



BREEZE BULLETIN

Office of University Research (<http://research.latech.edu>)

No man is fit to command another that cannot command himself.

William Penn

(1644-1718, British religious leader, founder of Pennsylvania)

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A REPORT ON RESEARCH ACTIVITIES AT RESEARCH UNIVERSITIES

Abstract: Results of a survey of senior research administrators at Carnegie Doctoral/ Research Universities - Intensive and -Extensive are presented. The survey results are discussed. Survey topics included the importance of research to the institution's mission, research planning and priority-setting, research culture, research publicity, economic development and technology transfer, and a request to the survey respondents to identify important positive and negative trends in research administration. (See: www.ncura.edu/data/mrd/15.1/researchActivities.pdf)

OUR'S NEW POST AWARD COORDINATOR!!!

Please join us in welcoming Elizabeth Womack as our new post award coordinator!! Elizabeth has been at Tech for two years and we are happy to have her join our staff.

THE SOUTHERN INNOVATION SUMMIT JUNE 4-6 IN NEW ORLEANS

SPECIAL REGISTRATION RATES FOR LOUISIANA PROFESSIONALS!!!

Southern Growth Policies Board's 34th annual conference, *The Southern Innovation Summit*, will focus on the creation, accumulation and application of knowledge as the fuel of innovation and the key to the South's economic competitiveness on June 4-6, 2006 in New Orleans. Conference sessions will explore strategies to capitalize on the innovative assets already in the Southern region, and for increasing innovation in the South's businesses, universities and governments, as well as the region's economic development policies.

To encourage participation by Louisiana business, nonprofit and government representatives, Southern Growth is extending a **special registration rate of \$335 for all Louisiana Professionals**. We understand that many businesses and organizations are still getting back on their feet following the devastation of Hurricane Katrina. We are offering our lowest registration rate to involve more Louisiana citizens in the conference and policy discussions. To register online, or to download registration forms, visit <http://www.southern.org/reg.shtml> (copy and paste into browser).

The Southern Innovation Summit will feature the release of the *2006 Report on the Future of the South*, and keynote and panel discussions with Southern Growth Chairman, Louisiana Governor Kathleen Blanco; Southern Technology Chairman, Georgia Governor Sonny Perdue; Missouri Governor Matt Blunt; Tennessee Representative Zach Wamp, champion of the East Tennessee Technology Corridor; Ping Fu, *Inc. Magazine's* 2005 Entrepreneur of the Year and Chairman and CEO of Geomagic; Dr. Walter Massey, President of Morehouse College and former director of the National Science Foundation; Edward Seidel, Director of Louisiana State University's Center for Computation & Technology as well as key researchers and strategists from universities and innovation centers from across the country.

The conference will also feature a special town meeting on the role of technology and innovation in responding to large-scale economic disasters. Louisiana Governor Kathleen Blanco will moderate the meeting featuring Robert O. Baron, President and CEO of Baron Services, Inc., and Honorable Mention in *Inc. Magazine's* 2004 Entrepreneur of the Year Awards; Richard Zuschlag, CEO and Chairman of the Board, Acadian Ambulance of Lafayette, LA and Honorable Mention in *Inc. Magazine's* 2005 Entrepreneur of the Year awards; and Mike Carolina, President of the Oklahoma Center for Science and Technology, and others. While the meeting will focus on Hurricane Katrina, the panelists will explore the role of technology in responding to and mitigating economic crises, and in rebuilding following the crises.

To view the full conference agenda, visit: <http://www.southern.org/conference/2006conference/agenda.shtml> (copy and paste into browser).

