

Louisiana Tech University



BREEZE BULLETIN

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

Find something you're passionate about and keep tremendously interested in it.

Julia Child

(1912-2004, American gourmet cook, author, and television personality)

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2013-14 TECH FRINGE RATES

Please note the 2013-14 rates below:

Faculty/Unclassified/Post Doc: 46.47%

Civil Service: 51.27%

Temporary/Part-time: 9.96%

DROP: 19.97%

Download the pdf chart: http://research.latech.edu/files/documents/2013-14_fringe_benefit_rates.pdf.

A NEW ERA AT TECH

Thank you Dr. Reneau and staff for many years of dedication and support of research at Tech. While we say a sad good-bye, we also look forward to a new era with Dr. Les Guice as our President and Dr. Stan Napper as our VP of Research and Development.

CONFLICT OF INTEREST TRAINING

LaTech faculty who are planning to submit research proposals to federal agencies are required to take the Conflict of Interest training through CITI. There is no cost for this mandatory on-line course and it is open to all LaTech faculty. Please contact Susan Black in University Research for more information: 318-257-5075 or sblack@latech.edu.

Top-paying Jobs Are in Engineering

By Aaron Smith
CNN Money
April 25, 2013

Seven of the top 10 highest-paid college degrees are in engineering, according to a report out Thursday from the National Association of Colleges and Employers. Petroleum engineering majors are the highest paid, with starting salaries averaging \$93,500, according to the association. That's at least \$20,000 more than the average salary for computer engineers, who are the second-highest paid group on the list.

Other highly-paid engineering degrees are in the fields of chemical, aerospace, mechanical, electrical/electronic, communications and technology, with starting pay ranging from \$62,200 to \$67,600 per year.

"Engineering majors are consistently among the highest paid because the demand for them is so great," said association executive director Marilyn Mackes, in a press release.

Computer science is the most lucrative non-engineering degree, with an average starting pay of \$64,800. The only other non-engineering degrees placing in the top 10 for pay are managing information systems/business (\$63,100) and finance (\$57,400.)

President Obama has, at various times in his tenure, addressed the country's need for more engineers and engineering students to stimulate the U.S. economy. In his State of the Union address earlier this year, he said he wanted to "reward schools that develop partnerships with colleges and employers, and create classes that focus on science, technology, engineering and math - the skills today's employers are looking for to fill jobs right now and in the future."

There's definitely a need to improve the prospects of college-aged Americans. As a demographic they face a higher unemployment rate -- 13.3% -- compared to 7.6% for the general population. So are students answering the call for engineers?

Sort of. Engineering is the second most popular field of employment for college students entering the job market in 2013, according to the study. This category was rather broad, including professional, scientific and technical services, with average pay of \$48,600.

Education was the most popular category, with more than 455,000 new college grads entering this year, even though average annual pay was less than \$40,000. Healthcare was in the third most popular industry, with average pay of about \$42,600, according to the report. ■

