

Spring 2012

## ORSP Research Newsletter - Spring 2012

Office of Research and Sponsored Programs

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## Caruntu Receives Prestigious CAREER Award

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UNO had the highest number of submissions and awards in the Board of Regents OPT-IN and SURE programs, Opportunities for Partnerships in Technology with Industry and Supervised Undergraduate Research Experience

University of New Orleans professor Gabriel Caruntu has received a CAREER award from the National Science Foundation (NSF) Faculty Early Career Development Program. Dr. Caruntu is an assistant professor in the Department of Chemistry and Advanced Materials Research Institute (AMRI). This is the third time that a CAREER award has gone to an AMRI professor.

The CAREER Program offers NSF's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research.

Dr. Caruntu's research group focuses on the interdisciplinary broad themes of energy storage, materials and environmental chemistry and are particularly aimed at the rational design, characterization of novel functional nanomaterials and their integration into various types of nanodevices.

The \$600,000 grant will support Caruntu's sophisticated chemistry and nanotechnology-related project, which involves a class of materials known as perovskites. Perovskites are naturally occurring minerals. The work is done on a nanoscale range where the size of the test materials is in the one-billionth of a meter range.

The objective of the project is to study the structure and manipulate the properties of these materials at the nanoscale level so that the final product is better suited to be used in applications such as sensors, communication



Dr. Caruntu in the AMRI lab

devices and data storage. Flash drives and atomizers for insulin inhalers are just two examples of devices that use perovskites.

Caruntu's research program also involves outreach efforts that will serve to expose minority undergraduate and high school students to basic research, giving them a greater understanding of what careers in science entail.

### UNO Research Expenditures

According to the recently submitted NSF Expenditure Survey for 2011, UNO has increased total research expenditures for the fourth straight year. Total and Federal research expenditures increased by 30% over the past two years.

## Board of Regents Support Fund Awards

### ATLAS

The BoRSF Awards to Louisiana Artists and Scholars (ATLAS) Program provides support to faculty members in arts, humanities, and social sciences disciplines to complete major scholarly and artistic productions with the potential to have a broad impact on a regional, national, and/or international level. The primary focus of ATLAS is the scholarly or artistic merit of the proposed work. Projects are assessed based on their necessity, importance, originality, and likelihood to have an impact on a broad academic and/or artistic community.

#### ATLAS Award:

**Anne Boyd Rioux**  
**English**  
*From Cleveland to Cairo: A Life of Constance Fenimore Woolson*

### Enhancement

Traditional Enhancement provides funds to develop the infrastructure of academic, research, or agricultural units and promote the State's economic development. A spectrum of enhancement activities, from equipment purchases to curricular redesign, are allowed and encouraged. Most disciplines are eligible on a rotating basis. Traditional Enhancement also encompasses a special Multidisciplinary subprogram.

#### Enhancement Awards:

**Leszek Malkinski**  
**Advanced Materials Research Institute**  
*Acquisition of 3-D Optical Profiler for Research and Education in Materials Science*

**Robert Racine**  
**Film, Theatre, & Communication Arts**  
*Image Acquisition, Color Grading, and Collaboration for 4K Digital Cinema Production Pipeline*

**Vassil Roussev**  
**Computer Science**  
*University of New Orleans: High-Performance Infrastructure for Information Assurance Research and Education*

### Research Competitiveness

This subprogram funds projects that strengthen the fundamental research base and competitiveness of Louisiana's public and private universities. The RCS is a stimulus program available to researchers who are currently not competitive for federal support but show strong potential for achieving national research competitiveness in an area funded by the federal government within a limited span of time. Research funded through this subprogram must make fundamental contributions to knowledge in eligible scientific and engineering disciplines rather than simply seek to apply existing knowledge.

#### RCS Award:

**Simon Lailvaux**  
**Biology**  
*Total sexual selection and whole-organism performance in dung beetles: an integrative approach to understanding genetic quality*

**Vaniyambadi Sridhar**  
**Biology**  
*Involvement of co-repressors in regulation of stress responsive gene transcription in Arabidopsis*

### SREB

The Board of Regents/SREB Graduate Fellowships to Promote Diversity program provides ten (10) fellowships per year statewide for support of underrepresented minority students seeking doctoral degrees. Awards are made to graduate schools or governing units for graduate education at eligible institutions, which then determine the distribution of individual fellowships among qualified departments. Each fellowship includes an academic-year stipend, membership in SREB's Doctoral Scholars Program, and participation in SREB's annual Institute on Teaching and Mentoring.

