



**ENGINEERING
RESEARCH**

*Speed Research 2020 Annual Report
Kevin Walsh, Jacqui Smith and Travis Ross*

FY20/CY20 BY THE NUMBERS

- **FY20 Research Expenditures Data**

- *\$11.8M in FY20 (based on % collaboration), down from 12.99M in FY19 due to lab closures from COVID. Although down compared to FY19, FY20 still ranks as the second highest year in expenditures for the past five years.*
- **FY20 New Proposals and Awards Data**
- *92 New Awards (with Speed PI and CoPIs) and 199 Submissions*
- *Total of \$14.54M in New Awards (based upon Speed School PIs)*
- *Strong number of NSF CAREER submissions resulting in Speed School's 4th CAREER award in the past five years*
- **CY20 Publications and Patents Data**
- *Journals – 223*
- *Conference Proceedings – 104*
- *Book Publications – 6*
- *Chapter Publications – 19*
- *Patents - 22*

2020 ADR OFFICE RESEARCH SUPPORT INITIATIVES

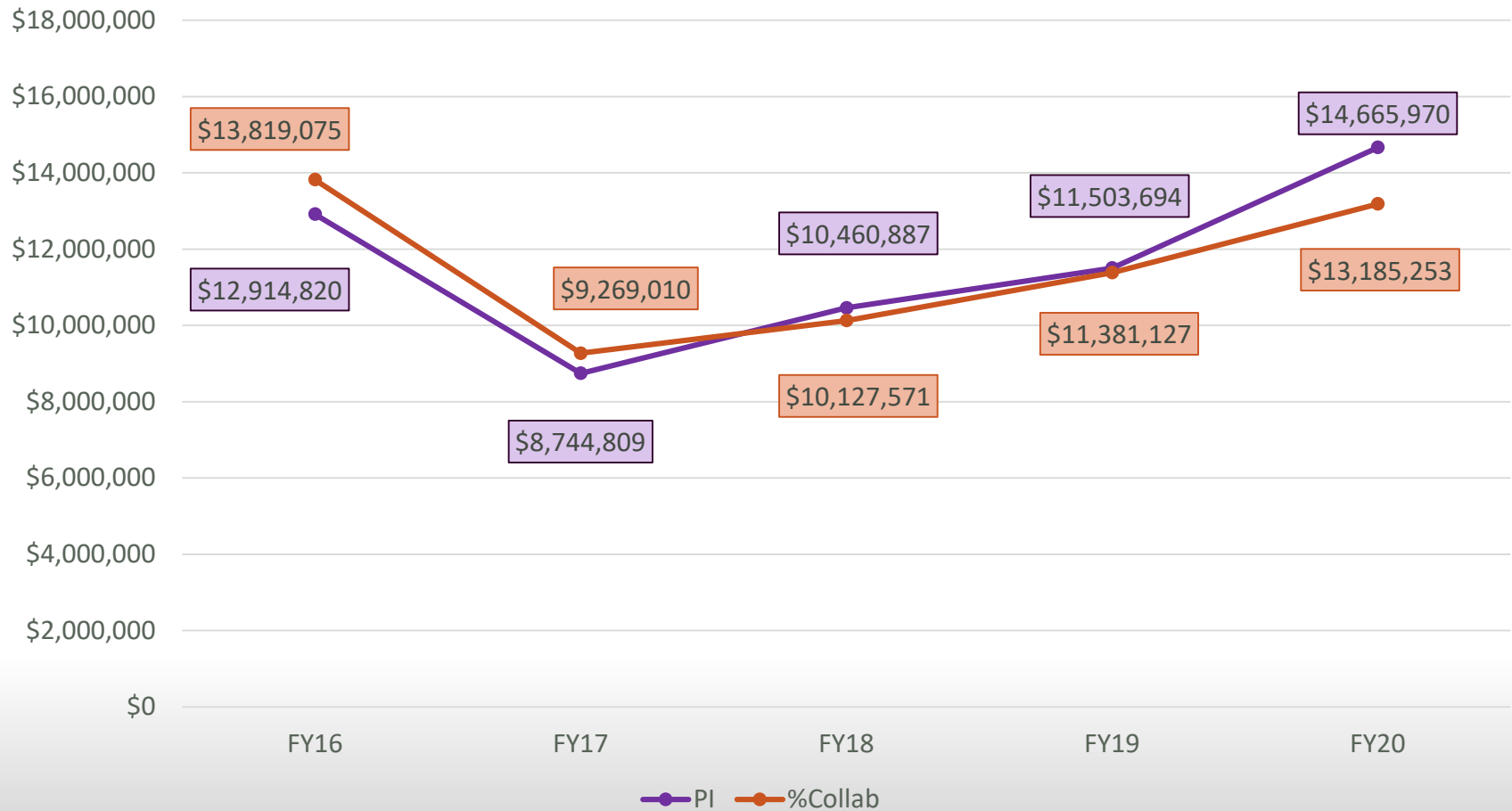
- **Research Opportunities**
 - **Writing to Get Published Workshop** – open to entire university with over 65 attendees
 - **Lunch and Learn Series** – with Research Administration Specialists Kelly Jackson and Amy Mock
 - **Professional Grant Writing Program** – available to all researchers at Speed School
 - **Research Orientation Manual** – created a new document to give new employees a guide to walk them through their first research proposal at UofL <https://engineering.louisville.edu/wp-content/uploads/2021/05/New-Faculty-Research-Orientation-Document.pdf>
- **Reporting**
 - **Speed Research Annual Report** - <https://engineering.louisville.edu/research-administration/researchproductivity/>
 - **Individual Research Productivity Reports** - Each faculty and staff were notified of awards and expenditures to ensure accuracy. This year included a three year trend report to chairs
 - **Awards Data** – Created new queries to reduce manual entry and calculations which reduced errors and improved report times
 - **Data Reporting** – Partnered with other administrators to request an awards report and expenditures report from IT that will work for the entire University
- **Marketing**
 - **Awards Announcements** – Included IBA as newsletter recipients

