



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE *of* ENGINEERING

Contracts and Grants Office Newsletter



GREETINGS

The **Contracts and Grants Office** in *the* William States Lee College of Engineering welcomes you to the Fall 2019 semester with the 3rd edition of the Contracts and Grants Office e-newsletter. The CoEN Research Faculty had a tremendously productive year securing a record amount of sponsored programs funding. During fiscal year 2019, the College of Engineering secured a total of **122** sponsored awards totaling over **\$16.4 million** in support of research activities, a record total for the College.

The University received a total of **\$51,008,661** in research dollars which marks the University's largest total awards amount in history. Congratulations to the Research Faculty and the administrators within the College, Departments, and Centers who work tirelessly as research administrators to support the continued growth in sponsored programs funding.

Please enjoy the Faculty research highlights and the research administration updates found in this issue. As always, we are grateful for our work with you and look forward to our next interaction with you and your teams.

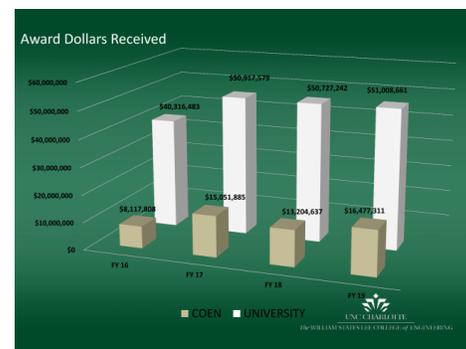
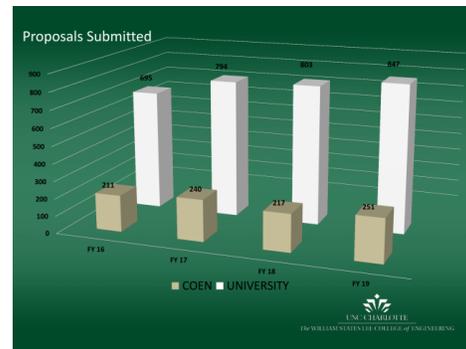
Sincerely,
Shanda L. Wirt
Director, Contracts and Grants Office, CoEN

PROPOSAL AND AWARD ACTIVITY

As of June 30, 2019, the **College of Engineering** has received 122 **awards** totaling **\$16.4M**. This is a **25% increase** in award dollars received from last year at this time.

Additionally, the **College of Engineering** has processed and submitted 251 **proposals in FY19**. This is a **15% increase** in number of proposals submitted from last year.

Note that, for the last three years, the **College of Engineering** has led UNC Charlotte in research award dollars totaling **\$15M for FY 17**, **\$13.2M for FY 18**, and **\$16.4 for FY 19**.



UNIVERSITY POLICY UPDATES



F & A Waiver Request

All proposals that do not adhere to UNCC's negotiated F&A rate will need prior signed approval from the Vice Chancellor for Research, Dr. Rick Tankersley, at least 10 Business Days prior to sponsor deadline. The Contracts and Grants Office will prepare the F&A Waiver Request form and obtain Dr. Tankersley's signature on behalf of the PI if notification is provided within the required 10 business days prior to the sponsor deadline.

Acquisition and Disposition of Gift and Grant Property Policy: 601.12

Requests for transfer of grant equipment must be submitted to the Executive Director of Grants & Contracts Administration for coordination with the Materials Management Department and the sponsor of the grant. The University will not release the equipment until approval is secured from the sponsor and all transfer procedures are completed. The process of documenting approval from the sponsor may take up to three months, and the entire transfer process may take up to six months before all approvals are in place. Under no circumstances may equipment be transferred without the express written approval of each of the Office of Grants & Contract Administration, the Materials Management Department, and the State Surplus Property Office.

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SPONSOR UPDATES

NIH Announces New Centralized Notifications for Unfunded Applications

NIH is adopting a new centralized, streamlined process for official notification of unfunded applications. About 14 months following the application's council date, the eRA system will send an automated email to the relevant institution's SO, AOR and to the NoA email address listed in the eRA Commons Institution Profile, listing applications that were not selected for funding (9/10/19).

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NSF Commits \$36 M to Uncovering Rules of Life that Will Drive the Next-Generation Research

The National Science Foundation has invested \$36 million in the first projects under its *Understanding the Rules of Life* portfolio. These awards are aimed at accelerating development in two key areas of *science* and *engineering* research: building a synthetic cell, and epigenetics.

Three years ago, NSF identified *Understanding the Rules of Life* as one of its Big Ideas, a set of long-term research priorities. NSF has now issued its first awards under that portfolio, demonstrating its commitment to bringing together interdisciplinary teams of researchers to begin uncovering this rulebook and using it to predict how an organism will look and behave (9/4/19).

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FACULTY RESEARCH SPOTLIGHTS

Dr. Matthew Davies,
Mechanical Engineering,
Dr. Thomas Suleski,
Physics & Optical
Science

The DoD recently
awarded Dr. Davies &
Dr. Suleski a Defense
University Research
Instrumentation



Program (DURIP) grant entitled "*Ultra-Precision Freeform Optics Generator for Space Situational Awareness and Surveillance*"

