

**NORTH CAROLINA STATE UNIVERSITY**

**Awards Received for the Period July 01, 2018 to December 31, 2018 by College and Department**

college is COLLEGE OF ENGINEERING (PI college only); no-cost extensions and deobligations suppressed; pre-awards suppressed; internal projects suppressed

<b>Project ID</b>	<b>Investigator(s)</b>	<b>SP</b>	<b>PI Department</b>	<b>Direct Sponsor</b>	<b>Amount</b>	<b>Type</b>	<b>Category</b>	<b>Title</b>
Biomedical Program-Grad Appts (147588):					<b>\$53,688</b>	1		
BTEC-Biomanufacturing Training and Education Center (148501):					<b>\$473,687</b>	4		
Civil Engineering Contracts and Grants (140340):					<b>\$30,144</b>	2		
Engineering Dean & Staff (140101):					<b>\$274,710</b>	1		
Integrated Manufacturing Systems Engineering Institute (IMSEI) (142401):					<b>\$100,000</b>	1		
Materials Science and Engineering C&G (140840):					<b>\$200,000</b>	1		
Mechanical & Aerospace Engineering C&G (140940):					<b>\$240,000</b>	2		
NCSU Future Renewable Electric Energy Delivery & Mgt Center (FREEDM) (14017					<b>\$899,973</b>	7		
Precision Machine Research (140502):					<b>\$25,030</b>	2		

**Advanced Self Powered Systems of Sensors and Technologies (ASSIST) Center (140172):**

**\$5,474,705      7**

2012-1067	Misra, Veena Muth, John Ozturk, Mehmet Strohmaier, Jason Oralkan, Omer Cheng, Ke Daniele, Michael Veety, Elena Jones, Melissa	Joint Coll.	Advanced Self Powered Systems of Sensors and Technologies (ASSIST) Center	National Science Foundation (NSF)	<b>\$583,184</b>	Supplement	Research	NSF Nanosystems Engineering Research Center (NERC) for Advanced Self-Powered Systems of Integrated Sensors and Technologies (ASSIST)
2012-1067	Misra, Veena Muth, John Ozturk, Mehmet Strohmaier, Jason Oralkan, Omer Cheng, Ke Daniele, Michael Veety, Elena Jones, Melissa	Joint Coll.	Advanced Self Powered Systems of Sensors and Technologies (ASSIST) Center	National Science Foundation (NSF)	<b>\$4,000,000</b>	Continuation	Research	NSF Nanosystems Engineering Research Center (NERC) for Advanced Self-Powered Systems of Integrated Sensors and Technologies (ASSIST)

**Biomedical Engineering (147501):**

**\$3,295,408      18**

2018-1749	Brown, Ashley LaBean, Thomas	Joint Dept.	Biomedical Engineering	National Science Foundation (NSF)	<b>\$400,000</b>	New	Research	A Multiscale Material Approach to Understanding the Effects of Viscoelasticity on Cell Adhesion, Migration, and TGF-beta Activation/Signaling
2018-1907	Cole-Husseini, Harrysson, Ola Jones, Jacob Pankow, Mark Schweitzer, Mary	Joint Coll.	Biomedical Engineering	National Science Foundation (NSF)	<b>\$695,668</b>	New	Research	MRI: Acquisition of a Nano-Computed Tomography System for Nondestructive 3D Microstructural Imaging
2018-2600	Freytes PhD, Donal Peng, Xinxia	Joint Coll.	Biomedical Engineering	National Institutes of Health (NIH)	<b>\$449,261</b>	New	Research	Optimal Tissue Engineering Approach for Treating Injured Vocal Folds
2018-0032	Huang, He		Biomedical Engineering	National Institutes of Health (NIH)	<b>\$471,723</b>	New	Research	Error Tolerance in Wearer Robot Systems

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**Chemical and Biomolecular Engineering (140201):** **\$7,901,131** **37**

2014-0702	Haugh, Jason		Chemical and Biomolecular Engineering	National Institutes of Health (NIH)	\$544,873	Continuation	Research	Multiscale Modeling of Wound Healing
2018-2898	Hsiao, Chien Velev, Orlin Khan, Saad		Chemical and Biomolecular Engineering	Eastman Chemical Company	\$499,976	New	Research	EMN-18-S-S-02: Design of BPA interfacial energies
2017-1062	Keung, Albert		Chemical and Biomolecular Engineering	National Institutes of Health (NIH)	\$456,000	Continuation	Research	The Epigenome in Substance Abuse Disorders: Engineering New Tools to Dissect Function From Form
2018-1096	Keung, Albert Rao, Balaji Laplante PhD, Caroline	Joint Coll.	Chemical and Biomolecular Engineering	National Science Foundation (NSF)	\$477,871	New	Research	EFRI CEE: Ascribing Function to Chromatin with Coordinated Live-cell Epigenomic Sensors and Scalpels
2018-0790	Li, Fanxing Westmoreland, Phillip Lamb, Henry Fang, Tiegang		Chemical and Biomolecular Engineering	Rapid Advancement in Process Intensification Deployment (RAPID) Institute (US Dept. of Energy (DOE) - Energy Efficiency & Renewable Energy (EERE))	\$434,722	New	Research	Modular Conversion Of Stranded Ethane To Liquid Fuels
2018-2712	Santiso, Erik Hall, Carol Menegatti, Stefano		Chemical and Biomolecular Engineering	National Science Foundation (NSF)	\$599,998	New	Research	Element:Software:Enabling Millisecond-Scale Biomolecular Dynamics

