

# RESEARCH OMNIBUS

A Newsletter for the Cal State L.A. Research Community

Office of Research and Development, Academic Affairs, Cal State L.A.  
Office of Research and Sponsored Programs, University Auxiliary Services, Inc.

Spring Quarter 2011

## ***New Award Highlight: Rupa Purasinghe – “NEESR-CR: Earthquake Response & Rehabilitation of Critical Lifelines”***



**Rupa Purasinghe (Civil Engineering)** has received a \$45,192 subcontract from Cornell University for his collaboration with Cornell and the University of Buffalo entitled “NEESR-CR: Earthquake Response & Rehabilitation of Critical Lifelines.” NEESR, Network of Earthquake Engineering Simulation Research, is a program funded under the NSF Directorate for Engineering.

Under this subcontract, Purasinghe will work with teams from Cornell and Buffalo on projects related to the effects of earthquakes on the structural integrity of pipelines. They will develop finite element models for earthquake loading, and perform stress analysis to better understand how earthquakes exert their destructive forces. Studies at Cornell and Buffalo will conduct earthquake shake table tests to examine structural

vulnerability of pipelines at fault crossings. At the Cal State L.A. Strength of Materials Lab, Purasinghe will develop a simplified structural experiment using shear loads to simulate structural vulnerability of a pipeline at an earthquake crossing.

This experiment will be incorporated as an educational enhancement tool in both the civil engineering junior level computer-aided structural analysis/design and experiment course and the freshman civil engineering design course. Research results will be shared with Cal State L.A. undergraduate and graduate students, as well as practitioners in the Los Angeles area. This project will provide enhanced information about the destructive forces of earthquakes to students, engineers, and state and federal agencies.

In 2008, Purasinghe brought the first ever NEESR research funding to Cal State LA in collaboration with Portland State University and the University of Washington for a project titled “Toward Rapid Return to Occupancy in Unbraced Steel Frames.” The objective of this project is to develop an innovative seismic lateral load resisting system, known as the linked column frame system. The new structural system is expected to reduce post-event downtime and building repair costs, and thus will have a significant impact on reducing earthquake losses and life-cycle costs.

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## ***Student Research Symposium Winners Honored at March 3 Reception***

### **Delegates to Statewide Competition, Local Travel Award Recipient Announced**

On March 3, a reception recognizing the oral and poster presentation awardees for their presentations at the 19<sup>th</sup> Annual Cal State L.A. Symposium on Research, Scholarship and Creative Activity was held in the University Club. Winners in both categories were announced, and the 10 students selected to represent Cal State L.A. as statewide delegates to the CSU Student Research Competition were named. In addition, a Phi Kappa Phi \$1,000 travel award was given for the best oral presentation of the symposium. Faculty mentors were also recognized for their participation. The symposium was co-

sponsored by the Office of Research and Development, Office of Graduate Studies and Research, Office of Research and Sponsored Programs, and the Honor Society of Phi Kappa Phi.

To help prepare for the CSU Student research Competition at CSU Fresno May 6-7, the delegates will participate in a half-day workshop offered by emeriti faculty member Janet Fisher-Hoult and her husband, Charles Hoult, from Northrop Grumman, both of whom volunteer each year to serve as judges for the campus competition as well.

Students receiving awards in each category are listed below.



CSULA delegates (l. to r.): Phoutdavone Phimphasone, Coleman Dobson, Rebecca Flegel, Joe Beaty, Victor Mejia, Matthew Pasillas, and Jose Zamalloa. Unavailable for photo: Tara Fansler, Sarah Gao, and Alisa Kosheleff.

