



 UNIVERSITY OF TENNESSEE  
**CHATTANOOGA**  
Research and Sponsored Programs

**ANNUAL REPORT**  
**FISCAL YEAR 2019**  
JULY 1, 2018 - JUNE 30, 2019





# WHAT'S INSIDE

FACULTY ENGAGEMENT .....	5
INSTITUTION OVERVIEW .....	6
UTC SPONSORED PROGRAM HIGHLIGHTS .....	7
ACADEMIC ADMINISTRATION .....	8
COLLEGE OF ARTS AND SCIENCES .....	10
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE .....	12
COLLEGE OF HEALTH, EDUCATION AND PROFESSIONAL STUDIES .....	14
GARY W. ROLLINS COLLEGE OF BUSINESS .....	16
CONTACT ORSP .....	20



# WELCOME

The Office of Research and Sponsored Programs (ORSP) seeks to promote scholarship, research, creative activities and engagement by encouraging and providing comprehensive support to faculty, staff and students in the pursuit of sponsored programs. The breadth and diversity of sponsored activities undertaken by faculty, staff and students throughout this past year make invaluable contributions toward UTC's mission and strategic plan goals.

The 2018 - 2019 ORSP Annual Report highlights the many sponsored program successes realized by UTC faculty and staff. The campus continues to attract external resources that invest in our community, engage research and scholarship across academic disciplines, promote student opportunities, foster innovation through research and development and grow our capacities in strategic and sustainable ways.

I would also like to recognize the efforts of the many faculty, staff, administrators and community partners who enable and empower sponsored program accomplishments. Please join me in congratulating all of the fiscal year 2019 awardees for their successes and thanking those who have submitted proposals during fiscal year 2019. The skill, expertise and good effort of so many on campus working together is an investment that will pay dividends for our shared future.



**Dr. Joanne Romagni**

Vice Chancellor for Research and Dean of the Graduate School



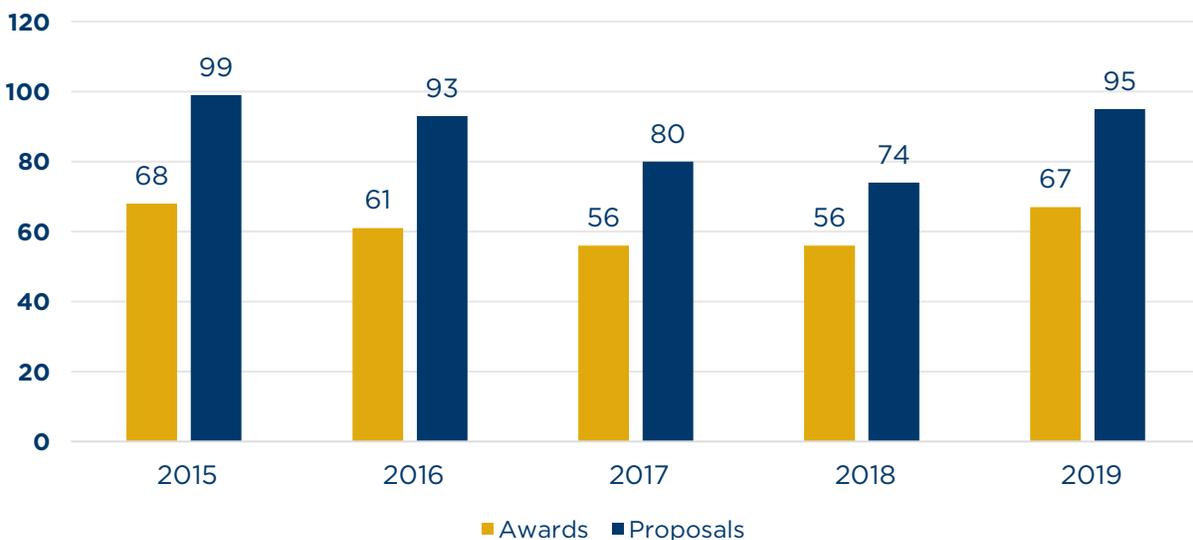
**ORSP Staff Members**

(From left to right and front to back)

Meredith Perry,  
Terri Bearbower,  
Maria Derrick,  
Sam Stanley,  
Angie Johnson,  
Todd Doman and  
Tracey Woodbury

# FACULTY ENGAGEMENT

## UNIQUE LEAD PRINCIPAL INVESTIGATORS

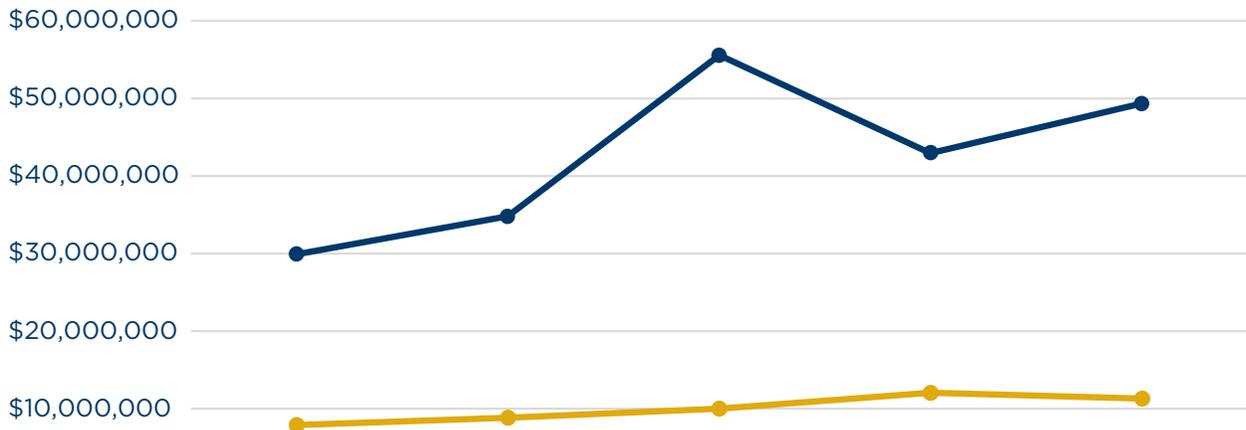


**Dr. Li Yang**, professor of computer science and director of the **National Center of Academic Excellence in Cyber Defense**, exemplifies the deep interconnection between meritorious research and student learning. While at UTC, Dr. Yang has attracted more than **\$1.5 million** in sponsored program awards. Her expertise in cybersecurity and innovations in using artificial intelligence to assess software and cybersecurity protocols have attracted funding from a number of sponsors.

