Louisiana Tech University

BREEZE BULLETIN

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

Believe it is possible to solve your problem. Tremendous things happen to the believer. So believe the answer will come. It will.

Norman Vincent Peale
(1898-1993, American Christian Reformed Pastor, Speaker, Author)

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2017-18 TECH FRINGE/F&A RATES

- Faculty/Unclassified/Post Doc: 49%
- Temporary/Part-time: 10.03%
- DROP: 21%
- Federal F&A (S/W): 49.40%

Go to the following link to download as a pdf file: http://research.latech.edu/files/documents/2017-18_La_Tech_Fringe_Rates.pdf.

OSP IN-HOUSE WORKSHOPS

To more efficiently accommodate busy schedules, the Office of Sponsored Projects is offering to hold workshops at the College level by request. Please contact Beth Free x2415 (bfree@latech.edu) or Courtney Jarrell x2416 (cjarrell@latech.edu) for more information.

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

NSF 2018 Budget Request to Congress

*The National Science Foundation Act of 1950 (Public Law 81-507) sets forth our mission: "**To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..."***

*The National Science Foundation Strategic Plan for 2014-2018, "Investing in Science, Engineering, and Education for the Nation's Future," defines our vision: "**A Nation that creates and exploits new concepts in science and engineering and provides global leadership in research and education."***

The President's FY 2018 Budget Request for the National Science Foundation (NSF) continues the Nation's longstanding commitment to support basic research and education across all fields of science and engineering. NSF funds basic research that pushes the boundaries of innovation and lays the groundwork for scientific breakthroughs that advance our Nation's economy, security, and global leadership. Also critical are NSF's education investments in science, technology, engineering, and mathematics (STEM) fields, which help to prepare future generations of scientists and engineers.

In January 2017, the President signed into law the American Innovation and Competitiveness Act (P.L. 114-329, abbreviated AICA), a bipartisan bill that affirms NSF's long-standing world renowned merit review process. AICA also addresses NSF's implementation of particular issues of importance such as increased transparency and accountability; management of multi-user facilities and mid-scale projects; and increased oversight of major research equipment and facilities. While maximizing research and education opportunities that help create the innovations that fuel our economy and create jobs, AICA also promotes the Foundation's commitment to diversity in STEM fields, incentivizes NSF's programs which encourage private-sector involvement, and re-affirms NSF's continued commitment to entrepreneurship and commercialization.

NSF's FY 2018 Budget Request is $6.653 billion, a decrease of $840.98 million (-11.2 percent) over the FY 2016 Actual investment. This funding will support approximately 8,000 new research grants, with an estimated funding rate of 19 percent for research grant proposals submitted to NSF. For comparison, in FY 2016, NSF funded 8,800 new research grants, with a funding rate of 21 percent.

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NEW GRANTS AWARDED

PI	Title	Funding Agency	$ Awarded
Joshua Adams	*Treenutri Product Testing Amendment II*	TreeNutri, LLC	10,049
Tony Carver	*Air Force Global Strike Command September 2017 Innovation Summit Support*	CIC	25,653
September 2017		***Total:***	**1,304,100**
Matthews/Alam	*Evaluation of an Innovative Spray-in-Place Pipe (SPP) Technology*	SIPP Tech	458,974
Arden Moore	*LaACES: Direction-correlated UVA-C Irradiance Measurements at Varying Altitudes*	NASA/LSU/ LaSPACE	10,000
Jay Wang	*2017-18 Capstone Senior Design Projects of Civil Engineering at Louisiana Tech University*	LTRC	5,000
Dave Norris	*The Fund for Louisiana's Future*	USDC/EDA	299,178
Daniella Mainardi	*Towards the Development of Novel Catalysts for the Fischer-Trospch Processes*	NASA/LSU/ LaSPACE	8,000
Sanjay Tewari	*Protecting Subsurface Freshwater Using Electrokinetic Barriers Against Seawater Intrusion in Coastal Louisiana*	US Water Institute	57,519
Rutledge/Chestnut	*Bulldog Book Club – Year 5 Increasing Lincoln Parish Preschoolers' Access to Books in the Home*	Lincoln Health Center	121,876
Keith/Murphey	*Exploring the Benefits of Regano® Supplementation in Sheep Diets*	Ralco Nutrition, Inc.	5,000
Guy Carwile	*HABS Drawings: Caroline C. Dormon Log Cabin*	Cane River National Heritage Area	6,140
October 2017		***Total:***	***971,687***
Debbie Inman	*Business Incubator Support Program 2017-2018*	LA Economic Dev. & LA Business Incubation Assoc.	8,268
George Noflin	*Call Me Mister Support Year 1*	Jonesboro State Bank	10,000
Basinger/Vessel/ Keith-Vincent/ Schillinger	*Support for Expansion of Clincial Residencies and Program Design for Implementation of Talent Pipeline Model*	US DoEDU/LA DoEDU	75,000
Vessel/Basinger/ Keith-Vincent/ Schillinger/Noflin/	*Teacher Preparation Residencies Support Needs Request 2016-2017*	US DoEDU/LA DoEDU	103,000
Donna Hood	*Perkins Basic Carryover FY18 Nursing*	US DoEDU/LA Delta CC	2,327
November 2017		***Total:***	**198,595**
		2017-18 YTD	***4,212,816***