## Oral Presentations

### ***Behavioral and Social Sciences I***

#### **1<sup>st</sup> place – Alisa Kosheleff, Statewide Delegate**

M.A. Psychology

*Effects of binge doses of methamphetamine on effortful behavior in rats*

Faculty Mentor: Dr. Alicia Izquierdo

#### **2<sup>nd</sup> place - Phuoc (Jimmy) Tran**

M.A. Psychology

*Computer Multitasking Effects on Learning*

Faculty Mentor: Dr. Kaveri Subrahmanyam

### ***Behavioral and Social Sciences II***

#### **1<sup>st</sup> place - Phoutdavone Phimphasone, Statewide Delegate**

M.A. Psychology

*Academic achievement in adolescents: Perceiving is not Achieving*

Faculty Mentor: Dr. Ji Son

#### **2<sup>nd</sup> place - Yu Zhang**

B.A. Psychology

*Tracking Culture-based Categorization through Developmental Time*

Faculty Mentor: Dr. Ji Son

### ***Behavioral and Social Sciences III***

#### **1<sup>st</sup> place - Matthew Pasillas, Statewide Delegate**

B.A. Sociology

*Emotional Labor of a Disney Resort Character*

Faculty Mentor: Dr. Roseann Giarrusso

#### **2<sup>nd</sup> place - Elizabeth Lee**

M.S. Nutritional Science

*Participatory Action Research with Photovoice: An Investigation of the Obesogenic Environment of East Los Angeles*

Faculty Mentor: Dr. Kathryn Hillstrom

### ***Biological Sciences I***

#### **1<sup>st</sup> place - Sarah Gao, Statewide Delegate & Travel Award**

B.S. Biochemistry

*Antiproliferative Effects of the novel anti-cancer agent, Chlorambucil-Tempol, and its use in drug delivery research*

Faculty Mentor: Dr. Yong Ba

#### **2<sup>nd</sup> place - Jose A. Zamalloa, Statewide Delegate**

M.S. Chemistry, Option in Biochemistry

*A Mutagenic Study of the Conserved Threonines in an Antifreeze Protein from Dendroides Canadensis*

Faculty Mentor: Dr. Xin Wen

### ***Biological Sciences II***

#### **1<sup>st</sup> place - Rebecca L. Flegel, Statewide Delegate**

M.S. Biology

*Landscape pattern and process in the disturbance paradigm: an alternative view of mussel beds*

Faculty Mentor: Dr. Carlos Robles

#### **2<sup>nd</sup> place - Brian Gatza**

M.S. Environmental Science

*The Effects of Habitat Structure on Western Gray Squirrels and Invasive Eastern Fox Squirrels*

Faculty Mentor: Dr. Alan Muchlinski

### ***Engineering and Computer Science***

#### **1<sup>st</sup> place - Victor Mejia, Statewide Delegate**

M.S. Computer Science

*Automatic Detection for Tracking Moving Objects in H.264 Video Sequences Using Multiple Features and Gaussian Approximation*

Faculty Mentor: Dr. Eun-Young Kang

#### **2<sup>nd</sup> place - Joe Beaty, Statewide Delegate**

M.S. Civil Engineering

*The use of flow penetrometers to determine the strength of soft clays at shallow penetration*

Faculty Mentor: Dr. Mark Tufenkjian

### ***Physical and Mathematical Sciences***

#### **1<sup>st</sup> place - Coleman Dobson, Statewide Delegate**

B.S. Physics and Mathematics, Pure and Applied Mathematics Options

*Saturn Data Analysis and Thermal Modeling*

Faculty Mentors: Drs. Linda Spilker (NASA JPL) and Susan Terebey

#### **2<sup>nd</sup> place - Shahrzad (Sara) Jamshidi**

M.S. Mathematics/M.A. Economics

*The Sub-Supersolution Method for Parabolic and Hyperbolic Partial Differential Equations*

Faculty Mentor: Dr. Borislava Gutarts

### **Humanities**

#### **1<sup>st</sup> place - Tara Fansler, Statewide Delegate**

M.A. History

*Writing American Identity: Impressions of Race in 19<sup>th</sup> Century Southern California Travel Literature*

