



BREEZE BULLETIN

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

In these matters the only certainty is that there is nothing certain.

*Pliny The Elder
(c.23-79, Roman neophatonist)*

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2011-12 TECH FRINGE RATES REVISED 1-5-12

- Faculty/Unclassified: 41.86%
- Civil Service: 43.76%
- Temp/Post-doc: 24.54%
- DROP: 18.16%

IN-HOUSE WORKSHOPS

- **Life in the Fastlane System** - March 13 @ 2-3pm CITDL Prescott Library
- **Finding Research Funding** - April 10 @ 2-3pm WT1535.
- **Grantwriting-NIH** - May 8 @ 2-3pm WT1535

Registration is required. E-mail Beth Free bfree@latech.edu to reserve your seat.

In-house workshops will be scheduled every second Tuesday of each month unless otherwise stated. For a full list and description of in-house workshops, go to http://research.latech.edu/resources/training_workshops/latech_workshops.

WHITE HOUSE 2013 BUDGET PROPOSAL (HIGHER EDUCATION HIGHLIGHTS)

AASCU (February 14, 2012)

The White House released its FY 2013 budget proposal on February 13, 2012. Many of its higher education highlights are similar to the proposals that the President laid out in his January 27 speech at the University of Michigan. The budget provides \$69.8 billion in discretionary education spending, which is a 2.5 percent increase or \$1.7 billion above the FY 2012 enacted level. For more information about the President's budget proposal, click here. For information on the Education portion of the budget submission click here.

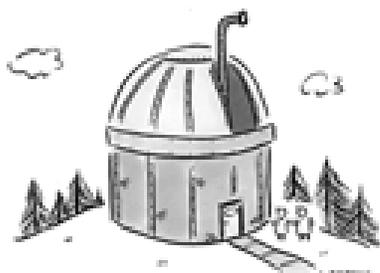
Student Financial Aid

The budget proposes to retool campus-based aid programs to reward schools that hold down tuition costs. Current allocation formulas for Supplemental Education Opportunity Grant (SEOG) Program, College Work Study (FCWS) Program, and Perkins Loan Program would be changed to reward institutions that keep tuition increases low and enroll and graduate high numbers of Pell Grant-eligible students. The budget also includes a \$150 million-dollar increase for the Federal College Work Study Program to begin the investment of doubling work-study participants over 5 years, for a total request of \$1.3 billion. In addition, the budget also proposes to limit the in-school interest subsidy provided to subsidized Direct Stafford Loan borrowers to 150 percent (6 years) of the normal time required to complete their educational programs.

The budget submission calls for suspending the increase in subsidized Stafford Loan interest rates from 3.4% to 6.8% currently scheduled for July 2012, so that low-income borrowers may continue to receive favorable loan rates. In addition, the proposal calls for revamping the Perkins Loan Program by recalling current funds and providing an additional \$8.5 billion in loans to be serviced by the Department.

The maximum Pell Grant award would be increased to \$5,635 for FY 2013 from the current \$5,550 maximum award. This amounts to \$36.1 billion in funding for Pell Grants, including \$22.8 billion in discretionary funds and \$13.3 billion in mandatory funds. The Administration estimates that approximately 10 million students would be eligible for Pell Grants during the 2013-2014 school year.

Similar to last year's budget, the FY 2013 budget request would replace the TEACH Grant program with a new Presidential Teaching Fellows Program. This program would provide formula grants to states to fund up to \$10,000 in scholarships for students attending "high-performing" teacher preparation programs. Currently, the TEACH grant program awards grants of up to \$4,000 to undergraduate and graduate students who agree to teach mathematics, science, foreign language, bilingual education, or reading at a high-need school.



"Hmm... Lemme check that purchase order again."

