

Louisiana Tech University



BREEZE BULLETIN

Office of Sponsored Projects (<http://research.latech.edu/about/welcome>)

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2016-17 TECH FRINGE/F&A RATES

- Faculty/Unclassified/Post Doc: 46.85%
- Temporary/Part-time: 10.20%
- DROP: 20.35%
- Federal F&A (S/W): 49.40%

Go to the following link to download as a pdf file: <http://finance.latech.edu/comptroller/fb1benefitsrates201617final.pdf>

OSP IN-HOUSE WORKSHOPS

For a complete list of in-house workshops, go to http://research.latech.edu/resources/training_workshops/latech_workshops.

- **BoR Support Fund Restructure:** 8/8/17 2-3pm, 1527 WT;
- **Grants.gov/Workspace:** 8/29/17 2-3pm, 1527WT;
- **OSP New Faculty Workshop:** 9/20/17 2-3pm, 1527WT

The will to win, the desire to succeed, the urge to reach your full potential... these are the keys that will unlock the door to personal excellence.

*Eddie Robinson
(American College Football Coach)*

2017-18 BoR Support Fund Changes

In November 2016, the Board of Regents approved a restructuring of the Board of Regents Support Fund (BoRSF) that has significant implications for funding opportunities in future cycles. In addition, the landscape of federal funding for research and higher education is in flux due both to evolutions/shifts in focus areas and the budget priorities of a new executive administration and congress. It is critical for faculty and administrators to keep abreast of these changes and position themselves for new opportunities.

Accordingly, the following changes to the BoRSF were approved in November 2016:

- Align all investments with BoR's "Educate and Innovate" focus, State/system/campus strategic priorities, and campus roles, scopes and missions;
- Replace large number of small, highly specific, limited-impact programs with fewer programs emphasizing greater impact and flexibility;
- Add workforce emphasis across Support Fund programs;
- Replace individual faculty-driven Enhancement grants with competitive funding at the departmental/unit/center level;
- Increase support for innovation in the marketplace, particularly related to LA: research commercialization and industrial partnerships;
- Broaden impact by requiring undergraduate and graduate student participation in research, educational, and training opportunities;
- Allow for completion of contracts and endowment matching requests already in place.

Substantially revised programs:

Enhancement

- Departmental projects with comprehensive and targeted options;
 - Open to all formally constituted departments, units, centers, etc. on eligible campuses;
 - Discipline rotation: two cycles in alternating years;
- Objectives (LA Constitution): to enhance the infrastructure of academic, research, or agricultural departments/units and to promote economic development;
- Two award types: comprehensive (holistic departmental approach) and targeted (focused approach);
- Three categories by primary contribution: research, education, workforce development;
- BoRSF program does not define priority areas for campuses: all disciplines eligible, though projects must document and argue for alignment with campus role, scope, mission and strategic priorities;
- Broad eligibility for activities: anything that can be convincingly argued will enhance infrastructure of participating department(s)/unit(s);
- As with current ENH programs, emphasis on impact, whether educational/training (student outcomes, curricular effects) or research (capacity/competitiveness/unique assets).

Eliminate:

Graduate Fellowships

- Integrate graduate student support (no tuition – not permitted per Constitution) and SREB Doctoral Scholars membership into Departmental Enhancement;

First-Generation Endowed Undergraduate Scholarships

- Resources are insufficient to generate needed assistance for higher-risk students;
- Other student endowments provide more targeted support and better results;



(Continued on Page 7)