ADDITIONAL GRANT FUNDING FOR EXISTING AWARDS

- Mike O'Neal - *Project SKUA (Secure keystroke-based User Authentication) Phase II*, CenturyLink: $29,825.
- Pedro Derosa - *Computational Study of Surface Interaction Between Peptides and Graphitic Surfaces*, Clarkson Aerospace Corp.: $50,000;
- Sumeet Dua - *Computational Study of Surface Interaction Between Peptides and Graphitic Surfaces*, Clarkson Aerospace Corp.: $9,334;
- Jean Gourd - *Computational Study of Surface Interaction Between Peptides and Graphitic Surfaces*, Clarkson Aerospace Corp.: $9,333;
- Miguel Gates - *Computational Study of Surface Interaction Between Peptides and Graphitic Surfaces*, Clarkson Aerospace Corp.: $9,333;
- Niel Crews - *Expanding Value Louisiana's Technical Assistance Capacity to Deliver Source Reduction Assistance*, EPA: $45,000.

PROPOSALS SUBMITTED

* FILE #	PI	Co-PI 's	TITLE	AGENCY	$ Requested
18-101	Barrow, Katie		Families and Humanities: Developing an Integrated Learning Experience in the Service of Enhancing Family Life	NEH	35,000
18-102	Tewari, Sanjay	Evans/ Patterson/Keith -Vincent	GP-IMPACT: Creating pathways for Project-based Geoscience Education in Four-Year Colleges	NSF	315,230
18-103	Iseley, Tom	Matthews, John	Update to NUCA Trenchless Manual	NUCA	9,004
18-104	Arumugam, Prabhu	Murray, Teresa	A Novel Electrochemical Probe for Real-time GABA Detection	NIH	342,670
18-105	DeCoster, Mark	Lvov/Murray	Self-assembly of Novel Nanocomposites for Cellular Remodelling	NIH	344,812
18-106P	Hamrick, Frank		Production of a Photography Monograph	BoR/ATLAS	50,000
18-107	Noflin, George	Keith-Vincent/ Speed	Call Me Mister Support Year 1	Jonesboro State Bank	10,000
18-108	O'Neal, Mike		Project SKUA (Secure keystroke-based User Authentication) Phase II	Century Link	29,825
18-109	Peters, Andrew		Simulations of Blended Diblock Copolymers for Cost Efficient Advanced Materials Design	ACS	110,000
18-110	Newman, Jamie		The Role of MED12 in Transcriptional Control and Self-Renewal and Adipogenesis of Human Adipose-Derived Stem Cells	NIH	349,797
18-111	Adhikari, Kaushallya		Semi-Coprime Sparse Arrays	NSF	214,322
18-112	Dua, Sumeet		Satellite-Assisted Forecasting Environment for Oyster Norovirus and Vibrio Outbreaks (SAFE Oyster)	NASA	240,000
18-113	Bardaweel, Hamzeh	Genov/Weiss/ Sun	A Transformative Approach Towards Broadband Ambient Vibration Energy Harvesting Using Airflow Through Sharp Edged Orifices	NSF	300,184
18-114	Tewari, Sanjay	Eklund/ Cardenas	In-situ Electrokinetic Remediation of Contaminated Soils in Phreatic Zones Having Variable Permeability	NSF	276,341
18-115	Mills, David		3D Printed Steroid-Doped Constructs for use in Post-Surgical Therapy	LBRN/NIH	62,357
18-116	Mills, David		Bioactive 3D Printed Customized Nasal Supports for Oral and Maxillofacial Repair	LBRN/NIH	76,649
18-117	Alam, Shaurav	Matthews, John	Pull Test and Pressure Rating Test of Terra Brute Assembly	IPEX	29,558
18-118	Wells, Steven	Beminiwattha/ Simicevic	The Parity Violating Electron Scattering Program of Louisiana Tech University	NSF	539,804
18-119	Wobisch, Markus	Sawyer, Lee	Testing QCD at the Energy Frontier in the ATLAS Experiment at the LHC	NSF	439,045
18-120	Dua, Prerna		A Predictive Modeling Framework for Continued Investigation of Disparity in Colorectal Cancer Screening	LBRN	55,379
18-121	Weiss, Leland	Evans/Keith-Vincent/Apter-Desselles	Afterschool-BRIDGE (Bringing Innovative Development via Grand Challenge Engagement)	NSF	1,380,393
18-122	Alam, Shaurav	Matthews, John	Pickle Jar Test of Polyuria Material	Spectrashield	13,339