NEW GRANTS AWARDED

PI	Title	Funding Agency	Amount Awarded
John Strait	<i>Blues at the Crossroads: A Summer Teaching Institute for Advanced Study of Blues Culture in the La. & Miss. Delta</i>	LEFH	35,206.00
Jo Ann Dauzat	<i>Project ELEVATE</i>	DoED	171,006.00
Chad O'Neal	<i>Evaluation of Electroactive Polymers as Strain-Gauges for Small Displacements</i>	US Army	24,994.00
Dave Norris	<i>City of Ruston, Economic Development Strategic Plan</i>	City of Ruston	40,000.00
James Heimdal	<i>North Central Alliance Partners in Prevention</i>	HHS	177,899.00
Yuri Lvov	<i>Layer By Layer Nanoassembly for Fiber Modification</i>	SAPPI	120,000.00
Ken Robbins	<i>Festival of New Works Playwright's Visitation Program</i>	RLCVB	500.00
Ken Rea	<i>Teacher Preparation Program Reward</i>	BoR	7,500
January 2006 Total			\$577,105.00
Chad O'Neal	<i>Fabrication of a Semi-automatic MEMS Release Station</i>	Space Photonics	4,270.00
February 2006 Total			\$4,270.00
Cheng Luo	<i>Development of a Numerical Model for an Intermediate-Layer Lithography Method</i>	NSF through BoR	10,000.00
Kelly Crittenden	<i>Entrepreneurship Through Multidisciplinary Projects and Collaborative Teams (Empact)</i>	NSF	134,709.00
Milan Vavrek	<i>Fiber Rolls as a Tool for Re-Vegetation of Oil-Rbine Contaminated Watersheds</i>	EPA	51,391.00
Tommy Grafton	<i>Town Hall Meeting</i>	CRP	1,000.00
Jay Wang	<i>A Model to Predict Shear Failure of Infrastructures Using Finite Element Method</i>	NSF	9,700.00
March 2006 Total			\$206,800.00
Aziz Saber	<i>Field Verification for the Effectiveness of Continuity Diaphragms for Skewed Continuous P/C P/S Concrete Girder Bridges</i>	LTRC	\$149,928.00
Angela Kennedy	<i>2005-06 Carl Perkins Vocational & Technical Edu. Carry Over Grant</i>	DoED	4,738.00
Jan Fuller	<i>Improving Student Assessment in Distance and Campus-based Education</i>	DoED	26,629.20
Glenn Beer	<i>Establishing the Louisiana Coalition for Academic and Mentoring Programs for Success (LaCAMPS) Year 2</i>	DoED	157,152.34
Larry Proctor	<i>COE-Committee on Diversity and Global Issues 2nd Annual Training Workshop</i>	AHEC	2,500.00
Les Guice	<i>Louisiana Tech University LONI Grant-Contract 2</i>	BoR	62,000.00
Henry Cardenas	<i>Reactive Electrophoretic Consolidation of Fine Construction Aggregates</i>	Osmotech	100,832.00
April 2006 Total			\$503,770.54
			YTD
			\$7,280,884.82

PROPOSALS SUBMITTED

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
06-174	Selmic, Sandra		Engineering of Polymer-Nanocrystal Quantum Dot Photodetectors and Photovoltaic Devices	DoD (Navy)	257,032
06-175	Sidney Sit		Effect of Material Surface Properties on Endothelial Cell Micromechanics	American Heart Association	259,952
06-176	Siriwardane, Upali		Cracking Glycerol to Produce Methanol for A Heterogeneously Catalyzed Closed Cycle Biodiesel Production Process	USDA-CSREES	98,908
06-177	Sit, Sidney		Effect of Material Surface Properties on Endothelial Cell Micromechanics	AMA - Beginning Grant-in-Aid	109,978
06-178	Lester, Richard		The Sources of Competitive Advantage in Family Controlled Businesses	NSF	187,179
06-179	Leangsuksun, Box		Survivability-Aware High Performance Computing Runtime	NSF	771,015
06-180	Ji, Frank		Disposable Microcantilever Sensor Array for Specific Organophosphorus	NSF	233,781
06-181	Allouche, Erez	Wang/Baumert	Development and Testing of a Seismic Resistant Non-Metallic Terrabrute Restraint Joint	IPEX, Inc.	44,900
06-182	O'Neal, Chad		Energy Harvesters/Storage Sys. For Onboard Power for Remote Microelectromechanical Systems (MEMS) Sensors/Devices with Long Mission Times	DOD/Air Force	31,068
06-183	Mainardi, Daniela		Understanding Pt Nanoparticles on Carbon Nanotubes for Enhanced Activity of Fuel Cell Catalysts	NSF	97,517
06-184	McShane, Mike	Kennedy/Green	Nanoengineered Fluorescent Tattoos for Cattle Identification	USDA	642,750
06-185	Selmic, Rastko	Phoha/Reddy/Kuljaca	Suboptimal Coverage Control Missions in Mobile Sensor Networks With Focus Areas	DOD/Air Force	245,000
06-186	Phoha, Vir		Multi University Research and Training in Information Assurance and Computer Security	NSF	35,677.00
06-187	Hall, David	Barker/Crittenden	Living WITH the Lab	NSF	487,797
06-188	Roberts, Freddy	Allouche Erez	Senior Design Projects With Transportation Features	LTRC	5,000
06-189	Allouche, Erez	Lee, Luke	Experimental and Numerical Evaluations of the Seismic Resistance of Carbon Nanotubes Reinforced Historic and Modern Masonry Walls	Portland Cement Assoc.	20,000
06-190	O'Neal, Chad		Fabrication of a Semi-automatic MEMS Release Station	Space Photonics, Inc.	4,270