Notably, Dr. Yang has invested her considerable talents in pursuing her research and in building UTC's capacity to prepare students for the cybersecurity workforce of the future. With her leadership, UTC has attracted scholarship funds to recruit, retain and diversify students pursuing computer science and cybersecurity careers. Dr. Yang also attracted funding to establish the National Center of Academic Excellence in Cyber Defense. Dr. Yang's expertise is nationally recognized, and her successful research career has earned her an appointment as a program officer at the National Science Foundation.

# INSTITUTION OVERVIEW

## FY15 - 19 PROPOSALS AND AWARDS



	2015	2016	2017	2018	2019
— Awards	\$7,911,365	\$8,850,482	\$10,036,667	\$12,075,666	\$11,337,379
— Proposals	\$29,869,180	\$34,758,764	\$55,539,947	\$42,944,804	\$49,288,399

**\$42,480,219** 5-Year Proposal Average

5-Year Award Average **\$10,042,312**

**\$1.3 million**

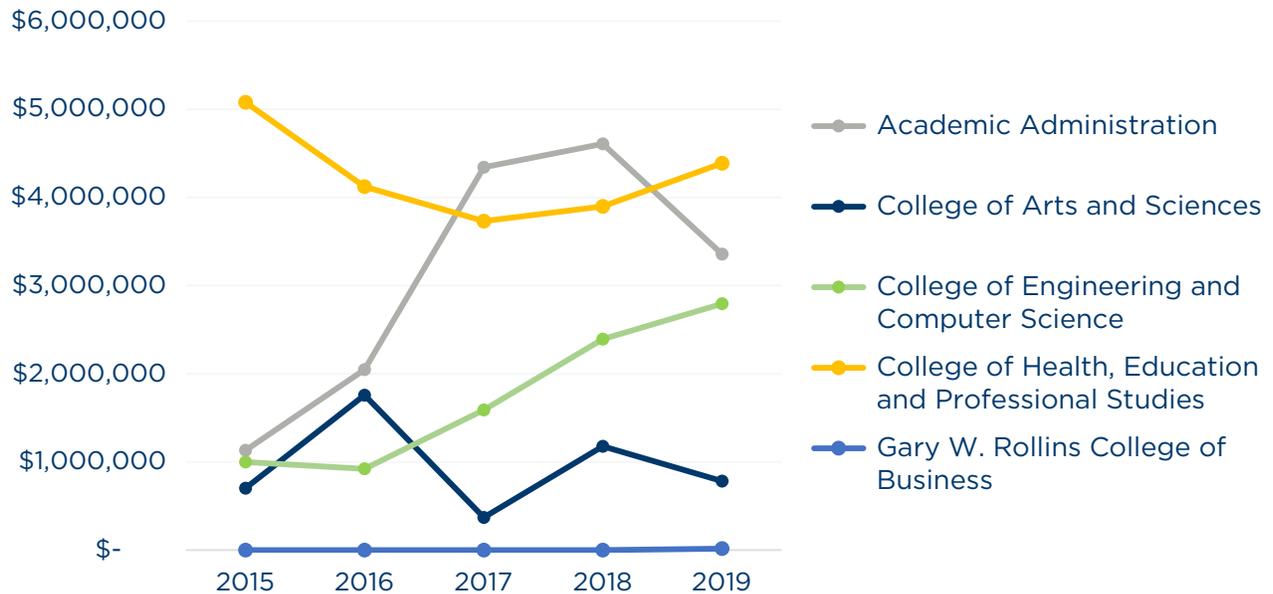
more award dollars in FY2019 than the 5-year average

**\$6.8 million**

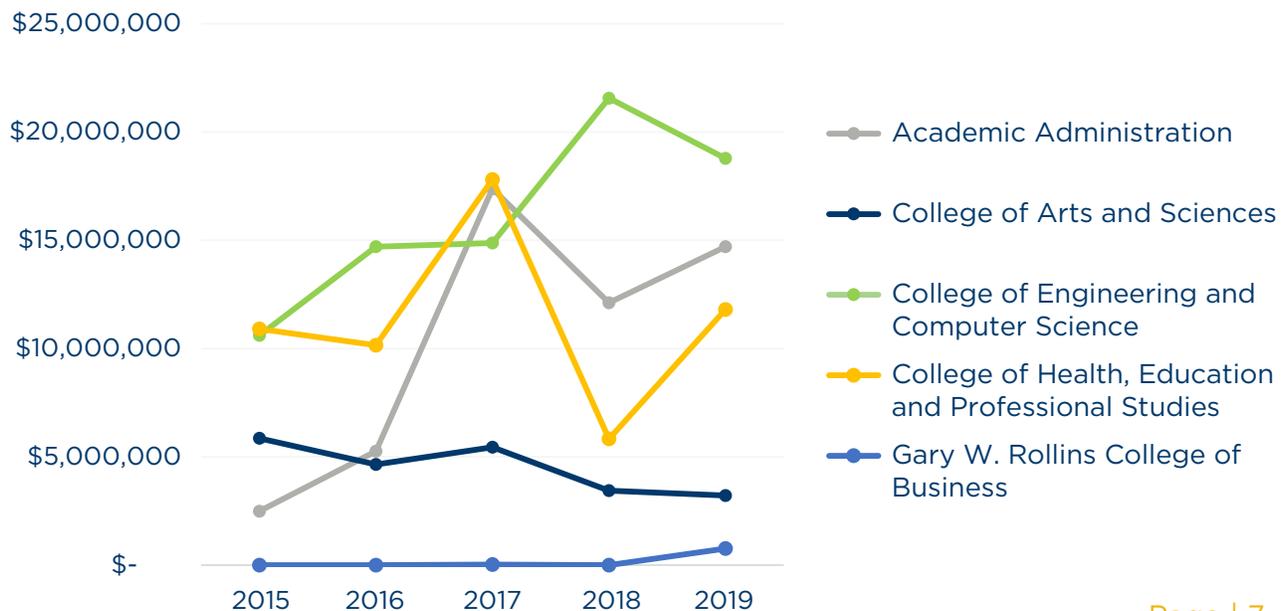
more proposal dollars in FY2019 than the 5-year average

