



 **THE UNIVERSITY OF TENNESSEE**
CHATTANOOGA
Office of Research and
Sponsored Programs

ANNUAL REPORT
FISCAL YEAR 2025

JULY 1, 2024 - JUNE 30, 2025



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WELCOME

The ORSP Annual Report for Fiscal Year (FY) 2025 documents the significant achievements of faculty, staff, organizational units, and the institution. FY25 was UTC's single greatest year for award dollars received. UTC faculty and staff attracted more than \$18.5 million in award dollars, and the institution experienced its highest single-year growth with a 20% increase over FY24.

UTC faculty and staff continue to distinguish themselves through meritorious investigator-initiated research. Dr. Murat Barisik (Mechanical Engineering) received a prestigious NSF CAREER award, Dr. Francesca Leasi (BGE) attracted NSF funding for environmental research, and Dr. David Giles and colleagues won an NIH award for biomedical research. Dr. Rahul R. Bhosale (Chemical Engineering) secured an NSF research award to examine thermochemical energy storage solutions, and Dr. Lani Gao (Mathematics) received industry funding for a statistical analysis in stroke care and treatment.



UTC faculty and staff leveraged sponsored funding to bolster learning environments and promote workforce and economic development in our region. Dr. Brad Harris led a multidisciplinary team in securing NSF funds for experiential learning in advanced manufacturing. Dr. Loren Hayes (BGE) attracted an NSF award to engage students in international research experiences. Dr. Don Reising (Electrical Engineering) continued a longstanding collaboration with Purdue University to grow the microelectronics workforce, and Dr. Amir Alakaam (Health & Human Performance) expanded his ongoing collaborations with the TN Department of Health to bolster the public health workforce.

Sponsored funding also undergirds significant community engagement that improves lives in our community, our state, and beyond. Under the leadership of Dr. Elizabeth O'Brien, the School of Professional Studies secured a new HRSA award that will generate \$2.4 million over 4 years to promote mental and behavioral health in a multi-county region. UTC's School of Nursing attracted \$2.1 million in funding in FY25 to bolster health care in our region. UTC's Criminal Justice faculty has secured nearly \$400,000 in funding that supports the broader aims of the Violence Reduction Initiative.

Through the Quantum Center and the Center for Urban Informatics and Progress, the UTC Research Institute continues to develop multi-investigator R&D efforts and special facilities in strategic priority areas, attracting \$5.8 million in sponsored program awards from a diversified sponsor base including NIST, NSF, the State of TN. Many of these efforts include collaborations with other institutions of higher education, national laboratories, the commercial sector, and the Chattanooga innovation ecosystem.

All of these achievements are made even more noteworthy due to the significant challenges that FY25 has witnessed. Despite the headwinds, the state of research at UTC is strong. That strength derives not only from the expertise and skills of faculty and staff but also from the commitment, creativity, and resilience of administrators at all levels who work diligently, often behind the scenes, to support the research enterprise and ensure the success of sponsored programs.

Please join me in congratulating all the UTC faculty and staff who engaged in sponsored project activity during FY25, and in recognizing the dedicated campus colleagues who support and enable sponsored project activity. A special and heartfelt thank-you to my ORSP colleagues whose expertise, dedication, commitment to service, and professionalism enable and support all of these accomplishments.

THE UNIVERSITY OF TENNESSEE
CHATTANOOGA
Office of Research and
Sponsored Programs

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 and staff in the pursuit of sponsored programs.



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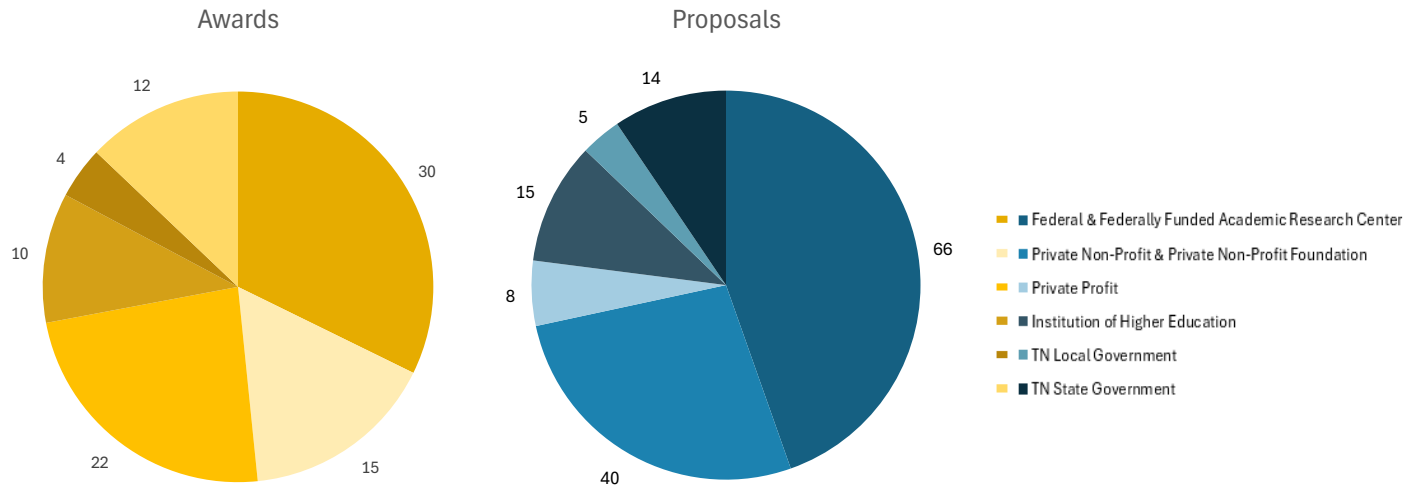
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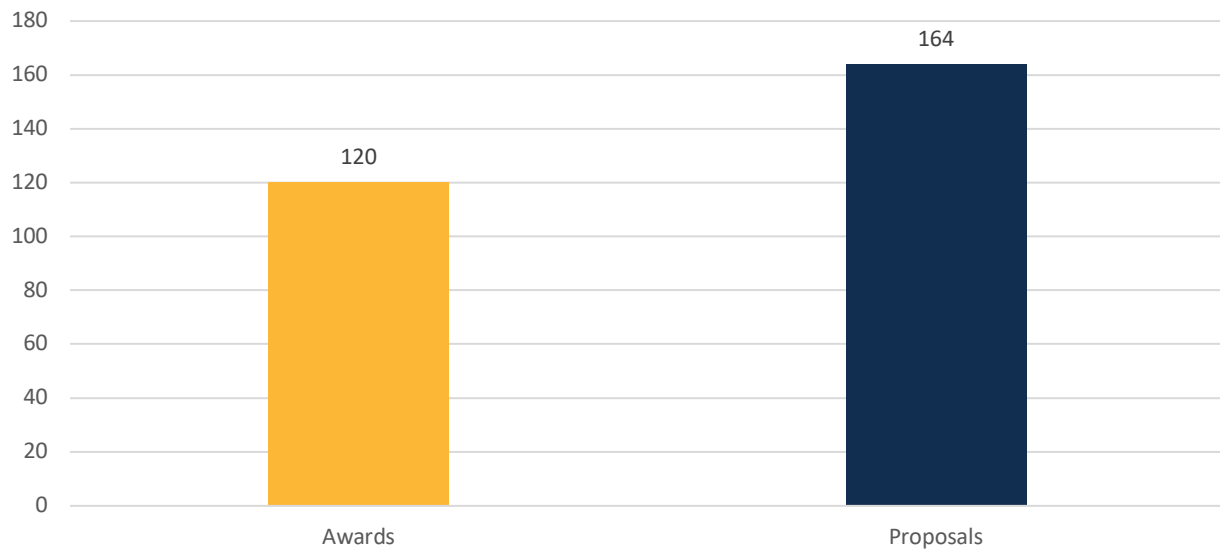
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FY25 UTC SNAPSHOTS