**Civil, Construction and Environmental Engineering (140301):** **\$3,824,040** **38**

2018-1572	Berglund, Emily Cooper, Caren	Joint Coll.	Civil, Construction and Environmental Engineering	Virginia Polytechnic Institute and State University (aka Virginia Tech) (US Environmental Protection Agency (EPA))	\$540,000	New	Research	Untapping the Crowd: Consumer Detection and Control of Lead in Drinking Water
2018-0768	Ranjithan, Sanmugavadivel		Civil, Construction and Environmental Engineering	National Science Foundation (NSF)	\$421,858	New	Research	Resilience-based Modeling for Water Infrastructure Systems

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**Computer Science (141901):**

**\$7,826,741**

**30**

2018-0674	Lester, II, James Azevedo, Roger	Joint Coll.	Computer Science	National Science Foundation (NSF)	\$1,499,183	New	Research	Supporting Student Planning with Open Learner Models in Middle Grades Science
2018-3231	Lester, II, James Mott, Bradford		Computer Science	National Science Foundation (NSF)	\$1,499,736	New	Research	Collaborative Research: FW-HTF: Augmented Cognition for Teaching: Transforming Teacher Work with Intelligent Cognitive Assistants
2018-1849	Lynch, Collin Barnes, Tiffany Heckman, Sarah		Computer Science	National Science Foundation (NSF)	\$597,529	New	Research	Developing Integrated Teaching Platforms to Enhance Blended Learning in STEM
2018-1258	Mueller, Frank		Computer Science	National Science Foundation (NSF)	\$500,000	New	Research	SaTC: CORE: Small: Enhanced Security and Reliability for Embedded Control Systems
2018-1260	Murphy-Hill, Emerson		Computer Science	National Science Foundation (NSF)	\$498,461	New	Research	SHF: Small: Retrospective and Prospective Studies of the Effects of Gender Bias in Software Engineering
2018-0826	Ogan, Kemafor Scafuro, Starly, Binil	Joint Dept.	Computer Science	National Science Foundation (NSF)	\$499,773	New	Research	CSR:Medium:SmartChai nDB - Enabling Smart Marketplaces With A Scalable Semantically- Enhanced Blockchain Platform
2018-1257	Tseng, Hung-Wei		Computer Science	National Science Foundation (NSF)	\$499,515	New	Research	CSR: Small: IOQL: an I/O Interface for Near- Data Processing

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**Electrical and Computer Engineering (140401):** **\$11,576,641** **56**

2018-2367	Daniele, Michael Bozkurt, Alper Lobaton, Edgar Rufty, Thomas	Joint Coll.	Electrical and Computer Engineering	US Dept. of Agriculture (USDA) National Institute of Food and Agriculture	\$956,930	New	Research	CPS:Medium:Multimodal Sensing for Early Detection and Real-Time Correction of Water Stress and Nutritional Needs in Plants
2017-3245	Franzon, Paul		Electrical and Computer Engineering	US Navy-Office Of Naval Research (Defense Advanced Research Projects Agency (DARPA))	\$1,398,056	Continuation	Research	Trusted Fabrication through 3D Integration Demonstration
2017-1261	Guvenc, Ismail		Electrical and Computer Engineering	University of South Carolina (National Aeronautics & Space Administration (NASA))	\$496,959	Continuation	Research	University Leadership Initiative; Hyper-Spectral Communications, Networking & ATM as Foundation for Safe and Efficient Future Flight: Transcending Aviation Operational Limitations with Diverse and Secure Multi-Band, Multi-Mode, and mmWave Wireless Links
2018-1408	Oralkan, Omer Dayton, Paul Yamaner, Feysel	Joint Dept.	Electrical and Computer Engineering	National Institutes of Health (NIH)	\$502,763	New	Research	Acoustic Angiography Using Dual-Frequency and Ultrawideband CMUT Arrays
2014-0654	Stancil, Daniel Baliga, B. Bhattacharya, Hopkins, Douglas Husain, Iqbal Lukic, Srdjan Harrysson, Ola Ozturk, Mehmet Misra, Veena Sullivan, Rogelio Pritchard, Ewan Carpenter, Pam Kekas, Dennis Muth, John Huang, Alex	Joint Coll.	Electrical and Computer Engineering	US Dept. of Energy (DOE)	\$3,464,152	Continuation	Research	PowerAmerica: The Next Generation Power Electronics Manufacturing Innovation Institute

