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 AMPTA.

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

*ELROD, WILLIAM E., Distinguished 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 Emeritus 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.

*HENGEHOLD, ROBERT L., Professor Emeritus of Physics, Department of Engineering Physics, Fellow of the American Physical Society.

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

MALL, SHANKAR, Distinguished 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.


PERRAM, GLEN P., Professor of Physics, Department of Engineering Physics, Fellow of the Directed Energy Professional Society.

PIGNATIELLO, JOSEPH J., Professor of Operations Research; Head, Department of Operational Sciences; Fellow of the Institute of Industrial and Systems 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., Professor of Electrical Engineering, Department of Electrical and Computer Engineering, Fellow of the Institute of Navigation.
RUGGLES-WRENN, MARINA B., Professor of Aerospace Engineering, Department of Aeronautics and Astronautics, Fellow of the American Society of Mechanical Engineers International.

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


WEIR, JEFFERY W., Professor and Associate Department Head, Department of Operational Sciences, Fellow of the Southwestern Ohio Council for Higher Education.

*Emeritus faculty
2.3 RESEARCH AND TEACHING AWARDS

2.3.1 FACULTY

BINDEWALD, JASON M., Maj,
2017 Air Force Research and Development Award

BOEHMKE, BRADLEY C.,
ASEE Engineering Economy Division Eugene L. Grant Award for Best Publication

CANCIANI, AARON J., Capt,
2017 John L. McLucas Basic Research Award

CARBINO, TIMOTHY J., Maj,
2017 Air Force Science & Engineering Award- Advance Technology Development

FEE, JAMES R., Lt Col,
Winner of the 2016 AFIT Volunteer of the Year Award

FICKUS, MATTHEW C.,
ENC Instructor of the Quarter, 2016 Fall Quarter
ENC Instructor of the Quarter, 2017 Summer Quarter
ENC Instructor of the Year, 2016-2017

FRANZ, ANTHONY L., Lt Col,
2017 Southwestern Ohio Council for Higher Education (SOCHE) Faculty Excellence Award.

HARPER, WILLIE F. Jr,
2016 John L. McLucas Basic Research Award
2017-2018 Embassy Science Fellow

HAZEN, BENJAMIN T., Maj,
SOCHE 2016 Faculty Excellence Award

LAKE, ROBERT A., Capt,
Air Force Outstanding Scientist & Engineer Award

LUNDAY, BRIAN J.,
Outstanding Young Member OR/MS Award, INFORMS Cincinnati-Dayton Chapter
MAILLOUX, LOGAN, O. Maj,
2016 AFIT Outstanding Military Instructor of the Year

PRIGGE, DIEDRICH, V.,
2016-2017 Sigma Iota Epsilon - Instructor of the year award

REEGER, JONAH A., Maj,
ENC Instructor of the Quarter, 2017 Winter Quarter

RUGGLES-WRENN, MARINA B.,
2017 ASME Dedicated Service Award
2017 ASME Board of Governors Award
2017 ASME Pressure Vessel and Piping Division Certificate of Appreciation.

WHITE, EDWARD D. III,
SOCHE Faculty Excellence Award, November 2016
Dr. Leslie M. Norton Teaching Excellence Award, March 2017
ENC Instructor of the Quarter, 2017 Spring Quarter

2.3.2 STUDENTS

BARNES, DANIEL R.,
2017 Space Best Presentation Award – 42nd AIAA Dayton Cincinnati Aerospace Sciences Symposium

CARLSON, NATHAN J.,
2017 Secretary James G. Roche Award honoring the enlisted student who best demonstrates academic, leadership, research, and service achievements.

CHALAOPAK, KASIDIT V.,
2017 AFIT Chapter of the American Nuclear Society Best Thesis Award

COLLIS, SCHUYLER L.,
Navigation Research Excellence Award

DUNKEL, MELISSA A.,
2017 Optimization Best Presentation Award – 42nd AIAA Dayton Cincinnati Aerospace Sciences Symposium
FAIN, BENJAMIN M.,

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Electrical and Computer Engineering. Thesis title: “Small Fixed-wing Aerial Positioning using Inter-vehicle Ranging Combined with Visual Odometry.”

FERGUSON, MATTHEW D.,

Military Operations Research Society (MORS) Dr. James T. Moore Graduate Research Prize

HALLADA, FRANCIS D.,

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Engineering Physics. Thesis title: “The Fresnel Zone Light Field Spectral Imager.”

2017 Chancellor's Award for the most exceptional master’s thesis by a graduating student. Thesis title: “The Fresnel Zone Light Field Spectral Imager.”