# SPONSORED PROGRAM HIGHLIGHTS

## FIVE-YEAR TREND - AWARDS

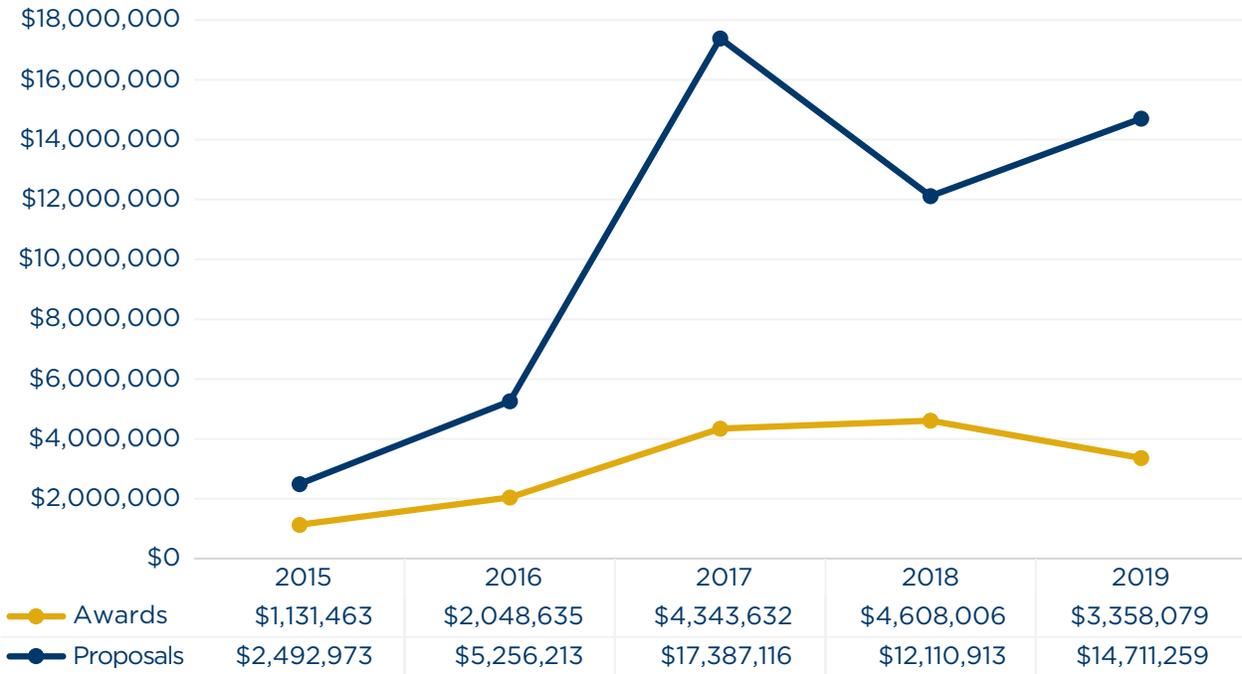


## FIVE-YEAR TREND - PROPOSALS

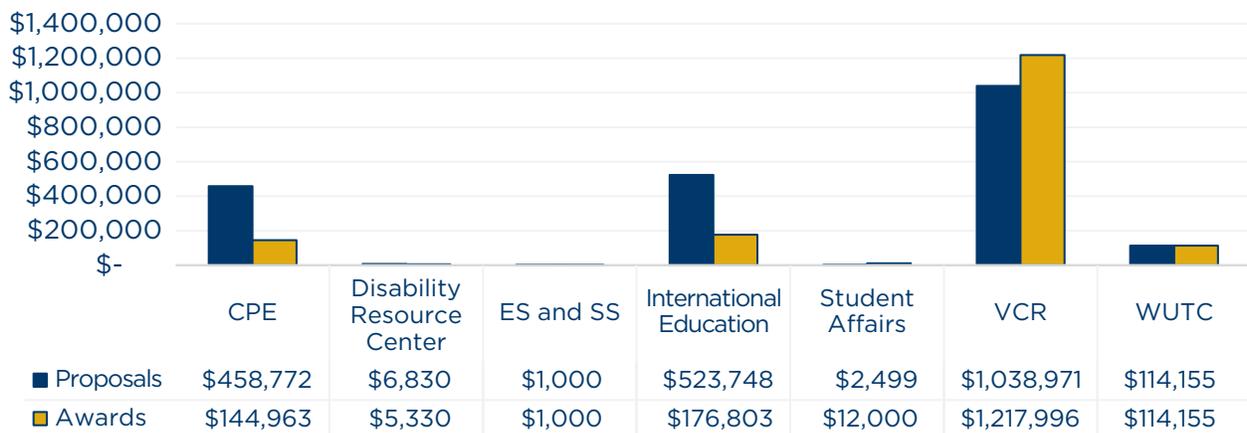


# ACADEMIC ADMINISTRATION

## FY15 - 19 PROPOSALS AND AWARDS



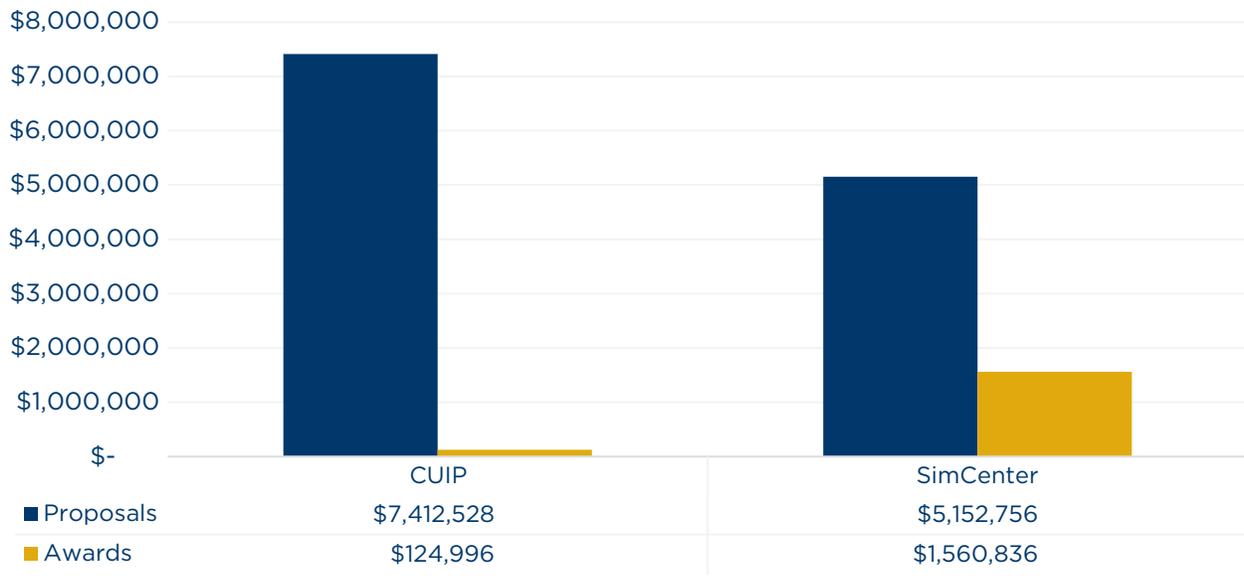
## PROPOSALS AND AWARDS BY DEPARTMENT



CPE: Center for Professional Education; ES and SS: Enrollment Services and Student Success; VCR: Vice Chancellor for Research; WUTC: Radio Station

# RESEARCH CENTERS\*

## PROPOSALS AND AWARDS



The Center for Urban Informatics and Progress (CUIP) led by **Dr. Mina Sartipi**, engages experts in cross-disciplinary research to find solutions to urban challenges. Dr. Sartipi is off to a momentous ascent as CUIP has submitted proposals requesting **\$7.4 million** in FY2019.

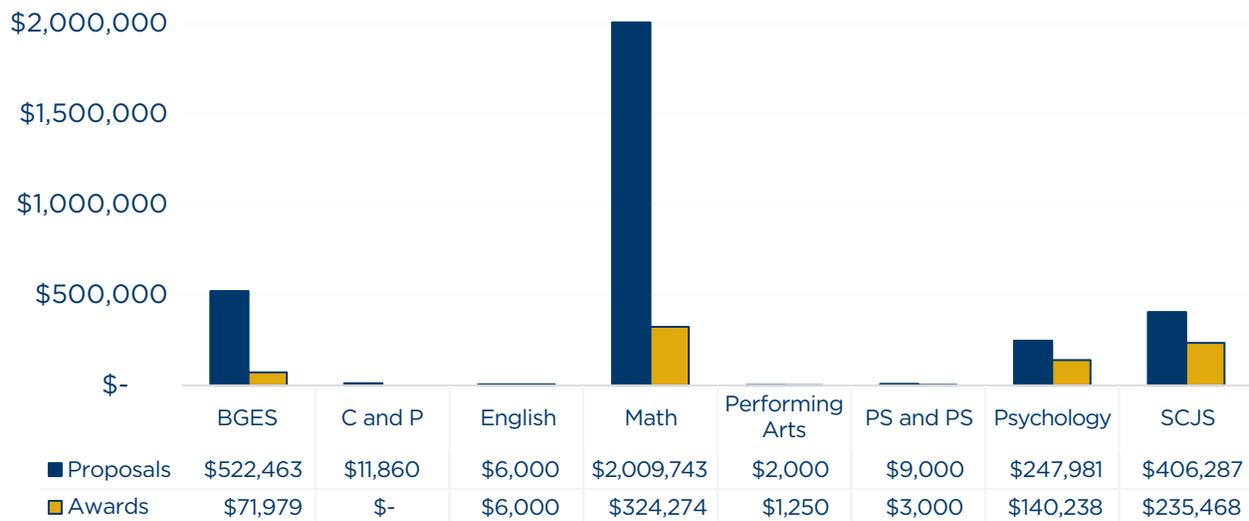


The SimCenter, led by **Dr. Tony Skjellum**, is a research accelerator for innovative concepts and laboratories and acts as UTC's core facility for High-Performance Computing and Storage. For FY2019, Dr. Skjellum was awarded more than **\$1.5 million** for projects originating in the SimCenter.

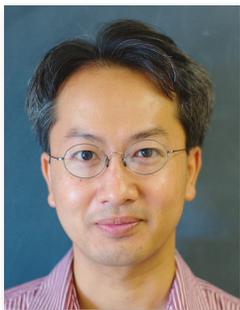
\*The research centers are classified as administrative departments through the Vice Chancellor of Research for ORSP reporting purposes.

# COLLEGE OF ARTS AND SCIENCES

## PROPOSALS AND AWARDS BY DEPARTMENT



**Dr. Lakmali Weerasena** and her research team led the department of Mathematics to be the **top contributor of proposals** across CAS, requesting more than **\$580k**. Dr. Weerasena and her team’s proposals focus on algorithm and mathematical framework development.