NEW GRANTS AWARDED

PI/Co-PI	Title	Funding Agency	\$ Awarded
Lindsey Vincent	NASA SOI: Summer STEM College and Career Planning and Snack-Building at SciTEC	NASA	24,977
Niel Crews	Evaluation of an Experimental Scintillator Material on a High-Altitude Balloon Payload	NASA	9,514
Lindsey Vincent	Logistical Support for Statewide Summer Transition Programs Funded by LOSFA/LaGEARUP	US Dept. of Education	365,661
Pedro Derosa	GSRA Graduate Student Research Assistance/Josh Brown	NASA/LaSPACE	5,000
Niel Crews	LaSPACE GSRA: Collin Tranter	NASA/LaSPACE	5,000
Jeong Hoon Choi	Louisiana Multi-tiered Early Childhood Education Summer Institute (LEEP)	US Dept. of Edu./ Nicholls	55,000
Lee Sawyer	High Energy Physics Research at the Energy Frontier at Louisiana Tech	US Dept. of Energy	601,000
April 2013			\$1,066,152.09
Erez Allouche	Practical Condition Assessment and Failure Probability Analysis of Small Diameter Ductile Iron Pipe	Water RF through CSIRO	60,000
Rastko Selmic	Graphical Evolutionary Hybrid Neuro-Observer (GNeuroObs) System	DOD through American GNC	30,000
Tammy Schilling	LaTech/LA GEAR UP Sports STARS Summer Transition program	US Dept. of Edu/ LOSFA	95,826.43
Lindsey Vincent	My Story, My Dream, My Plan	US Dept. of Edu/ LOSFA	95,946.55
Lindsey Vincent	Soaring through the Skies with STEM	US Dept. of Edu/ LOSFA	95,953.23
Lindsey Vincent	Reaching Beyond Our Limits with STEM: LOSFA/LA GEAR UP	US Dept. of Edu/ LOSFA	95,991.31
Julie Rutledge	Bulldog Book Club: Increasing Lincoln Parish Preschoolers' Access to Books in the Home	Lincoln Health Foundation	66,000
May 2013			\$539,717.52
Patrick O'Neal	Pre-Clinical Development of a Multi-Wavelength Pulse Photometer for Non-Invasive Real-Time Pharmacokinetics	BoR	180,000
Nazimuddin Wasiuddin	Investigation of Oxidative Aging Characteristics of Nanoclay-Modified Asphalt Binders	BoR	4,500
Katie Evans	SURE Proposal - Olivia Brown	BoR	4,500
Thea Edwards	Ecological Regulation of Schistosomiasis Snail Hosts	BoR	4,500
Edward Bell	Louisiana Center for the Blind/La. Tech	State of La. through Dept. of Education	400,000
Diane Madden	LEEC Project Way	La. Environmental Education Commission	2,148
Susan Black	University Research Replacement Desktops	Lagniappe Ladies	4,651.05
Libby Manning	Lagniappe Grant	Lagniappe Ladies	4,986.90
Mark DeCoster	OPT-IN: Partnership for a Millifluidic Device for 3-Dimensional Cellular Aggregates	BoR/NSF	20,000
Thomas Bishop	Bamburg: A Coarse Grained Energy Landscape for ICM Webserver	BoR	4,500
Adarsh Radadia	Graphene Chemiresistors for Point-of-Care Diagnostics	BoR	155,493
Thea Edwards	Chemical Ecology of Phyto-Hormones	BoR	84,000
Genaro Smith	The Land Baron's Sun: Poetry Collection and the Beautiful Ones Are Not Yet Born: Collection of Short Stories	BoR	18,837
Paul Jackson	A Safe Lighting System & Mechanical Ventilation for the Louisiana Tech University Greenhouses	BoR	48,900