SPONSOR TYPE



UTC PERSONNEL INVOLVED IN SPONSORED PROJECT ACTIVITY



FY25 UTC SNAPSHOTS

88

unique Lead PIs
submitting proposals



62

unique sponsors



148

proposals
submitted



\$68M

in proposal requests



93

new awards received



\$18.6M

in awards received



234

total
active
awards



\$50.9M

in active
award dollars

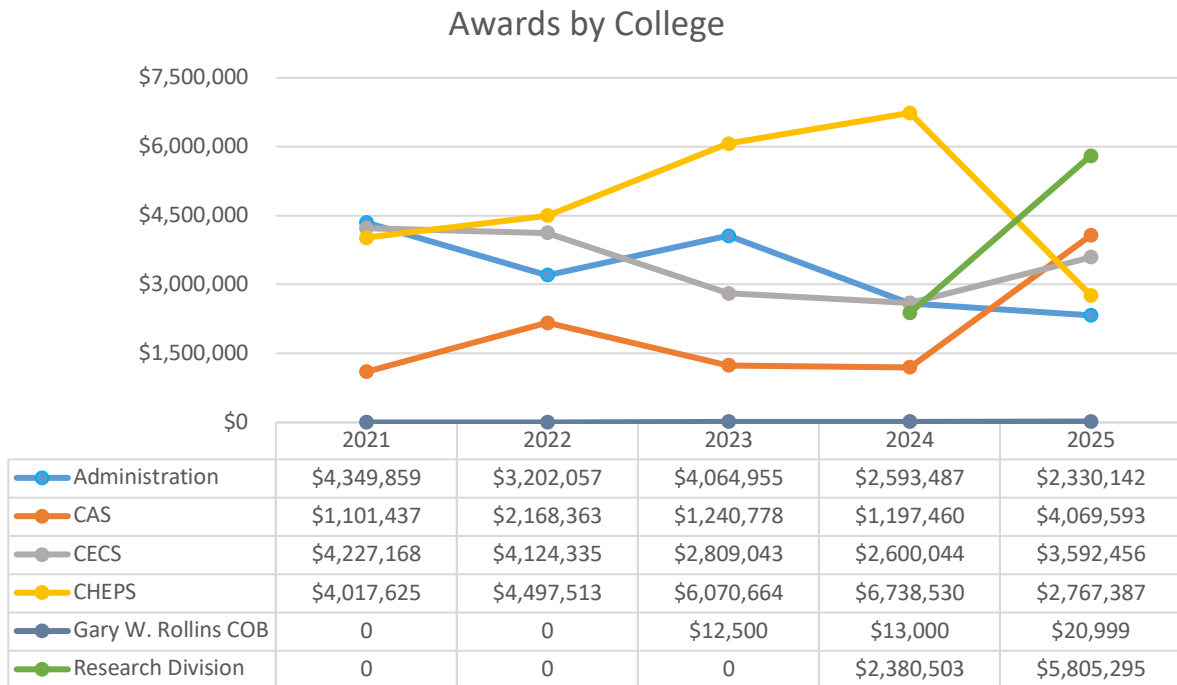
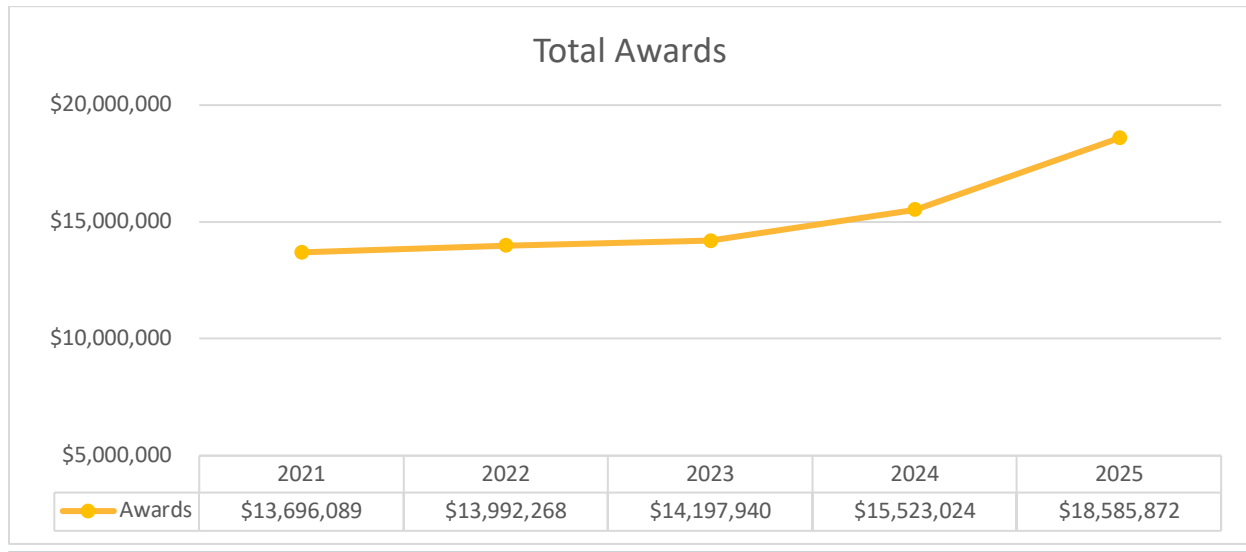


28

high-value
proposals
(\$500k+)