Speed School Research Trends FY16 – FY20

Research Expenditures Trend (based upon % Collab)

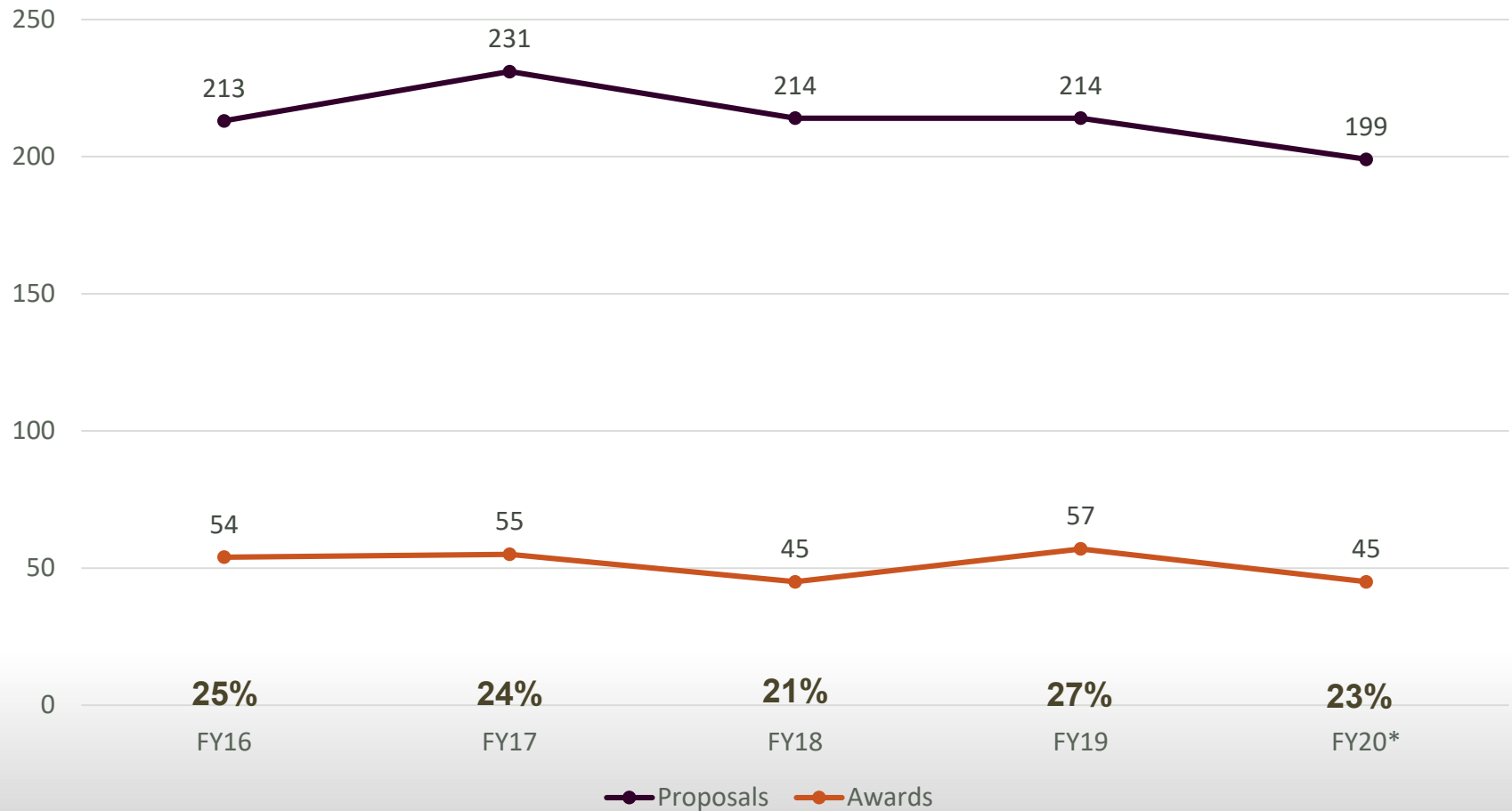


Speed New Awards by Fiscal Year*



*Based on amount currently guaranteed to UofL