PROPOSALS SUBMITTED (CONT'D FROM PAGE 3)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
06-191	Varahramyan, Kody		Acquisition of a Sputtering System for Micro/Nanotechnology Research, Training, and Education	NSF	399,250.00
06-192	Gold, Scott		Superior Graduate Fellows in Engineering	BoR	384,000
06-193	Luo, Cheng		Nanomanufacturing Program in Lithography	NSF	318,508
06-194	Ji, Frank		Microcantilever Biosensors Based on Ligand-Gated Ion Channel Receptors	NIH	850,369
06-195	Dans, Clarice	Shoemaker, S.	Superior Graduate Fellows in Audiology	BoR	144,000
06-196	McShane, Mike	Besio, Walt	Graduate Fellows in Biomedical Engineering	BoR	277,500
06-197	Sit, Sidney	Ji, Frank	Microcantilever-based Dynamic Studies of Fibrinogen Interfacial Properties	NIH	99,996.00
06-198	Ramachandran, Bala		Superior Graduate Fellows in Computational Analysis and Modeling	BoR	168,000.00
06-199	Regan, Sarah		KTVE's Public Service Role: Fallout from Katrina	Nt'l Assoc. of Broadcasters	2,989
06-200	Leangsuksun, Box		Center for Reliability, Availability and Seviceability for Peta-Scale High-end Computing	DOE	1,250,000
06-201	Nelson, James	Turner/Crittenden	LaTechStep: LaTech's Stem Talent Expansion Program	NSF	999,847
06-202	Miletello, Wendy	Walczyk, Jeffrey	Enhancing Adolescent Wellbeing Through a Mind-Body Intervention	NIH	65,907
06-203	Parker, Randy	Holmes/Beer	The Effect of Museum Based Learning on Student Achievement	Inst. of Museum & Library Sciences	988,887.06
06-204	Cronk, Stan		Web Browsing Interface for Persons With a Severe Physical Disability	NIDRR	224,444
06-205	Bennett, Rebecca		An Exploration of the Relationship Between Top Management Team Member Board Participation and Post-IPO Firm Performance	NSF	293,201
06-206	Humphries, Janie		Project SHARE: Students Helping Through Assistance, Resources and Education	Louisiana Children's Trust Fund	18,239
06-207	Bell, Edward		Measurement of Self-Efficacy for Blindness Independence	DOEdu/NIDRR	150,000
06-208	Walczyk, Jeffrey	Sheets/Besio	Combining a Cognitive Analysis With the Laplacian EEG for the Detection of Deception	DoDefense	188,338
06-209	Lee, Luke		Center for Rapid Rehabilitation and Construction	BoR	11,116.00
06-210	Wilson, Chester	Derosa, Pedro	Get Chad the Money	BoR	80,000

