# TABLE OF CONTENTS

- **INTRODUCTION** ................................................................................................................................. 3
- **UTC SPONSORED PROGRAMS – AWARDS FY18/FY19 COMPARISON** ......................................................... 4
- **UTC SPONSORED PROGRAMS – PROPOSALS FY18/FY19 COMPARISON** ....................................................... 5
- **COLLEGE OF ARTS & SCIENCES – AWARDS & PROPOSALS FY18/FY19 COMPARISON** ................................. 6
- **GARY W. ROLLINS COLLEGE OF BUSINESS – AWARDS & PROPOSALS FY19** ...................................................... 7
- **COLLEGE OF ENGINEERING & COMPUTER SCIENCE – AWARDS & PROPOSALS FY18/FY19 COMPARISON** ......................... 8
- **COLLEGE OF HEALTH, EDUCATION, & PROFESSIONAL STUDIES – AWARDS & PROPOSALS FY18/FY19 COMPARISON** .................................................... 9
- **ADMINISTRATIVE UNITS – AWARDS & PROPOSALS FY17/FY18 COMPARISON** ............................................... 10
- **LISTING OF AWARDS – FY2019 QUARTER 1** ............................................................................................... 11
- **LISTING OF PROPOSALS – FY2019 QUARTER 1** ............................................................................................ 14
- **OFFICE OF RESEARCH AND SPONSORED PROGRAMS** .................................................................................. 20
INTRODUCTION

FIRST QUARTER: JULY 1, 2018 – SEPTEMBER 30, 2018

The information contained in this report is drawn from the Cayuse database and provides comparisons of the amounts of external funding for the first quarters of FY 18 and FY 19. This report includes all proposals and awards that were reported and approved by September 30, 2018. Proposals submitted for internal routing but not yet approved and awards not fully processed as of that date will be included in future quarterly reports. If any of the information in this report does not correspond to your records or you have general questions, please notify orsp@utc.edu.
UTC SPONSORED PROGRAMS – PROPOSALS FY18/FY19 COMPARISON

<table>
<thead>
<tr>
<th>Category</th>
<th>FY18 (Total: $7,336,213)</th>
<th>FY19 (Total: $18,118,292)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>$846,600</td>
<td>$1,756,251</td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td>$764,665</td>
</tr>
<tr>
<td>Engineering &amp; Computer Science</td>
<td>$3,510,038</td>
<td>$7,875,855</td>
</tr>
<tr>
<td>Health, Education &amp; Professional Studies</td>
<td>$2,957,361</td>
<td>$7,454,634</td>
</tr>
<tr>
<td>Academic Administration</td>
<td>$22,214</td>
<td>$266,887</td>
</tr>
</tbody>
</table>
COLLEGE OF ARTS & SCIENCES – AWARDS & PROPOSALS FY18/FY19 COMPARISON

Awards

- FY18 (Total: $601,946)
- FY19 (Total: $84,607)

- Biology, Geology, & Environmental Sciences: $39,004
- Mathematics: $41,615
- Psychology: $3,988

Proposals

- FY18 (Total: $846,600)
- FY19 (Total: $1,756,251)

- BGES: $271,857
- Chemistry & Physics: $398,853
- Mathematics: $324,311
- Music: $2,500
- Political Science & Public Service: $1,000
- Psychology: $3,988
COLLEGE OF ENGINEERING & COMPUTER SCIENCE – AWARDS & PROPOSALS FY18/FY19 COMPARISON

### Awards

- **Civil & Chemical Engineering**: $19,998
- **Computer Science & Engineering**: $189,648
- **Electrical Engineering**: $62,846
- **Mechanical Engineering**: $59,788

FY18 (Total: $229,572) vs. FY19 (Total: $692,520)

### Proposals

- **Civil & Chemical Engineering**: $19,998
- **Computer Science & Engineering**: $228,802
- **Electrical Engineering**: $1,005,619
- **Engineering Management & Technology**: $859,783
- **Mechanical Engineering**: $228,802

FY18 (Total: $3,510,038) vs. FY19 ($7,875,855)
COLLEGE OF HEALTH, EDUCATION, & PROFESSIONAL STUDIES – AWARDS & PROPOSALS FY18/FY19 COMPARISON