INSTITUTION OVERVIEW

FIVE YEAR TREND - AWARDS

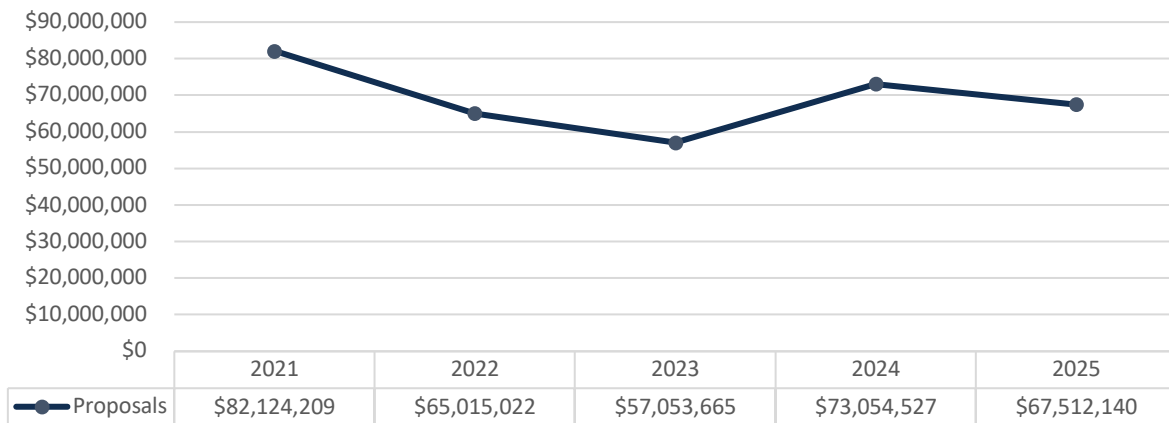


*Research Division data was included in the "Administration" Unit until 2024

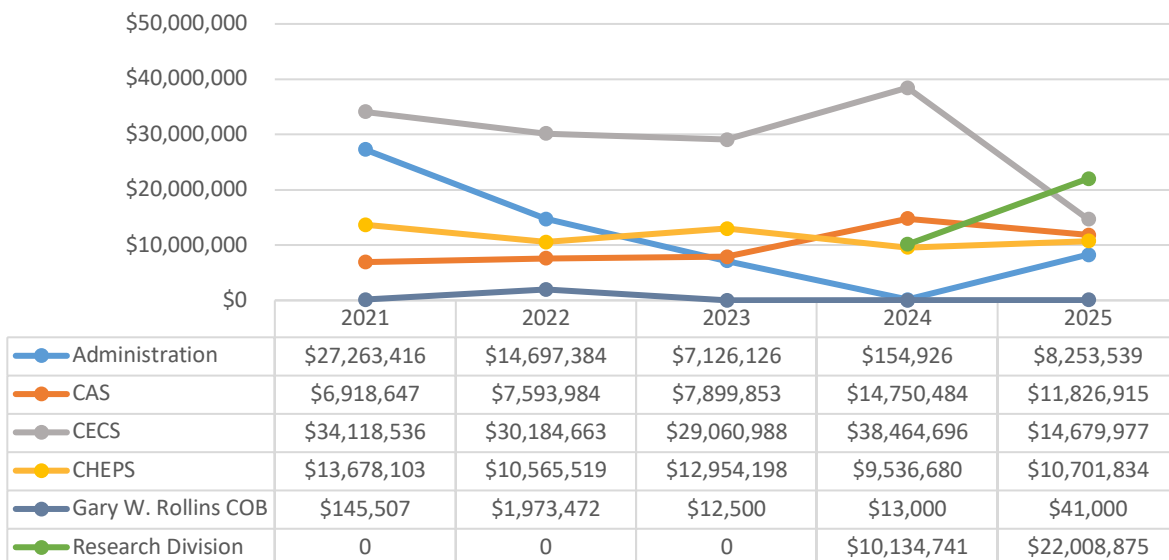
INSTITUTION OVERVIEW

FIVE YEAR TREND - PROPOSALS

Total Proposals



Proposals by College

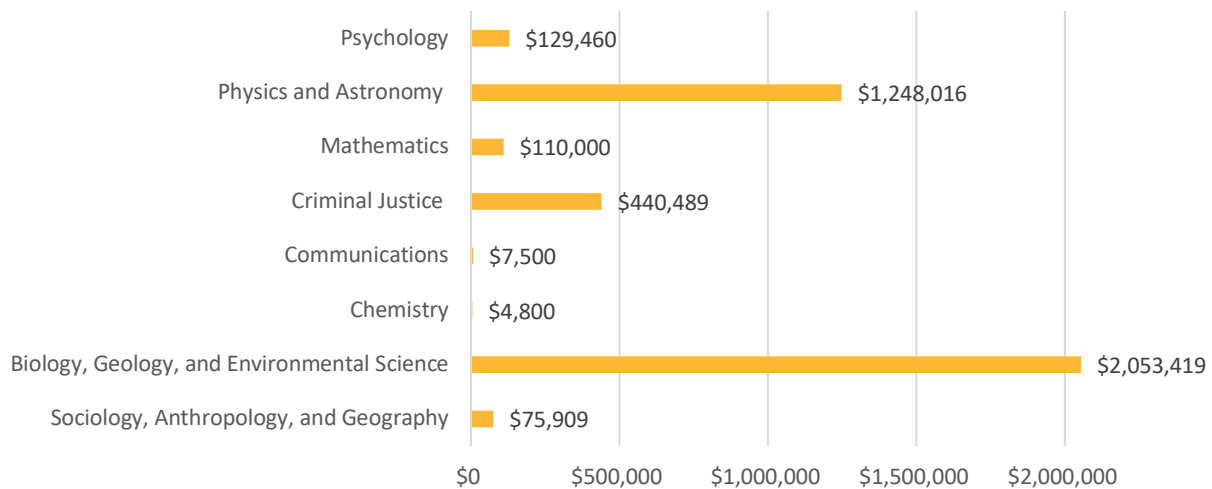


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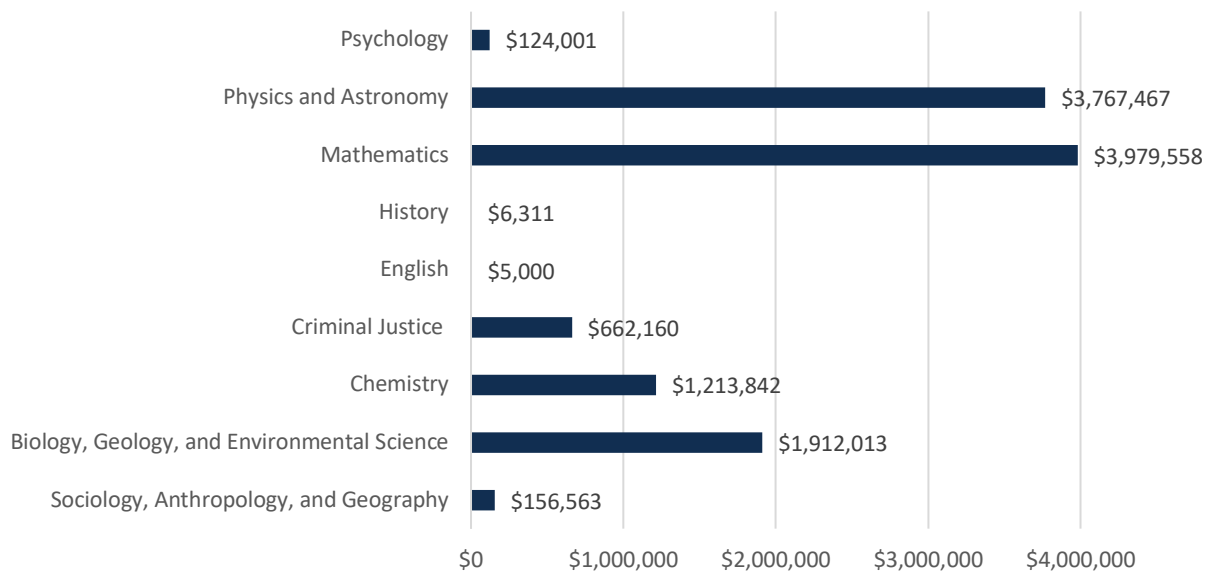
COLLEGE OF ARTS AND SCIENCES

AWARDS & PROPOSALS BY DEPARTMENT

Awards



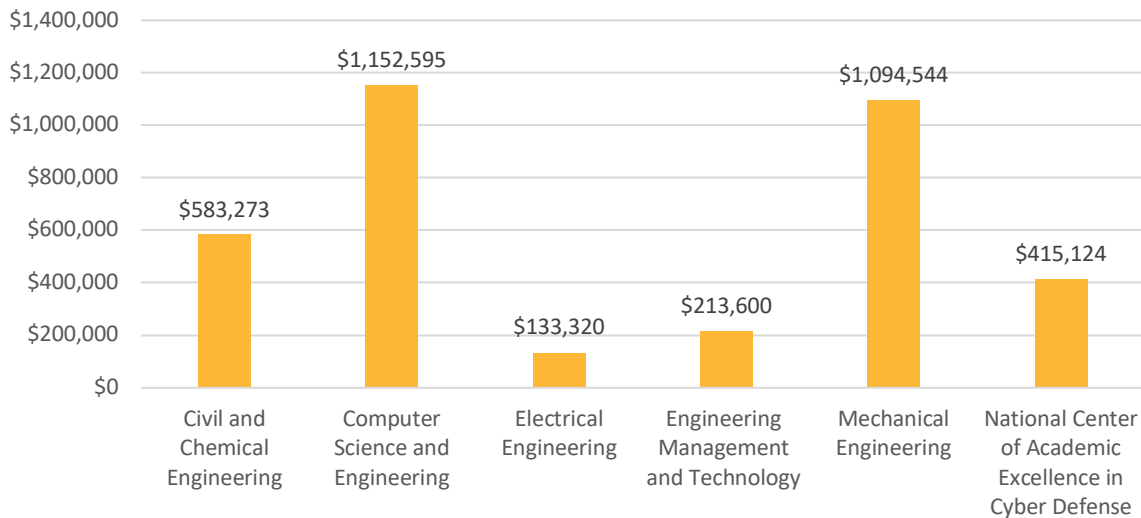
Proposals



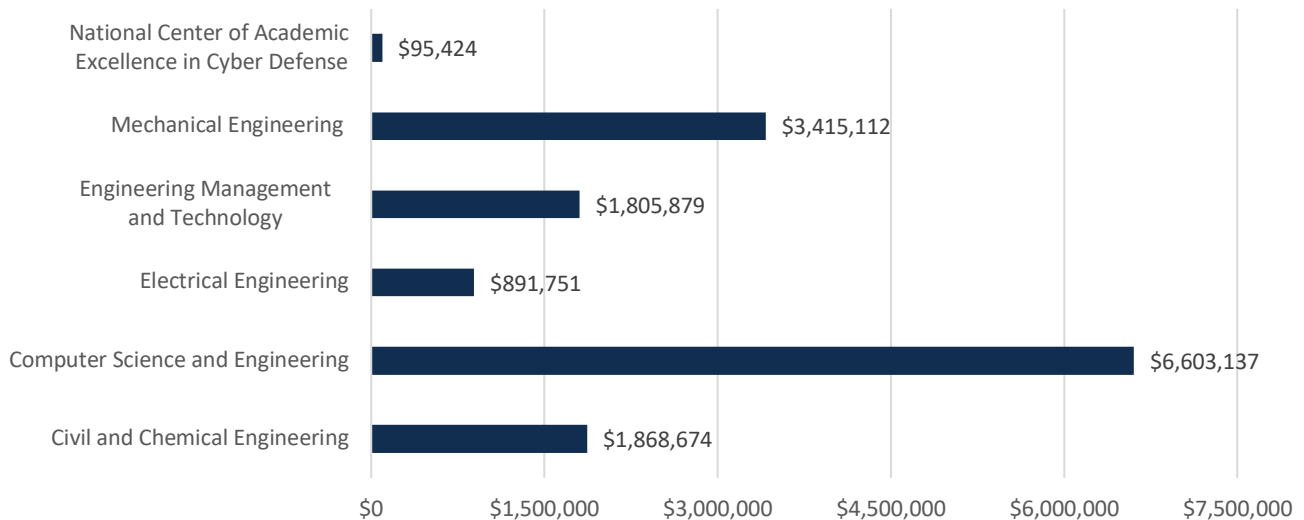
COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