(*Missing File #'s denote withdrawn proposals)

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

* FILE #	PI	Co-PI 's	TITLE	AGENCY	$
18-123	Matthews, John	Alam Shaurav	Evaluation of a New Spray-on Coating Technology	BASF	221,284
18-124	Hou, Songming		Collaborative Research: Gradient Recovery Methods for Interface Problems with Applications to Photonic Graphene	NSF	61,777
18-125	Keith, Ashley		ENHANCING TECH FARM THROUGH THE DEVELOPMENT OF A SMALL RUMINANT CENTER	BoR/ENH	25,305
18-126	Chen, Jinyuan		NeTS: Small: Collaborative Research: Multi-layer Coding for Distributed Computing and Caching	NSF	257,235
18-127	Hall, David	Evans, Katie	Sophomore Living With The Lab	BoR/ENH	487,016
18-128	Ker, Jun-Ing	Easley, John	A One-Piece Flow Approach to Enhance the Lean and Six Sigma Education Quality through Manufacturing Equipment Acquisitions and Upgrades	BoR/ENH	101,500
18-129	Crews, Niel	Chapman, Philip	Enhancing the IfM: Strengthening Thrust Area Research	BoR/ENH	996,801
18-130	Arumugam, Prabhu		Development of a Novel GABA Microsensor Array for Brain Function Studies	BoR/NASA/EPSCoR/ RAP	34,985
18-131	Murray, Erica		Impedancemetric Method for Electrochemical Multi-Gas Sensing	BoR/NASA/EPSCoR/ RAP	39,511
18-132	Min, Manki		NeTS: Small: Collaborative Research: Vehicular Communication Assisted Evacuation Planning and Dissemination for Smooth Acceleration of Mandatory Hurricane Evacuation	NSF	225,500
18-133	Turner, Galen	Chowriappa, Pradeep	Riverstone Software Contract	RiverStone Software LLC	360,000
18-134	Crittenden, Kelly	(see routing form)	IMAGES: Instilling Mathematics Appreciation through Graphics in Electronic Spaces	NSF	2,753,152
18-135	Whittaker, Robert		Digital Humanities Initiative	BoR/ENH	28,300
18-136	Ramachandran, Ramu	Thomas, Donna	Increasing Diversity in Doctoral Populations at Louisiana Tech University 2018-21	BoR/SREB	180,000
18-137	Jacob, Jane	Walczyk, Jeff	Aquisition and Implementation of EEG and Eye Tracking Technology in Cognitive Neuroscience	BoR/ENH	126,375
18-138	Radadia, Adarsh	Zivanovic, Sandra	Acquisition of Nano-Raman for Nano Education and Research	BoR/ENH	172,880
18-139	Stafford, Tom		SaTC: CORE: Small: Understanding Platform and Software-Based Complacency and Policy Non-Compliance in Response to Cybersecurity Threats.	NSF	448,357
18-140	Alam, Shaurav		Investigation of Moment Gradient Factor Effect on Load Ratings of Stringers	LTRC	151,685
18-141	Caldolera-Moore, Mary		Combinatorial Material for Muscle Regeneration Applications	BoR/SURE	5,000
18-142	Sun, Chuanbing Shawn		Load Rating of Existing Continuous Stringers on Louisiana's Bridges	LTRC	124,999
18-143	Lvov, Yuri		Metallized Core-shell Micropatterns Templated on Ceramic Nanotubes	BoR/NSF/CIMM	10,000

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

(Cont'd on page 5)