**Awards**

- **CCCE**
  - FY18: $1,496,497
  - FY19: $1,134,520
  - Total: $2,496,067

- **Nursing**
  - FY18: $892,864
  - FY19: $900,478
  - Total: $1,793,342

- **Physical Therapy**
  - FY18: $30,000
  - FY19: $77,114
  - Total: $107,114

- **School of Education**
  - FY18: $2,978
  - FY19: $255,000
  - Total: $257,978

- **School Psychology**
  - FY18: $172,800
  - FY19: $19,000
  - Total: $191,800

- **Southeast Center for Education**
  - FY18: $1,157,500
  - FY19: $77,114
  - Total: $1,234,614

**Proposals**

- **CCCE**
  - FY18: $5,175,203
  - FY19: $73,894
  - Total: $5,249,097

- **HHP**
  - FY18: $417,798
  - FY19: $190,394
  - Total: $608,192

- **Interior Design**
  - FY18: $2,167,037
  - FY19: $30,000
  - Total: $2,197,037

- **Nursing**
  - FY18: $799,999
  - FY19: $1,000
  - Total: $800,999

- **Physical Therapy**
  - FY18: $152,8368
  - FY19: $30,000
  - Total: $182,8368

- **School of Education**
  - FY18: $30,000
  - FY19: $5,000
  - Total: $35,000

- **School Psychology**
  - FY18: $2,167,037
  - FY19: $16,302
  - Total: $2,183,339

- **Southeast Center for Ed**
  - FY18: $1,134,520
  - FY19: $19,000
  - Total: $1,153,520

Total

- **Awards**
  - FY18: $5,000
  - FY19: $30,000
  - Total: $35,000

- **Proposals**
  - FY18: $5,000
  - FY19: $30,000
  - Total: $35,000
## LISTING OF AWARDS – FY2019 QUARTER 1

### COLLEGE OF ARTS AND SCIENCES

#### BIOLOGY, GEOLOGY & ENVIRONMENTAL SCIENCE

Dr. Joey Shaw received **$30,504** from the National Science Foundation for the project entitled, “Repair, digitization, and integration of the Southern Adventist University herbarium into the University of Tennessee at Chattanooga herbarium” and received **$8,500** from the Association of Southeastern Biologists for the project entitled, “Graduate Assistantship to Support the Chair of the Wildflower Pilgrimage Organizing Committee.”

#### MATHEMATICS

Dr. Feng Bao received **$41,615** from the National Science Foundation for the project entitled, “RUI: Efficient Adaptive Backward SDE Methods for Nonlinear Filtering Problems.”

#### PSYCHOLOGY

Drs. Kristen Black and Alexandra Zelin requested and received **$3,988** from the Girls Preparatory School for the project entitled, “Team Building for Faculty at the Girls Preparatory School.”

### GARY W. ROLLINS COLLEGE OF BUSINESS MANAGEMENT

Dr. Hemant Jain received **$16,305** from the Public Education Foundation for the project entitled, “Support of Graduate Student Research on Predictors of College Success.”

### COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

#### CIVIL & CHEMICAL ENGINEERING


#### ELECTRICAL ENGINEERING

Dr. Thomas Loveless requested and received **$42,846** from Vanderbilt University for the project entitled, “Fundamental Research into Radiation Resiliency of Emerging Circuit Technologies Appropriate to the CWMD Mission.”
COMPUTER SCIENCE AND ENGINEERING

Drs. Hong Qin and Yu Liang, Drs. Joey Shaw and Azad Hossain (Biology, Geology and Environmental Science), and Dr. Karen Adsit (School of Education) received $549,888 from the National Science Foundation for the project entitled, “Spokes: MEDIUM: SOUTH: Collaborative: Integrating Biological Big Data Research into Student Training and Education.”

PHYSICAL THERAPY

Dr. David Levine and Drs. Henry Spratt and David Giles (Biology, Geology & Environmental Science) requested and received $30,000 from the Osborne Foundation in collaboration with the UC Foundation for the project entitled, “Equipment to Support UTC’s Clinical Infectious Disease Control Research Group to Establish a Satellite Lab on the Campus of Erlanger Hospital.”