AWARDS & PROPOSALS BY DEPARTMENT

Awards



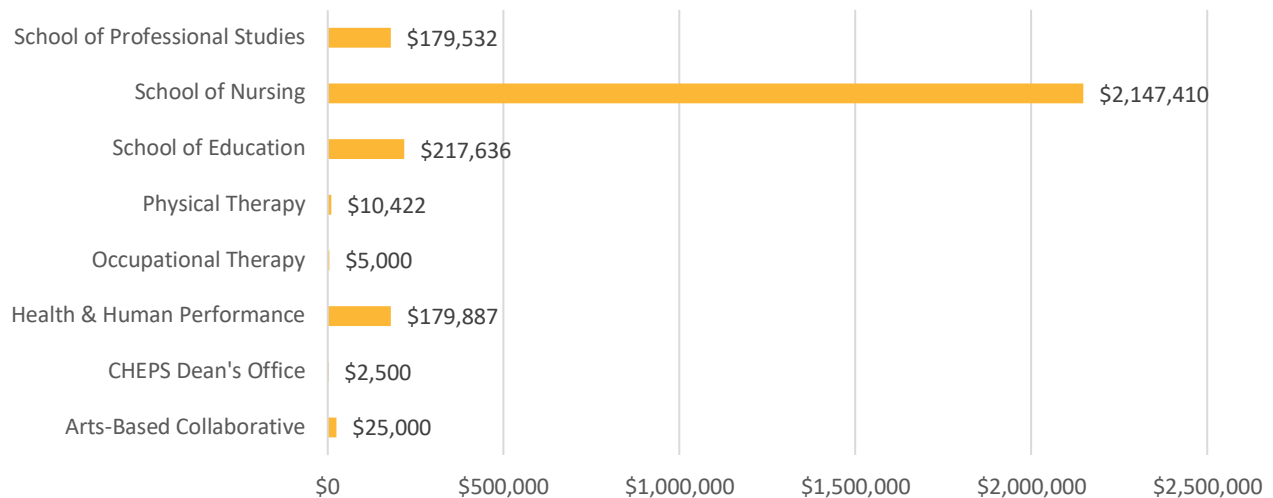
Proposals



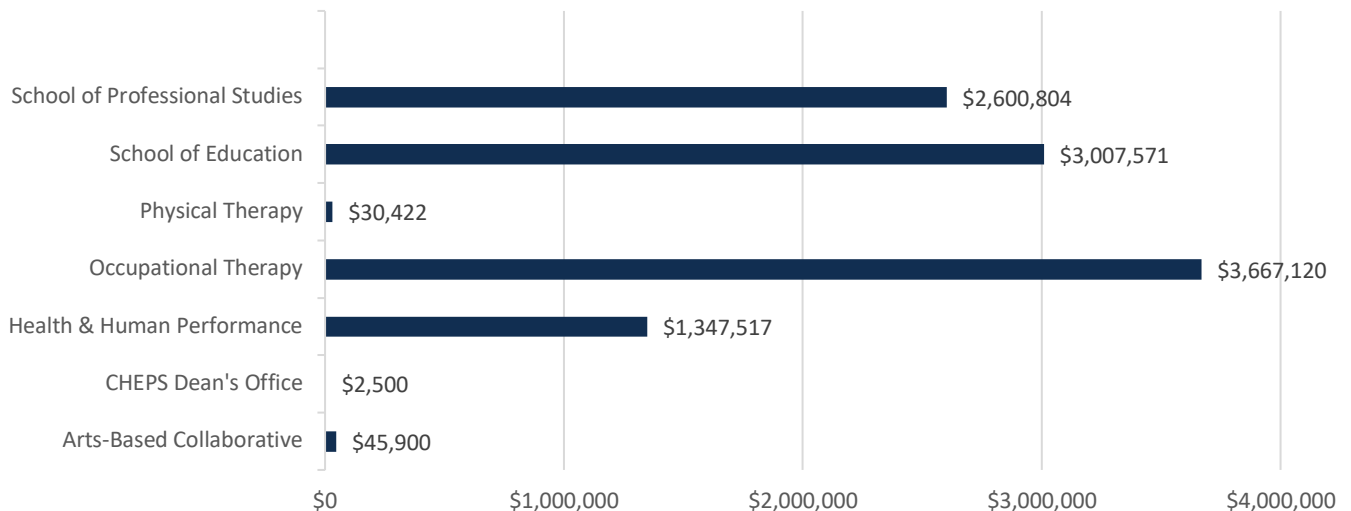
COLLEGE OF HEALTH, EDUCATION, AND PROFESSIONAL STUDIES

AWARDS & PROPOSALS BY DEPARTMENT

Awards

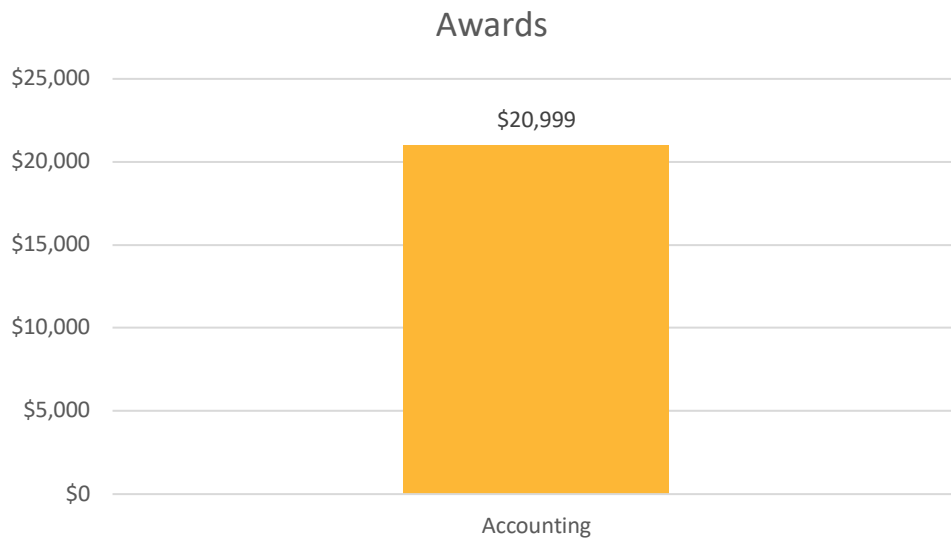


Proposals



GARY W. ROLLINS COLLEGE OF BUSINESS

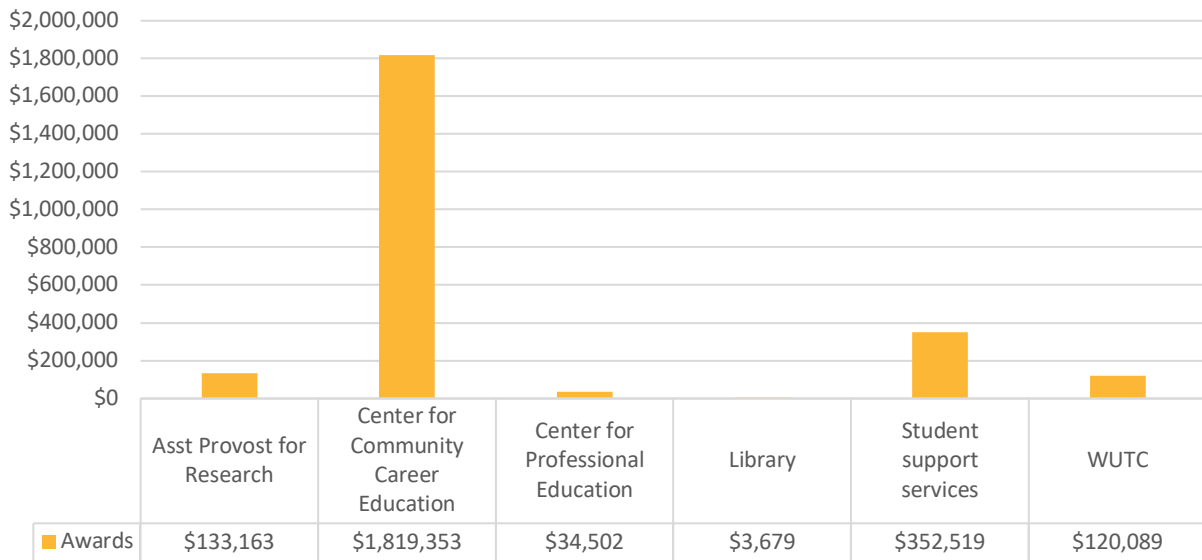
AWARDS & PROPOSALS BY DEPARTMENT



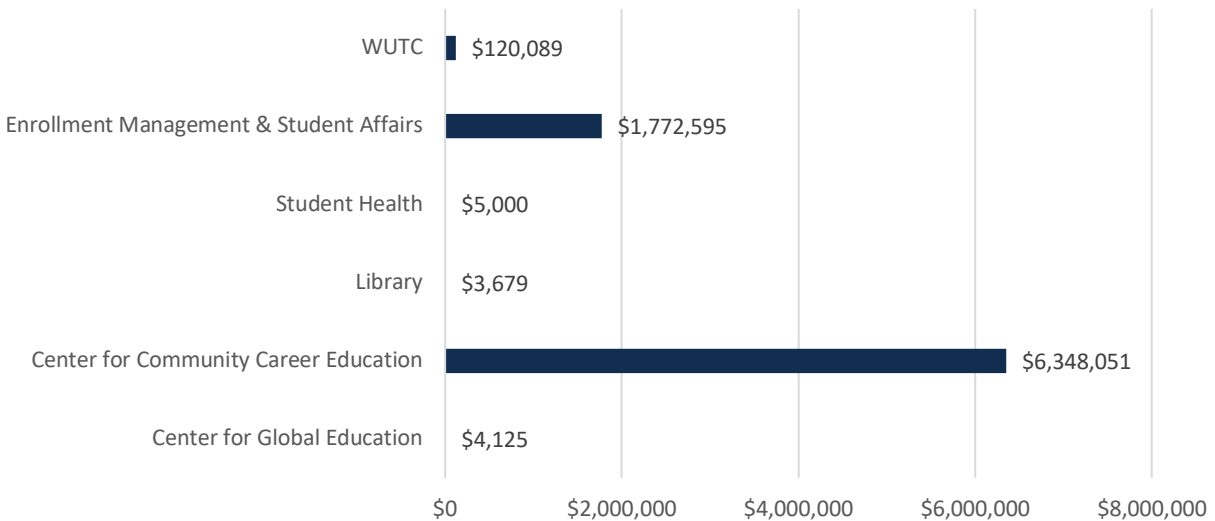
ADMINISTRATION

AWARDS & PROPOSALS BY DEPARTMENT

Awards



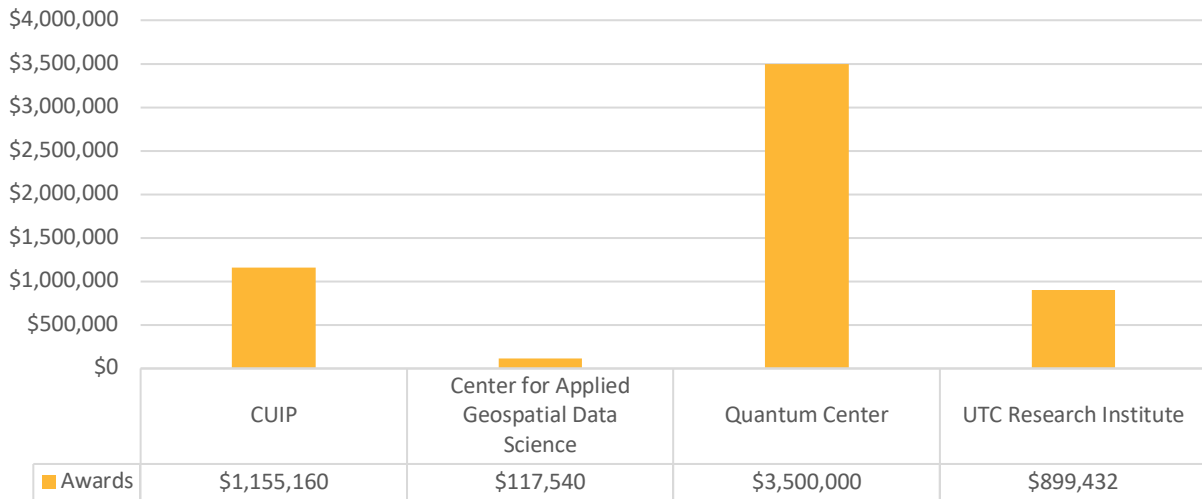
Proposals



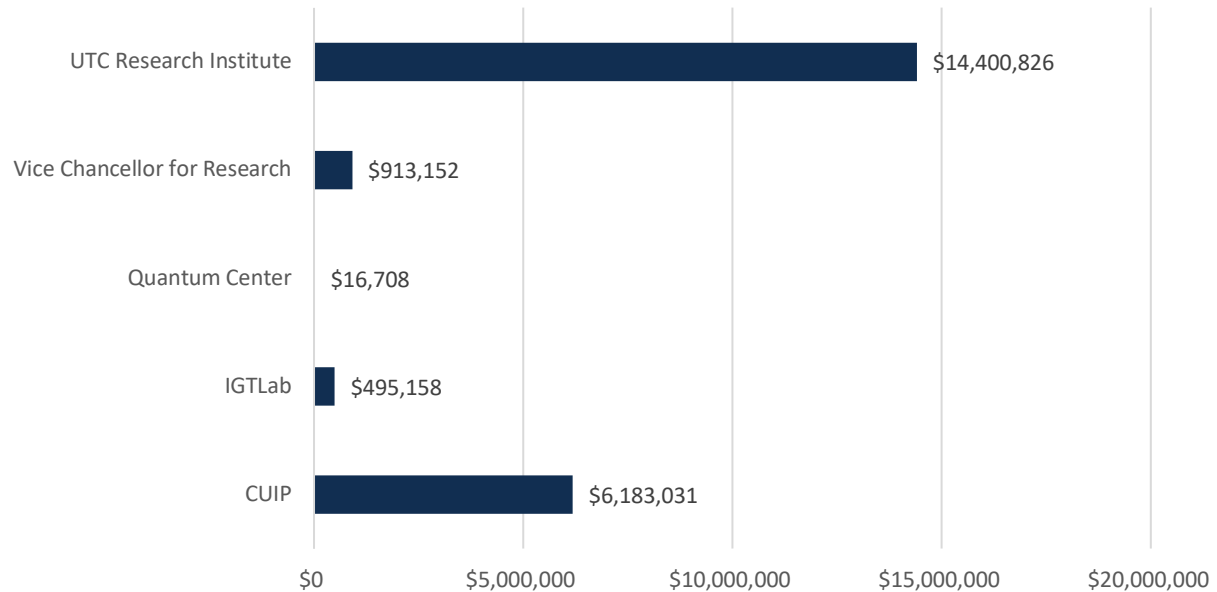
RESEARCH DIVISION

AWARDS & PROPOSALS BY DEPARTMENT

Awards



Proposals



UTC INVENTION DISCLOSURES

The University of Tennessee Research Foundation (UTRF) plays a vital role in turning university research and ideas into innovations that serve the public good Through its focus on technology transfer and commercialization.

Congratulations to all UTC faculty and staff who engaged in technology transfer activities during FY25!



PATENTS

Dr. Erkan Kaplanoglu (Engineering Management and Technology) who received a patent for Athletic Balance Control Platform with Pneumatic Actuation.



AWARDS

Dr. Joshua Tyler (Electrical Engineering) received the Entrepreneurial Fellow 2025 award for developing a SAS for the innovative Advanced Waveform Resampling.

INVENTION DISCLOSURES

Disclosure Title	Inventors*
Virtual-RSU Sensor Driven Connected Vehicle (CV2X) Virtualization and Actuation Road Side Unit A Vehicle Based Platform For Automated ITS Asset Integration	Austin Harris, Mina Sartipi
High-Resolution Infrastructure Based Detection Localization Using Mobile Calibration and Fusion System	Austin Harris, Mina Sartipi
Localization and Integration of Connected Vehicle and Road-Side Detection Systems	Austin Harris, Mina Sartipi
MLK Smart Corridor Testbed - Testbed-As-A-Service	Austin Harris, Mina Sartipi
Smart Robotic Gripper with Enhanced Capabilities for Pinion Gear Systems	Erkan Kaplanoglu
Sampling device for surface water quality	Jejal Bathi, Kidambi Sreenivas
LaMMOn: A Language Model and Graph Neural Network Approach for Multi-Target Multi-Camera Tracking	Tuan Nguyen, Macro Fisichella, Mina Sartipi, Huu Nguyen
Cooling Driven Offloading Insole System (COISY) for Rehabilitation of Diabetic Neuropathy	Erkan Kaplanoglu, Gazi Akgun
Development of Theramatch App for Rehabilitation Professionals	Brooklyn Caballero, Alexie Inman, Blake Wright, Corrin Sneed, Courtney Ward, Maggie Chamberlain, Michael Radick
Monocular Camera Autocalibration Method And System For Adaptive Cruise Control	Terry Zhang
Brooks Band: A Wearable Real-Time Feedback Device for Voice Modulation and Routine Management	Megan Cales
RANDOM Encryption Network	Joshua Tyler, Donald Reising
MACA: Large Language Multi-Agents Model for User-Interactive Multi-Target Multi-Camera Tracking	Huu Nguyen, Tuam Nguyen, Thanh Doan, Mina Sartipi, This Hoang Nygan Le
Predicting Driver Distraction	Maged Shoman, Parisa Hatami, Sima Ashayer, Mina Sartipi
A Route-based Multi-Agent Reinforcement Learning Algorithm for Joint Optimization of Vehicle and Pedestrian Signals	Vijayalakshmi Kumarasamy, Mina Sartipi, Yu Liang, Pengyuan Sun, Dalei Wu
Software for predicting viral variant fitness from nucleotide sequences	Hong Qin, Parisa Hatami
The Assistive Guitar Pick Holder: The Pick-Grip	Areej Alghoul, Michael Martin, Amy Guinac