Faculty Mentor: Dr. Choi Chatterjee

#### **2<sup>nd</sup> place - Mario Giron-Abrego**

M.A. Anthropology

*The Epigraphy of a Maya Polychrome Vase Found at Midnight Terror Cave, Belize*

Faculty Mentor: Dr. James Brady

### **Creative Arts**

#### **Debra Bianculli**

MFA Studio Art

*C.A.N.D.I.E.D: Contemporary Agricultural Nanotechnologies Delivering Internal & Environmental Detriment*

Faculty Mentor: Dr. Mika Cho

### **Poster Presentations**

#### **Health, Nutrition, and Clinical Sciences**

##### **Abdullah Madany**

B.S. Biochemistry

*Determining the Km Lecithin Cholesterol Acyltransferase in the Serum of New Zealand White Rabbits for a Synthetic Cholesterol Substrate*

Faculty Mentor: Dr. Raymond Garcia

#### **Behavioral and Social Sciences I**

##### **Diana Layous**

B.A. Psychology

*Does Processing of Disturbing Events Improve Cognitive Functioning?*

Faculty Mentor: Dr. Joel Ellwanger

#### **Behavioral and Social Sciences II**

##### **Winnie Shi, Deisy Guardado, Gabby Casillas, and Kimberly Perry**

B.A. Psychology

*Predictors of Depressive Symptoms among Black and Latino College Students*

Faculty Mentor: Dr. Munyi Shea

#### **Engineering and Computer Science**

##### **Te-Kang Chao**

M.S. Electrical Engineering

*The Effect of Timing Functional Electrical Stimulation (FES) with Robotically Controlled Hindlimb Position on Ankle Flexion*

Faculty Mentors: Drs. Deborah Won and Ray de Leon

#### **Physical and Mathematical Sciences I**

##### **Caitlin Dwyer**

M.S. Geological Sciences, Option in Environmental Hydrogeology

*Water Quality in an Elevated CO<sub>2</sub> Region: a Field Study at Mammoth Lakes, CA*

Faculty Mentors: Drs. Andre Ellis, Crist Khachikhan, and Gustavo Menezes

#### **Physical and Mathematical Sciences II**

##### **Donja Brown**

M.S. in Biochemistry

*Role of Arginine Residues in the Enhancing Function of an Antifreeze Protein from the beetle Dendroides Canadensis*

Faculty Mentor: Dr. Xin Wen

### ***Biological Sciences I***

**Jessica Ponce**

M.S. Biochemistry

*Validation of a Bronchioepithelial Cell Culture Model with Primary Cells Derived from Nasosinal Tissue to Study the Regulation of Antimicrobial Cholesteryl Ester Biosynthesis*

Faculty Mentors: Drs. Edith Porter and Jivianne Lee

### ***Biological Sciences II***

**Gregory Kanzaki**

M.S. Biology

*The role of a mobile loop in activation of phosphoenolpyruvate carboxylase*

Faculty Mentor: Dr. Scott Grover

### ***Biological Sciences III***

**Alberto Villegas**

B.S. Biochemistry

*The Coevolution of P53 and MDM2*

Faculty Mentor: Dr. Jamil Momand

### ***Biological Sciences IV***

**Melo-Jean Encinas**

M.S. Biology

*Modeling the dynamics of layered mussel beds*

Faculty Mentor: Dr. Robert Desharnais

## **2010-11 RSCA Minigrant Awards Announced**

Congratulations to the following faculty who were awarded 2010-11 minigrants totaling \$22,712 through the Research, Scholarship and Creative Activity program:

**Paul Anderson**, Art

“The Role and Practice of Artists in Society”

**Raquel Delevi**, Child and Family Studies, “Relationship education in a predominantly Latino college setting”

**Andre Ellis**, Geological Sciences

“Effects of Climate change on watershed chemistry in a hyper-sensitive permafrost region of central Alaska”

**Simona Montanari**, Child and Family Studies, “The Phonological Skills of Spanish-English Dual Language Preschoolers”

**Ji Son**, Psychology, “Improving Quantitative Reasoning through College-level Statistics”

## **Funding Agency News**

### ***NSF Requires New Data Management Plan***

National Science Foundation grant proposals now must include a supplementary document of no more than two pages, labeled “Data Management Plan.” This supplementary document (not counted against the 15-page limit) should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. Additional information and clarification can be found at the links below.