COLLEGE OF HEALTH, EDUCATION, AND PROFESSIONAL STUDIES

CENTER FOR COMMUNITY CAREER EDUCATION

Ms. Twyler Boykin received $275,155 from the U.S. Department of Education for the project entitled, “Upward Bound Math & Science.”

Ms. Sandra Cole received $289,514 from the U.S. Department of Education for the project entitled, “Southern Appalachian Educational Opportunity Center.”

Ms. Shirl Gholston received $313,396 from the U.S. Department of Education for the project entitled, “Student Support Services FY16-FY21.”

Ms. Karen Vann has received $256,455 from the U.S. Department of Education for the project entitled, “Talent Search.”

SCHOOL OF EDUCATION

Dr. Renee Murley received $105,000 from the Community Foundation of Greater Chattanooga Incorporated for the project entitled, “Chattanooga Teaching Fellows Program” and $150,000 from the Lyndhurst Foundation for the project entitled, “Residency Model.”

SCHOOL OF NURSING

Dr. Linda Hill received $55,989 from the Health Resources and Services Administration for the project entitled, “Nurse Anesthesia Traineeship Grant.”

Dr. Amber Roache received $836,875 from the Health Resources and Services Administration for the project entitled, “Clinical-Academic Network for Developing Leaders.”

SCHOOL PSYCHOLOGY

Dr. Pamela Guess received $172,800 from the Tennessee Department of Education for the project entitled, “School Psychology Intern Program.”
Ms. Laurie Melnik received $7,500 from the Tennessee Arts Commission for the project entitled, “Arts Learning Lab,” $90,000 from the Lyndhurst Foundation for the project entitled, “Arts Pathways Plan,” and requested and received $18,000 from the Hunter Museum of American Art for the project entitled, “2018-19 Art of Balance and Diagnosis.”

Mr. John Freeze received $32,620 from the University of Tennessee – Institute of Public Service for the project entitled, “Southeastern Command and Leadership Academy (SECLA) and $57,960 from the Tennessee Office of Criminal Justice Programs for the project entitled, “Crucial Conversations in a Law Enforcement Setting with a Domestic Violence Focus.”

Dr. Mina Sartipi received $49,996 for her research efforts.

Mr. Bryan Bulmer requested and received $500 from CashCourse for the project entitled, “Support for Student Financial Education Events.”

Mr. Charles Mix requested and received $3,228 from the American Rivers for the project entitled, “Tuckasegee River Trail Map Design” and received $21,600 from the Lyndhurst Foundation for the project entitled, “Interdisciplinary Geospatial Technology Lab (IGT Lab) Support for Thrive Regional Partnership.”

Dr. Joanne Romagni requested and received $400,000 from the UC Foundation for a number of projects supporting academic initiatives and educational excellence.

LISTING OF PROPOSALS – FY2019 QUARTER 1

COLLEGE OF ARTS AND SCIENCES

BIOLOGY, GEOLOGY & ENVIRONMENTAL SCIENCE

Dr. Loren Hayes, Dr. Amanda Clark (Psychology), Dr. Jennifer Ellis (School of Education), and Dr. Shewanee Howard-Baptiste (Health and Human Performance) requested $263,357 from the National Science Foundation for the project entitled, “Collaborative Research: IRES Track I: Stronger together: Exploring how communal care reduces individual costs during challenging years.”

MATHEMATICS

Drs. Sumith Gunasekera, and Lingju Kong requested $99,774 from the Sony U.S.A. Foundation Inc. for the project entitled, “Exact Inference of the Youden Index and Its Corresponding Cut-Point Under Multivariate Roc Curve in The Presence of Normally Distributed Biomarkers with Missing Values Using Parallel Programming and Newly Developed Generalized-Multivariate-Youden Platform.”

Drs. Lingju Kong, John Graef, and Sumith Gunasekera requested $257,720 from the National Science Foundation for the project entitled, “REU Site: Differential/Difference Equation Models and Statistics.”