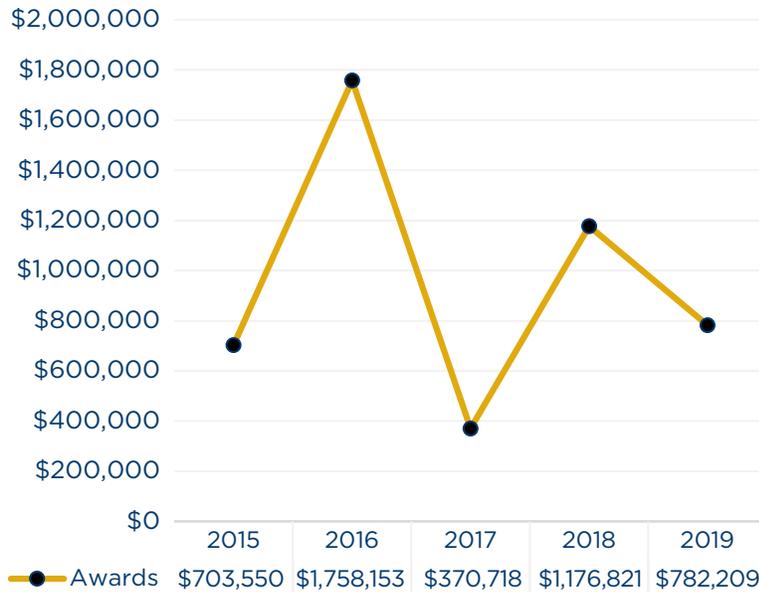


**Dr. Andrew Ledoan** and his research team led the department of Mathematics to be the **top recipient of funding** across CAS. Dr. Ledoan received more than **\$282k** to support undergraduate research opportunities in mathematical analysis.

BGES: Biology, Geology and Environmental Science; C and P: Chemistry and Physics; PS and PS: Political Science and Public Service; SCJS: Social, Cultural and Justice Studies

# COLLEGE OF ARTS AND SCIENCES

## Award Trends



**88%**

of depts that submitted proposals received funding

## Proposal Trends

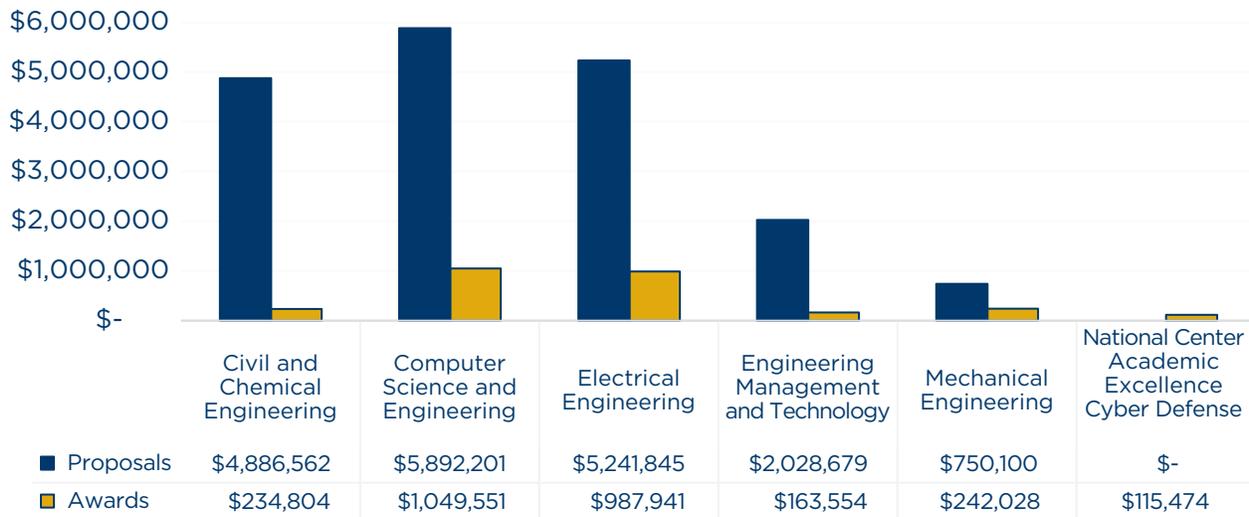


**91%**

of proposals supported research activities

# COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

## PROPOSALS AND AWARDS BY DEPARTMENT



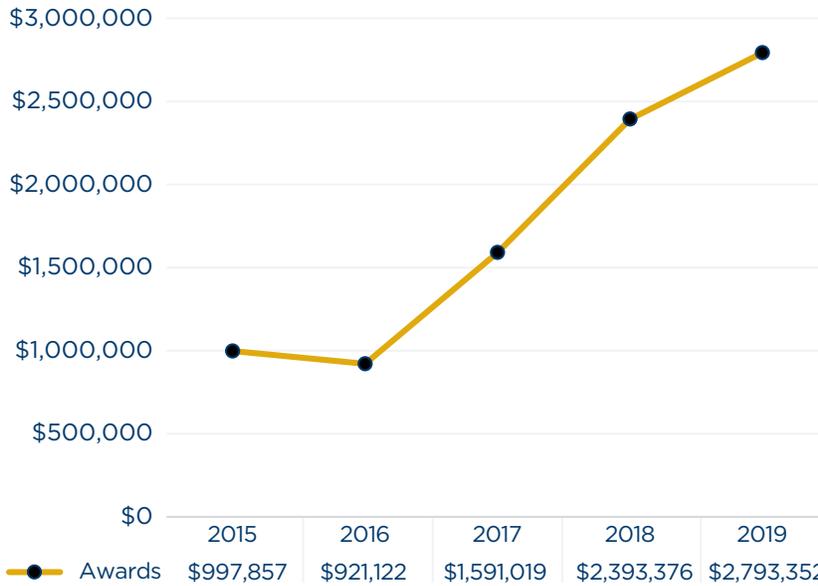
**Dr. Hong Qin**, professor of computer science and engineering, is the **top recipient of awards** across CECS. Dr. Qin's latest project brought more than **\$549k** to support his initiative to integrate biological big data research into student training and education.



**Dr. Michael Danquah**, professor of civil and chemical engineering, was the **top contributor of proposals** within CECS. His eight projects have the potential to bring in more than **\$816k** to support a variety of initiatives surrounding disaster management, opiate and pathogen detection and leukemia therapy, to name a few.

# COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

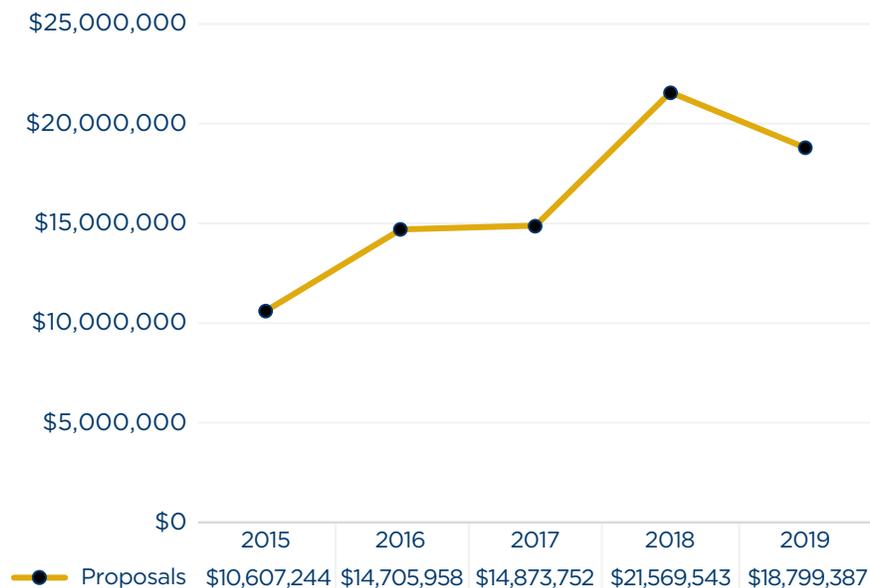
## Award Trends



**25%**  
of all UTC  
awards  
were from  
CECS

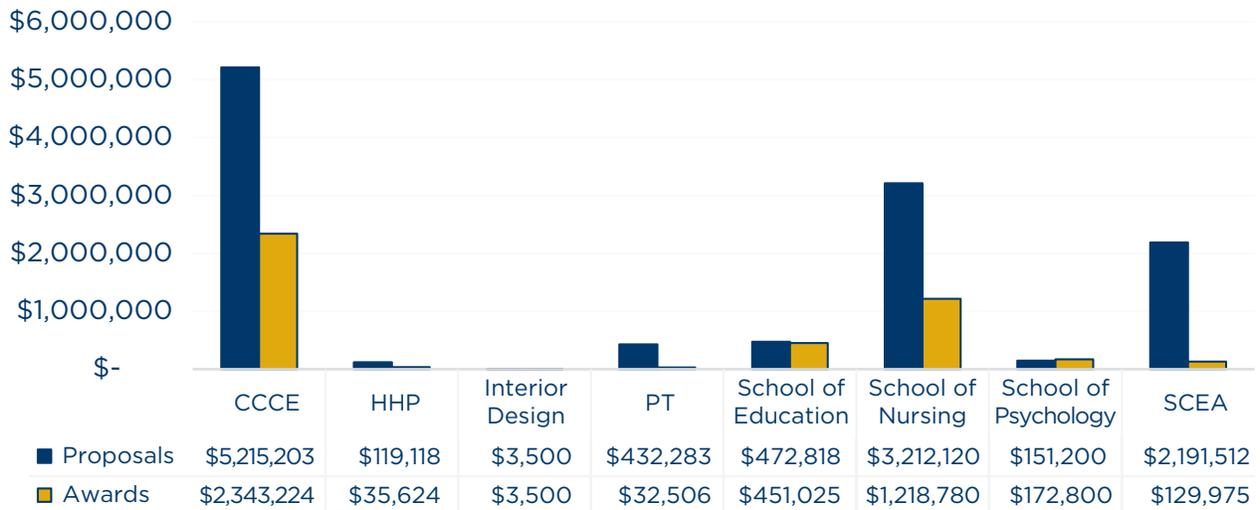
## Proposal Trends

**38%**  
of all UTC  
proposals  
were from  
CECS



# COLLEGE OF HEALTH, EDUCATION AND PROFESSIONAL STUDIES

## PROPOSALS AND AWARDS BY DEPARTMENT



**Dr. Hunter Huckabay**, attracted more than **\$5.1 million** for the Center for Community Career Education for the multi-year **GEAR UP** project. This project empowers low-income, potential first-generation students to succeed in school and prepare for college.

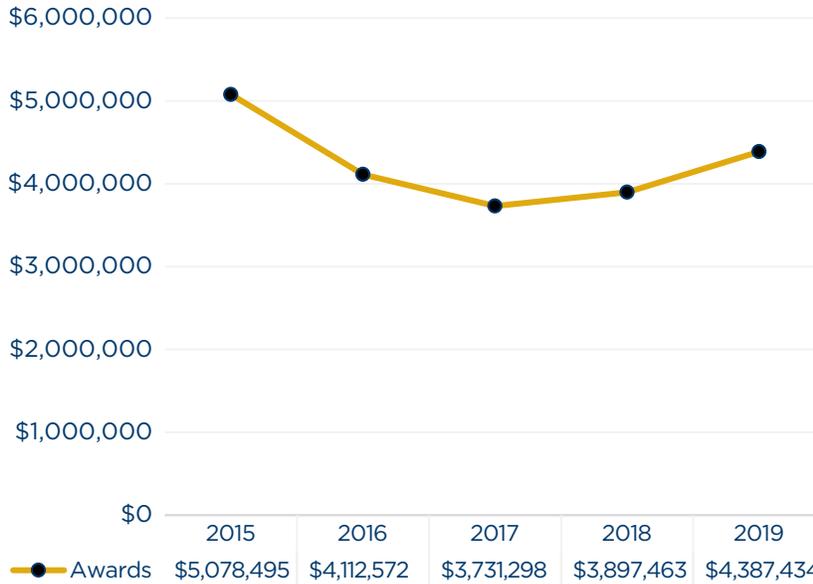
**Dr. Amber Roache** led the School of Nursing in proposals by requesting and receiving more than **\$699k** for the **Clinical-Academic Network for Developing Leaders**. The excellent work of Dr. Roache and the project team was vital in attracting a **\$137k** supplement to address pain management and the opioid crisis.