In particular, the FAQs, guidance, and examples for several NSF directorates, divisions, and programs may give applicants a clearer understanding of what is specifically required and expected.

Grant Proposal Guide – Data Management Plan Requirement:

[http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg\\_2.jsp#dmp](http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg_2.jsp#dmp)

Frequently Asked Questions about DMPs: <http://www.nsf.gov/bfa/dias/policy/dmpfaqs.jsp>

Guidance and examples for specific NSF directorates, divisions, and programs:

<http://www.nsf.gov/bfa/dias/policy/dmp.jsp>

## Recent Grant and Contract Awards

A number of new and continuing grants and contracts have been awarded since November 15, 2010 in a wide range of disciplines. Funding levels shown are annual amounts. Congratulations to these PIs on their awards!

Principal Investigator	Project Title	Funding Source	Awarded Amount
<b>Karin Elliot Brown</b>	“CALSWEC Full-Time and Part-Time Training Program”	CA Dept of Social Svcs	\$1,317,734
<b>Carolyn Frank</b>	“Los Angeles Writing Project, No Child Left Behind”	UC Regents (CA DoEd)	\$43,482
<b>Carolyn Frank</b>	“CSULA Writing Project”	UC Regents	\$27,000
<b>Frank Gomez</b>	“Revolutionizing Metallic Biomaterials for National Science Foundation” supplement	NC A&T (NSF)	\$40,000
<b>Cherie Hawley</b>	“(STEM)2 Laying the Foundation”	CSU Office of the Chancellor (Corp for Natl & Comm Svc)	\$4,000
<b>Barry Hibbs</b>	“Assessment of the MEDN Water Quality Monitoring Protocol as implemented in the Santa Monica Mountains (SAMO)” supplement	National Park Service	\$18,129
<b>Cynthia Hughes</b>	“School of Nursing BSN Program”	Whittier Foundation	\$300,000
<b>Lori Kim</b>	“Linking Theories and Practices Collaboratively”	National Educ Assn	\$5,000
<b>Namhee Lee</b>	“Developing Korean Single Subject Teaching Credential Program”	Korean Educ Center	\$769,710
<b>Paul Liu</b>	“CSULA Center of Excellence (Mentorship)” supplement	Northrup Grumman Corp	\$15,000
<b>Sachiko Matsunaga</b>	“Enhancement of the Subject Matter Knowledge for Credential Renewal in Japanese”	Japan Foundation	\$3,000
<b>Holly Menzies</b>	“Frontloading for Reading”	Saugus Union School Dist	\$33,750
<b>Holly Menzies</b>	“CRLP CSULA”	UC Regents (USDoEd)	\$55,479
<b>Holly Menzies</b>	“CSMP Application for Continued Funding (ACF) California State Appropriation (2010-2011)”	UC Regents	\$29,221
<b>Holly Menzies</b>	“Focused Approach to Systematic ELD Instruction”	Saugus Union School Dist	\$22,500
<b>Keith Moo-Young</b>	“MESA/NSF Scholarship Program”	UC Regents (NSF)	\$5,625