This award has **one year duration** with a total of **\$946,716**. The equipment proposed for acquisition in this DURIP proposal will enhance the quality of research and education in freeform optics with direct impact on currently funded DoD projects. Applications are broad and include broad band surveillance systems, imaging spectrometers and hyperspectral imaging, infrared sensors and imagers, threat detection and threat mitigation systems and compact heads up displays. It will also enable future DoD research. Examples include high power beam shaping and beam combination with freeform optics, large-scale light-weight, thermally-insensitive silicon carbide optics for UAV applications, space applications, directed energy weapons, and hard transparent materials, such as aluminum oxynitride (ALON), spinel, or polycrystalline alumina, for freeform elements for aerodynamic missile domes or high-power laser optics. Freeform optics are applicable across a wide range of size scales for many other applications both defense and non-defense related and they allow entirely new optical devices and both miniaturized and higher performance optical devices. The proposed equipment and associated research enabled that has applicability to DoD priorities in: (1) miniaturization and SWaP reduction for battlefield and space situational awareness systems, UAVs and warfighter intelligence; (2) surveillance and hyperspectral imaging; (3) directed energy/high-power laser weapons; and (4) threat mitigation. The equipment purchased in this DURIP will enable research in freeform optics crossing length scales from the sub-millimeter to greater than half-meter in optically transparent materials across various wavelength bands (e.g. zinc sulfide, germanium, chalcogenide glass, spinel) to metals and lightweight thermally insensitive reflective materials (e.g. silicon carbide). Such optics have broad-ranging military applications of interest to the DoD and in private industry.

Dr. Mesbah Uddin,
Mechanical
Engineering

**The DOD DN Office of
Naval Research
(ONR) recently
awarded Dr. Uddin A
Navy and Marine
Corps Science,
Technology,**

**Engineering & Mathematics (STEM),
Education and Workforce Program grant entitled "*Retooling
Veterans with Service and Combat-Connected Disabilities in
Advanced Virtual Engineering*".**



This award has three years duration with a total of \$750,000 which focuses on veteran graduate education particularly in the area of computational mechanical engineering. The concept of this program is driven by the fact that fast-paced developments in computer horse-power and analytical tools enabled engineering design decision-making processes to move from a process based off expensive pure physical testing towards an alternative one that relies heavily on computer simulations or virtual laboratory analyses. As a result, there is a strong demand for well-trained Computer-Aided Engineering (CAE) simulation engineers. Thus, this project targets primarily U.S. armed forces veterans, especially veterans with service- and combat-connected disabilities, to retrain them to grow into Highly-Qualified Personnel (HQP) in the Naval/DoD STEM related areas through an applied graduate level education and research in the area of virtual engineering design and analyses. For veterans with a service- and combat-connected disability, it will open up the doors for intellectually challenging and financially rewarding career opportunities, while for Navy/DoD, it makes available a pool of highly-qualified mechanical engineering graduates with Master's and PhD degrees well trained in computer aided design and analysis. This program to retrain veterans with disabilities (and veterans in general) is effectively designed to address the critical DoD talent needs as identified in the National Defense Strategy (NDS). As such, almost the entirety of the curriculum, except for the two fundamental engineering classes, is devoted to advanced computing. The restricted technical elective courses mandate that the students be trained in at least one of the following areas in addition to their MSME major: data

analytics, artificial intelligence, autonomy and robotics. As such, the overall curriculum design will encompass most of the areas identified in the NDS as the advanced technology areas where our defense initiatives need HQP in order to maintain our global superiority. Finally, although the program will be tailored primarily towards the retraining of our veterans, the Naval application related research projects will be open to all US nationals. A successful completion of this project will subsequently enable the Navy and DoD, in general, to have access to an even larger pool of US national talents trained in Virtual Engineering or in Engineering using Advanced High Performance Computing. **Dr. Harischandra Cherukuri, and Dr. Jerry Dahlberg are Co-PIs for this project.**

READ MORE

WELCOME NEW FACULTY

Dr. Ahmed Arafa

Assistant Professor

Electrical & Computer Engineering

Dr. Linqun Bai

Assistant Professor

Systems Engineering & Engineering Management

Dr. Behnaz Papari

Assistant Professor

Energy Production & Infrastructure Center

Dr. Cathy Blat

Assistant Dean

Office of Student Development and Success

Dr. Yuting Chen

Assistant Professor

Engineering Technology & Construction Management

Dr. Youxing Chen

Research Assistant Professor

Mechanical Engineering & Engineering Science

Mr. Jim Gafford

Assistant Director

Energy Production & Infrastructure Center

Dr. Wei Gao

Lecturer/Lab Manager

Electrical & Computer Engineering

Dr. Javad Hashempour

Assistant Professor
Engineering Technology & Construction Management

Ms. Bobbi Hodge
Lecturer
Engineering Technology & Construction Management

Dr. Mario Mencagli
Assistant Professor
Electrical & Computer Engineering

John Nettles
Lecturer
Engineering Technology & Construction Management

Dr. Stephanie Pilkington
Assistant Professor
Engineering Technology & Construction Management

Dr. Alison Sears
Teaching Assistant Professor
Engineering Technology & Construction Management

Dr. Michael Smith
Assistant Professor
Engineering Technology & Construction Management

Dr. Guanglin Xu
Assistant Professor
Systems Engineering & Engineering Management

Dr. In Hong Yang
Assistant Professor
Mechanical Engineering & Engineering Science

UPCOMING EVENTS AND CONFERENCES

Research Administration Conferences

NCURA: Financial Research Administration (FRA)
San Juan, Puerto Rico 3/2/20 - 3/3/20 [Details here](#)

NCURA: Pre-Award Research Administration (PRA)
San Juan, Puerto Rico 3/5/20 - 3/6/20 [Details here](#)

NCURA: REGION III 2020 Regional Meeting
St. Pete Beach, FL. 4/26/20 - 4/29/20 [Details here](#)

Have News To Share?

Please send any news, awards, photos, etc. along to [Joanne Zhang](#) to be included in Contracts and Grants Office newsletter.

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