2017 International Society for Optics and Photonics (SPIE) Excellence in Optics and Photonics Research Award

2017 Advanced Technical Intelligence Association (ATIA) Outstanding Student Award

HAWS, DEREK W.,

2017 Air Force Historical Foundation General Bryce Poe II Award

HOEFFNER, ZACHARY W.,

2017 Mervin E. Gross Award, that recognizes a graduating master’s student who has demonstrated the most exceptional academic achievement and high qualities of character, initiative and leadership.

KNAPP, KEVIN R.,

2017 Lockheed-Martin Best Student Paper Award – 2017 AIAA SciTech Conference

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Aeronautics and Astronautics. Thesis title: “Time-Dependent Validation of Finite Element Strain Distribution of a Plastically-Deformed Plate via Digital Image Correlation.”

LEFGREN, SCOTT J.,

AOC Academic Research Excellence Award

LENKER, RONALD J.,

2017 Edwin E. Aldrin, Sr. Award which is given for displaying the most exceptional leadership characteristics while in the graduate program.

LIM, GAYLEEN S.A.,

March 2017 Jerome G. Peppers Jr., Outstanding Student Award which is given to a member of each graduating class whose academic record and research significantly contributes to the field of logistics.
LIU, KAN,


PITMAN, BRIAN W.,

2017 MASINT Committee Award of Academic Excellence

PORTANTE, ANTHONY A.,

2017 Best Masters Paper and Presentation at the 12th International Conference on Cyber Warefare and Security

RIGOLET, TAYLOR S.,

June 2017 Jerome G. Peppers Jr., Outstanding Student Award which is given to a member of each graduating class whose academic record and research significantly contributes to the field of logistics.

ROSE, ANTHONY J.,

2017 Louis F. Polk 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.

SCHWEMMER, JOSEPH R.,

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Operational Sciences. Thesis title: “Optimal Design of a Hexakis Icosahedron Vacuum Based Lighter than Air Vehicle.”

STELZER, DYLAN,


STERN, JORDAN L.,

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Systems Engineering and Management. Thesis title: “Genetic Algorithm Optimization of Geosynchronous Earth Orbit Space Situational Awareness Systems via Parallel Evaluation of Executable Architectures.”

WATCHEL, STEVEN T.,

2017 Dean’s Award for the most exceptional master’s thesis by a graduating student in the Department of Systems Engineering and Management. Thesis title: “Genetic Algorithm Optimization of Geosynchronous Earth Orbit Space Situational Awareness Systems via Parallel Evaluation of Executable Architectures.”
### 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 FY17.

#### Figure 3.2 New Award History FY08-FY17

#### Table 3.3 FY17 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>Newly Awarded Education Projects</th>
<th>Total FY17 Newly Awarded Projects</th>
<th>Total FY17 Research Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># $k</td>
<td># $k</td>
<td># $k</td>
<td># $k</td>
</tr>
<tr>
<td>Mathematics &amp; Statistics (ENC)</td>
<td>5  288</td>
<td>- -</td>
<td>5  288</td>
<td>539</td>
</tr>
<tr>
<td>Electrical &amp; Computer Eng (ENG)</td>
<td>57 5,950</td>
<td>2 228</td>
<td>59 6,178</td>
<td>7,871</td>
</tr>
<tr>
<td>Engineering Physics (ENP)</td>
<td>54 5,719</td>
<td>1 9</td>
<td>55 5,728</td>
<td>7,066</td>
</tr>
<tr>
<td>Research &amp; Sponsored Programs (ENR)</td>
<td>1 280</td>
<td>- -</td>
<td>1 280</td>
<td>-</td>
</tr>
<tr>
<td>Operational Sciences (ENS)</td>
<td>35 9,976</td>
<td>4 286</td>
<td>39 10,262</td>
<td>11,534</td>
</tr>
<tr>
<td>Systems Eng &amp; Management (ENV)</td>
<td>17 1,249</td>
<td>1 400</td>
<td>18 1,649</td>
<td>1,863</td>
</tr>
<tr>
<td>Aeronautical &amp; Astronautical Eng (ENY)</td>
<td>48 3,275</td>
<td>2 59</td>
<td>50 3,334</td>
<td>6,320</td>
</tr>
<tr>
<td>TOTAL</td>
<td>217 26,737</td>
<td>10 982</td>
<td>227 27,719</td>
<td>35,193</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Center</th>
<th>Newly Awarded Research Projects</th>
<th>Newly Awarded Education Projects</th>
<th>Total FY17 Newly Awarded Projects</th>
<th>Total FY17 Research Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># $k</td>
<td># $k</td>
<td># $k</td>
<td># $k</td>
</tr>
<tr>
<td>Autonomy and Navigation Technology (ANT)</td>
<td>30 3,792</td>
<td>- -</td>
<td>30 3,792</td>
<td>5,101</td>
</tr>
<tr>
<td>Center for Cyberspace Research (CCR)</td>
<td>10 668</td>
<td>2 228</td>
<td>12 896</td>
<td>1,161</td>
</tr>
<tr>
<td>Center for Directed Energy (CDE)</td>
<td>19 3,025</td>
<td>1 9</td>
<td>20 3,034</td>
<td>3,186</td>
</tr>
<tr>
<td>Center for Operational Analysis (COA)</td>
<td>24 7,516</td>
<td>2 180</td>
<td>26 7,696</td>
<td>9,640</td>
</tr>
<tr>
<td>Center for Space Research and Assurance (CSRA)</td>
<td>26 2,484</td>
<td>- -</td>
<td>26 2,484</td>
<td>3,549</td>
</tr>
<tr>
<td>Center for Tech Intel Studies &amp; Research (CTISR)</td>
<td>15 1,552</td>
<td>- -</td>
<td>15 1,552</td>
<td>1,836</td>
</tr>
<tr>
<td>TOTAL</td>
<td>124 19,037</td>
<td>5 417</td>
<td>129 19,454</td>
<td>24,473</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 FY17 Awards by Sponsor