PROPOSALS SUBMITTED

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$ Requested
13-248	Guinn, Mark	Sciro, Cherrie	KAB Man	Keep America Beautiful	2,000
13-249	Lvov, Yuri		Clay Nanotube Coating for Sustained Anticorrosion Protection	NSF	42,682
13-250	Edwards, Thea		Ecological Regulation of Schistosomiasis Snail Hosts	BoR/SURE	4,500
13-251	Mills, David		Effects of Various Nanocoatings on Electrospun Scaffolds for Wound Regeneration	BoR/SURE	4,500
13-252	Phoha, Vir		Context-aware Active Authentication Using Touch Gestures, Typing Patterns and Body Movement	DARPA	236,479
13-253	Evans, Katy		SURE Proposal - Olivia Brown	BoR/SURE	4,500
13-254	Hollins, Bryant		Monitoring Oxidative and Nitrosative Stress Protein Changes in Acetaminophen-induced Hepatotoxicity	BoR/SURE	4,500
13-255	Allouche, Erez		Evaluation of Debris from Aluminum Manufacturing Facility	Brenford Environmental Systems	28,060
13-256	Allouche, Erez		Controlled Field Testing of 3M Locatable Rope	3M	23,790
13-257	O'Neal, Patrick		Experimental and Mathematical Modeling of Nanoparticle Bio-Availability	BoR/SURE	4,500
13-258	Wasiudden, Nazimuddin		Investigation of Oxidative Aging Characteristics of Nanoclay-Modified Asphalt Binders	BoR/SURE	4,500
13-259	McFadden, Patti	Sims/Broks	Sexual Health: Raising STI Awareness	Lincoln Health Foundation	926
13-260	Sciro, Cherrie		Time Bones by Margaret Jenkins Dance Company	New England Foundation for the Arts	10,000
13-261	Allouche, Erez	Montes/McKim	Geopolymer Pipe Laboratory and Field Case Study	Lehigh Hanson	37,210
13-262	Allouche, Erez	Montes, Carlos	Statistical Geopolymer Mix Design Software Project	Lehigh Hanson	32,940
13-263	Selmic, Rastko		Graphical Evolutionary Hybrid Neuro-Observer (GNeuroObs) System	American GNC/DOD SBIR	30,000
13-264	Tyree, Michael		Developing a Carbon Life-Cycle Analysis Tool for Biomass Crop Production Systems of Eastern Cottonwood and Black Willow in the Lower Mississippi Alluvial Valley	Entergy Services	325,000
13-265	Selmic, Rastko		Smart Gloves for Classification of 3D Dynamic Hand Gestures System	Google	52,000
13-266	Selmic, Rastko		Intelligent Distributed and Ubiquitous Health Management System (Phase II)	NASA STTR Phase II/GNC	200,000
13-267	Weiss, Leland		Hydrogen Sulfide Lab on Chip Device for Medical Application	BoR/OPT-IN	19,996
13-268	Decoster, Mark		2D and 3D Systems for Evaluating Potential Glutamate Involvement in TBI	US Army Research Office	120,000

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

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
13-269	Liu, Pei		Perceptions of Restaurants' Food Safety: An Application of Importance-Performance Analysis	Foodservice Systems Management Education Council	2,000
13-270	Schillinger, Don	Vincent/ Tobacyck/ Livingston	LOSFA's LA GEAR UP Professional Development & Academic Year Follow Up: A Call to ACTION to ENGAGE and Motivate Teachers and Students Across Louisiana	LOSFA	496,699
13-271	Dowling, Bobby		Trail to Hideaway Park	Louisiana Recreational Trails Program	80,000
13-272	Wilson, Chester		Energy Harvesting Shoes Utilizing a Microstructured Proprietary Polymer	BoR/NSF	109,160
13-273	Lvov, Yuri	Null, Randy	Stormwall Boards With Antimolding and Flame Retardance Coating Based on Clay Nanotubes	BoR/NSF	35,000
13-274	Decoster, Mark		OPT-IN: Partnership for a Millifluidic Device for 3-Dimensional Cellular Aggregates	BoR/NSF	20,000
13-275	Shipp, Michael		Comprehensive Center for Rehabilitation Technology (CCRT)	Louisiana Rehabilitation Services	1,002,531
13-276	Bishop, Thomas		Bamburg: A Coarse Grained Energy Landscape for ICM Webserver	BoR/SURE	4,500
13-277	Mills, David		Electrospun Silicone Clay Halloysite Nanotube (HNTs) Condoms Doped With Enhanced-Pleasure and Anti-infective Biofactors	Gates Foundation	100,000
13-278	Dai, Weizhong		A Generalized Finite-Difference Time-Domain Method for Solving the Complex Ginzburg-Landau Equation	NASA EPSCoR/LSU	33,263
13-279	Allouche, Erez	Montes, Carlos	Development of 'Kyger Bond'-High Temperature Geopolymer Refractory Binder for Extreme Exposure Conditions	American Electric Power	60,000
13-280	Merchant, David	Choate	Green Clinic Surgical Hospital	Louisiana Workforce Commission	72,981
13-281	Allouche, Erez	Ramachandran, Bala	Preliminary Planning for an Engineering Research Center	BoR/EPSCoR	10,000
13-282	Zivanovich, Sandra		Alpha/Beta Voltaics With Conjugated Polymers	NASA/EPSCoR	34,987
13-283	Napper, Stan		Howard Hughes Medical Institute	Howard Hughes Medical Institute	0
13-284	Allouche, Erez	Alam, Shaurav	Experimental Investigation of Leakage in Annular Space Between Host Pipe and Liner	Sanexen Environmental Services, Inc.	40,000
13-285	Hood, Joanne		REAP Formula Grant	US Dept. of Education	35,000
13-286	Allouche, Erez		Multi-scale Forensic Examination of Geopolymer Binder Subjected to Elevated Temperature Beneath the Flame Trench	BoR/EPSCoR	35,000
13-287	Brown, Paula		Assessing the Impact of Writing Consultations on Writing Quality and Student Attitudes Towards Writing: a Longitudinal Study	Institute of Educational Sciences (IES)	300,000
13-288	Iasemidis, Leon	Vlachos, Ioannis	A New Quantitative EEG Technique for Prediction of Post-traumatic Epilepsy in Individual Subjects After Traumatic Brain Injury	DOD	50,187