**Industrial and Systems Engineering (140601):** **\$2,517,928** **23**

2018-1768	Uzsoy, Reha Ozaltin, Osman Morrill, Thayer	Joint Coll.	Industrial and Systems Engineering	National Science Foundation (NSF)	<b>\$618,910</b>	New	Research	Decentralized Engineering Decision Models to Support Product Transitions
2018-1855	Xu, Xu Chen, Karen Feng, Jing Wu, Tianfu	Joint Coll.	Industrial and Systems Engineering	National Science Foundation (NSF)	<b>\$749,542</b>	New	Research	Leverage Augmented Reality for Safety Education in the Logistics Industry

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**Industrial Extension Service (140701):** **\$2,899,002** **2**

2018-2797	Baxter, Fiona		Industrial Extension Service	US Dept. of Defense (DOD)	\$2,667,002	New	Service/Ex	DoD OEA Implementation Grant
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**Manufacturing Extension Partnership (144301):** **\$3,246,183** **2**

2015-0820	Mintz, Phillip		Manufacturing Extension Partnership	National Institute of Standards & Technology (US Dept. of Commerce (DOC))	\$3,036,183	Continuation	Public Service/E xtension	Manufacturing Extension Partnership Center for State of North Carolina (Recompete Proposal)
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**Materials Science and Engineering (140801):** **\$4,082,679** **30**

2015-1959	Brenner, Donald Maria, Jon-Paul		Materials Science and Engineering	US Navy-Office Of Naval Research	\$639,709	Continuation	Research	The Science of Entropy Stabilized Ultra-High Temperature Materials
2015-1760	Jones, Jacob Ozturk, Mehmet Hawari, Ayman Berube, David Dickey, Elizabeth Muth, John	Joint Coll.	Materials Science and Engineering	National Science Foundation (NSF)	\$1,100,000	Continuation	Research	NNCI: North Carolina Research Triangle Nanotechnology Network (RTNN)

**Mechanical & Aerospace Engineering (140901):** **\$3,434,122** **32**

2018-1327	Jiang, Xiaoning Dayton, Paul Jing, Yun	Joint Dept.	Mechanical & Aerospace Engineering	National Institutes of Health (NIH)	\$632,171	New	Research	Forward viewing catheter-delivered microbubble enhanced sonothrombolysis (FV-CAMUS)
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**MS Computer Networking ECE (146901):** **\$600,000** **1**

2018-1854	Wang, Wenye Eun, Do Dai, Huaiyu	Joint Dept.	MS Computer Networking ECE	National Science Foundation (NSF)	\$600,000	New	Research	SpecEES: Efficient Monitoring and Spectrum Utilization of Multi-Layer Wireless Networks
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**North Carolina Clean Energy Technology Center (140150):** **\$3,554,260** **4**

2017-1789	Brutz, Heather Sapienza, Richard Tsai, Chih		North Carolina Clean Energy Technology Center	NC Department of Transportation (Federal Highway Administration (FHWA))	\$1,100,101	Continuation	Research	Clean Fuel Advanced Technology 2016-2017
2017-1789	Brutz, Heather Sapienza, Richard Tsai, Chih		North Carolina Clean Energy Technology Center	NC Department of Transportation (Federal Highway Administration (FHWA))	\$1,245,374	Continuation	Research	Clean Fuel Advanced Technology 2016-2017
2017-3030	Panzarella, Isaac Samberg, Arthur		North Carolina Clean Energy Technology Center	US Dept. of Energy (DOE) - Energy Efficiency & Renewable Energy (EERE)	\$1,108,785	New	Public Service/E xtension	Combined Heat and Power Technical Assistance Partnership (Proposed title: Combined Heat and Power Technical Assistance Partnership for the Southeast United States)

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**Nuclear Engineering (141101):**

**\$11,368,798**

**31**

2018-2827	Avramova, Maria Hou, Jia Smith, Ralph	Joint Coll.	Nuclear Engineering	US Dept. of Energy (DOE)	<b>\$710,000</b>	New	Research	Demonstration Of Utilization Of High-fidelity Neams Tools To Inform The Improved Use Of Conventional Tools Within The Neams Workbench On The 18-15104
2018-2925	Dinh, Nam Avramova, Maria Gupta, Abhinav Chi, Min	Joint Dept.	Nuclear Engineering	US Dept. of Energy (DOE) - Advanced Research Projects Agency - Energy (ARPA-E)	<b>\$2,686,834</b>	New	Research	Development of a Nearly Autonomous Management and Control System for Advanced Reactors
2018-1446	Hawari, Ayman		Nuclear Engineering	US Dept. of Energy (DOE)	<b>\$488,464</b>	New	Research	Establishing a Hot Cell Capability at the PULSTAR Reactor
2014-0501	Mattingly, John Gardner, Robin Azmy, Yousry Krim, Hamid Vatsavai, Ranga Wilson, Alyson Smith, Ralph Boettcher, William Reardon, Robert Samatova, Nagiza	Joint Coll.	Nuclear Engineering	National Nuclear Security Administration (US Dept. of Energy (DOE))	<b>\$4,977,029</b>	Continuation	Research	Consortium for Nonproliferation Enabling Capabilities

**COLLEGE OF ENGINEERING Total:**

**\$73,974,470**

**333**

**310 projects**

**Jul - Dec 2018**