Drs. Andrew Ledoan, Jin Wang, Roger Nichols, and Dr. Sherry Marlow Ormsby (Office of Planning, Evaluation & Institutional Research) requested $282,659 from the National Science Foundation for the project entitled, “REU Site: Research Training for Undergraduates in Mathematical Analysis with Applications in Allied Fields.”

Drs. Lingju Kong, John Graef, and Sumith Gunasekera requested $258,667 from the National Science Foundation for the project entitled, “Deterministic Models for Waterborne Infections.”

Dr. Lakmali Weerasena requested $501,397 from the National Science Foundation for the project entitled, “CAREER: Mathematical Framework for Multi-Objective Set Covering Problem with Multifaceted Applications” and $79,189 from Amazon, Inc. for the project entitled, “Efficient Multi-Objective Approximation Algorithm for Supply Chain Networks.”

POLITICAL SCIENCE & PUBLIC SERVICE

Dr. Amanda Wintersieck and Dr. Shawn Trivette (Social, Cultural, and Justice Studies) requested $1,000 from the Civic Nation for the project entitled, “#MOCtheVote2018 Student Mobilization Project.”
GARY W. ROLLINS COLLEGE OF BUSINESS

MANAGEMENT

Dr. Hemant Jain requested $16,305 from the Public Education Foundation for the project entitled, “Support of Graduate Student Research on Predictors of College Success.”

MARKETING & ENTREPRENEURSHIP

Dr. Beverly Brockman, Dr. Reinhold Mann (Vice Chancellor for Research), and Dr. Mina Sartipi (CUIP) requested $748,360 from the Economic Development Administration for the project entitled, “Smart Cities Accelerator Leading Entrepreneurship through University Partnerships (SCALE UP).”

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

CIVIL & CHEMICAL ENGINEERING

Dr. Jejal Reddy Bathi (Civil and Chemical Engineering), Dr. Cuilan Gao (Mathematics), and Dr. Azad Hossain (Biology, Geology and Environmental Science) requested $245,838 from the Tennessee Department of Transportation for the project entitled, “Peak Flow Estimation in Urban Drainage Areas.”

Dr. Michael Danquah submitted a preliminary proposal to the India Ministry of Science and Technology for the project entitled, “Preliminary Proposal: Anisotropic Nanoparticles Incorporated Micro/Nanoreactors for CO2 Capturing and Converting It into Useful Products.”

Dr. Ignatius Fomunung and Dr. Aldo McLean (Engineering Management and Technology) requested $147,811 from the Tennessee Department of Transportation for the project entitled, “Improvement of Park-and-Ride Facilities and Services in Metropolitan Areas of Tennessee” and requested $99,412 (in partnership with Dr. Joseph Owino) for the project entitled, “Evaluating Performance and Benefits – Costs of Road Diets in Tennessee.”

Drs. Bradley Harris, Sungwoo Yang, Dr. Rasouli Disfani Vahid (Electrical Engineering), Drs. Charles Margraves, Trevor Elliott (Mechanical Engineering), Dr. Amanda Clark (Psychology), and Dr. Jennifer Ellis (School of Education) requested $587,659 from the National Science Foundation for the project entitled, “RET Site: Providing Research Experiences and Practicum on Cyber-Physical Systems for Regional Community College Faculty (PREP-CPS).”

Drs. Mbakisya Onyango, Ignatius Fomunung, Joseph Owino, and Weidong Wu requested $199,940 from the Tennessee Department of Transportation for the project entitled, “Evaluating the Performance of Inverted Pavements in Tennessee,” requested $320,000 (in partnership with Dr. Joseph Owino, Dr. Joseph Kizza (Computer Science & Engineering), and Drs. Endong Wang and Alexandr Sokolov (Engineering Management and Technology)) for the project entitled, “Network Level Pavement Structural Data,” and requested $198,680 (in partnership with Drs. Endong Wang, Weidong Wu and Joseph Owino) for the project entitled, “MEPDG Climate Data Input for The State of Tennessee.”

Drs. Endong Wang and Mbakisya Onyango, Dr. Li Yang (Computer Science & Engineering), and Dr. Robert Baggett (Engineering Management and Technology) requested **$124,986** from the Tennessee Department of Transportation for the project entitled, “Developing Safety Metrics and Thresholds for Highway Constructions in Tennessee.”