Real-Time Three-Dimensional Fluoroscopy Reconstruction Framework for Interventional Surgical Guidance	Zihao Wang

*Lead Inventor listed first

OPEN PUBLISHING SUPPORT FUND RECIPIENTS

Congratulations to UTC's Open Publishing Support Fund FY25 Recipients!

The Open Publishing Support Fund is an internal fund that assists with expenses related to article processing charges for eligible peer-reviewed, open access journals.



Dr. Hope Klug (Biology, Geology, and Environmental Science) is an author on the article entitled, "Sexual Selection and Life History Interact to Influence the Evolution of Paternal Care," which has been published in *Ecology and Evolution*.

Dr. Wolday Abrha (Engineering Management and Technology) is the lead author on the article entitled, "Cybersecurity Access Control: Framework Analysis in a Healthcare Institution," which was published in the *Journal of Cybersecurity and Privacy*.



Dr. Francesca Leasi (Biology, Geology, and Environmental Science) is the lead author on the article entitled, "Microbiota associated with Ototyphlonemertes spp. (Nemertea, Hoplonemertea, Monostilifera, Ototyphlonemertidae) reveal evidence of phyllosymbiosis," which has been published in *Ecology and Evolution*.

Dr. Caitlin Jarvis (Biology, Geology, and Environmental Science) is the lead author on the article entitled, "Effects of Urbanization on Disease Prevalence in Managed Honey Bee Hives in Hamilton County, TN," which was published in *Urban Naturalist*.



Dr. Serkan Varol (Engineering Management and Technology) is the lead author on the article entitled, "Unlocking Insights in Real Estate Markets: Integrating Geo-Spatial Data for Comprehensive Property Valuation and Urban Planning," which was published in *Data in Brief*.

Dr. Donald Reising (Electrical Engineering) is the lead author on the article entitled "Assessing Adversarial Replay and Deep Learning-Driven Attacks on Specific Emitter Identification-based Security Approaches," which was published in *Discover Internet of Things*.



Dr. Sean Richards (Biology, Geology and Environmental Science) is the lead author on the article entitled "The Current Applications of Metabolomics in Endometriosis: A Systematic Review," which was published in *Metabolites*.

2025 NSF CAREER COHORT

Best of luck to UTC's FY25 NSF CAREER proposal submission cohort!

The NSF CAREER program supports the research aspirations of early career faculty in pursuing intellectually rigorous and impactful scholarship in NSF-eligible areas of inquiry. The following faculty spent the better part of summer 2025 preparing for submission:



Dr. Rahul Bhosale (Civil & Chemical Engineering) requested \$575,036 for a project entitled, "Toward Solar Jet Fuel: Solar-Driven Isothermal Chemical Looping Reforming of CH₄ Coupled with H₂O/CO₂ Conversion for Syngas Production."

Dr. Luis Sanchez Diaz (Physics) requested \$753,182 for a project entitled, "Structure and Rheology of Passive and Active Silica-Protein Colloidal Systems."



Dr. Thien Le (Mathematics) requested \$734,355 for a project entitled, "Statistical Inference and Prediction in Network-Based Models of Complex Systems."

Dr. Tian Li (Physics) requested \$530,063 for a project entitled, "Deploying Encoded Quantum Repeaters and Cultivating the Quantum Workforce on a Commercial Metro-Scale Fiber Network Testbed."



Dr. Xiunan Wang (Mathematics) requested \$467,262 for a project entitled, "Modeling and Forecasting Cognitive Animal Foraging and Migrations."

