computing <b>National Science Foundation</b> Initial Uncovering Potential Risks of Wind-induced Cascading Damages	\$379, 143
<b>Hart, Katie</b> College of Arts, Sciences & Education <b>Children's Trust</b> Pre-Award Reading Explorers Program	\$132, 745
<b>Hernandez, Pedro Pablo</b> Academic Affairs - Other Units <b>University of Central Florida</b> Increase FIU I-Corps Teams Funding	\$3, 050
<b>Ibrahim Mohamed, Ahmed Salah</b> College of Engineering and Computing <b>National Science Foundation</b> Initial NeTs: Small: Collaborative Research	\$199, 980
<b>Ilcheva, Maria</b> Steven J. Green School of International & Public Affairs <b>City of Miami Beach</b> Initial City of Miami Beach - Convention Center Hotel Survey	\$21, 000
<b>Kadko, David</b> Academic Affairs - Other Units <b>National Science Foundation</b> Continuation GEOTRACES Arctic Section	\$108, 934

<p><b>Laird, Angela Marie Richmond</b>  College of Arts, Sciences &amp; Education  <b>National Science Foundation</b>  Increase  Exploring the Neural Mechanisms of Physics Learning</p>	\$184, 758
<p><b>Lisetti, Christine</b>  College of Engineering and Computing  <b>National Science Foundation</b>  Increase  CHS: Small: Advanced Design Principles for Computer Simulated Agents</p>	\$194, 024
<p><b>Liu, Hong</b>  College of Arts, Sciences &amp; Education  <b>Fairchild Tropical Botanic Garden</b>  Supplemental  GA for the Fairchild Challenge educational program</p>	\$92
<p><b>Maziak, Wasim</b>  College of Public Health Social Work  <b>National Institute on Drug Abuse</b>  Initial  Tobacco Control Research and Capacity Building</p>	\$303, 044
<p><b>Mora, Francisco</b>  Steven J. Green School of International &amp; Public Affairs  <b>U.S. Department of Education</b>  Increase  LACC National Resource Centers (NRC) and Foreign Language and Area Studies</p>	\$225, 000
<p><b>Munroe, Norman D</b>  College of Engineering and Computing  <b>Children's Trust</b>  Initial  FIU-ENLACE</p>	\$512, 493
<p><b>Nair, Madhavan P</b>  College of Medicine  <b>National Institutes of Health</b>  Continuation  Nano-delivery of methanandamide across BBB to block cannabinoid</p>	\$529, 498
<p><b>Nair, Madhavan P</b>  College of Medicine  <b>National Institutes of Health</b>  Initial  Nanotechnology Based Gene Editing to Eradicate HIV Brain Reservoir in Drug Abusers</p>	\$680, 840
<p><b>Padilla, Mark</b>  Steven J. Green School of International &amp; Public Affairs  <b>National Institutes of Health</b>  Initial  Migration, Tourism and the HIV-drug use Syndemic in the Dominican Republic</p>	\$382, 658

<b>Paul Ward, Amy</b> College of Nursing and Health Sciences <b>U.S. Department of Education</b> Continuation Preparing Occupational Therapists to Practice in Schools (POPS)	\$249, 927
<b>Pomeroy, Jordana</b> Academic Affairs - Other Units <b>Florida Division of Cultural Affairs</b> Initial General Program Support Culture Creates Community	\$90, 711
<b>Prospect, Sean Antonio</b> College of Arts, Sciences & Education <b>After-School All Stars</b> Continuation Project SUPPORT (FIU After-School All-Stars) 2015-2017	\$18, 465
<b>Prospect, Sean Antonio</b> College of Arts, Sciences & Education <b>Florida Department of Education</b> Initial Project HOPE (FIU After School All Stars) 2016-2017	\$258, 876
<b>Prospect, Sean Antonio</b> College of Arts, Sciences & Education <b>Florida Department of Education</b> Initial Project PANTHER (FIU After School All Stars) 2016-2017	\$302, 940
<b>Prospect, Sean Antonio</b> College of Arts, Sciences & Education <b>Florida Department of Education</b> Initial Project SILVER (FIU After- School All-Stars) 2016-2017	\$400, 581
<b>Ramaswamy, Sharan</b> College of Engineering and Computing <b>American Heart Association</b> Initial Bioscaffold mitral valve replacement permitting somatic growth and remodeling	\$77, 000
<b>Ramaswamy, Sharan</b> College of Engineering and Computing <b>National Science Foundation</b> Initial Mechanically Conditioned 3-Dimensional Cell Culture System	\$30, 000
<b>Richards, Jennifer</b> College of Arts, Sciences & Education <b>Fairchild Tropical Botanic Garden</b> Increase Fairchild Tropical Botanic Garden supports research and education in tropical botany	\$1, 159