NEW GRANTS AWARDED

PI/Co-PI	Title	Funding Agency	\$ Awarded
Niel Crews	<i>Closed-Loop Thermal Control for a High-Altitude Microreactor</i>	LaSPACE/NASA	9,500
Pedro Derosa	<i>Computational Materials Science & Engr. Sub-CTC</i>	DOD/Clarkson	35,000
Sumeet Dua	<i>Spatial-Spectral Change Detection</i>	DOD/Clarkson	25,000
Rastko Selmic	<i>Cooperative Apertures for Position-Adaptive MAV Sensors</i>	DOD/Clarkson	25,000
Angela Kennedy	<i>2011-12 Carl Perkins Basic Grant</i>	LCTCS/NE La. Technical College	22,500
Carrice Cummins	<i>W7: Words at their Best</i>	USDE/BoR/ LaGEAR UP	82,224.50
December 2011			199,224.50
Niel Crews	<i>Thermal Micro-Reactor for Reduced Gravity Biology</i>	LaSPACE/BOR/ DART2	49,613
January 2012			49,613
Md Karim	<i>DURIP: A Distributed Platform for Capturing, Analyzing, & Combating Botnet Attacks</i>	AFRO/UT San Antonio	60,164
Davy Norris	<i>Louisiana Tech Proof of Concept Center</i>	US Dept. of Commerce	100,000
Long Que	<i>Harvesting Multiple Radiative Energies for a High Efficient Portable Battery Charger/Storage Unit</i>	DOD/SBIR	30,000
Weizhong Dai	<i>Development of a Higher Order Accurate Finite Difference Time Method Domain Method for Solving Nonlinear Schroedinger Equation</i>	LaSPACE/BOR/ DART2	44,980
Rastko Selmic	<i>Virtual Health-Monitoring Sensors for Sensing & Actuation Devices</i>	LaSPACE/BOR/ DART2	47,140
Niel Crews	<i>CSG: Extending the Reach of the Pre-College STEM Experience</i>	LaSPACE/NASA	9,995
Niel Crews	<i>Free-Floating Payload for Microgravity Assessment of a Genetic Analysis</i>	NASA	75,988
February 2012			368,267.63
2011-12 YTD Total:			6,094,472.82

ADDITIONAL GRANT FUNDING FOR EXISTING AWARDS

- E. Allouche, INFRASTRUCTURE DEFECT RECOGNITION, VISUALIZATION AND FAILURE PREDICTION SYSTEM UTILIZING ULTRA WIDE BAND PULSED RADAR, US Dept. of Commerce through ELXSI \$112,500;
- G.Beer, IMPLEMENTATION OF ACT QUALITY CORE IN LA GEAR UP SCHOOLS, US Dept. of Education through LaGEAR UP 199,501;
- E. Deemer, RESEARCH PROPOSAL; THE MEDIATING ROLE OF STEREOTYPE THREAT AND ACHIEVEMENT GOALS IN THE REGULATION OF SCIENTIFIC MOTIVATION, NSF \$103,580;
- M. O'Neal, PROVIDING MANAGERIAL EXPERTISE TO NETWORK FOUNDATION TECHNOLOGIES, NFT, LLC \$6,400;
- E. Bell, ORIENTATION AND MOBILITY TRAINING, Lincoln Parish School Board, \$650.00;

PROPOSALS SUBMITTED

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$ Requested
12-130	Beer, Glenn	Crews/Vincent	Up! Up! And Away! Camp	Bernard Harris Foundation	79,982
12-131	Strimbu, Bogdan		Sensitivity of Land Use Change to Social and Market Dynamics: a Multi-scale Approach	NASA	
12-132	Choi, Ben		Parallel and Distributed Cloud Computing	NSF	198,068
12-133	Radadia, Adarsh		A Highly Multiplexed, Reproducible, Scalable Ultrananocrystalline Diamond Microarray Biosensor for Real-Time Pathogen Detection	Advanced Diamond Technologies	40,000
12-134	Radadia, Adarsh		Miniaturized Point-of-care Diagnostics for Pathogen Sensing Blood	WRCE	425,505
12-135	Hou, Songming		Shape Reconstruction and Classification Using the Response Matrix	NSF	169,524
12-136	Keith-Vincent, Lindsey	Beer, Glenn	Louisiana Tech/LA GEAR UP Explorers Camps	USDOE/LaSIP/LaGEARUP	115,152
12-137	Allouche, Erez	Mainardi/Eklund	High Performance Geopolymeric Binders for Space Applications	NASA EpSCOR	1,500,000
12-138	Allouche, Erez	Patil/Mainardi	Geopolymer Binders for High Temperature & Corrosion Resistant Refractory Castables	M.L. Smith, Jr. LLC	500,000
12-139	Jaganathan, Arun		Energy From Sewers Project Support	Ipex, Inc.	10,000
12-140	Kennedy, Angela	Moore, Pamela	2011-12 Carl Perkins Basic Grant	LCTCS through NE LA Technical College	20,000
12-141	Kennedy, Angela	Moore, Pamela	2011-12 Carl Perkins Carry-Over	LCTCS through NE LA Technical College	2,500
12-142	Schilling, Tammy	Dornier/Beer	LaTech/LA GEAR UP Sports Medicine Camp	US DOEdu/BoR	114,971
12-143	Choi, Ben		Creating New Sentences to Summarize Documents	NSF	184,068
12-144	Beer, Glenn	Keith-Vincent, Lindsey	LA GEAR UP Lights, Camera, ACTION Camps	USDOE/LaSIP/LaGEARUP	119,554
12-145	Beer, Glenn	Keith-Vincent/Odom	LA GEAR UP Soaring to New Heights Camps	USDOE/LaSIP/LaGEARUP	110,728
12-146	Crews, Niel		CSG: Extending the Reach of the Pre-College STEM Experience	LaSPACE/NASA	9,995
12-147	Beer, Glenn	Schilling, Tammy	LA CAMPS 2012	USDOE/LaSIP/LaGEARUP	290,176
12-148	Beer, Glenn	Keith-Vincent, Lindsey	Reaching Beyond Our Limits Through STEM Camp (Balloon Camp)	USDOE/LaSIP/LaGEARUP	114,440
12-149	Beer, Glenn	Livingston/Tobacyk/Keith-Vincent	Building Capacity for Sustainability of College and Career Readiness Initiatives in LA GEAR UP Schools	USDOE/LaSIP/LaGEARUP	408,093
12-150	Jaganathan, Arun	Allouche, Erez	Fiber Optic Seal Leak Detectors for Hazardous Material Pipelines	Intelligent Optical Systems, Inc.	25,000
12-151	Jaganathan, Arun	Guice/Allouche/Simicevic	Sensors for Fatigue Failure Prediction in Critical Infrastructure	NSF	0