<b>Keith Moo-Young</b>	“Comparative Tensile Strength Analysis of Sub-Size Steel Samples to Full-Scale Steel Samples”	Southern Calif Gas Company	\$25,000
<b>Keith Moo-Young</b>	“MESA Schools Program”	UC Regents	\$215,000
<b>Keith Moo-Young</b>	“Corporate University Affiliates Program”	The Aerospace Corporation	\$20,000
<b>Keith Moo-Young</b>	“Professional Practice Program”	Raytheon	\$20,000
<b>Keith Moo-Young</b>	“Professional Practice Program”	The Boeing Company	\$20,000
<b>Rupa Purasinghe</b>	“NEESR-CR: Earthquake Response and Rehabilitation of Critical Lifelines”	Cornell University (NSF)	\$45,192
<b>Patricia Ramirez-Ulloa</b>	“Child Care Food Program – 2010 (State)”	CA Dept of Education	\$10,000
<b>Patricia Ramirez-Ulloa</b>	“Child Care Food Program – 2010 (Federal)”	CA Dept of Education	\$98,158
<b>Jaime Regalado</b>	“Pat Brown’s Institute Health Policy Outreach Center (HPOC)”	Kaiser Permanente	\$45,000
<b>Jose Rodriguez</b>	“Theoretical Study of Quantum Magnetism in New Iron-Based High-Temperature Superconductors” supplement	Air Force Office of Scientific Res	\$79,611
<b>Sandra Sharp</b>	“Cal Poly Pomona and Cal State L.A. Collaborative CIRM Bridges Program to Enhance Stem Cell Research Training and Education”	Cal Poly Pomona (Calif Institute for Regenerative Medicine)	\$67,285
<b>Simeon Slovacek</b>	“Los Angeles Apprentice Teacher Program (LA-ATP)”	Los Angeles Unified School Dist (USDoe)	\$75,485
<b>Simeon Slovacek</b>	“Science Education Partnership Award (SEPA) Program”	Charles Drew Univ of Med & Sci (NIH)	\$24,999
<b>Katharine Tellis</b>	“Police Decision Making in Sexual Assault Cases: An Analysis of Crimes Reported to the L.A. Police Department, 2006 – 2008” supplement	Arizona State Univ (DOJ)	\$28,365
<b>Mark Tufenkjian</b>	“NEESR-CR: Seismic Response of Landfills: In-Site Evaluation of Dynamic Properties of Municipal Solid Waste, Comparison to Laboratory Testing & Impact on Numerical Analysis”	Univ of Michigan (NSF)	\$100,000
<b>Deborah Won</b>	“Bridging CSULA with Biomedical Engineering Opportunities at USC”	Univ of So Cal (NSF)	\$11,733
<b>Toshiko Yokota</b>	“Japanese Speech Contest (2011 Event)”	Japan Foundation	\$500

## Institutional Review Board—Human Subjects News

If a research project involves human subjects, approval must be obtained from the Cal State L.A. Institutional Review Board-Human Subjects (IRB) prior to beginning the project. This includes biomedical, behavioral, survey, and educational projects, and both funded and unfunded research projects by faculty, staff, and students. The purpose of the review is to assess risk to and protect the rights of human research subjects, in accordance with federal regulations. Please contact Ellen Stein at [estein@cslanet.calstatela.edu](mailto:estein@cslanet.calstatela.edu) or x3798 if you have any questions regarding IRB requirements.

## ***New IRB Application Form and Guidelines Workshop for Faculty Advisers***

On **Tuesday, May 10**, from **3:30 to 5:00 p.m.** in the Library Conference Room (LibN B530), ORAD will be offering a workshop for faculty who serve as thesis or project advisers, or who teach research methods courses. Faculty who periodically identify student class assignments involving human subjects for presentation at conferences or submission for publication are also encouraged to attend. Entitled “Navigating the New IRB Application Form and Guidelines,” this workshop is designed to assist faculty in helping their students through the review process. The new application form, developed by the IRB over a period of time and piloted over the summer, was implemented during winter quarter. This form requires considerably less narrative, instead having many new items presented in list format, for check-off as appropriate. Use of the new form should reduce the amount of time spent by both the applicants and the reviewers in preparing and reviewing applications, respectively, and further streamline the review process.