Dr. Weidong Wu requested **$516,860** from the National Science Foundation for the project entitled, “CAREER: Building a database to boost smarter civil engineering AI/deep learning research and application,”

Drs. Weidong Wu, Mbakisya Onyango, Benjamin Byard, and Joseph Owino (Civil Engineering) have requested **$219,806** from the Tennessee Department of Transportation for the project entitled, “Use of Recycled Concrete Aggregate in New Concrete Mixes.”

**COMPUTER SCIENCE & ENGINEERING**

Drs. Farah Kandah and Mina Sartipi (Computer Science and Engineering & CUIP) have requested **$199,936** from the Tennessee Department of Transportation for the project entitled, “Travel Survey and Analysis Through Smartphone Apps.”

Drs. Yu Liang, Dalei Wu, Li Yang, and Hong Qin (Computer Science and Engineering) have requested **$199,960** from the Tennessee Department of Transportation for the project entitled, “A Cooperative Data-Driven Wrong-Way Driving Avoidance System (DWAS).”

Drs. Claire McCullough, Joseph Dumas (Computer Science and Engineering), and Dr. Amye Warren (Psychology) have requested **$392,503** from the National Science Foundation for the project entitled, “Science, Technology, Engineering, Art and Math for Underrepresented Students (STEAM for US).”

Drs. Hong Qin (Computer Science & Engineering), Soubantika Palchoudhury, Bradley Harris (Civil and Chemical Engineering), Yu Liang, Dalei Wu, Mengjun Xie (Computer Science and Engineering), Hope Klug, Francesca Leasi, Jennifer Boyd, Joey Shaw, Azad Hossain, David Giles, Deanna Beasley (Biology, Geology, and Environmental Science), and Jisook Kim (Chemistry and Physics) have requested **$359,971** from the National Science Foundation for the project entitled, “REU Site: ICompBio – Engaging Undergraduates in Interdisciplinary Computing for Biological Research.”

Dr. Dalei Wu (Computer Science & Engineering) has requested **$433,069** from the National Science Foundation for the project entitled, “CAREER: Towards Adaptive and Cognitive Wireless Video Sensor Networks for Enhanced Situational Awareness.”

Drs. Mengjun Xie, Dalei Wu, and Li Yang (Computer Science and Engineering) have requested **$199,988** from the Tennessee Department of Transportation for the project entitled, “Activity-based Household Travel Survey Through Smartphone Apps in Tennessee.”
Dr. Daniel Loveless (Electrical Engineering) has requested $500,000 from the National Science Foundation for the project entitled, “CAREER: Fundamental Reliability Analysis of Si FinFETs and Nanowires through Ionizing Radiation Effects Spectroscopy.”

Drs. Abdul Ofoli, Ahmed Eltom, Vahid Rasouli Disfani (Electrical Engineering), and Ms. Squoia Holmes (Student Affairs) have requested $1,247,670 from The Office of Energy Efficiency and Renewable Energy for the project entitled, “Developing, Training and Bridging the Skills Gap for the Solar Workforce.”

Dr. Daniel Pack (Electrical Engineering) has requested $437,576 from the National Science Foundation for the project entitled, “Small Cooperative Unmanned Aerial Vehicles to Combat Malaria.”

Drs. Wolday Abrha, Aldo McLean (Engineering Management & Technology), and Mr. Charles Mix (IGT Lab) have requested $84,298 from the Tennessee Department of Transportation for the project entitled, “Investigating the Service of App-based Rideshare and Transportation Network Companies in Tennessee.”

Drs. Seong Dae Kim, and Alexandr Sokolov (Engineering Management and Technology) have requested $180,394 from the Tennessee Department of Transportation for the project entitled, “Investigation On Wrong-Way Prevention Technologies and Systems.”

Drs. Alexandr Sokolov (Engineering Management and Technology), Endong Wang, Mbakisya Onyango, and Ignatius Fomunung (Civil Engineering) have requested $85,254 from the Tennessee Department of Transportation for the project entitled, “Return On Investment (ROI) On Transportation Projects.”