#### SREB Award:

**Elizabeth Sigler**  
**Office of Research & Sponsored Programs**  
*Ernest G. Chachere Doctoral Diversity Fellowship*

## *UNO-Sponsored Holy Cross High School Robotics Team Competes in Regional Challenge*



*Holy Cross High School robotics team at the BEST Challenge at Auburn University*

The Holy Cross High School robotics team recently placed 24th in the South's BEST Regional Robotics Challenge. Each fall, over 750 middle and high schools and over 11,000 students participate in the competition. At the end of the season, the best 25% of the schools compete in the Challenge at Auburn University.

Boosting Engineering, Science & Technology (BEST) is a robotics competition whose mission is to engage and excite students about engineering, science, and technology, as well as inspire them to pursue careers in these fields.

UNO and Red Stick Robotics teamed with BEST Robotics to form NOLA BEST, which is the first BEST robotics hub in Louisiana. A BEST hub competition will be held on the UNO campus in the Fall of 2012.

UNO has also teamed with VEX Robotics to host their competition in the Spring of 2013. VEX is one of the primary manufacturers of robots for these competitions.

UNO and Red Stick will be hosting 25 high schools from the Greater New Orleans region for the BEST and VEX competitions and 7 middle and high schools as part of their Sea Perch program, which is an undersea robotics competition. The Sea Perch competition will be held in the UNO Aquatics Center. The schools participating in BEST/VEX are: Academy of Our Lady High School, Acadiana, Aerospace, Avoyelles, Capitol, Catholic PC, Central Lafourche, Chapelle, Comeaux, Episcopal, Hannan, Holy Rosary, Lusher, Mandeville, McMain, Mt. Carmel, Northlake Christian, Pope John Paul, Port Allen, Rummel, SSA, St. John, St. Michael, St. Thomas Moore and Ursuline. The schools competing in Sea Perch are: Mary Queen Peace, Most Blessed Sacrament, Sacred Heart Norco, St. Catherine, St. George, St. Matthew, and St. Theresa.

Red Stick has offered workshops locally to bring together teams of students and their teachers to develop their robotics skills for these competitions.



## ***Summer Research Program Seed Money Yields Results***

The goal of the Summer Research Program Stimulating Competitive Research (SCoRe) award is to increase extramural sponsored research activity and enhance the researcher's capacity to acquire future outside funding. Robert Laird, Associate Professor in the Department of Psychology, used his SCoRe award to generate meaningful pilot data on which to base competitive federal, state and private funding applications. Laird explained the importance of seed money to his research, "Seed money provided three distinct advantages that I tried to capitalize on when seeking larger amounts of funding. First, I was able to pilot test my projects. Even very small pilot tests appeared to be favorably received by reviewers and in many cases pilot data provided direct answers to feasibility questions raised by reviewers. Second, the pilot tests helped to identify some weak-

ness in recruitment strategies or variables that had been overlooked. In my proposals, in addition to reporting the pilot data, I described what I learned about better ways to do the project. Third, the seed money provided a reason to formalize connections and collaborations. This provided a jumpstart to building the personal relationships that are required with gatekeepers and others whose cooperation is needed."

Laird's strategy paid off. He received further seed money from the Louisiana Board of Regents Pfund, then a three-year \$515,000 grant from the William T. Grant Foundation to study parenting new teen drivers. The federal funding applications are still pending.

Laird, an associate professor of psychology,

will examine how a new driver in the family changes the dynamics of parent-adolescent interactions. Car crash injuries are the leading cause of death among adolescents and the goal of the study is to understand how parents can make driving safer.

Laird will recruit families from driver's education classes. A sample of 250 racially diverse teen-parent pairs will complete self-report surveys and a series of tasks designed to elicit conversations between parents and teens. Through the lens of an important developmental milestone, Laird hopes to gain a better understanding of how autonomy and independence are negotiated by parents and adolescents.

The William T. Grant Foundation supports high-quality research to improve the lives of young people.

## ***2012 Greater New Orleans Science and Engineering Fair at UNO***

The Greater New Orleans Science and Engineering Fair (GNOSEF), one of the oldest such fairs in the nation, awards more than \$25,000 in cash and prizes to students each year. Winners are eligible to advance to state and international competitions, where they compete for more than \$4 million in cash and prizes.