APPENDIX A: Awards and Proposals by Lead PI

Lead Investigator	Total Award Amount	Total Proposal Amount	Lead Investigator	Total Award Amount	Total Proposal Amount
<i>Aborn, David</i>	\$1,600	\$1,700	<i>Giles, David</i>	\$396,750	
<i>Acocello, Shellie</i>		\$23,243	<i>Guo, Zibin</i>		\$19,069
<i>Ahmed, Raga</i>		\$737,689	<i>Hamilton, Kara</i>	\$9,995	\$9,995
<i>Alakaam, Amir</i>	\$161,839		<i>Hargrove, Jami</i>		\$5,000
<i>Baker, Sybil</i>		\$5,000	<i>Harris, Austin</i>	\$169,763	\$419,859
<i>Barbee, Meredith</i>		\$120,000	<i>Harris, Bradley</i>	\$509,398	\$25,000
<i>Barbosa, Jose</i>		\$714,175	<i>Hayes, Loren</i>	\$749,999	
<i>Barisik, Murat</i>	\$686,732	\$596,510	<i>Hill, Linda</i>	\$18,621	
<i>Basham, Sherah</i>	\$99,830	\$399,931	<i>Hogg, Jennifer</i>		\$155,554
<i>Bathi, Jejal Reddy</i>	\$73,875	\$173,787	<i>Hood, Ralph</i>	\$61,618	
<i>Bhosale, Rahul</i>		\$958,821	<i>Hossain, Azad</i>	\$147,389	
<i>Black, Kristen</i>		\$110,000	<i>Huckabay, Hunter</i>	\$654,390	\$6,348,051
<i>Boykin, Twyler</i>	\$309,505		<i>Hunt, Nyssa</i>		\$5,442
<i>Bridges, Keith</i>	\$566,988		<i>Ibrahim, Hamdy</i>	\$111,968	\$412,799
<i>Brock-Hon, Amy</i>	\$7,690	\$7,690	<i>Kaplanoglu, Erkan</i>	\$57,600	\$288,650
<i>Carver, Ethan</i>	\$133,163		<i>Kendall, Catherine</i>	\$5,982	\$14,250
<i>Copeland, Molly</i>	\$3,679	\$3,679	<i>Kiel, Anna</i>	\$5,000	\$10,000
<i>Cunningham, Christopher</i>	\$58,989	\$14,001	<i>Kim, Jisook</i>		\$1,068,242
<i>Davenport, Stephan</i>	\$19,999		<i>Kode, Venkateswara</i>		\$184,388
<i>Denney, Andrew</i>	\$52,575		<i>Laseter, Melissa</i>	\$352,519	\$1,772,595
<i>Dierenfeldt, Rick</i>	\$245,429	\$219,574	<i>Lazenby, Susan</i>	\$120,089	\$120,089
<i>Dittmar, Angela</i>	\$25,000	\$45,900	<i>Leasi, Francesca</i>	\$696,680	\$35,000
<i>Dungey, Keenan</i>	\$4,800	\$9,600	<i>Levine, David</i>	\$5,000	\$5,000
<i>Eckelmann, Susan</i>		\$6,311	<i>Li, Tian</i>	\$4,740,326	\$1,847,618
<i>Elliott, Trevor</i>	\$200,000		<i>Liang, Yu</i>	\$100,000	\$250,000
<i>Epperson, Brooke</i>	\$499,999		<i>Liuzzo, Derek</i>		\$20,000
<i>Erdemir, Gokhan</i>		\$443,679	<i>Lynberg, Jennifer</i>	\$55,571	\$1,623,520
<i>Fayard, Louis</i>	\$1,000	\$1,000	<i>Ma, Ziwei</i>		\$299,998
<i>Ferdoush, Jannatul</i>		\$684,869	<i>Mann, Reinhold</i>	\$899,432	\$913,152
<i>Frank, Alexandra</i>		\$13,004	<i>Margraves, Charles</i>	\$25,844	\$34,920
<i>Freeze, John</i>	\$34,502		<i>McAllister, Deborah</i>	\$162,065	\$1,384,051
<i>Frishcosy, Christopher</i>		\$26,731	<i>McElrone, Marissa</i>		\$466,340
<i>Gao, Lan</i>	\$110,000	\$109,998	<i>Melhorn, Erin</i>		\$3,657,120

Lead Investigator	Total Award Amount	Total Proposal Amount	Lead Investigator	Total Award Amount	Total Proposal Amount
<i>Mix, Charles</i>	\$117,540	\$489,716	<i>Suzuki, Takeo</i>		\$4,125
<i>Mukherjee, Rick</i>		\$16,708	<i>Tanner, James</i>	\$7,500	
<i>O'Brien, Elizabeth</i>		\$2,400,000	<i>Tantawi, Khalid</i>	\$156,000	\$687,381
<i>Persons, Brooke</i>	\$9,832		<i>Teaford, Max</i>	\$6,853	
<i>Peyer, Karissa</i>	\$8,053	\$76,556	<i>Vann, Karen</i>	\$288,470	
<i>Pienkos, Jared</i>		\$16,000	<i>Varol, Serkan</i>		\$386,169
<i>PolICASTRO, Christina</i>	\$42,655	\$42,655	<i>Walker, Richard</i>		\$404,460
<i>Ranjan, Reetesh</i>		\$1,403,409	<i>Wang, Jin</i>		\$2,769,925
<i>Reising, Donald</i>	\$133,320	\$154,062	<i>Wang, Xiunan</i>		\$320,744
<i>Ren, Shaogang</i>		\$498,905	<i>Wang, Yingfeng</i>	\$205,800	\$1,060,638
<i>Roache, Amber</i>	\$628,790		<i>Wang, Zihao</i>		\$1,997,525
<i>Rutledge, Valerie</i>	\$2,500	\$2,500	<i>Ward, Chandra</i>		\$50,000
<i>Sakib, Shahnewaz Karim</i>		\$360,000	<i>Weerasena, Lakmali</i>		\$478,893
<i>Sanchez Diaz, Luis</i>		\$1,919,849	<i>Wick, Kristina</i>	\$1,000,000	
<i>Sartipi, Mina</i>	\$985,397	\$20,113,998	<i>Wu, Dalei</i>	\$599,989	\$399,999
<i>Schilling, Ashley</i>	\$5,422	\$5,422	<i>Xie, Mengjun</i>	\$462,124	\$142,424
<i>Scott, Cathy</i>	\$173,550	\$173,550	<i>Yang, Sungwoo</i>		\$499,947
<i>Shaw, Joey</i>	\$61,001	\$64,119	<i>Yeo, Jinsoo</i>		\$40,000
<i>Shelton, Jill</i>	\$2,000		<i>Yuan, Yukun</i>	\$199,806	\$1,989,070
<i>Shi, Yunye</i>	\$70,000	\$967,474	<i>Zwart, Ryan</i>		\$615,829
<i>Smith, Morgan</i>	\$66,077	\$137,494			
			Grand Total	\$18,585,872	\$67,512,140

APPENDIX B: Awards by Month

JULY 2024

Dr. Hunter Huckabay (Center for Community Career Education), has received \$654,390 from the US Department of Education for the project entitled, "UTC GEAR UP Project."

Dr. Keith Bridges (Center for Community Career Education) has received \$241,332 from the U.S. Department of Education for the project entitled, "Northwest Georgia Educational Opportunity Center NWGEOC."

Dr. Keith Bridges (Center for Community Career Education) has received \$325,656 from the U.S. Department of Education for the project entitled, "Southern Appalachian Educational Opportunity Center (SAEOC)."

Dr. Melissa Laseter (Enrollment Management and Student Affairs) has received \$352,519 from the US Department of Education for the project entitled, "UTC Student Support Services Program."

Twyler Boykin (Center for Community Career Education) has received \$309,505 from the US Department of Education for the project entitled, "University of Tennessee at Chattanooga Upward Bound Math & Science."

Dr. Amber Roache (School of Nursing) has received \$628,790 from the Health Resources and Services Administration for the project entitled, "Clinical-Academic Partnerships: Breaking Down Barriers to Care 2023-27."

Dr. Linda Hill (School of Nursing) has received \$18,621 from the Health Resources and Services Administration for the project entitled, "2020-27 HRSA Nurse Anesthetist Traineeships."

Dr. Donald Reising (Electrical Engineering) and Dr. Mohamed Fadul have received \$34,129 to support a research project.

Dr. Donald Reising (Electrical Engineering) has received \$45,740 from Purdue University for the project entitled, "2020 SCALE Consortium – Radiation-Hard Microelectronics Workforce Development Consortium."

Dr. Austin Harris (CUIP/ UTC Research Institute) Dr. Dalei Wu and Dr. Yukun Yuan (Computer Science and Engineering) have received \$149,764 from the State of Tennessee Appropriations for the project entitled, "COAST RV App Development."

Dr. John Freeze and Rebecca Hurst (Center for Professional Education) have received \$34,502 from the Tennessee Office of Criminal Justice Programs for the project entitled, "JAG – Southeastern Leadership Academy 2023-2026."

Dr. Bradley Harris (Civil and Chemical Engineering), Dr. Trevor Elliot (Mechanical Engineering), Dr. Stephanie Philipp (School of Education), Dr. Raga Ahmed (Electrical Engineering) and Dr. Rahul Bhosale (Civil and Chemical Engineering) in collaboration with Cleveland State Community College, have received \$509,398 from the National Science Foundation for the project entitled, "Explorations: Experiential Learning in Advanced Manufacturing towards Novel and Diverse Career Opportunities for Rural TN Students."

Dr. Dalei Wu and Dr. Yu Liang (Computer Science and Engineering) in collaboration with the University of Vermont & State Agricultural College, have received \$599,989 from the National Science Foundation for the project entitled, "Real-time Subsurface Sensing with Cognitive Networked Robotic System."