Key changes include:

- Faculty advisers on student research will serve as the principal investigator on the application, with the student listed as co-investigator. This more accurately reflects the delineation of responsibilities in the application preparation, as well as conduct and oversight of human subjects research at Cal State L.A.
- All researchers – faculty, students, administrators, staff – must complete the online IRB tutorial and attach the proof of completion (quiz score email) to each application. The tutorial certification is valid for three years.
- The IRB has recently set deadlines for submission of applications for student research for theses and projects involving human subjects. Look for further information in your inbox regarding these new deadlines.

## ***Next Quarterly IRB Workshop to be Offered on April 26***

On **Tuesday, April 26**, from **4:00-5:30 p.m.**, ORAD will be offering the final of three quarterly workshops for students who are planning to conduct research with human subjects. Faculty advisers are also encouraged to attend. The workshop will be held in the Library Conference Room (LibN B530). Space is limited, so reserve a space early by contacting Ellen Stein at [estein@cslanet.calstatela.edu](mailto:estein@cslanet.calstatela.edu) or x3798.

## ***IRB Faculty Serve as College Liaisons***

The following members of the Institutional Review Board—Human Subjects serve as college liaisons and may be contacted by anyone conducting research involving human subjects for assistance. In addition, researchers may contact the Office of Research and Development at x3798.

Jon Beaupre	Arts & Letters
Maria Costa	Arts & Letters
Jai Hong	Engineering, Computer Science & Technology
Anh-Luu Huynh-Hohnbaum	Health & Human Services
Karen Nielsen-Menicucci	Health & Human Services
Edith Porter	Natural & Social Sciences
Heidi Riggio	Natural & Social Sciences
Sharon Ulanoff	Education

## **2010-11 IRB Meeting Calendar**

### **Spring Quarter**

April 29\*

May 20

\*Note new date.

Meetings take place from 10:00 a.m. to 12:30 p.m. in Administration 313. Contact Ellen Stein at [estein@cslanet.calstatela.edu](mailto:estein@cslanet.calstatela.edu) or x3798 for more information.

No meetings are scheduled at this time for the summer, but may be arranged if needed.

**Note: Visit the ORAD webpage, [www.calstatela.edu/academic/aa/orad](http://www.calstatela.edu/academic/aa/orad), to download the new CSULA IRB Application and the Guidebook, or complete the IRB online tutorial.**

## **Institutional Animal Care and Use Committee News**

The use of animals in instructional activities or research (whether funded or unfunded) requires prior approval from the Cal State L.A. Institutional Animal Care and Use Committee (IACUC). The IACUC maintains oversight of University animal facilities and animal care procedures, and carries out such activities as required by law to assure the humane treatment of animals, in compliance with federal regulations.

## **2010-11 IACUC Meeting Calendar**

### **Spring Quarter**

April 7

May 5

June 2

No meetings are scheduled during the summer, but may be arranged if needed. New protocols may be submitted at any time for consideration at the first fall quarter meeting in October.

Meetings take place from 2:30 to 4:00 p.m. Contact Ellen Stein at [estein@cslanet.calstatela.edu](mailto:estein@cslanet.calstatela.edu) or x3798 for meeting location.

**Note: The latest versions of Animal Protocol forms A and B may be found on the ORAD webpage, [www.calstatela.edu/academic/aa/orad](http://www.calstatela.edu/academic/aa/orad).**

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This newsletter is published quarterly and is transmitted via email to all faculty, senior administrators, and ORSP and ORAD staff. For further information on newsletter content, email Ellen Stein, Regulatory Compliance and Research Development Analyst, at [estein@cslanet.calstatela.edu](mailto:estein@cslanet.calstatela.edu) or Philip LaPolt, Acting Associate Dean of Graduate Studies and Research, at [plapolt@exchange.calstatela.edu](mailto:plapolt@exchange.calstatela.edu). We welcome your comments and suggestions on how to improve this publication.