PROPOSALS SUBMITTED (CONT'D FROM PAGE 3 . . .)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
12-152	Wilson, Chester		Novel Methods to Develop Graphene Obscurant Materials	DOD/Army	30,000
12-153	Cardenas, Henry		Electrokinetic Abrasion Resistance Enhancement in Concrete (Modification Phase II)	A.J. Weller Corp.	5,346
12-154	Wilson, Chester	Greenwood/ Martin	Post Detonation Radiological and Nuclear Forensics	Defense Threat Reduction Agency	1,050,000
12-155	Roberts, Tom	Bennett/ Chocran	Managing Organizational Insiders: Shifting the Balance to Protective Motivated Behaviors	NSF	466,409
12-156	Murray, Teresa		Invivo Time Course Study of Adult Neurogenesis & Adult Neural Stem Cell Transformation to Tumor Cells in the Mouse Subventricular Zone...	LBRN/INBRE	375,000
12-157	Zivanovic, Sandra		Detection of Medium Energy Electrons Using Conjugated Polymers for Space Application	NASA	54,671
12-158	Wilson, Chester	Greenwood, Zeno	Science for Novel Radiation Hardened Robotics for Sampling and Rescue	Defense Threat Reduction Agency	1,050,000
12-159	Wick, Collin	O'Neal, Patrick	The Effect of Surfactant Composition on Oil-in-water Micelle Size Distribution and Critical Micelle Concentration: A Joint Computational/ Experimental Study	Gulf Coast Research Initiative	460,288
12-160	Que, Long		Harvesting Multiple Radiative Energies for a High Efficient Portable Battery Charger/ Storage Unit	Army/SBIR	30,000
12-161	Wang, Jay		Geothermal Energy Pile Driven in Louisiana Saturated Soft Clay	LTRC	30,000
12-162	Wang, Jay		Potential Impact of Oiling of Wetland Plant (Spartina alterniflora) Shoots, Roots and rhizomes on Shear Strength and Erosion Resistance of Soils	Gulf Coast Research Initiative	350,000
12-163	Liu, Don		Collaborative Research: A Particle-Resolving Computational Model for Particulate Flows and it's Applications in Sediment Entrainment and Coastal Erosion	NSF	248,879
12-164	Wasiudden, Nazimuddin		Field and Laboratory Evaluation of Sweep Test (ASTM7000) and Asphalt Bond Strength Test (AASHTO TP 91-11) for Chip Seals Performance	LTRC	30,000
12-165	Wasiudden, Nazimuddin		A Novel Dewetting and Spreading Based Moisture Susceptibility Test Method for Hot & Warm Mix Asphalt	LTRC	30,000
12-166	Wasiudden, Nazimuddin		Development of Aging Related Performance Grade Specifications for Emulsions and Warm Mix Asphalt Using a Rotary Evaporator	LTRC	30,000
12-167	Weiss, Leland	Jaganathan/ Murray	SEP Collaborative: Energy Sustainability via Novel Structure Insulation and Thermal Scavenging	NSF	1,408,898
12-168	Wilson, Chester		Printed Nanostructure Enhanced Composites for Covert, Self Powering 3D MEMS	IC	349,951

(Cont'd on page 5)