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

FILE #	PI	Co-PI 's	TITLE	AGENCY	\$
13-289	Allouche, Erez	Alam, Shaurav	Evaluation of Resin Impregnated Fiberglass Liner Material Used in CIPP Applications Following ASTM D2992-12 Procedures	Applied Felts, Inc.	55,876
13-290	Bryan, Melinda		Student's Perceptions of Scientists	NIH	9,000
13-291	Ker, Jun-Ing		Operation Efficiency Analysis for HML Enterprises' Fertilizer Plant in Acadia	HML Enterprise, LLC	4,966
13-292	Black, Susan		University Research Replacement Desktops	Lagniappe Ladies	4,651
13-293	McKim, Rob		RockTenn Pipe Analysis Study	CH2M	12,000
13-294	Norris, Dave		University Center	EDA	997,591
13-295	Crews, Niel		CSG: Promoting STEM Academics Regional Outreach	LaSPACE/NASA	11,522
13-296	Bishop, Thomas	Bishop, Thomas	TGEF for Bishop to Present at Epigenetics 2013	BoR/TGEF	1,200
13-297	Gibson, Mark		McIntire-Stennis Cooperative Forestry Research Program -2013	USDA	219,827
13-298	Manning, Libby	Kimbell-Lopez/ Cummins	Lagniappe Grant	Lagniappe Ladies	4,987
13-299	Hollins, Bryant		Proteomic Biomarkers of Mitochondrial Oxidative Stress Differentiate PD from PD-MCI in Early Stage Disease	Michael J. Fox Foundation	125,000
13-300	Shipp, Michael		Comprehensive Center for Rehabilitation Technology (CCRT)	Louisiana Rehabilitation Services	798,784
13-301	Jones, Steve		Interaction Between Positive and Negative Feedback in Platelet Adhesion	NIH	354,965
13-302	Hegab, Hisham		GSRA Graduate Student Research Assistance/Shawn Le	LaSPACE/NASA	5,000
13-303	Zivanovich, Sandra		COMSOL Modeling and Fabrication of Polymer Solar Cells	LaSPACE/NASA	6,000
13-304	Lvov, Yuri		Clay Nanotubes for Sustainable Geopolymer Concrete	LaSPACE/NASA	6,000
13-305	Keith-Vincent, Lindsey		Lincoln Parish MSP	Lincoln Parish School Board	10,283
13-306	Tyree, Michael		Modeling Soil Greenhouse Gas Efflux along Hydrological and Population Gradients	NASA	140,000
14-001	Casas, Irene		Assessing Space-Time Uncertainties of Dengue Fever Outbreaks Using a Parallel Framework	NIH	50,095
14-002	Tims, Heath	Hall, David	STEM-Discovery	NSF/BoR/ EPSCoR	705,000
14-003	Cargill, David		CIT Conference Room Update	Lagniappe Ladies	4,610
14-004	Jaganathan, Arun	Allouche, Erez	Field Demonstration of Evortex: A Novel Energy Harvesting Mechanism for Waste and Storm Water Conveyance Systems	WERF	122,955
14-005	Orr, Marisa	Hall/Carpenter	Owning Engineering: A Longitudinal Mixed-Methods Study of Student-Owned Laboratories	NSF/BoR/ EPSCoR	1,294,288
14-006	Allouche, Erez	Montes, Carlos	Development of 'Kyger Bond' - High Temperature Geopolymer Refractory Binder for Extreme Exposure Conditions	Electric Power Research Institute	60,000

