2. SPECIAL RECOGNITIONS

2.1 FACULTY FELLOWS

BADIRU, ADEDEJI B., Dean, Graduate School of Engineering and Management, Fellow of the Institute of Industrial Engineers, Fellow of the Nigerian Academy of Engineering.

COLLINS, PETER J., Professor of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of Antenna Measurement and Techniques Association.

DECKRO, RICHARD F., Professor of Operations Research, Department of Operational Sciences, Fellow of the Military Operations Research Society.

*ELROD, WILLIAM E., Professor Emeritus of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of American Society of Mechanical Engineers International.

*FRANKE, MILTON E., Professor Emeritus of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of the American Society of Mechanical Engineers.

GOLTZ, MARK N., Professor of Engineering and Environmental Management, Department of Systems Engineering and Management, Fellow of the Society of American Military Engineers.

GRIMAILA, MICHAEL R., Professor and Head, Department of Systems Engineering and Management, Fellow of the Information System Security Association.

*HOUPIST, CONSTANTINE H., Professor Emeritus of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Institute of Electrical and Electronic Engineers.

MALL, SHANKAR, Professor of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of the American Society of Mechanical Engineers International.

*MAYBECK, PETER S., Professor Emeritus of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Institute of Electrical and Electronic Engineers.

PACHTER, MEIR, Professor of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Institute of Electrical and Electronic Engineers.


PIGNATIELLO, JOSEPH J., Professor of Operations Research; Head, Department of Operational Sciences, Fellow of the Institute of Industrial Engineers; Fellow of the American Society for Quality.

POLANKA, MARC D., Professor of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of the American Society of Mechanical Engineers International.

RAQUET, JOHN F., Associate Professor of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Institute of Navigation.

RUGGES-WRENN, MARINA B., Professor of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of the American Society of Mechanical Engineers International.

TERZUOII, ANDREW J., Associate Professor of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Electromagnetics Academy.

*Emeritus faculty*
2.3 RESEARCH AND TEACHING AWARDS

2.3.1 FACULTY

AKERS, BENJAMIN F.,
ENC Instructor of the Year, 2017-2018.

ANDERSON, JASON R.,
Southwestern Ohio Council for Higher Education (SOCHE), Faculty Excellence Award, 2018.

ARMSTRONG, ANDREW M., Maj,
ENC Instructor of the Quarter, 2017 Fall Quarter.

BREITBACH, TIMOTHY W.,
ASAM Instructor of the Year, 2018.
ENS Military Faculty Member of the Year, 2018.

CANCIANI, AARON J., Capt,
2018 John L. McLucas Basic Research Award

COBB, RICHARD G.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation – Space Division

COLOMBI, JOHN M.,
IEEE Senior Member, March 2018.

DECKRO, RICHARD F.,

FREEMAN, JACOB A., Lt Col,
2018 SOCHE Faculty Excellence Award

HARPER, WILLIE F., Jr.,

LINGENFELTER, ANDREW J., Capt,
2018 AETC Outstanding Scientist/Engineer of the Year Award (mid-career military category)

LUNDAY, BRIAN J.,
Southwestern Ohio Council of Higher Education (SOCHE), Faculty Excellence Award, 2017.

MILLER, MICHAEL E.,
Southwestern Ohio Council for Higher Education Faculty Excellence Award, Fall 2017.
NYKL, SCOTT L.,
Air Force Outstanding Scientist/Engineer, Junior Civilian Award – AETC Winner.

POLANKA, MARC D.,
2018 AETC Outstanding Scientist/Engineer of the Year Award (senior civilian category)
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation Award

PRIGGE, DIEDRICH V.,
Sigma Iota Epsilon 2017-2018 Instructor of the Year Award — Beta Chapter, March 2018.

REEGER, JONAH A., Maj,
SOCHE Faculty Excellence Award, November 2017
ENC Instructor of the Quarter, 2018 Winter Quarter.

RUGGLES-WRENN, MARINA B.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation – Structures Division
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Art-in-Science (Photo Category) Award – 2nd Place

RUTLEDGE, JAMES L., Lt Col.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation
2018 AFIT Outstanding Military Faculty Award
2018 AFIT Educator of the Year

SCHULDT, STEVEN J.,
Air Force Winner, Arthur S. Flemming Award, Basic Science Category, 2018.
2.3.2 STUDENTS

BATEMAN, MARK G., Jr.,
2018 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Systems Engineering and Management. Thesis title: “Optimization of Geosynchronous Earth Orbit and Ascent Vehicle Space Situational Awareness via Parallel Evaluation of Executable Architectures”

BEYER, STEVEN M.,
2018 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Electrical and Computer Engineering. Thesis title: “Pattern-of-Life Modeling using Data Leakage in Smart Homes”

2018 Chancellor’s Award for the most exceptional master’s thesis by a graduating student. Thesis Title: “Pattern-of-Life Modeling using Data Leakage in Smart Homes”