PROPOSALS SUBMITTED (CONT'D FROM PAGE 4 . . .)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
12-167	Weiss, Leland	Jaganathan/ Murray	SEP Collaborative: Energy Sustainability via Novel Structure Insulation and Thermal Scavenging	NSF	1,408,898
12-168	Wilson, Chester		Printed Nanostructure Enhanced Composites for Covert, Self Powering 3D MEMS	IC	349,951
12-169	O'Neal, Chad	Eklund/O'Neal P.	MRI: Acquisition of a Raman Spectrometer for Engineering and Science Research	NSF	194,192
12-170	Que, Long	Genov, Dentcho	An Integrated Hybrid Energy Scavenging System	NSF	1,223,467
12-171	Derosa, Pedro		Understanding & Improving the Interface Between Nanocomposites	NSF	413,891
12-172	Sawyer, Lee		Large-area, Thin, High-Sensitivity 3D g-ray Radiation Sensor Using Gas Electron Multiplier Technology	NNSA	59,716
12-173	Wasiudden, Nazimuddin		Regional Implementation of Warm Mix Asphalt	LTRC	30,000
12-174	Choi, Ben		Creating New Sentences to Summarize Documents	NSF	280,300
12-175	Hegab, Hisham		Multi-Stage Microcompressors for Microenergy Systems Applications	NSF	340,957
12-176	Murray, Erica	Weiss, Leland	The Role of Porous YSZ in NOx Exhaust Gas Sensing	NSF	291,809
12-177	Que, Long	Lvov, Yuri	Controlled Drug Effects Analysis on Single Cell Using Real-Time Electrical Measurement	NSF	322,349
12-178	Keith-Vincent, Lindsey	Beer, Glenn	A Touch of Science Through Tactile Explorations: Activity Station Support and Exhibit Design	LaSPACE	26,134
12-179	Phoha, Vir		Preventing Oil Spills and Gas Releases: Risk Assessment, Software Detection and Mitigation with Sensor Networks	BP (GoMRI)	699,739
12-180	Radadia, Adarsh		Point-of-Care Microelectronic Diagnostics for Early Phase Rickettsial Infections	LBRN/INBRE	19,000
12-181	Igou, Frank	Apter-Desselles/ Sheets	Louisiana State Police Commission Promotional Testing Phase 1	Institute for Human Services & Public Policy	5,000
12-182	Dua, Prerna		Rule-based Data Mining for Knowledge Discovery in Alzheimer's Disease Using Microarray Databases	LBRN/INBRE	112,500
12-183	Napper, Stan	Dua, Sumeet	Louisiana Biomedical Research Network - Admin	LBRN/INBRE	46,896
12-184	Giorno, Rebecca		Role of IunH in Bacillus Anthracis Spore Germination	LBRN/INBRE	18,976
12-185	Chiu, Alan		Adaptive Coupled Neural System Model for Hippocampal Function Restoration (Year 3)	LBRN/INBRE	112,265
12-186	Dua, Sumeet		Analysis of Metagenome Samples Using Fractals	LBRN/INBRE Graduate	6,000

(Cont'd on page 6)

PROPOSALS SUBMITTED (CONT'D FROM PAGE 5 . . .)

FILE #	PI	Co-PI 's	Title	Agency	\$ Requested
12-187	Dua, Prerna		A Comparative Study of Feature Selection and Classification Techniques in Stomach Cancer	LBRN/INBRE/NIH	3,000
12-188	Napper, Stan	Dua, Sumeet	Louisiana Biomedical Research Network (LBRN) Composite	LBRN/INBRE/NIH	384,161
12-189	Feng, June		Understanding the Molecular Mechanism of Alzheimer's Disease: Quantitative Proteomics of Oxidatively Modified Proteins Using ITRAQ Analysis and a Novel Proteomic Reactor	LBRN/INBRE/NIH	112,500
12-190	Selmic, Rastko		iSOS: Networking Knowledge for Smart Sensors and Actuators	NASA NIAC	0
12-191	Hegab, Hisham		Investigation of Condensation in Micro Pin Fin Devices	NSF	294,666
12-192	Mainardi, Daniela	Cardenas/ Kanno	Multi-Scale Approach to Study Corrosion Mitigation in Nanoparticle-Treated Concrete	NSF	359,903
12-193	Wang, Jay		Thermal Effect of Energy Pile Driven in Soft Silty Clays	NSF	281,080
12-194	Cummins, Carrice	Kimball-Lopez/ Vessell/ Manning	W7: Words at Their Best	LaSIP/US Dept. EDU	217,269
12-195	Beer, Glenn	Madden, Diane	NASA SOI: Summer STEM Snacks	NASA	49,833
12-196	Que, Long		An Ultrasensitive Diagnostics System	NIH	375,973
12-197	Cathey, Ron	Medley/Merritt	"Choose to BARC" Bulldogs Advocating Responsible Choices	NCAA	30,000
12-198	Beer, Glenn	Deese/ Madden	C3: Chemistry Concepts and Connections	LaSIP/US Dept. EDU	200,392
12-199	Talton, Carolyn	Patterson/ Beer	Project PAT: Promoting Algebraic Thinking	LaSIP/US Dept. EDU	209,473
12-200	Wang, Shengnian		Hybrid Field Regulation of Macromolecule Configurations and Dynamics in Flows	NSF	299,248
12-201	Beer, Glenn	Madden/Keith-Vincent	Project RIPPLE/MISE	LaSIP/US Dept. EDU	216,018
12-202	Strimbu, Bogdan	Ross, William	Integrated Management of Threats to Mayhaw (Crataegus Spp.) Productivity In the Southeast	USDA	88,884
12-203	Edwards, Thea		Endocrine Disruption of Plants and Ecosystems	BoR	1,200
12-204	Phoha, Vir		Cloud Enabled and Crowd Sourced Disaster Detection and Needs Projection	BP (GoMRI)	2,999,986
12-205	Radadia, Adarsh		A Highly Multiplexed Scalable Ultrananocrystalline Diamond Microarray Sensor for Point of Use Biodetection	ADT	51,000
12-206	Wilson, Chester		Louisiana Tech University Response to Navy CRADA	DOD/Navy	0