Dr. Francesca Leasi (Biology, Geology and Environmental Science) in collaboration with Florida International University, has received \$696,680 from the National Science Foundation for the project entitled, "The Evolution of Salinity Tolerance in Monogonont Rotifers."

Dr. Mengjun Xie (National Center of Academic Excellence in Cyber Defense), has received \$290,124 from the National Science Foundation for the project entitled, "The National Cybersecurity Workforce."

Dr. Brooke Persons (Social, Cultural & Justice Studies) has received \$9,832 from the U.S. Forest Service for the project entitled, "USFS Internship – Cherokee National Forest."

Dr. Deborah McAllister (School of Education), in collaboration with Vanderbilt University has received \$36,666 from the National Aeronautics and Space Administration for the project entitled, "Elementary and Middle Grades STEM."

AUGUST 2024

Dr. Joey Shaw (Biology, Geology and Environmental Science) has requested and received \$13,000 from the Association of Southeastern Biologists for the project entitled, "2024-2025 Spring Wildflower Pilgrimage (SWFP) Graduate Assistantship."

Dr. Mina Sartipi (UTC Research Institute/ CUIP) has received \$100,397 from DENSO International America, Inc for the project entitled, "Federated Trajectory Prediction for VRU Safety."

Dr. Trevor Elliott (Mechanical Engineering) has received \$200,000 from DENSO North America Foundation for the project entitled, "Integration of Metal Additive Manufacturing into UTC Senior Design."

Dr. Murat Barisik and Dr. Rateesh Ranjan (Mechanical Engineering) have received \$184,972 from the Department of Energy for the project entitled, "First principles multiphase modeling of mesoscale gas transport in porous reactive systems."

Dr. Karen Vann (Center for Community and Career Education) has received \$288,470 from the Department of Education for the project entitled, "UTC Talent Search."

Dr. Kara Hamilton (Health & Human Performance) has received \$9,995 from Fast Break Athletics for the project entitled, "Fast Break Clients Utilization of HHP Sports Lab."

Dr. Morgan Smith (Social, Cultural & Justice Studies), in collaboration with Florida State University, has received \$38,569 from the Department of Interior for the project entitled, "Reevaluating BOEM's Guidelines for Identifying Submerged Pre-Contact Archaeological Sites in the Gulf of Mexico: An Extensive Geoarchaeological Approach."

Dr. Brooke Epperson, Tessa Mullinax-Baker, Dr. Rosebelle Peters, Dr. Jenny Holcombe, Dr. Rachel Nall, and Michelle Rosano (School of Nursing) have received \$499,999 from the Health Resources and Services Administration for the project entitled, "AHEAD-RN."

Dr. David Giles (Biology, Geology and Environmental Science), Dr. Bradley Harris (Chemical Engineering), and Dr. Steven Symes (Chemistry and Physics) have received \$396,750 from the National Institutes of Health for the project entitled, "In vitro and in silico investigations of changes in bacterial cell membrane dynamics due to polyunsaturated fatty acid (PUFA) modifications."

Dr. Erkan Kaplanoglu and Dr. Gokhan Erdemir (Engineering Management and Technology) have received \$57,600 from the JTEKT North America Corporation for the project entitled, "Smart Robotic Gripper with Enhanced Capabilities for Pinion Gear Systems."

Dr. Christopher Cunningham (Psychology) has received \$44,989 from Peak Performance, Inc. for the project entitled, "Continuing support for the Smart Factory Institute (Years 4-5)."

Molly Copeland and Carolyn Runyon (Library) have requested and received \$3,679 from the Tennessee State Library and Archives for the project entitled, "Woman's Christian Temperance Union of Chattanooga Records Digitization Project."

Dr. Christopher Cunningham (Psychology) has received \$14,000 from The House: University Ministries of Chattanooga for the project entitled, "Campus Ministry Impact Project - A Longitudinal Study for The House: University Ministries of Chattanooga."

Dr. Angela Dittmar (Arts-Based Collaborative) has received \$25,000 from the United Way of Chattanooga for the project entitled, "UWGC-Chattanooga 2.0 Wolf Trap Residencies 2024."

Dr. Yingfeng Wang (Computer Science and Engineering), in collaboration with Kean University, has received \$195,000 from the National Science Foundation for the project entitled, "Collaborative Research: CISE-MSI: RCBP: SCH: Advancing Breast Cancer Detection in Ultrasound Imaging through Active and Weakly Supervised Learning Techniques."

Dr. Deborah McAllister (School of Education), Dr. Lauren Ingraham (English), Dr. Cindy Williamson (Academic Affairs), in collaboration with the University of Nebraska at Omaha, have received \$97,899 from the National Science Foundation for the project entitled, "Collaborative Research: Measuring faculty use of evidence-based classroom practices and identifying perceived obstacles to adoption."

Dr. Loren Hayes, Dr. Azad Hossain (Biology, Geology and Environmental Science), Dr. Krysta Murillo (School of Education), and Dr. Jin Wang (Mathematics) have received \$749,999 from the National Science Foundation for the project entitled, "IRES: Integrating biological, geospatial, and math modeling to understand how a changing climate impacts animal social systems."

Dr. Tian Li (Chemistry & Physics) has received \$792,705 from the National Science Foundation for the project entitled, "ExpandQISE: Track 1: Demonstration of distributed quantum sensing with Heisenberg scaling by creating multipartite entanglement on a metropolitan scale quantum network."

Dr. Yukun Yuan, Dr. Yu Liang, Dr. Dalei Wu (Computer Science and Engineering), Dr. Feng Guo (Psychology), and Dr. Abdelrahman Mohammed (Electrical Engineering), in collaboration with Central State University and Florida State University, have received \$199,806 from the National Science Foundation for the project entitled, "Collaborative Research: CISE MSI: RDP: CPS: Enhancing Efficiency and Sustainability in Electric Transportation and Power Systems through Interaction-aware Management."

Dr. Morgan Smith (Social, Cultural & Justice Studies) has requested and received \$20,000 from the Forest Service for the project entitled, "USFS Internship - Cherokee National Forest."

SEPTEMBER 2024

Charles Mix (IGTLab) and Nyssa Hunt have received \$6,261 from the Dalton State College Foundation, Inc. for the project entitled, "Dalton Resilient Communities, A Spatial Analysis of Rocky Face Ridge."

Dr. Tian Li (UTC Research Institute), Dr. Tatiana Allen (Chemistry and Physics), Dr. Christopher Cox (Mathematics), Dr. Yu Liang (Computer Science and Engineering), Dr. Reinhold Mann (Vice Chancellor for Research) and Dr. Donald Reising (Electrical Engineering) have received \$3,500,000 from the National Institute of Standards and Technology for the project entitled, "UTC Quantum Center."

Dr. Mengjun Xie (National Center of Academic Excellence in Cyber Defense) has received \$125,000 from the Department of Defense for the project entitled, "UTC AY24-25 DoD Cyber Scholarship Recruitment and Capacity Building."

Charles Mix (IGTLab) has received \$14,706 from the Enterprise Center for the project entitled, "EPA Air Quality Sensor Site Location Analysis; Spatial Data Science Support for The Enterprise Center & Student Fellows Program."

Dr. Louis Fayard (Accounting) has received \$1,000 from the Institute of Management Accountants for the project entitled, "Memorial Education Fund Proposal."

Dr. Mina Sartipi (UTC Research Institute), Dr. Ignatius Fomunung and Dr. Weidong Wu (Civil and Chemical Engineering) have received \$350,000 from the Nashville Department of Transportation for the project entitled, "Leveraging Advanced Data to Deliver Multimodal Safety."

Dr. Cathy Scott (Social Work), Dr. Erin Melhorn (Occupational Theory), and Dr. Kristi Wick (School of Nursing) have requested and received \$173,550 from the Southeast Tennessee Area Agency on Aging and Disability for the project entitled, "Academic Partnership for Delivering Evidence Based Programs." Dr. Jennifer Lynberg (School of Education) has received \$55,571 from the Tennessee Department of Education for the project entitled, "Governor's School for Prospective Teachers (2025)."

Dr. Ralph Hood, Dr. Chris Silver, and Matthew Durham (Psychology) have received \$61,618 from the Universität Bielefeld for the project entitled, "Faith Development Longitudinal Study Part Three."

OCTOBER 2024

Dr. Valerie Rutledge (Dean of the College of Health, Education and Professional Studies) has received \$2,500 from the Jack Miller Center for Teaching America's Founding Principles and History for the project entitled, "The Fourteenth Annual Dr. Richard Gruetzemacher Constitution Day Lecture Series."

Dr. Kristina Wick (School of Nursing) and Dr. Jessica Freeman (Communications) have received \$1,000,000 from the Tennessee Department of Health for the project entitled, "National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities."

Dr. Donald Reising (Electrical Engineering) and Dr. Tian Li (Chemistry and Physics) have received \$19,546 from Tennessee Technological University for the project entitled, "Beginnings: Creating & Sustaining a Diverse Community of EQUIS Across the Southeastern US."

Dr. James Tanner (Communications) has received \$7,500 from the Solutions Journalism Network for the project entitled, "UTC Media Project."

Dr. Morgan Smith (Social, Cultural & Justice Studies) has received \$7,508 from the City of Chattanooga for the project entitled, "Archaeological Investigation of Shallowford Ecological Preserve."

NOVEMBER 2024

Dr. Khalid Tantawi (Engineering Management and Technology) and Dr. Francesca Leasi (Biology, Geology and Environmental Science), in collaboration with Motlow State Community College and Chattanooga State Community College, have received \$150,000 from the National Science Foundation for the project entitled, "Development of an Electric Vehicle Engineering Technology Program for the Middle Tennessee Region."