Table 3.4 New FY17 Awards to Academic Departments & Research Centers by Sponsor

<table>
<thead>
<tr>
<th>Dept.</th>
<th>AFRL $k</th>
<th>AFMC (Non-AFRL) $k</th>
<th>Other USAF $k</th>
<th>Other DOD $k</th>
<th>Other Federal $k</th>
<th>Non-Federal $k</th>
<th>Total $k</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC</td>
<td>284</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>288</td>
</tr>
<tr>
<td>ENG</td>
<td>3,102</td>
<td>-</td>
<td>589</td>
<td>1,950</td>
<td>195</td>
<td>341</td>
<td>6,178</td>
</tr>
<tr>
<td>ENP</td>
<td>1,552</td>
<td>-</td>
<td>521</td>
<td>3,172</td>
<td>359</td>
<td>124</td>
<td>5,728</td>
</tr>
<tr>
<td>ENR</td>
<td>280</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>280</td>
</tr>
<tr>
<td>ENS</td>
<td>617</td>
<td>2,722</td>
<td>2,978</td>
<td>3,320</td>
<td>625</td>
<td>-</td>
<td>10,262</td>
</tr>
<tr>
<td>ENV</td>
<td>286</td>
<td>400</td>
<td>512</td>
<td>229</td>
<td>223</td>
<td>-</td>
<td>1,649</td>
</tr>
<tr>
<td>ENY</td>
<td>1,031</td>
<td>-</td>
<td>-</td>
<td>2,223</td>
<td>-</td>
<td>80</td>
<td>3,334</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7,152</td>
<td>3,122</td>
<td>4,600</td>
<td>10,894</td>
<td>1,406</td>
<td>545</td>
<td>27,719</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>Dept.</th>
<th>AFRL $k</th>
<th>AFMC (Non-AFRL) $k</th>
<th>Other USAF $k</th>
<th>Other DOD $k</th>
<th>Other Federal $k</th>
<th>Non-Federal $k</th>
<th>Total $k</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT</td>
<td>1,892</td>
<td>-</td>
<td>350</td>
<td>1,400</td>
<td>30</td>
<td>120</td>
<td>3,792</td>
</tr>
<tr>
<td>CCR</td>
<td>349</td>
<td>-</td>
<td>59</td>
<td>293</td>
<td>195</td>
<td>-</td>
<td>896</td>
</tr>
<tr>
<td>CDE</td>
<td>770</td>
<td>-</td>
<td>9</td>
<td>1,816</td>
<td>119</td>
<td>320</td>
<td>3,034</td>
</tr>
<tr>
<td>COA</td>
<td>445</td>
<td>2,699</td>
<td>2,602</td>
<td>1,840</td>
<td>110</td>
<td>-</td>
<td>7,696</td>
</tr>
<tr>
<td>CSR A</td>
<td>445</td>
<td>-</td>
<td>35</td>
<td>2,004</td>
<td>-</td>
<td>-</td>
<td>2,484</td>
</tr>
<tr>
<td>CTISR</td>
<td>259</td>
<td>-</td>
<td>318</td>
<td>951</td>
<td>24</td>
<td>464</td>
<td>1,552</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4,160</td>
<td>2,699</td>
<td>3,373</td>
<td>8,304</td>
<td>454</td>
<td>464</td>
<td>19,454</td>
</tr>
</tbody>
</table>

Note: All Center funds are also included in departmental funding.