<b>Riera Diaz, Jorge Javier</b> College of Engineering and Computing <b>National Institutes of Health</b> Increase Novel method for classifying BOLD response mechanisms in focal epilepsy	\$315, 503
<b>Rishe, Naphtali</b> College of Engineering and Computing <b>National Science Foundation</b> Increase I/UCRC Phase II: Center for Advanced Knowledge Enablement	\$20, 000
<b>Simon, Sharon R</b> College of Nursing and Health Sciences <b>Health Resources &amp; Services Administration</b> Continuation Veterans to BSN Program	\$385, 962
<b>Teutonico, Rita A</b> College of Arts, Sciences & Education <b>National Science Foundation</b> Initial Workshop: Enhancing Resilience of Coastal Caribbean Communities	\$41, 281
<b>Troxler, Tiffany</b> College of Arts, Sciences & Education <b>National Park Service</b> Initial Monitoring for Potential Water Quality Impacts	\$130, 000
<b>Uluagac, Arif Selcuk</b> College of Engineering and Computing <b>National Science Foundation</b> Increase CAREER: Securing Sensory Side-Channels in Cyber-Physical Systems	\$118, 018
<b>Wnuk, Stanislaw</b> College of Arts, Sciences & Education <b>FIU Division of Research</b> Initial Bridge funding for Dr. Stanislaw Wnuk	\$8, 500
<b>Zhang, Yuying</b> College of Arts, Sciences & Education <b>University of Miami</b> Initial Estimating effective sample size for head-boat-caught length	\$34, 147

## *Funding Opportunities*

ORED has a new, improved and interactive webpage for funding opportunities. Please visit <http://research.fiu.edu/funding/#current>.

## *Limited Submissions*

Current limited submission opportunities are available at <http://research.fiu.edu/funding/limited-submissions/>.

## *Contact ORED Senior Leadership*

Name	Title	Email Address
Andrés G. Gil	Vice President for Research & Economic Development	Andres.gil@fiu.edu
Tonja Moore	Associate Vice President, <a href="#">Strategic Planning &amp; Operations</a>	Tonja.moore@fiu.edu
Luis P. Salas	Associate Vice President, <a href="#">International Research, Space Optimization and Compliance</a>	Luis.salas@fiu.edu
Mirtha Alberto	Director, <a href="#">Budget &amp; Cost Analysis</a>	Mirtha.alberto@fiu.edu
Henry Artigues	Director, <a href="#">External Partnerships &amp; Economic Development</a>	Henry.artigues@fiu.edu
David Driesbach	Assistant Vice President, <a href="#">Research Information Systems</a>	David.driesbach1@fiu.edu
Christopher Grayson	Director, <a href="#">Research Integrity</a>	Christopher.grayson@fiu.edu
Emily Gresham	Assistant Vice President, <a href="#">Innovation &amp; Economic Development</a>	Emily.gresham@fiu.edu
Robert Gutierrez	Assistant Vice President, <a href="#">Research Development &amp; Pre-Award</a>	Robert.gutierrez@fiu.edu
Pedro Hernández	Director, <a href="#">Technology Management &amp; Commercialization</a>	Pedro.hernandez7@fiu.edu
Maureen Pelham	Director, <a href="#">Research Development</a>	Maure.pelham@fiu.edu
Aida Reus	Director, <a href="#">Post-Award</a>	Aida.reus@fiu.edu
Horatiu Vinerean	Director, <a href="#">Laboratory Animal Research</a> ; Attending Veterinarian	Horatiu.vinerean@fiu.edu
Susan Webster	Director, <a href="#">Training &amp; International Research Initiatives</a>	Susan.webster@fiu.edu



OFFICE OF RESEARCH AND ECONOMIC DEVELOPMENT

11200 SW 8<sup>th</sup> Street

MARC 430

Miami, FL 33199

<http://research.fiu.edu>