CCCE: Center for Community Career Education; HHP: Health and Human Performance; PT: Physical Therapy; SCEA: Southeast Center for Education

# COLLEGE OF HEALTH, EDUCATION AND PROFESSIONAL STUDIES

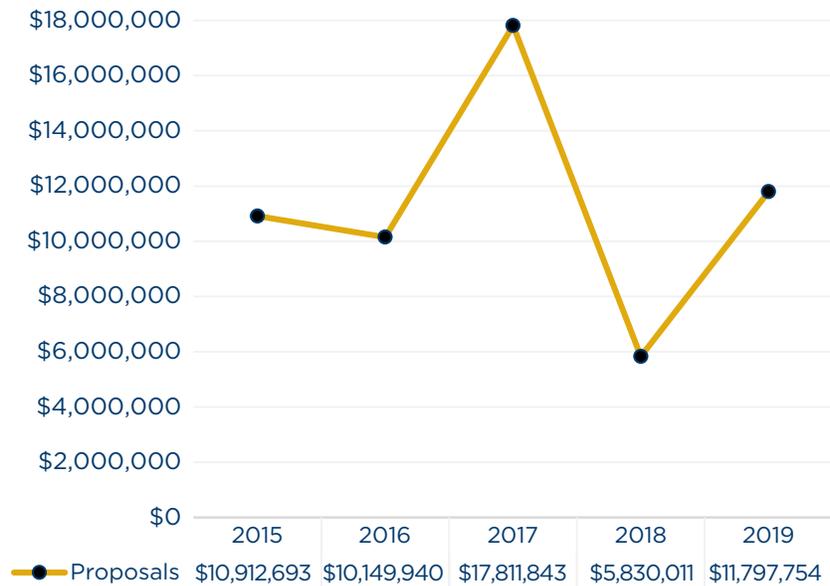
## Award Trends



**63%**  
of Awards  
contributed  
to instruction  
and public  
service

**25%**  
of all UTC  
proposals  
were from  
CHEPS

## Proposal Trends



# GARY W. ROLLINS COLLEGE OF BUSINESS

## PROPOSALS AND AWARDS BY DEPARTMENT



**Dr. Hemant Jain**, professor of management, has been the **top recipient of awards** across the College of Business for several years running. Dr. Jain’s initiatives focus on supporting graduate student research examining the predictors of college success.

Under the direction of **Libby Santin**, the **Center for Innovation and Entrepreneurship (CIE)** was established in 2018 to “inspire, nurture and empower scholarship, creativity, discovery, innovation and entrepreneurial initiatives.” In FY2019, the CIE played a key role in an Economic Development Administration Regional Innovation Strategies proposal in collaboration with the Company Lab and UTC’s CUIP. The CIE is positioned to connect UTC’s research potential with economic development through the Co.Starters Cohort for Research program and other initiatives.



# APPENDIX

Lead Investigator	Total Award Amount	Total Proposal Amount	Lead Investigator	Total Award Amount	Total Proposal Amount
<i>Abrha, Wolday</i>		\$84,298	<i>Fomunung, Ignatius</i>		\$439,544
<i>Ahmed, Raga</i>	\$595,935	\$595,936	<i>Ford, Joseph</i>	\$1,250	\$2,000
<i>Arabshahi, Abi</i>	\$41,615		<i>Freeze, John</i>	\$144,963	\$458,772
<i>Ashmore, Pamela</i>	\$13,028	\$13,028	<i>Gholston, Shirl</i>	\$313,396	
<i>Auchter, Jessica</i>	\$2,000	\$2,000	<i>Giles, David</i>		\$217,630
<i>Baggett, Robert</i>	\$7,272	\$7,272	<i>Guess, Pamela</i>	\$172,800	\$151,200
<i>Bathi, Jejal Reddy</i>	\$19,998	\$245,838	<i>Gunasekera, Sumith</i>		\$99,774
<i>Black, Kristen</i>	\$53,858	\$53,858	<i>Guo, Zibin</i>	\$100,000	\$187,452
<i>Boyd, Jennifer</i>	\$7,666	\$7,666	<i>Hanks, June</i>	\$2,506	\$2,506
<i>Boykin, Twyler</i>	\$315,155		<i>Harris, Bradley</i>		\$662,534
<i>Bridges, Keith</i>	\$289,514		<i>Hayes, Loren</i>		\$263,357
<i>Brockman, Beverly</i>		\$748,360	<i>Hill, Linda</i>	\$55,989	
<i>Brownlee, Belinda</i>	\$401,219		<i>Hinkle, Linda</i>		\$2,499
<i>Bulmer, Bryan</i>	\$1,000	\$1,000	<i>Hood, Ralph</i>	\$86,380	
<i>Bumphus, Victor</i>	\$33,000	\$33,000	<i>Howard-Baptiste, Shewanee</i>		\$5,400
<i>Cole, Sandra</i>	\$14,962	\$114,962	<i>Huckabay, Hunter</i>	\$752,523	\$5,160,241
<i>Craddock, Hill</i>	\$5,230	\$5,230	<i>Hungenberg, Eric</i>	\$25,709	\$25,709
<i>Danquah, Michael</i>		\$816,618	<i>Ibrahim, Hamdy</i>		\$20,963
<i>Deardorff, Michelle</i>		\$6,000	<i>Jain, Hemant</i>	\$16,305	\$16,305
<i>Dierenfeldt, Rick</i>	\$50,000	\$50,000	<i>Kandah, Farah</i>	\$499,663	\$699,599
<i>Ellington, Lucien</i>	\$101,593	\$101,593	<i>Kemplin, Katharine</i>		\$152,014
<i>Elliott, Louie</i>		\$14,950	<i>Kendall, Catherine</i>	\$3,500	\$3,500
<i>Elliott, Trevor</i>	\$45,000	\$580,949	<i>Kim, Seong Dae</i>		\$375,291
<i>Ellis, Jennifer</i>		\$178,825	<i>Kizza, Joseph</i>		\$495,577
<i>Fell, Nancy</i>		\$399,777	<i>Kong, Lingju</i>		\$257,720
<i>Foerder, Preston</i>		\$194,123	<i>Lane, Bryan</i>	\$114,155	\$114,155