BUTT, SPENCER A.,
2018 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Operational Sciences. Thesis title: “Cyber Data Anomaly Detection using Autoencoder Neural Networks”

BOHAN, BRIAN T.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Art-in-Science (video category) Award – 2nd Place

HEWITSON, SCOTT C.,

HUFF, RILEY,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation Award

2018 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Aeronautics and Astronautics. Thesis title: “Design, Buildup, and Testing of a Radial Rotating Detonation Engine for a Compact Auxiliary Power Unit”

KIM, DEBORAH B.,

KNISELY, ANDREW J.,

KROEGER, BRIAN G.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Art-in-Science (Photo Category) Award – 2nd Place

KUNICKI, JOSEPH,
2018 ES Thrust Area Charles Bleckmann Wingman Award, Outstanding Student Award which recognizes the student who best exemplifies outstanding academic achievement, leadership, and character.
MCCREA, JOHN P.,

MERRIMAN, CAMERON,
2018 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Engineering Physics. Thesis title: “Modeling Ground Burst Electromagnetic Pulse for Nuclear Weapon Diagnostics”

NG, JUSTIN,
2018 Dean's Award for the most exceptional master's thesis by a graduating student in the Department of Mathematics and Statistics. Thesis title: “Radial Basis Function Generated Finite Differences for the Nonlinear Schrodinger Equation”

OKAMOTO, JAMES T.,

PRINCE, ERIC R.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation – Space Division

PRY, GLEN E.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Best Presentation – Structures Division

RAMSEY, PHILIP A.,

SANDERS, KEITH A.,
2018 AFIT Distinguished Graduate


SPAN, MARTIN T., III,
2018 Louis K. Polk National Defense Industrial Association Award which is given for exhibiting the highest standards of academic and professional accomplishment and through their research made a significant contribution toward strengthening the nation's industrial defense base. Thesis title: “Conceptual Systems Security Analysis Aerial Refueling Case Study”

WATERS, MICHAEL C.,
2018 AIAA Dayton-Cincinnati Aerospace Sciences Symposium Art-in-Science (video category) Award – 2nd Place
3.3 EXTERNAL SPONSOR FUNDING FOR THE GRADUATE SCHOOL OF ENGINEERING AND MANAGEMENT

Many of the Graduate School of Engineering and Management’s theses and research projects completed under faculty supervision are funded in part by other Air Force, DOD and government units and agencies. Often, this funding results from collaboration between faculty and thesis sponsors and occurs when the research project can be leveraged by the purchase of equipment or services not otherwise available. Figure 3.2 summarizes the past ten fiscal years of sponsored funding. Tables 3.3 and 3.4, and Figure 3.3, summarize external funding for FY18.

Figure 3.2 New Award History FY09-FY18

<table>
<thead>
<tr>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Table 3.3 FY18 External Funding & Research Expenditures for Academic Departments & Research Centers ($1,000's)

<table>
<thead>
<tr>
<th>Department</th>
<th>Newly Awarded Research Projects</th>
<th>#</th>
<th>$k</th>
<th>#</th>
<th>$k</th>
<th>#</th>
<th>$k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics &amp; Statistics (ENC)</td>
<td>9</td>
<td>554</td>
<td>9</td>
<td>554</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical &amp; Computer Eng (ENG)</td>
<td>55</td>
<td>5,774</td>
<td>3</td>
<td>150</td>
<td>58</td>
<td>5,924</td>
<td></td>
</tr>
<tr>
<td>Engineering Physics (ENP)</td>
<td>46</td>
<td>5,743</td>
<td>1</td>
<td>8</td>
<td>47</td>
<td>5,751</td>
<td></td>
</tr>
<tr>
<td>Research &amp; Sponsored Programs (ENR)</td>
<td>1</td>
<td>88</td>
<td>1</td>
<td>88</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Operational Sciences (ENS)</td>
<td>33</td>
<td>6,144</td>
<td>3</td>
<td>221</td>
<td>36</td>
<td>6,365</td>
<td></td>
</tr>
<tr>
<td>Systems Eng &amp; Management (ENV)</td>
<td>13</td>
<td>869</td>
<td>1</td>
<td>150</td>
<td>14</td>
<td>1,019</td>
<td></td>
</tr>
<tr>
<td>Aeronautical &amp; Astronautical Eng (ENY)</td>
<td>51</td>
<td>2,659</td>
<td>2</td>
<td>99</td>
<td>53</td>
<td>2,758</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>208</td>
<td>21,832</td>
<td>10</td>
<td>628</td>
<td>218</td>
<td>22,459</td>
<td></td>
</tr>
<tr>
<td>Total FY18 Research Expenditures</td>
<td>23,613</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Center