PROPOSALS SUBMITTED (CONT'D FROM PAGE 4)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
06-211	McShane, Mike		Planning for the Biomedical Nanosystems IGERT Program	BoR	10,000
06-212	Dai, Waizhong		Mathematical Models & Numerical Modes for Investigating Thermal Deformation in Metal Media Induced by Ultrashort-Pulsed Lasers	NSF	210,096
06-213	Lvov, Yuri	Darrat, Aadel	Composite Material of Clay Nanotubes and Cellulose Microfiber	BoR	5,000
06-214	Gerald, Bonnie	Hunt, Alice	Factors Influencing Participation in the National School Lunch Program	Robert Wood Johnson Foundation	40,278
06-215	Ramsey, Linda	Gullatt, David	IMPACTS in Mathematics and IMPACTS in Science Subcontract	La. Dept. of Edu	116,119
06-216	O'Neal, Chad		Reflow Study of Solder Bumps for Wafer-level Packaging of 200 mm+ Wafers	Sufect Technologies	3,500
06-217	Besio, Walter		Using Concentric Ring Electro Stimulation for Emergency Seizure Control in Spaceflight	LSU	5,000
06-218	McShane, Mike		Engineering the Cell-Response to a Biomimetic Cornea	USDA	88,154
06-219	Luo, Cheng		Multiple Arrays of Conducting Polymer Microwire Based Sensors	BoR	10,000
06-220	Kennedy, Angela		2005-06 Carl Perkins Vocational & Technical Edu. Carry Over Grant	DoEdu	4,725
06-221	Dua, Sumeet		NIH-INBRE	NIH	384,138
06-222	Gold, Scott	Derosa, Pedro	Proton Conduction in Nanoporous Silicon Proton Exchange Membranes	NSF	276,100
06-223	Beer, Glenn		GEAR-UP Partnership Grant	DoEdu	1,600,000
06-224	Cardenas, Henry		Investigation of Electrokinetic Pozzolani Nanoparticle Treatment for Strength and Durability Enhancement in Concrete	NSF	596,200
06-225	McShane, Mike		In Vivo Deployment and Testing of Nanoengineered Smart Tattoo Glucose Sensors	Iacocca Foundation	157,969
06-226	Wang, Jay	Allouche, Erez	Macro/micro Scale Modeling of Shear Band Localization in Granular Materials and its Application to the Horizontal Directional Drilling	NSF	246,371
06-227	Selmic, Rastko		Suboptimal Coverage Control in Mobile Sensor Networks Using High Performance Computing	NSF	491,140
06-228	Murimi, Mary	Fuller/Long/Nassar	Factors that Predict Successful Implementation of a School Wellness Policy: The Effect of the Implementation on Improving the School Food Environment and the Associated Dietary Behavior Secondary School Children	Robert Wood Johnson Foundation	378,492
06-229	Sit, Sidney		Correlating Material Surface Properties With Cellular Mechanical Properties	LaSPACE	5,000
06-230	Selmic, Rastko		Control of Flying Blimps in a Wireless Sensor Network Environment	LaSPACE	5,000

PROPOSALS SUBMITTED (CONT'D FROM PAGE 5)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
06-231	Guice, Leslie		Louisiana Tech University LONI Grant-Contract 2	BoR	62,000
06-232	Grafton, Tommy		Drug Free Communities Support Program	SAMSHA	99,962
06-233	Eklund, Sven		Improvement of Miniature Biofuel Cells Using CNTs as Electron Transfer Mediators	LaSPACE	5,000.00
06-234	Wilson, Chester		Developing Instrumentation for Space Radiation Dosimeters	LaSPACE	5,000
06-235	Heimdal, James	Grafton, Tommy	Project Northland	DHH	96,753
06-236	Grafton, Tommy		Town Hall Meeting	CRP, Inc.	1,000
06-237	Ramsey, Linda	Hubbard, Danny	The North Louisiana Regional Education Collaborative	Univ. of Texas	65,000
06-238	Fuller, Jan	Baxter/ Martin/ Theodos	Improving Student Assessment in Distance and Campus-based Education	DoEdu	22,696
06-239	Theodos, Kim	Martin/Fuller/ Baxter	Bridging the Gap: Developing a HIM Preceptor Model	AHIMA	55,226
06-240	Basinger, Dawn	Lvova, Elena	Enhancing Music Appreciation in Rural Louisiana Schools: An Innovative Group Piano Training Experience	Coca Cola Foundation	27,472
06-241	Varahramyan, Kody		Microsensors for Moisture Detection in Soil	US Army ERDC	25,450
06-242	Besio, Walter		Effects of Noninvasive Transcutaneous Electrical Stimulation via Concentric Ring Electrodes on Experimentally Induced Seizures in Rats	Coulter Foundation	5,000
06-243	Walker, H.L.		Development of Myrothecium Verrucaria as a Microbial Herbicide	USDA	11,350
06-244	Walker, H.L.		Control of Harmful Algal Blooms	House of Raeford	4,850
06-245	Luo, Cheng		Conducting Polymer Microwire Array Sensors for Detecting Glucose in Urine	WHCF	240,000
06-246	Ji, Frank	Varahramyan/Lvov	Nanoassembly Integrated Microcantilever Sensor For Neutron Detection	DOEnergy	38,640
06-247	Varahramyan, Kody		Summer 2006 JFAP Educational Outreach Program at IfM	BoR	15,000
06-248	Wilson, Chester		Development of a Nanotechnology Based Platform for Radiation Detection	DOEnergy	437,226
06-249	Turner, Galen	Basinger, Dawn	Noyce Teachers From STEM Majors	NSF	498,000
06-250	O'Neal, Chad	Selmic, Rastko	Design, Actuation and Control of a Piezo-MEMs Articulating Arm	Army Research Office	360,687