Speed Proposal Success Rate FY16-FY20



* FY20 total to date. Awards and % Success will increase as additional awards are announced.



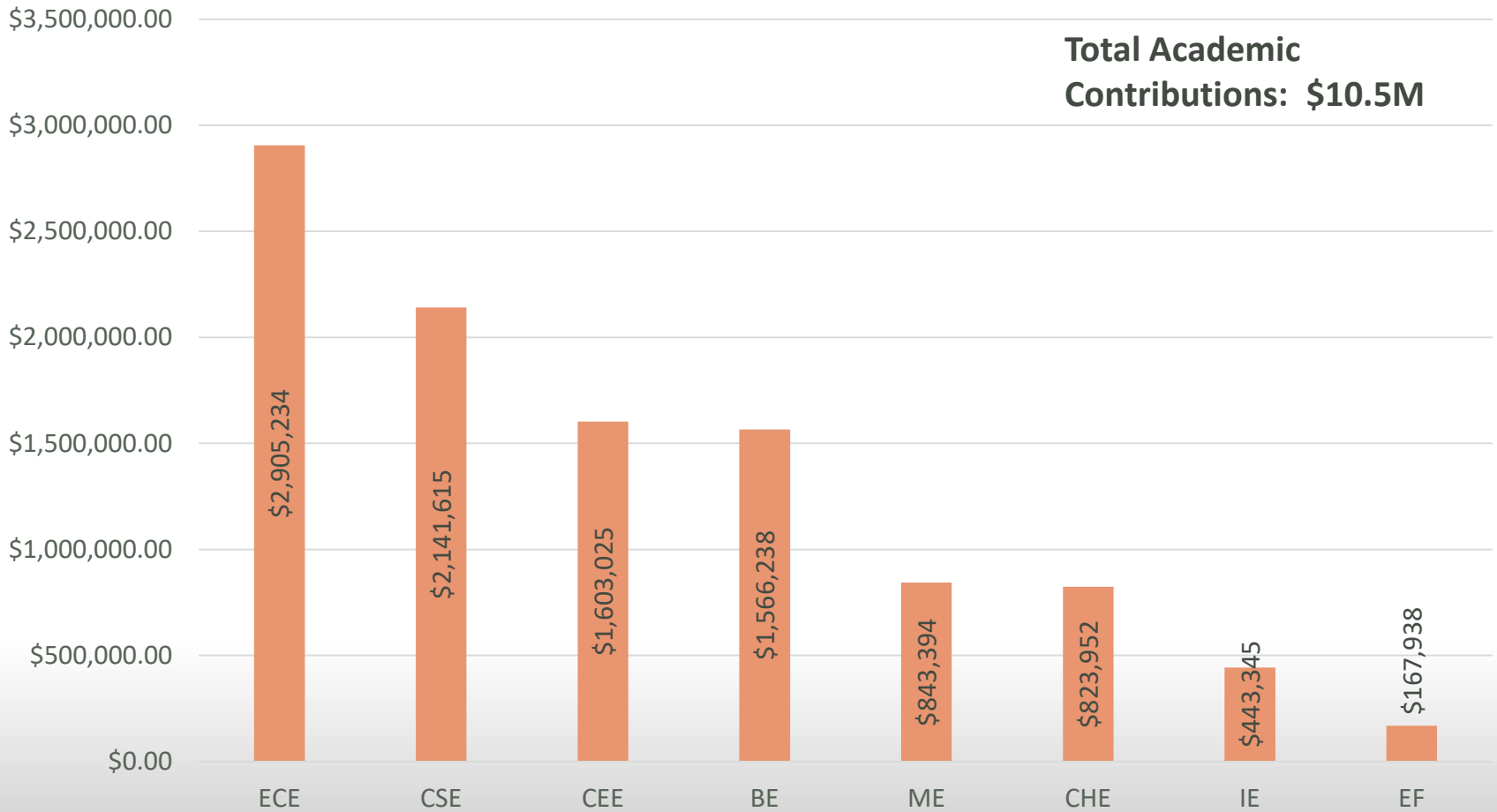
F16-FY20 Proposals and Contracts By the Numbers