<table>
<thead>
<tr>
<th>Center</th>
<th>Newly Awarded Research Projects</th>
<th>#</th>
<th>$k</th>
<th>#</th>
<th>$k</th>
<th>#</th>
<th>$k</th>
<th>#</th>
<th>$k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy and Navigation Technology (ANT)</td>
<td>31</td>
<td>3,871</td>
<td>2</td>
<td>120</td>
<td>33</td>
<td>3,991</td>
<td>4,167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Cyberspace Research (CCR)</td>
<td>15</td>
<td>1,185</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>1,185</td>
<td>936</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Directed Energy (CDE)</td>
<td>20</td>
<td>2,957</td>
<td>1</td>
<td>8</td>
<td>21</td>
<td>2,965</td>
<td>2,799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Operational Analysis (COA)</td>
<td>16</td>
<td>2,937</td>
<td>1</td>
<td>90</td>
<td>17</td>
<td>3,027</td>
<td>3,198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Space Research and Assurance (CSRA)</td>
<td>29</td>
<td>1,902</td>
<td>1</td>
<td>20</td>
<td>30</td>
<td>1,922</td>
<td>2,347</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Tech Intel Studies &amp; Research (CTISR)</td>
<td>12</td>
<td>1,510</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>1,510</td>
<td>1,633</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>123</td>
<td>14,362</td>
<td>5</td>
<td>238</td>
<td>128</td>
<td>14,600</td>
<td>15,080</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Total research expenditures reported include institutional cost sharing, which is not included in newly awarded projects. Numbers reported to the ASEE and NSF research expenditure surveys vary somewhat due to differences in definitions. All Center funds are also included in departmental funding.
Figure 3.3 New FY18 Awards by Sponsor

Table 3.4 New FY18 Awards to Academic Departments & Research Centers by Sponsor

<table>
<thead>
<tr>
<th>Dept.</th>
<th>AFRL (Non-AFRL) $k</th>
<th>AFMC Other USAF $k</th>
<th>Other DOD $k</th>
<th>Other Federal $k</th>
<th>Other Non-Federal $k</th>
<th>Total $k</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC</td>
<td>458</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>554</td>
</tr>
<tr>
<td>ENG</td>
<td>3,115</td>
<td>100</td>
<td>399</td>
<td>2,240</td>
<td>70</td>
<td>5,924</td>
</tr>
<tr>
<td>ENP</td>
<td>747</td>
<td>300</td>
<td>970</td>
<td>3,408</td>
<td>327</td>
<td>5,752</td>
</tr>
<tr>
<td>ENR</td>
<td>88</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>88</td>
</tr>
<tr>
<td>ENS</td>
<td>425</td>
<td>2,637</td>
<td>1,000</td>
<td>2,192</td>
<td>110</td>
<td>6,364</td>
</tr>
<tr>
<td>ENV</td>
<td>500</td>
<td>150</td>
<td>173</td>
<td>20</td>
<td>80</td>
<td>1,018</td>
</tr>
<tr>
<td>ENY</td>
<td>1,054</td>
<td>8</td>
<td>365</td>
<td>1,084</td>
<td>166</td>
<td>2,758</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,387</td>
<td>3,195</td>
<td>3,003</td>
<td>8,944</td>
<td>753</td>
<td>22,458</td>
</tr>
</tbody>
</table>

Note: “Other DOD” in this table includes the DEJTO, OSD, NGA, NSA, US Army, and US Navy pie slices from Figure 3.3, plus funding from other DOD organizations.

Center

<table>
<thead>
<tr>
<th>Center</th>
<th>AFRL $k</th>
<th>AFMC $k</th>
<th>Other USAF $k</th>
<th>Other DOD $k</th>
<th>Other Federal $k</th>
<th>Other Non-Federal $k</th>
<th>Total $k</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT</td>
<td>2,237</td>
<td>-</td>
<td>180</td>
<td>1,544</td>
<td>30</td>
<td>-</td>
<td>3,991</td>
</tr>
<tr>
<td>CCR</td>
<td>783</td>
<td>-</td>
<td>179</td>
<td>153</td>
<td>70</td>
<td>-</td>
<td>1,185</td>
</tr>
<tr>
<td>CDE</td>
<td>435</td>
<td>300</td>
<td>8</td>
<td>2,146</td>
<td>77</td>
<td>-</td>
<td>2,966</td>
</tr>
<tr>
<td>COA</td>
<td>253</td>
<td>1,340</td>
<td>487</td>
<td>837</td>
<td>110</td>
<td>-</td>
<td>3,027</td>
</tr>
<tr>
<td>CSRA</td>
<td>452</td>
<td>-</td>
<td>155</td>
<td>1,316</td>
<td>-</td>
<td>-</td>
<td>1,923</td>
</tr>
<tr>
<td>CTISR</td>
<td>121</td>
<td>-</td>
<td>825</td>
<td>564</td>
<td>-</td>
<td>-</td>
<td>1,510</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4,281</td>
<td>1,640</td>
<td>1,834</td>
<td>6,560</td>
<td>287</td>
<td>-</td>
<td>14,602</td>
</tr>
</tbody>
</table>

Note: All Center funds are also included in departmental funding