NEW GRANTS AWARDED

PI	Title	Funding Agency	\$ Awarded
Katie Evans	<i>Preparation for Industrial Careers in the Mathematical Sciences (PIC Math) Application</i>	NSF/MAA	6,000
April 2017			Total: 6,000
Vessel/Bassinger/ McCoy/Schillenger	<i>LDOE Clincial Residency Support Request Spring (January- June 2017)</i>	US DoEdu/ LaDoEdu	25,000
Jae Ung Lee	<i>Modeling Insider Threat Behavior</i>	NSF/UTSA	17,037
Lauren Colvin	<i>M*A*S*H* Program 2017</i>	Bayou North Area Health Education Center (BNAHEC)	7,266.75
Arden Moore	<i>Rapid, Safe Inspection of Water-spanning Infrastructure via Amphibious Unmanned Aerial Vehicle</i>	LTRC	29,941
Lynam/Wassiuddin	<i>Evaluating Using Louisiana-sourced Lignin as Partial Replacement in Asphalt Binder and as an Antioxidant</i>	LTRC	30,000
Eric McConnell	<i>Economic Contributions of Mid-Atlantic Forest Products Exports</i>	USDA/N. Carolina Dept. of Ag.	114,965
Keith-Vincent/Cox- Bonioi/Madden	<i>Louisiana State Science Standards at the TLS</i>	LADOE	12,000
Alam/Hall	<i>Tensile Creep Testing of Liner Material as per ASTM D2990</i>	Interplastic Corp.	31,513
Mhire/Tims	<i>AICS @ LA Tech</i>	CIC	90,000
Patrick Hindmarsh	<i>A Quantitative Analysis of Candida Albicans' Response to Antifungals Using Reactive Oxygen Sensitive GFP</i>	Sigma Xi	475
Shengnian Wang	<i>Hybrid Field Microfluidics for Nonviral Nanoparticle Synthesis and Cell Reprogramming</i>	NSF	299,995
Tewari/Palmer	<i>Identification of Transportation Infrastructure at Risk Due to Sea-level Rise and Subsidence of Land in Coastal Louisiana</i>	NSF	28345
May 2017			Total: 686,537.75
Joshua Adams	<i>Analysis, Breeding and Propagation of Superior American Sycamore (Platanus occidentalis L.) Lines with Bacterial Leaf Scorch (Xylella fastidiosa) Resistance</i>	USFS	65,000
Mike O'Neal	<i>Transitioning Keystroke-based Continuous Authentication from Research Project to Viable Product</i>	CenturyLink	56,313
Bryant Hollins	<i>A Paper-based Molecular Calcium Sensor Using Gold Nanoparticles</i>	NASA/LSU/ LSPACE	30,500
Madden/Keith- Vincent/Morgan/ Sutherland	<i>I3 SciTEC Core Expansion</i>	USDOE/Jackson State University	84,000
N. Wassiuddin	<i>Development of a Standard Test Method for Characterization of Asphalt Mod-Deep Eutectic Solvents for Deconstruction of Rice Hulls and Sugarcane Bagasse</i>	USDOT/LSU	54,000
Joan Lynam		BoR	131,705
M. Caldolera-Moore	<i>Dynamic 3D Platforms for Regeneration Applications</i>	BoR/LSU	19,000
U. Siriwardane	<i>Incorporation of Modern Chemical Separation Techniques (GC/HPLC) into LA Tech Integrated Chemistry/Environmental Science Labs</i>	BoR	85,220
Jennifer Hill	<i>The Impacts of Sub-lethal Pesticide Concentrations on Predator-prey Interactions in Marine and Freshwater Communities</i>	BoR	178,140
M. Bardaweel	<i>Regenerative Hybrid Hydraulic- Electromagnetic Shock-Absorber</i>	BoR	39,974
Sheets/Igou	<i>AROS Sasol Assessment Analysis</i>	LED	80,000
N. Wassiuddin	<i>Apical Design with Conventional Technologies</i>	CenturyLink	95,988
Keith-Vincent/ Speed/Madden/ Noflin/Larson	<i>Stem Cyber Success and Security</i>	USEDU/BoR	95,988
Anthony Carver	<i>Support for Nuclear Deterrence and Escalation Workforce Development- NUC300</i>	NSRI/CIC	13,320
June 2017			Total: 1,016,886
			2016-17 TOTAL: 4,103,636