Dr. Lani Gao (Mathematics) has received \$110,000 from Tele-Specialists for the project entitled, "Statistical Analysis in Stroke Care & Treatment."

Dr. Christina Policastro and Dr. Karen McGuffee (Social, Cultural & Justice Studies) have received \$42,655 from the Tennessee Coalition to End Domestic and Sexual Violence for the project entitled, "2025 Senator Tommy Burks Victims Assistance Academy."

Dr. Mina Sartipi (CUIP/UTC Research Institute) has received \$490,000 from the Tennessee Department of Economic and Community Development for the project entitled, "Advancing High Powered Dynamic Wireless Charging for Medium and Heavy-Duty Vehicles."

Dr. Amir Alakaam (Health & Human Performance) has received \$36,839 from the Tennessee Department of Health for the project entitled, "Developing a Curriculum for Public Health Workforces in Tennessee."

Dr. David Aborn (Biology, Geology and Environmental Science) has received \$1,600 from the Tennessee Ornithological Society for the project entitled, "Survey of Age and Sex Ratios in Chimney Swift (*Chaetura pelagica*) Roosts in the Southeastern US."

Dr. Ethan Carver (Assistant Provost for Research), Dr. Michelle Deardorff (Political Science and Public Service), and Dr. Joanne Romagni (Biology, Geology and Environmental Science) have received \$133,163 from the National Science Foundation for the project entitled, "ASPIRE: Appalachian Students Promoting the Integration of Research in Educations."

DECEMBER 2024

Dr. Yunye Shi (Mechanical Engineering) has received \$70,000 from the American Chemical Society for the project entitled, "Experimental Investigation of Light-controlled Active Droplets in Confined Environment."

Dr. Stephan Davenport and Dr. Spencer Usrey (Accounting) have received \$19,999 from the Internal Revenue Service, in collaboration with the Urban League of Greater Chattanooga. for the project entitled, "UTC IRS/VITA Program for Students to Provide Tax Preparation Services for the Underserved."

Dr. Sherah Basham (Social, Cultural & Justice Studies) has received \$99,830 from Arnold Ventures for the project entitled, "A multi-site planning of a rapid video response model: Phase I - randomized control trial planning and piloting."

Dr. Rick Dierenfeldt (Social, Cultural & Justice Studies) has received \$245,429 from the U.S. Department of Justice, in collaboration with the City of Chattanooga for the project entitled, "Chattanooga United to Reduce Violence."

JANUARY 2025

Dr. Andrew Denney, Dr. Sherah Basham, Dr. Rick Dierenfeldt, and Dr. Gale Iles (Social, Cultural & Justice Studies) in collaboration with the U.S. Department of Justice have received \$52,575 from the Hamilton County Government for the project entitled, "Recidivism Reduction Initiative."

Dr. Catherine Kendall (Interior Design) has received \$5,982 from the Tennessee Board of Architectural and Engineering Examiners for the project entitled "2025 Architectural and Engineering Grant."

Dr. Charles Margraves (Mechanical Engineering) has received \$25,844 from the Tennessee Board of Architectural and Engineering Examiners for the project entitled, "2025 Architectural and Engineering Grant."

Charles Mix and Nyssa Hunt (IGTLab) have received \$96,573 from the Tennessee Department of Agriculture-Division of Forestry for the project entitled, "Spatial Analysis of TN Urban Community Forests."

Dr. Jejal Reddy Bathi (Civil and Chemical Engineering) has received \$73,875 from Solmax for the project entitled, "Microplastics Investigation at Plastic Erosion Controls Installed Sites."

Dr. Karissa Peyer, Dr. Eric Hungenberg, Dr. Andrew Bailey, and Dr. Kara Hamilton (Health & Human Performance) have received \$8,053 from the Chattanooga Tourism Co. for the project entitled, "Chattanooga Marathon Research Project."

Dr. Max Teafora (Psychology) has received \$6,853 from The Ohio State University, in collaboration with the Office of Naval Research for the project entitled, "Identifying Adverse Modes via Human-Machine Cybernetic Modeling."

Dr. Mina Sartipi (UTC Research Institute) has received \$45,000 from the University of Memphis in collaboration with the Tennessee Department of Economic and Community Development for the project entitled, "Designing Multimodal Transit for Blue Oval City and Volkswagen."

FEBRUARY 2025

Dr. David Levine (Physical Therapy) has received \$5,000 from True Power Performance Inc for the project entitled, "Effectiveness of True Power Performance, Inc on Cutaneous Blood Flow."

Dr. Yu Liang, Dr. Yingfeng Wang, Dr. Dalei Wu (Computer Science and Engineering), Dr. Katherine Elverd (Music Therapy), and Dr. Zibin Guo (Anthropology) have received \$100,000 from the AI/Machine Learning Consortium to Advance Health Equity and Researcher Diversity for the project entitled, "Enhancing Healthcare Equity through Large-Language-Model-Enabled Diagnostic and Therapeutic Music Modality."

Dr. Donald Reising (Electrical Engineering) has requested and received \$24,052 from Purdue University for the project entitled, "2020 SCALE Consortium - Radiation-Hard Microelectronics Workforce Development Consortium."

MARCH 2025

Dr. Joey Shaw (Biology, Geology and Environmental Science) has received \$12,000 from the Association of Southeastern Biologists for the project entitled, "2025 Spring Wildflower Pilgrimage."

Austin Harris (CUIP) has received \$19,999 from Vanderbilt University for the project entitled, "Mobile Lidar Trailer Partnership."

Dr. Hamdy Ibrahim (Mechanical Engineering) and Dr. Stephanie Philipp (School of Education) have received \$111,968 from the National Science Foundation for the project entitled, "Hybrid Surface Coating Toward Corrosion-Controlled Magnesium-Based Implants."

Dr. Ashley Schilling, Dr. Max Jordon, and Dr. David Levine (Physical Therapy) have received \$5,422 from the AMBUCS for the project entitled, "Impacts of seating fit upon pedaling initiation and power production on an adaptive tricycle in children with neuromuscular disability."

Dr. Susan Lazenby (Radio station) has received \$120,089 from the Corporation for Public Broadcasting for the project entitled, "WUTC Radio Community Service Grant."

APRIL 2025

Dr. Anna Kiel (Occupational Therapy) and Dr. June Hanks (Physical Therapy) have received \$5,000 from the Alliance of Women Philanthropists for the project entitled, “BrainBridge: Exploring Brain Health Across Lifespan and Recovery.”

Dr. Amy Brock-Hon and Kevin Hon (Biology, Geology and Environmental Science) and Steven Kline (Chemistry and Physics) have received \$7,690 from the Alliance of Women Philanthropists for the project entitled, “Hands-On Educational Displays at the Clarence T. Jones Observatory: Sparking Curiosity and Enhancing Astronomy Education in the Chattanooga Community.”

Dr. Azad Hossain (Biology, Geology and Environmental Science) has received \$147,389 from the National Aeronautics and Space Administration for year 2 of the project entitled, “Remote Sensing of Water Quality in the Tennessee River.”

Dr. Mengjun Xie, Dr. Li Dai, Dr. Yu Liang, Dr. Yingfeng Wang, and Dr. Yukun Yuan (Engineering and Computer Science) have received \$47,000 from Northeastern University for the project entitled, “2025 Bridge to Cyber.”

Dr. Amir Alakaam (Health & Human Performance) has received \$125,000 from the Tennessee Department of Health for the project entitled, “Developing a Curriculum for Public Health Workforces in Tennessee.”

Dr. Donald Reising (Electrical Engineering) has received \$9,853 from Tennessee Technological University for the project entitled, “TREN: Building Tennessee Research and Education Network.”

MAY 2025

Dr. Joey Shaw, Dr. Stylianos Chatzimanolis, and Jessica Sanders (Biology, Geology, and Environmental Science) have requested and received \$36,001 from the Electric Power Board of Chattanooga (EPB) for the project entitled, “2025 EPB Bio Survey.”

Dr. Jill Shelton (Psychology), in collaboration with Florida International University (FIU), has received \$2,000 from the Mental Research Institute for the project entitled, “The Role of Self & Others in the Internalization of Disability Identity.”

Dr. Deborah McAllister (School of Education), in collaboration with Georgia Tech Research Institute, has received \$27,500 from the National Aeronautics and Space Administration for the project entitled, “Inspiring NASA’s Next Generation through Building, Coding, and Machine Learning Missions (NASA ML-BOTS).”

Dr. Tian Li (Chemistry and Physics) and Dr. Donald Reising (Electrical Engineering), in collaboration with the Arizona State University, have received \$447,621 from the National Science Foundation for the project entitled, “Collaborative Research: Sub-Shot-Noise Limited Distributed Quantum Sensing on a Commercial Metropolitan-Scale Quantum Network via Deep Learning Aided Noise Suppression.”

JUNE 2025

Dr. Keenan Dungey, Dr. Meredith Barbee, and Dr. Jared Pienkos (Chemistry and Physics) have received \$4,800 from the American Chemical Society for the project entitled, "Project SEED site in Chattanooga for 2025."

Dr. Yingfeng Wang (Computer Science and Engineering) has received \$10,800 from a private institution for higher education for a research project.

Dr. Murat Barisik (Mechanical Engineering) has received \$501,760 from the National Science Foundation for the project entitled, "CAREER: Multiscale characterization of heat transfer in nanoporous materials assisted by machine learning."