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

*FILE #	PI	Co-PI 's	TITLE	AGENCY	$
18-144	Caldolera-Moore, Mary		Development and Testing of a Chitosan Formulation for 3D Printing for Wound Applications	BoR/SURE	5,000
18-145	Momeni, Kasra		A Phase-Field Model of Plastic Deformation for Multiscale Metal Forming Processes	BoR/NSF/CIMM	10,000
18-146	Momeni, Kasra		Fatigue in 3D Printed Structures: A Multiscale Approach	BoR/NSF/CIMM	10,000
18-147	Liu, Don		Modeling Soil Particles Entrainment in Deltaic Rivers and Coastal Louisiana to Mitigate Soil Erosion	NSF	289,624
18-148	Arumugam, Prabhu		Engineering a Reliable Ultrananocrystalline Diamond Electrode Technology Using 3D-Printed Titanium Substrates	BoR/NSF/CIMM	10,000
18-149	Murray, Erica		Effect of 3D Printing on Corrosion Characteristics of Stainless Steel	BoR/NSF/CIMM	10,000
18-150	Matthews, John		Innovative Spray-in-Place Pipe (SIPP) Lining Technology	NSF/SBIR/SIPP	74,765
18-151	Keith-Vincent, Lindsey	(see routing fom)	Gaming Activities for Motivating an Innova-tive New Generation (GAMING) for STEAM Careers-RESIDENTIAL	LOSFA/ GEARUP	192,000
18-152	Schilling, Tammy	Chen/Keith-Vincent	Sports STARS Non-Residential Summer Learning Camps	LOSFA/ GEARUP	95,148
18-153	Keith-Vincent, Lindsey	(see routing form)	Gaming Activities for Motivating an Innova-tive New Generation (GAMING) for STEAM Careers-NON RESIDENTIAL	LOSFA/ GEARUP	192,000
18-154	Schilling, Tammy	Chen, Yu-Chun	Sports STARS Residential Summer Learning Camps	LOSFA/ GEARUP	95,148
18-155	Stafford, Tom		SFS: Capacity: Small: Psychophysiological Assessment of Teaching and Learning Effectiveness of Cybersecurity Curricula	NSF	442,728
18-156	Clay, Natalie		Ecological Consequences of Low-Level Sodium Inputs in Riparian Zones on Decomposition Processes and Inputs to Freshwater Ecosystems	Louisiana Water Resources Research Institute	39,903
18-157	Liu, Don		Big-Data Modeling of Deltaic and Coastal Sediment Transport on GPUs and CPUs	NSF	299,746
18-158	Arumugam, Prabhu	Murray, Teresa	A Novel Electrochemical Probe for Real-time GABA Detection	NIH	342,670
18-159	Keith-Vincent, Lindsey	Tims, Heath	FOUNDATION FOR PATHWAYS: Bossier Partnership for Development and Distribution of Tier 1 Secondary Science Curriculum	LaEDU/USEdu	110,106
18-160	Keith-Vincent, Lindsey	(see routing form)	MCMSP Tier One Science Standards Curric-ulum for the State of Louisiana	LaEDU/USEdu	63,067
18-161	Nielson, Lynne	(see routing form)	INVEST and ELEVATE: Lincoln Parish MSP Math 2017-2018	LaEDU/USEdu	47,525
18-162	Keith-Vincent, Lindsey	Newman, Jamie	Bossier Partnership for Development and Distribution of Tier 1 Middle School Science Content	LaEDU/USEdu	119,759

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

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2017 FALL DISSERTATIONS

DOCTOR OF AUDIOLOGY

College of Liberal Arts

Jeni Abrams Dunnington, Loranger

BS (2103) 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)

NSF 2018 BUDGET... (CONT'D FROM PAGE 1)

The FY 2018 Budget Request reflects NSF's commitment to establishing clear priorities in areas of national importance, as well as to identifying innovative and promising research ideas, in order to yield return on investment for the Nation.

Federal investments in basic research and STEM workforce development are increasingly important to help establish U.S. leadership in next-generation technologies, especially as other nations intensify their support of research, development, and education. U.S. leadership is important, in part because of the unprecedented level of global competition for the highly skilled, technical workers who generate innovative scientific ideas.

FY 2018 Budget Request

Total: $6.65 billion

Decrease: $840.98 million

-11.2% from FY 2016 Actuals

As the only agency with a diverse portfolio that supports all fields of science and engineering, NSF helps to cultivate the Nation's role as a leader in the scientific enterprise by supporting the fundamental research that is so vital to the commercial marketplace and by building the workforce necessary to address the complex challenges that face the Nation.

(Full article: https://www.nsf.gov/about/budget/fy2018/pdf/01_fy2018.pdf)