PROPOSALS SUBMITTED

* FILE #	PI	Co-PI 's	TITLE	AGENCY	\$ Requested
17-216	Moore, Arden		Understanding Electrothermal Transport in Ga2O3 Thin Films for Next Generation Ultra-wide Band Gap Electronic Devices	NASA/ LASPAC/REA	29,806
17-217	Keith-Vincent, Lindsey	Ganacheau, Andrew	Data Grant Proposal to The National Conference of State Legislators	The National Conference of State Legislators	10,000
17-218	Arumugam, Prabhu		Development of a Novel Multiplexed ElectroChemical Probe for Brain Aging Biomarkers	NASA/ LASPAC/REA	30,968
17-219	Wasiudden, N.		Development of a Standard Test Method for Characterization of Asphalt Modifiers and Aging-Related Degradation Using an Extensional Rheometer	DOTD/LSU	54,000
17-220	Wasiudden, N.		DOTD Support for UTC Project: Development of a Standard Test Method for Characterization of Asphalt Modifiers and Aging-Related Degradation Using an Extensional Rheometer	LTRC/LA DOTD	20,000
17-221	Zivanovic, Sandra		SETFOS Modeling of Thin-Film Solar Cells for Space Applications	NASA/ LASPAC/REA	34,995
17-222	Lynam, Joan	Cardenas, Henry	Biomass Ash as Replacement for Portland Cement in Concrete: Porosity, Strength, Corrosion, and Microscopic Phase Analysis	NASA/ LASPAC/REA	35,189
17-223	Lantz, Melanie		The Role of White Therapist Factors in Psychotherapy Process and Outcomes with Black/African American Clients	American Psy- chological Foun- dation	10,000
17-224	Newman, Jamie		Influence of Biomaterials in Directing Stem Cell Fate	NASA/ LASPAC/REA	30,500
17-225	Caldolera-Moore, Mary		Tailorable 3D Platforms for Controlling Stem Cells Proliferation and Differentiation for Tissue Regeneration Applications	NASA/ LASPAC/REA	30,000
17-226	Lantz, Melanie		Ameliorating Hunger on College Campuses: A Pilot at Louisiana Tech University	American Psychological Foundation	2,500
17-227	Hollins, Bryant		A Paper-based Molecular Calcium Sensor Using Gold Nanoparticles	NASA/ LASPAC/REA	30,500
17-228	Radadia, Adarsh		A Highly Multiplexed Flexible ISFET Microarray Sensor for Point of Use Biodetection	NASA/ LASPAC/REA	35,000
17-229	Keith-Vincent, Lindsey	Speed/Madden/ Noflin/Larson	STEM Cyber Success and Security	BoR/LAGEARUP	95,988
17-230	Keith-Vincent, Lindsey	Speed/Madden/ Shrubb/Love- Vaughn	STEAM Success Sampler	BoR/LAGEARUP	95,988
17-231	Alam, Shaurav	Matthews, John	Flexural Creep Testing of Newly Developed PVC Liner – TTL-6 formulation as a PVC folded and formed product to ASTM F1504	IPEX, Inc.	13,505
17-232	Keith-Vincent, Lindsey	Livingston/ Tobacyk/Madden	LAGEARUP FPC	US DOE	1,600,725
17-233	Adams, Joshua	Clay, Natalie	Cedar + Garlic Insect Repellent Amendment	Richard Fewell	17,430
17-234	Murray, Teresa		Conference Grant for MINDS Workshop	NSF	15,000
17-235	Colvin, Lauren		M*A*S*H* Program 2017	Bayou North Area Health Education Center (BNAHEC)	7,267

(*Missing File #'s denote with-drawn proposals)