NEW GRANTS AWARDED (CONT'D FROM PAGE 2 . . .)

PI/Co-PI	Title	Funding Agency	\$ Awarded
Nazimuddin Wasiuddin	Acquisition of Superpave Asphalt Binder Testing Equipment for Highway Engineering Laboratory	BoR	42,565
Erez Allouche	Enhancement of LTU Structural Testing Laboratory	BoR	126,275
Randall	Creation of a Digital Multi-Media Studio	BoR	75,000
Leland Weiss	Intelligent Distributed and Ubiquitous Health Management System (Phase II)	BoR	20,000
Yuri Lvov	Stormwall Boards With Antimolding and Flame Retardance Coating Based on	BoR	25,000
Rob McKim	RockTenn Pipe Analysis Study	BoR	12,500
June 2013			\$1,238,355.9
			2012-13 YTD: \$6,510,450.3
Katie Evans	Open-Source Problems in Engineering Studies (OPES): Making the WeB Work	NSF	249,9000
Jim Palmer	Superior Graduate Fellows Supporting Five Centers of Excellence in Engineering 2013-2017	BoR	200,000
Marie Bukowski	Superior Graduate Fellows Supporting Area of Excellence in the School of Art	BoR	45,000
Leland Weiss	Novel Lab on Chip Sensor Development for H2S Detection	LSU/PAC	25,000
Libby Manning	Powerful Instruction through Interactive Read Alouds, Literacy Stations & Workshops	LaSIP/US Dept. of Education	69,894.50
Carolyn Talton	Project PAT: Promoting Algebraic Thinking	LaSIP/US Dept. of Education	75,200
Lindsey Vincent	Lincoln Parish MSP	Lincoln Parish	10,283.04
Leland Weiss	MEMS Based Solutions for an Integrated Energy Harvesting System	NASA/Radiance Technology	49,833
Leon Iasemidis	A New Quantitative EEG Technique for Prediction of Post-traumatic Epilepsy in Individual Subjects After Traumatic Brain Injury	US Army Research	50,187
Mark Gibson	McIntire-Stennis Cooperative Forestry Research Program -2013	USDA	219,827
Songming Hou	Solving Two & Three Dimensional Interface Problems Using Non-Body-Fitted Grid	NSF	120,000
Erez Allouche	Development of 'Kyger Bond' - High Temperature Geopolymer Refractory Binder for Extreme Exposure Conditions	Electric Power Research Insti-	25,000
Niel Crews	CSG: Promoting STEM Academics Regional Outreach	NASA/LSU	11,575
Erez Allouche	Preliminary Planning for an Engineering Research Center	NSF/BoR	10,000
Erez Allouche	Multi-scale Forensic Examination of Geopolymer Binder Subjected to Elevated Temperature Beneath the Flame Trench	NASA/BoR	35,000
Mike Shipp	Comprehensive Center for Rehabilitation Technology (CCRT)	US Dept. of Edu/ LWC/LRS	788,992
David Cargill	CIT Conference Room Update	Lagniappe Ladies	4,610
Thomas Bishop	Enhancing the ICM Webserver: a Prototype Computational Core Activity	NIH/LSU	18,500
Rebecca Giorno	Roles of Spore Specific Proteins in Germination and Pathogenicity of Clostridium Difficile	NIH/LSU	54,000
Adarsh Radadia	Point-of-Care Microelectronic Diagnostics for Early Phase Rickettsial Infections	NIH/LSU	54,000
Sandra Zivnovic	Alpha/Beta Voltaics With Conjugated Polymers	BoR	34,987
Weishong Dai	A Generalized Finite-Difference Time-Domain Method for Solving the Complex Ginzburg-Landau Equation	NASA/BoR	33,263
July 2013			\$2,285,011.5
			2012-13 YTD: \$2,285,011.5