The competition was open to any student attending middle school or high school in Jefferson, Orleans, Plaquemines or St. Bernard Parish. The mission of GNOSEF is to encourage independent student research in science and engineering, to encourage youth to pursue science, math or engineering careers, and to promote collaboration and interaction between area students and scientists and engineers. The fair promotes the development of skills students will need in their future education or career. UNO President Fos introduced the guest speaker, Apollo 13 astronaut Fred Haise, Jr.



***Science Fair projects fill the gym floor inside the UNO Human Performance Center***

## *Summer Research Awards*

The UNO Office of Research and Sponsored Programs is pleased to announce its 2012 Summer Research Program awards. The Summer Research Program has three categories: Creative Endeavors Opportunity (CEO), Stimulating Competitive Research (SCoRe), and Summer Undergraduate Experience (SUE).

	<b>SCoRe Awards</b>
<b>Nicola Anthony</b>	Isolation and characterization of the major histocompatibility complex in the green <i>Anolis carolinensis</i>
<b>Jerome Howard</b>	Characterization of Hemiptera salivary enzyme profiles by transcriptome analysis
<b>Leszek Malkinski</b>	Novel Solid State Solar Cells Based on New Physical Principle
<b>Kevin Stokes</b>	Hall and Nernst Effect Measurements and Data Analysis for the Understanding of Electronic Transport
	<b>SUE Awards</b>
<b>Dimitrios Charalampidis</b>	Undergraduate Research in Advanced Computing Knowledge
<b>Malay Ghose Hajra</b>	Literature review and interpretation of field and laboratory geotechnical test data
	<b>CEO Awards</b>
<b>D'Lane Compton</b>	Gay and Lesbian and the Law
<b>Renia Ehrenfeucht</b>	Living with Population Loss, A Visual Essay
<b>Richard Frank</b>	The Politics of Human Trafficking
<b>Laszlo Fulop</b>	Immigrants - A Documentary Film
<b>Daniel Lewis</b>	Testing Policy Responsiveness with Dynamic MRP Estimates and Multiprocess Models
<b>Susan Mann</b>	Reading Feminist Theory
<b>Kyeong Sam Minn</b>	Cultural Differences in Consumer Response to Self-Customization
<b>Martin O'Connell</b>	Review of estuarine species pairs as a means of assessing possible impacts for the 2010 Deepwater Horizon
<b>Doreen Piano</b>	Our Classroom Away from Class: Connection through Disconnection in a Post-Katrina Classroom Blog

### *NIH's Rockey Explains Record Low NIH Grant 'Success' Rates*

In two posts on her blog, Rock Talk, Sally Rockey, NIH's deputy director for extramural research, announced that in calendar year 2011, 15.5% of applicants who sought either R01 or R21 grants received them, a record low for the agency. Rockey described these categories as "two of the most-frequently used grant activities." R01 applicants had a higher rate of success, 18%, compared to just 13% for R21 hopefuls. NIH statistics indicate success rates for NIH research grants were more than 30% in 1991-2001; in 2010, the rates were 22% for R01s and 15% for R21s.

Increasing numbers of grant requests and slightly higher grant amounts, coupled with a drop in NIH funding, are behind the numbers, according to Rockey. Another factor is the level of funding NIH commits to grants that last three to five years, leaving less money for new proposals. "While the success rate number is often cited as the indicator of the state of funding at NIH, it is very complex, and certainly, there is not a simple relationship between the success and the quantity of science supported by us," Rockey wrote. "Success rate may be more closely equated with an indicator of competition, at least within some mechanisms, but even then, it is not straightforward."

## *Doctoral Dissertation Improvement Grants/ Thesis Improvement Grants*

The Office of Research and Sponsored programs was proud to implement the Doctoral Dissertation Improvement Grants/Thesis Improvement Grants (DDIG/TIG) in Spring 2011. We are pleased to announce that we were able to continue to fund this program for a second year, starting in January 2012.

With the goal of introducing doctoral and master's students to the external grant process, students were asked to submit proposals using a proposal template similar to the one utilized by the Board of Regents. Included in the proposal was an estimated budget with budget justification.

These grants provide supplemental funds for items not usually available from the student's academic department. Funds were used for valid research expenses which included conducting field research in settings away from campus that would not otherwise be possible, data collection and sample survey costs, specialized research equipment, analysis and services not otherwise available, supplies, travel to archives, and travel to specialized collections and facilities or field research locations.