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

* FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
17-236	Vessel, Amy	Basinger/ Keith-Vincent	Support for Expansion of Clinical Residencies and Program Design for Implementation of Talent Pipeline Model	LADOEdu/USDOE	2,403,611
17-237	Madden, Dianne	Keith-Vincent/ Morgan/ Sutherland	I3 SciTEC Core Expansion	USDOE through JSU	50,000
17-238	Mhire, Jeremy	Tims, Heath	AICS @ LA Tech	CIC	90,000
17-239	Adams, Joshua		Analysis, Breeding and Propagation of Superior American Sycamore (Platanus occidentalis L.) Lines with Bacterial Leaf Scorch (Xylella fastidiosa) Resistance	USFS	65,000
17-240	Hindmarsh, Patrick		A Quantitative Analysis of Candida Albicans' Response to Antifungals Using Reactive Oxygen Sensitive GFP	Sigma Xi GIAR	475
17-241	Nestorova, Gergana		Identification of Novel miRNAs That Modulate Radiation-induced mtDNA Repair	LaSPACE/LURA	6,000
17-242	Mainardi, Daniella	Lvov/Derosa/ Ramachandran	Nanowire/Nanotube Catalyst Architectures for a Single-stage Water-gas Shift Reaction Process	DOEnergy	799,728
17-243	Lvov, Yuri	Pickett/Crews	Microchannels Functionalized with Clay Nanotubes for Spacecraft Bacteria Monitoring Device	LaSPACE/LURA	6,000
17-244	O'Neal, Mike		Transitioning Keystroke-based Continuous Authentication from Research Project to Viable Product	CenturyLink	56,313
17-245	Bardaweel, Hamzeh		Geometric Fidelity and Dimensional Characteristics of Microfluidic Networks Fabricated Using Additive Manufacturing	LaSPACE/GSRA	8,000
17-246	Murray, Teresa		Evaluation of the Ability of the Tripeptide GHK-Cu to Ameliorate Oxidative Stress Induced by Ionizing Radiation in Neural Cell Cultures	LaSPACE/GSRA	8,000
17-247	Bardaweel, Hamzeh		Managing Satellite Micro-jitters Using Energy Harvester Dynamic Vibration Isolation Platform	LaSPACE/LURA	6,000
17-248	Matthews, John		Development of TAG-R Version 4.0	NASSCO	49,636
17-249	Weiss, Leland	Bardaweel, Hamzeh	Adjustable Design, Anode Assisting, Plating Terminal Rack - ADAAPTR	DoD FY2017 Rapid Innovation Fund	250,000
17-250	Weiss, Leland	Bardaweel, Hamzeh	ERGS (Exhaust Recovery Generation System)	DoD FY2017 Rapid Innovation Fund	250,000
17-251	Leang, Chen	Kennedy, Angela	Modeling Spatiotemporal Information of Patients Associated with Obesity and Chronic Conditions Using Ambulatory HER	Robert Wood Johnson Foundation	147,505
17-252	Lynam, Joan		Sustainable, Sulfurfree Lignin to Replace Plasticizers in Cement	LaSPACE/LURA	6,000
17-253	Mainardi, Daniella		Towards the Development of Novel Catalysts for the Fischer-Tropsch Processes	LaSPACE/GSRA	8,000
17-254	Matthews, Elizabeth		Core: Validating Residential Flood Loss Functions Used to Support Louisiana Hazard Mitigation Planning	Louisiana Sea Grant/NOAA	88,876
17-255	Wilson, Chester		Surface and Atmosphere Mapping via LIDAR Through 3D Additive Manufacturing GRIN Optics	LaSPACE/LURA	6,000

(*Missing File #'s denote withdrawn proposals)