PROPOSALS SUBMITTED (CONT'D FROM PAGE 6)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
06-251	Nelson, James	Turner, Galen	LaTech's S-STEM Scholarship Program	NSF	499,292
06-252	Rea, Kenneth		Rural Development Center	USDA	106,285.
06-253	Sterling, Ray		Review of Test Data and Field Trials for Cempipe Process	Cempipe Americas	9,634
06-254	Ji, Frank		Preparation and Characterization of Functionized Layer-by-Layer Multilayer Films Containing Ion-Recognition Agents	Petroleum Research Fund	99,000
06-255	Baumert, Micheal	Cardenas, Henry	Electrokinetic Systems for Controlling Expansive Soils Installed Using Trenchless Methods-Proof of Concept	Osmotech	437,154
06-256	Proctor, Larry		COE-Committee on Diversity and Global Issues 2nd Annual Training Workshop	Better Health for the Delta Grant	2,500
06-257	Long, David		West Africa Geospatial Technology Certificate Program	AASCU	122,036
06-258	Allouche, Erez	Baumert, Mike	Structural Water Main Liner Testing Program - Phase II Characterization of Long-Term Materials Properties	City of Hamilton	4,336
06-259	Allouche, Erez	Baumert, Mike	Structural Water Main Liner Testing Program - Phase III Characterization of Long-Term Materials Properties	City of Hamilton	23,548
06-260	O'Connor, John		Validation and Development of the Louisiana Competency Test for Adapted Physical Education	Louisiana Schools	55,315
06-261	Allouche, Erez	Baumert, Mike	Experimental and Numerical Evaluation of the Response of the Terrabrute TM Restraint Joint to Cyclic Loading	IPEX, Inc.	5,000

ADDITIONAL GRANT FUNDING FOR EXISTING AWARDS

Erez Allouche, SGER: ESTIMATING DAMAGE TO URBAN BURIED INFRASTRUCTURE IN THE AFTERMATH OF HURRICANE KATRINA, NSF, \$6,000;

Chad O'Neal, EVALUATION OF ELECTROACTIVE POLYMERS AS STRAIN-GAUGES FOR SMALL DISPLACEMENTS, U.S. Army Water Experiments Lab, \$25,450;

James Heimdahl, NORTH CENTRAL ALLIANCE PARTNERS IN PREVENTION, SAMHSA thru LA DHH, \$49,998;

Dick Greenwood, A LOUISIANA TECH/FERMILAB PARTNERSHIP TO DEVELOP A DO SILICON DETECTOR TESTS FACILITY AND REMOTE LINUX ANALYSIS FACILITY, Dept. of Energy, \$96,792;

Erez Allouche, ENHANCING TRENCHLESS SERVICE INSTALLATIONS THROUGH KEYHOLES: TECHNOLOGY REVIEW, SCREENING, AND PRELIMINARY EVALUATION OF TECHNOLOGIES AND TECHNIQUES, Gas Technology Institute, \$25,376;

Box Leangsuksun, MOLAR: MODULAR LINUX AND ADAPTIVE RUNTIME SUPPORT FOR HEC OS/R RESEARCH, DOE, \$99,575;

Erez Allouche, ENHANCEMENT AND TESTING OF THE TERRABRUTE RESTRAINT JOINT, IPEX, Inc., \$5,000.