NSF APPLICANTS: CHANGES ARE COMING TO HOW YOU START A PROPOSAL IN FASTLANE

Currently, FastLane allows you to start a new proposal by copying from a previously submitted proposal or by using a previously created template.

Starting August 2, applicants will only be able to copy proposals submitted under the current version of NSF's Grant Proposal Guide (GPG).

Additionally, you will no longer be able to create and save templates in FastLane.

However, the standard process for creating a new proposal remains unchanged.

ADDITIONAL GRANT FUNDING FOR EXISTING AWARDS

- T. Murray - LONG TERM 3D IMAGING OF MOUSE BRAIN IN VIVO TO STUDY GLIAL CELLS AND GLIOGENESIS, NIH \$85,979;
- B. Strimbu - IDENTIFICATION OF OPTIMAL PRODUCTS ALLOCATION FOR STRATEGIC PLANNING USING LIDAR DATA, BoR \$85,500;
- Y. Lvov - LAYER BY LAYER NANOCARRIERS FOR HIGHLY EFFICIENT SOLUBILIZATION OF INSOLUBLE DRUG, NIH/Northwestern \$41,486;
- P. Dua - NOVEL METHODS FOR MICROARRAY GENE EXPRESSION DATA MINING FOR TRANSLATIONAL BIOINFORMATICS, BoR \$26,713;
- D. Cahoy - STATISTICAL METHODS FOR FRACTIONAL BIRTH-DEATH PROCESSES, BoR \$38,661;
- E. Allouche - FIELD DEMONSTRATION AND RETROSPECTIVE EVALUATION OF REHABILITATION TECHNOLOGIES FOR WASTEWATER COLLECTION AND WATER DISTRIBUTION SYSTEMS, EPA/Batelle \$93,450;
- E. Allouche - DEVELOPMENT AND DEMONSTRATION OF A CAST-IN-PLACE-FIBERS TECHNOLOGY, CenturyLink \$70,000;
- Y. Lvov - TUBULE NANOCONTAINERS FOR CORROSION INHIBITORS, NSF \$41,682;
- J. Wang - APPLICATION OF SOLID BIOENGINEERING APPROACHES FOR RIPARIAN RESTORATION IN COASTAL AREA OF LA, Office of Coastal Protection/LSU \$25,000;
- T. Atkison - DEVELOPING EFFECTIVE ROGUE APPLICATION PREDICTION TECHNIQUES THROUGH COMBINING OF MULTIPLE MACHINE LEARNING AND DATA MINING TECHNIQUES, BoR \$39,675;
- D. Genov - ARTIFICIAL OPTICAL MATERIALS FOR MOLDING THE FLOW OF LIGHT, BoR \$43,811;
- T. Murray - IN VIVO TIME COURSE STUDY OF ADULT NEUROGENESIS AND ADULT NEURAL STEM CELL TRANSFORMATION TO TUMOR CELLS IN THE MOUSE SUBVENTRICULAR ZONE USING IMPLANTED MICRO-LENSES AND MULTIPHOTON MICROSCOPY, BoR \$48,531;

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BOR 2013-14 SUPPORT FUND RFP'S

The Louisiana Board of Regents Support Fund Request for Proposals and a quick-print chart of due dates and eligible disciplines are now available for download from their website: <http://web.laregents.org/latest-news/>. Please contact Karthik, the BoR webmaster to update your LOGAN log-in and password if needed. He can be reached at 225-342-4253 or poobal@laregents.org.