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

*FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
17-256	De Paola, Pasquale		IR&E Project Proposal in Louisiana Sea Grant's Focus Area of Resilient Communities and Economies: Louisiana Universities Resilient Architecture Collaborative (LURAC)	Louisiana Sea Grant/NOAA	52,278
17-257	Hollins, Bryant		Graduate Student Research Assistantship: Shauna Tranter	LaSPACE/GSRA	8,000
17-258	Caldolera-Moore, Mary		Development of Micropatterned Hydrogel Tissue Scaffolds for the Regeneration of Astronauts' Cardiovascular Systems	LaSPACE/LURA	6,000
17-259	Caldolera-Moore, Mary		Investigating Cell-Biomaterial Interactions to Create Cardiac Tissue Patch on Tailorable PEGDMA Hydrogel Scaffolds	LaSPACE/GSRA	8,000
17-260	Wang, Shengnian		Produce Novel Composite Sulfur Cathode for Lithium-Sulfur Battery	LaSPACE/GSRA	8,000
17-261	Newman, Jamie		Optimization and Characterization of the Osteogenic Differentiation of Human Mesenchymal Stem Cells on Tailorable Hydrogel Scaffolds	LaSPACE/LURA	6,000
17-262	Crews, Niel		Modeling and Development of Concentration Gradient Makers for Complex Profiles	LaSPACE/LURA	6,000
17-263	Crews, Niel		Microfluidic Valve and Pump System Using Joule Heating and Thermal Expansion	LaSPACE/LURA	6,000
17-264	Caldolera-Moore, Mary		Drug Loaded Hydrogels for Chronic Wound Healing and Tissue Scaffolding Applications	LaSPACE/LURA	6,000
17-265	Moore, Arden		Viability of Lignin-based Solid Biofuels as an Environmentally Friendly Propellant in Small Scale Rockets	LaSPACE/LURA	6,000
17-266	Whitaker, Robert		Humanities Respawned: a Bridge Between Scholarship and Video Games	NEH	29,828
17-267	Lynam, Joan		Deep Eutectic Solvents for Deconstruction of Underutilized Forest ByProducts	USDA/AFRI/NIFA	481,333
17-268	Tewari, Sanjay		Anaerobic Co-digestion of Sewage Sludge with Biodegradable Waste from Food Processing and Intensive Animal Farming for Increased Biogas Production	Environmental Research & Education Foundation	40,000
17-269	Bardaweel, Hamzeh	Weiss, Leland	Personalized Operator Wearable Energy Recovery (POWER) System with Multiple Integrated Energy Harvesting Modules	USSOCOM (DoD)	200,000
17-270	Bishop, Thomas		Genomic Unification with an Interactive Chromatin Modeling Genome Browser	NIH	1,250,000
17-271	Voziyanov, Yuri		Engineering Hybrid Binary Recombinases with Modular Target Specificity	NIH	354,994
17-272	Matthews, John		High Consequence Isolation Valve Placement and Operation for Effective Risk Management of Pipe Failure	Pure Technologies/WRF 4624	126,946
17-273	Madadi, Mahboubeh		Design of Breast Cancer Screening Policies to Control/minimize the Personalized Lifetime Risk of Overdiagnosis and Overtreatment	DOD	336,436
17-274	Poh, Scott		Design of Peptide Activation and Targeting of Thermosensitive Biopolymers for Breast Cancer Therapy	DOD/ARO	188,041
17-275	Adams, Joshua		Sustained Development of Populus Feedstock Genetics for the Southeast	USDA/AFRI	193,342

(*Missing File #'s denote withdrawn proposals)

(Cont'd on page 6)