MECHANICAL ENGINEERING

Drs. Louie Elliott, Trevor Elliott, and Charles Margraves (Mechanical Engineering) have requested $14,950 from the Engineering Information Foundation for the project entitled, “UTC Girls to Engineers Network (GEN) Phase 2.”

Dr. Trevor Elliott (Mechanical Engineering) has requested $530,949 from the National Science Foundation for the project entitled, “CAREER: To Infinity and Beyond – Combustion Analysis and Control of Additively Manufactured Solid Rocket Fuel Grain Geometries without Conventional Limitations.”

Dr. Charles Margraves (Mechanical Engineering) has requested $29,975 from the Tennessee Board of Architectural and Engineering Examiners for the project entitled, “Mechanical Engineering TBAEE Grant.”
Ms. Sandra Cole (Center for Community Career Education) has requested $14,962 from the City of Chattanooga for the project entitled, “College Knowledge, Now! (CK, Now!) 2018-19.”

Dr. Hunter Huckabay, Michelle Oliver, Elizabeth Eaves, Keith Mayes, Shamira Freeman (Center for Community Career Education), and Dr. Sarah Sandefur (School of Education) have requested $5,160,241 from the U.S. Department of Education for the project entitled, “UTC GEAR UP Project.”

Dr. Priscilla Simms-Roberson (Nursing) has requested $5,000 from CVS Health for the project entitled, “2018 CVS Health Foundation Family Nurse Practitioner and Physician Assistant Scholarship Program.”

Ms. Laurie Melnik, Dr. Joel Baxley (Southeast Center for Education), Dr. Lee Harris (Music Education), Mr. Thaddeus Taylor (Challenger Center), and Ms. Rachel Fleming (Library) have requested $2,149,037 from the U.S. Department of Education for the project entitled, “Arts Learning Lab (ALL): A STEAM-Based Arts Integration Project in Rural Education.”

Dr. Mina Sartipi (CUIP) has requested $99,955 from the Tennessee Department of Transportation for the project entitled, “Evaluating Performance and Benefits of Road Diets in Tennessee.”

Dr. Mina Sartipi (CUIP), and Mr. Charles Mix (IGT Lab) have requested $144,832 from the Tennessee Department of Transportation for the project entitled, “Localization of SPF for Jurisdiction State Routes.”

Dr. Karissa Peyer (Health and Human Performance) has requested $73,894 from the William and Ella Owens Medical Research Foundation, in collaboration with the University of Tennessee – Health Science Center, for the project entitled, “Chattanooga Child Health and wellness Opportunities through Inter-Sectoral Collaboration and Environmental change (CHOICE).”

Ms. Catherine Kendall (Interior Design) has requested $3,500 from the Tennessee Board of Architectural and Engineering Examiners for the project entitled, “2018 TBAEE NCIDQ Application & Exam Fees and Drawing Enhancement Grant.”
OFFICE OF THE VICE CHANCELLOR FOR RESEARCH

Dr. Gregory Heath (Office of the Vice Chancellor for Research), Drs. Shewanee Howard-Baptiste, Charlene Schmidt, and Karissa Peyer (Health and Human Performance) have submitted a preliminary proposal to the Robert Wood Johnson Foundation for the project entitled, “Chattanooga Child Health and wellness Opportunities through Inter-Sectoral Collaboration and Environmental change (CHOICE)”.

Mr. Charles Mix (IGT Lab) has requested $21,600 from the Lyndhurst Foundation for the project entitled, “Interdisciplinary Geospatial Technology Lab Support for Thrive Regional Partnership.”

SIMCENTER

Dr. Anthony Skjellum (SimCenter) has submitted a preliminary proposal with the University of New Mexico to the National Nuclear Security Administration for the project entitled, “PSAAP-III-RFI: Center for Understandable, Performant Exascale Communication Systems (CUP-ECS)”, and submitted a preliminary proposal to the National Nuclear Security Administration for the project entitled, “PSAAP-III-RFI Response (FIC): Message-Passing Parallel Programming Research for Exascale: Performance, Portability, Productivity, Predictability.”