(Cont'd on page 7)

PROPOSALS SUBMITTED (CONT'D FROM PAGE 6 . . .)

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
12-207	Grafton, Tommy	Boyd, Rhonda	Project Northland-Lincoln, Union & Jackson Parishes	DHH	166,752
12-208	Crittendon, Kelly	Evans/Watson	Pr-ISM: Project-driven Innovative Science & Mathematics	NSF	1,499,935
12-209	Napper, Stan		Research, Training & Technology Development in Security & Sensory	Cyber Innovation Center	701,244
12-210	Allouche, Erez	Alam/McKim	Field Demonstration & Retrospective Evaluation of Rehabilitation Technologies for Wastewater Collection and Water Distribution Systems	Battelle/EPA	100,000
12-211	Grafton, Tommy	Boyd, Rhonda	Project Northland - Claiborne Parish	DHH Office of Behavioral Health	34,650

WHITE HOUSE 2013 BUDGET PROPOSAL (CONT. FROM PG. 1)

On the tax front, the budget calls for a permanent extension of the American Opportunity Tax Credit (AOTC), a refundable tax credit that provides a 100% deduction for the first \$2,000 spent on tuition and fees and a 25 percent deduction on the next \$2,000 spent on higher education-related expenses for a total credit of \$2,500.

Higher Education Programs

The administration is proposing a \$1 billion Race to the Top program to both provide states incentives to pursue higher education reform and reward those states that demonstrate “good value” for students, such as reining in high tuition costs, using pioneering tuition policies, and improving the alignment between K-12 and postsecondary education.

In addition, the budget proposes a \$55 million “First in the World” competition. This program would provide incentives and rewards directly to institutions for innovative programs and ideas that reduce costs and improve student outcomes. Up to \$20 million would be dedicated specifically to minority-serving institutions. A portion of the funds would be used for incentive payments rewarding grantees for successful outcomes.

The president’s budget requests level funding for all Title III, Aid for Institutional Development, and Title V programs, Aid for Hispanic Serving Institutions. The specific funding levels for select programs under these titles are as follows:

Strengthening Institutions	\$80.6 million
Strengthening HBCUs	\$313 million (includes \$85M in mandatory funds)
Strengthening PBIs	\$24.3 million (includes \$15M in mandatory funds)
Strengthening AANAPISIs	\$8.1 million (\$5 M in mandatory funds)
Developing HSIs	\$100.4 million

Finally, the budget request calls for maintaining funding for both the TRIO Programs and GEAR UP at the levels of \$839.9 million and \$302.2 million respectively.

The Congress has deemed this budget dead on arrival – as is historically the case. However, program funding levels and budget initiatives are commonly included throughout the appropriations bills. Neither the House nor the Senate need to pass a budget since the overall funding level was determined with the passage of the Budget Control Act last August. Having said that, the House is anticipated to pass a ceremonial proposal, while the Senate is only likely to have committee action. On the appropriations front, both Chairmen in each chamber indicate their desire to move early on measures in order to pass separate bills. Given this is an election year, most bets are on an end-of-year omnibus in a lame-duck session. AASCU staff will continue to keep you updated as events unfold. Please do not hesitate to ask any questions.

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