<i>Ledoan, Andrew</i>	\$282,659	\$508,429	<i>Reising, Donald</i>		\$1,804,277
<i>Levine, David</i>	\$30,000	\$30,000	<i>Rigler, Michelle</i>	\$5,330	\$6,830
<i>Liang, Yu</i>		\$2,400,615	<i>Roache, Amber</i>	\$836,875	\$2,729,974
<i>Loveless, Daniel</i>	\$158,708	\$1,156,386	<i>Romagni, Joanne</i>	\$1,181,060	\$781,060
<i>Mann, Reinhold</i>		\$217,401	<i>Sartipi, Mina</i>	\$124,996	\$7,412,528
<i>Margraves, Charles</i>	\$44,201	\$44,199	<i>Shaw, Joey</i>	\$39,004	\$8,500
<i>Mauldin, Marcus</i>		\$82,515	<i>Simms-Roberson, Priscilla</i>	\$4,000	\$5,000
<i>McAllister, Deborah</i>	\$33,861	\$31,829	<i>Skjellum, Anthony</i>	\$1,072,592	\$4,055,708
<i>McCullogh, Claire</i>		\$392,503	<i>Smith, Christine</i>	\$120,000	\$312,816
<i>Melnik Allen, Laurie</i>	\$129,975	\$2,191,512	<i>Sokolov, Alexandr</i>		\$231,142
<i>Mix, Charles</i>	\$36,936	\$33,708	<i>Spratt, Henry</i>	\$20,079	\$20,080
<i>Murley, Renee</i>	\$315,571	\$60,571	<i>Sreenivas, Kidambi</i>	\$28,795	\$28,795
<i>Nasab, Ahad</i>		\$999,342	<i>Stoutenberg, Marcus</i>	\$9,915	\$9,915
<i>Newman, James</i>		\$737,077	<i>Suzuki, Takeo</i>	\$176,803	\$523,748
<i>Noe, Marcia</i>	\$6,000	\$6,000	<i>Tanis, Craig</i>		\$218,267
<i>Ofoli, Abdul</i>		\$1,247,670	<i>Vann, Karen</i>	\$256,455	\$40,000
<i>Oglesby, Carol</i>	\$12,000		<i>Wang, Endong</i>	\$156,282	\$331,334
<i>Onyango, Mbakisya</i>	\$214,806	\$923,618	<i>Wang, Jin</i>		\$258,667
<i>Owino, Joseph</i>		\$195,524	<i>Webster, Robert</i>	\$124,032	\$60,244
<i>Pack, Daniel</i>	\$233,298	\$437,576	<i>Weerasena, Lakmali</i>		\$580,586
<i>Palchoudhury, Soubantika</i>		\$566,623	<i>Wick, Kristina</i>	\$9,100	\$12,316
<i>Panagiotou, Eleni</i>		\$304,567	<i>Wintersieck, Amanda</i>	\$1,000	\$1,000
<i>Park, Han Jung</i>		\$6,860	<i>Wu, Dalei</i>		\$613,634
<i>Peyer, Karissa</i>		\$78,094	<i>Wu, Weidong</i>		\$886,289
<i>Piazza, Lisa</i>		\$6,802	<i>Xie, Mengjun</i>		\$349,921
<i>Pienkos, Jared</i>		\$5,000	<i>Yang, Li</i>	\$115,474	\$637,360
<i>Policastro, Christina</i>	\$39,440	\$40,292	<i>Yang, Sungwoo</i>		\$149,974
<i>Qin, Hong</i>	\$1,038,132	\$444,696			
			<b>Grand Total</b>	<b>\$11,337,379</b>	<b>\$49,288,399</b>

# INDIVIDUAL AND INTERNAL AWARDS

## UTC Faculty earned scholarly awards as individuals:

- Michelle Deardorff, *Political Science and Public Service*, from the U.S. Fulbright Scholars Program
- Ethan Mills, *Philosophy*, from the Heinlein Society
- Dana Moody, *Interior Design*, from RoosterGNN (Global News Network)
- Mark Stoutenberg, *Health and Human Performance*, from the U.S. Fulbright Scholars Program
- John Swanson, *History*, from the Leibniz Institute for the History and Culture of Eastern Europe; U.S. Fulbright Scholars Program

## More than \$100,000 in funding bolstered pre-tenure faculty research portfolios further ensuring success toward promotion and tenure.

Pre-Tenure Research Enhancement Program	Lead Investigator	Total Award Amount
	Susan Eckelmann Berghel, <i>History</i>	\$11,139
	Kara Hamilton, <i>Health and Human Performance</i>	\$15,000
	Katie Hargrave, <i>Art</i>	\$8,550
	Azad Hossain, <i>Biology, Geology and Environmental Science</i>	\$14,383
	Kira Robison, <i>History</i>	\$4,800
	Jeremy Strickler, <i>Political Science and Public Service</i>	\$13,434
	Shawn Trivette, <i>Social, Cultural and Justice Studies</i>	\$14,414
	Sungwoo Yang, <i>Civil and Chemical Engineering</i>	\$14,070
Alexandra Zelin, <i>Psychology</i>	\$4,300	

## More than \$124,000 in funding has supported health research collaborations between UTC and Erlanger/UTCOM.

Biomedical Research Initiation Collaboration	Lead Investigator	Total Award Amount
	Michael Danquah, <i>Civil Engineering</i>	\$25,000
	Chris Smith, <i>School of Nursing</i>	\$24,820
	Gary Wilkerson, <i>Health and Human Performance</i>	\$25,000
	Sean Richards, <i>Biology, Geology and Environmental Science</i>	\$25,000
Jenny Holcombe, <i>School of Nursing</i>	\$25,000	

 UNIVERSITY OF TENNESSEE  
CHATTANOOGA  
Research and Sponsored Programs



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