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

*FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
17-276	Sheets, Tilman		AROS Sasol Assessment Analysis	LED FastStart	50,081
17-277	Green, William	Keith/ Hennen	Supplementation of Supreme Gold Plus to Beef Cattle Diets during Post-Weaning Period	Supreme Energy Resources, Inc.	18,936
17-278	Iasemidis, Leonidas		Closed-Loop Feedback Control for Transcranial Direct Current Situation	Universal Technology Corp/ DOD	42,000
17-279	Clay, Natalie		Native Legume-Based Pasture as a Sustainable Alternative to Introduced Grass Monoculture: Comparisons of Forage and Ecosystem Function	USDA/AFRI	216,452
17-280	Hood, Donna		Perkins Basic Grant FY18 Nursing	US Dept of Ed / Perkins/LDCC	18,068
17-281	Moore, Arden		LaACES: Measurement of UVA, UVB, and UVC Irradiance at High Altitudes - Amendment	BoR/LaSPACE/ NASA/LaACES	5,000
17-282	Adams, Joshua		Mitigating Drought Stress of Mid-rotation Loblolly Pine (Pinus taeda L.) Plantations in the Western Gulf Region: Influences of Genotype and Thinning on Physiological and Growth Parameters in Response to Induced Severe Drought	USDA/AFRI	134,215
17-283	Wasiudden, N.		Apical Design with Conventional Technologies	CenturyLink	83,726
17-284	Giorno-McConnell, Rebecca		Aspects of Spore Germination in Context to Decontamination Strategies-Draft	NIH	385,853
17-285	Momeni, Kasra		Advanced Physics-Based Phase-Field Model of Non-equilibrium Additive Manufacturing Processes: Effect of Elastoplasticity and Interface Tension	NASA	486,880
17-286	Rutledge, Julie	Chestnut, Laura	Bulldog Book Club – Year 5 Increasing Lincoln Parish Preschoolers' Access to Books in the Home	Lincoln Health Foundation	52,500
17-287	Rutledge, Julie	Yates, Amy	We Inspire Smart Eating by Supporting Promotion of health Across Childcare Environments (WISExSPACES)	Lincoln Health Foundation	94,305
17-288	Dua, Sumeet		Big Data Analytics for Training Performance and Proficiency Assessment in Dynamic Data Environments	US Navy/STTR	68,000
17-289	Norris, Davy		The Fund for Louisiana's Future	EDA	299,178
17-290	Maness, Terri		Developing a Framework to Evaluate Restoration Effectiveness Through Health and Population Assessment of Colonially Nesting Birds in the Northern Gulf of Mexico	National Academies of Science	576,783
17-291	Fontenot, Catherine	Jones, Ethel	Promoting Healthy Life Styles for Children in Low-income Families	USDA/NIFA/AFRI	695,000
17-292	Arumugam, Prabhu		Novel Electrochemical Nanosensors for Probing Brain Oxidative Stress	NSF CAREER	518,293
17-293	Bardaweel, Hamzeh		CAREER: Broadband Vibration Energy Harvesting for Wireless Sensor Networks	NSF CAREER	500,000

(*Missing File #'s denote withdrawn proposals)



2017 SPRING DISSERTATIONS

DOCTOR OF AUDIOLOGY College of Liberal Arts



Jeni Abrams Dunnington, Loranger

BS (2013) Southeastern University, Lakeland, FL
Dissertation: "Acoustical Properties of Amplified and Unamplified Stethoscopes When Examining Typical Body Sounds"
Major Advisor: Dr. Melinda F. Bryan (Hooded by Dr. Steven G. Madix)

Shenque Iesha Lester, Jacksonville, FL

BS (2013) University of South Florida, Tampa, FL
Dissertation: "The Effect of Gamification on Audiology Awareness Among Young Adults"
Major Advisor: Dr. Steven G. Madix

DOCTOR OF EDUCATION College of Education

Richard Alan Crawford, Ruston

BA (1989) Louisiana Tech University
MAcc (1991) Louisiana Tech University
Dissertation: "What is the Association Between the Financial Position of Public Institutions to Tuition Discount Rates?"
Major Advisor: Dr. Don Schillinger

Lindsey Blair Keith-Vincent, Ruston

BS (2007) Louisiana Tech University
MS (2008) Louisiana Tech University
Dissertation: "An Abbreviated Form of the Multidimensional Scales of Perceived Self-Efficacy in an Adolescent Sample"
Major Advisor: Dr. David Gullatt (Hooded by Dr. Jerry Tobacyk)

2017-18 BoR Support Fund Changes (Continued from pg. 1)

Retain with Minimal Changes:

R&D Subprograms (RCS, ITRS-PoC/P, ATLAS)

- Increase support as possible for economic development activities (ITRS-PoC/P);
- Endowed Two-Year Workforce and Superior Graduate Student Scholarships;

Link to 2017-18 BoRSF rfps: http://research.latech.edu/resources/funding_opportunities/louisiana_board_of_regents/

ADDITIONAL GRANT FUNDING FOR EXISTING AWARDS

- Pedro Derosa, Computational Study of Surface Interaction Between Peptides and Graphitic Surfaces, Clarkson through DOD: \$30,000;
- Adams/Clay/Keith/Jackson, Cedar + Garlic Insect Repellent Amendment, NASA/American GNC: \$23,000.