Maximum amount of funding for DIG is \$3,000 and for TIG is \$2,000.

Eligible students included those who had been admitted to candidacy (approved candidacy-masters/report on general-doctoral form on file).

For 2012, eleven awards were made, 1 TIG and 9 DDIG's, which totaled \$35,400.

As of Spring 2012, of the original 16 students awarded in 2011, 7 have graduated:

- Leslie Culver – DCOED
- Lorraine Dinkel – DCOED
- Mevlida Turkes-Habibovic – DCOED
- Gang Liu – GENGR-ENEE
- Evan Casper-Futterman – GMURP
- Bridget McKinney – DCOED
- Franz Reneau – DEDAD

An additional seven students have filed for degree in Spring 2012, and the remaining 2 are still active students.

ORSP will send out a Request for Proposals in mid-Fall for the next cycle which will begin in January 2013.

<b>2012 Awardees included:</b>	
<b>Biology</b>	<b>Alex Figueroa</b>
<b>Electrical Engineering</b>	<b>Arjun Joginipelly</b>
<b>Financial Economics</b>	<b>Jatin Malhotra</b>
<b>Financial Economics</b>	<b>Geoffrey Ngene</b>
<b>Educational Administration</b>	<b>Jade O'Dell</b>
<b>Civil Engineering</b>	<b>Amitdyuti Sengupta</b>
<b>Urban Studies</b>	<b>Valerie McMillan</b>
<b>Urban Studies</b>	<b>Aram Lief</b>
<b>Psychology</b>	<b>Brandon Scott</b>
<b>Psychology</b>	<b>Kathleen McGoron</b>
<b>Chemistry</b>	<b>Haiou Qu</b>



*ORSP walks in UNO Mardi Gras Parade "Fairy Tales Come True"*

## **Research Professor Awards Announced**

Research Council is pleased to announce the recipients of the Research Professor awards.

Research Professor awards will become effective July 1, 2012 and each professor will be awarded a plaque at the ORSP award ceremony/open house in the fall semester.

### **President's Research Professorship**

The President's Research Professorship is the highest level of recognition UNO bestows upon persons who have achieved the rank of Professor and who have distinguished themselves in their creative and scholarly work at the university. This year UNO awarded 2 President's Research Professorships:

**Dr. David Hui**—Professor of Mechanical Engineering  
**Dr. John Wiley**— Professor of Chemistry

### **University Research Professorship**

This award provides opportunities to devote even greater attention to scholarly and creative contributions and provides support for those individuals seeking to achieve even higher levels of distinction in their scholarly careers. Research Council awarded 2 University Research Professorships:

**Dr. Pamela Jenkins**—Professor of Sociology  
**Dr. Leonard Spinu**—Professor of Physics

### **Early Research Professorship**

This is recognition for persons who hold the rank of Assistant Professor, who have passed their third year review and who have distinguished themselves in their creative and scholarly activities. The recipient this year is:

**Dr. Gabriel Caruntu**—Professor of Chemistry

## **Helpful Hints**

April was the inaugural issue of Helpful Hints. This monthly 1 page newsletter will highlight one area related to research.

The first Helpful Hints monthly news letter covered funding opportunities.



### **Work Station—now available**

The Office of Research and Sponsored Programs is pleased to announce that we now have a dedicated workstation for researchers to use in our office.

If you need assistance you can use this workspace and have someone in our office assist you. This may be a good place to have students complete their Responsible Conduct of Research (RCR) training, or we can assist new employees learn how to use SharePoint or we can give refresher sessions on how to run reports in PeopleSoft. To schedule the workstation in advance call 280-6836 Or email [orsp@uno.edu](mailto:orsp@uno.edu).

### **Reminder— budget template**

The Office of Research and Sponsored Programs (ORSP) has updated the budget templates to reflect the increase in Graduate Assistant (GA) tuition and the increase in fringe benefits. Graduate Assistant tuition increased this summer and fringe benefits are increasing from 33.8% to 39% on July 1, 2012.

The ORSP budget template will have future years fringe benefit and GA tuition increases included for you and will automatically calculate the indirect rate. Budget templates are embedded in the electronic routing form, or can be found on the Proposal Development page of the ORSP website. We highly recommend that you use the budget template.

Budget Preparation is covered in detail on the Policies and Procedures page or you can contact our office if you have questions.