5 Year Summary (Proposals with Speed School as Lead PI)

SSoE Proposals Submitted	1071
SSoE Proposals Awarded	238
Average Submitted per Year	214
Average Awarded per Year	48
Average Success Rate	22%

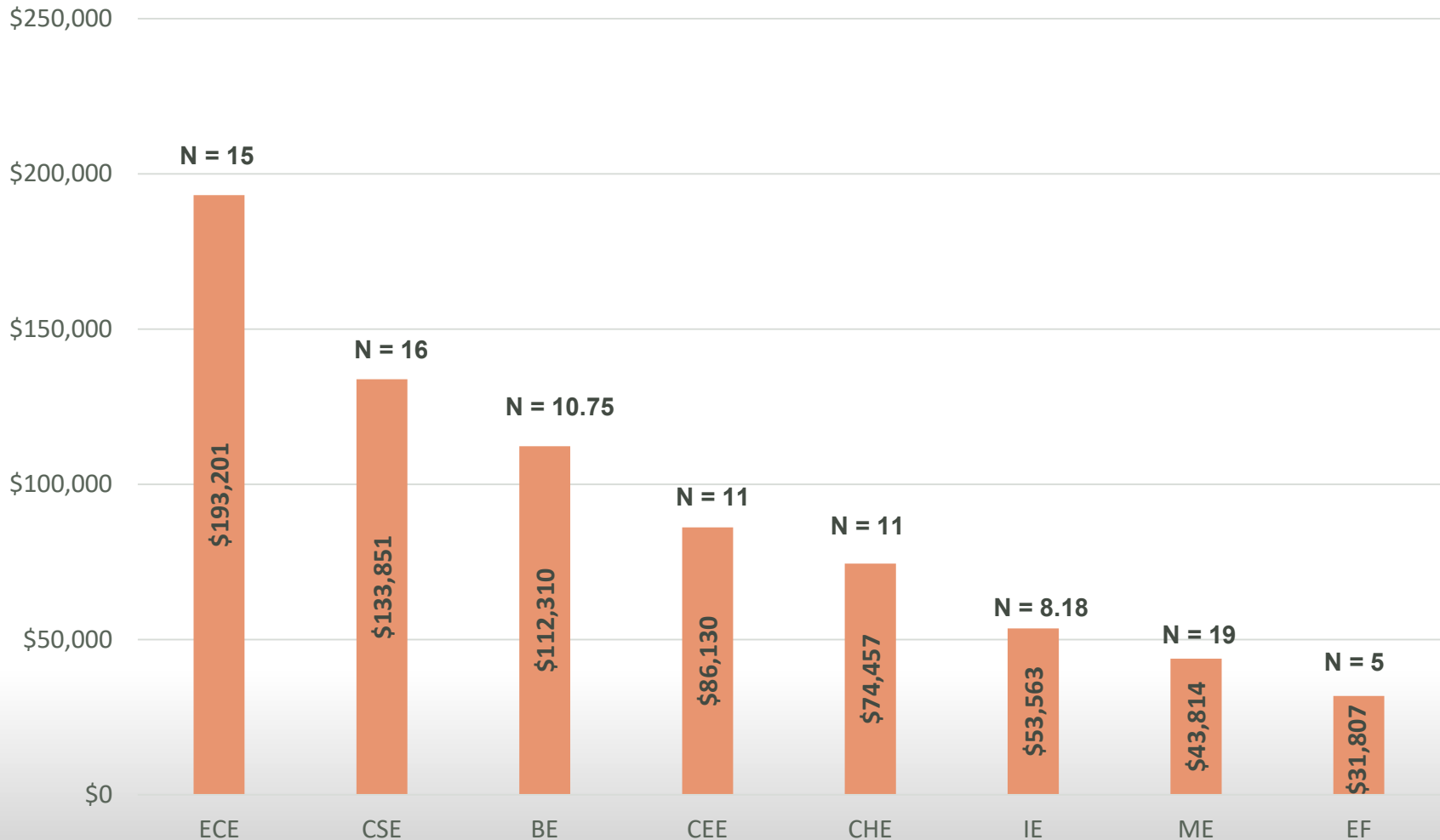
Research Expenditures FY20

Research Expenditures by Dept (based on % Collab)



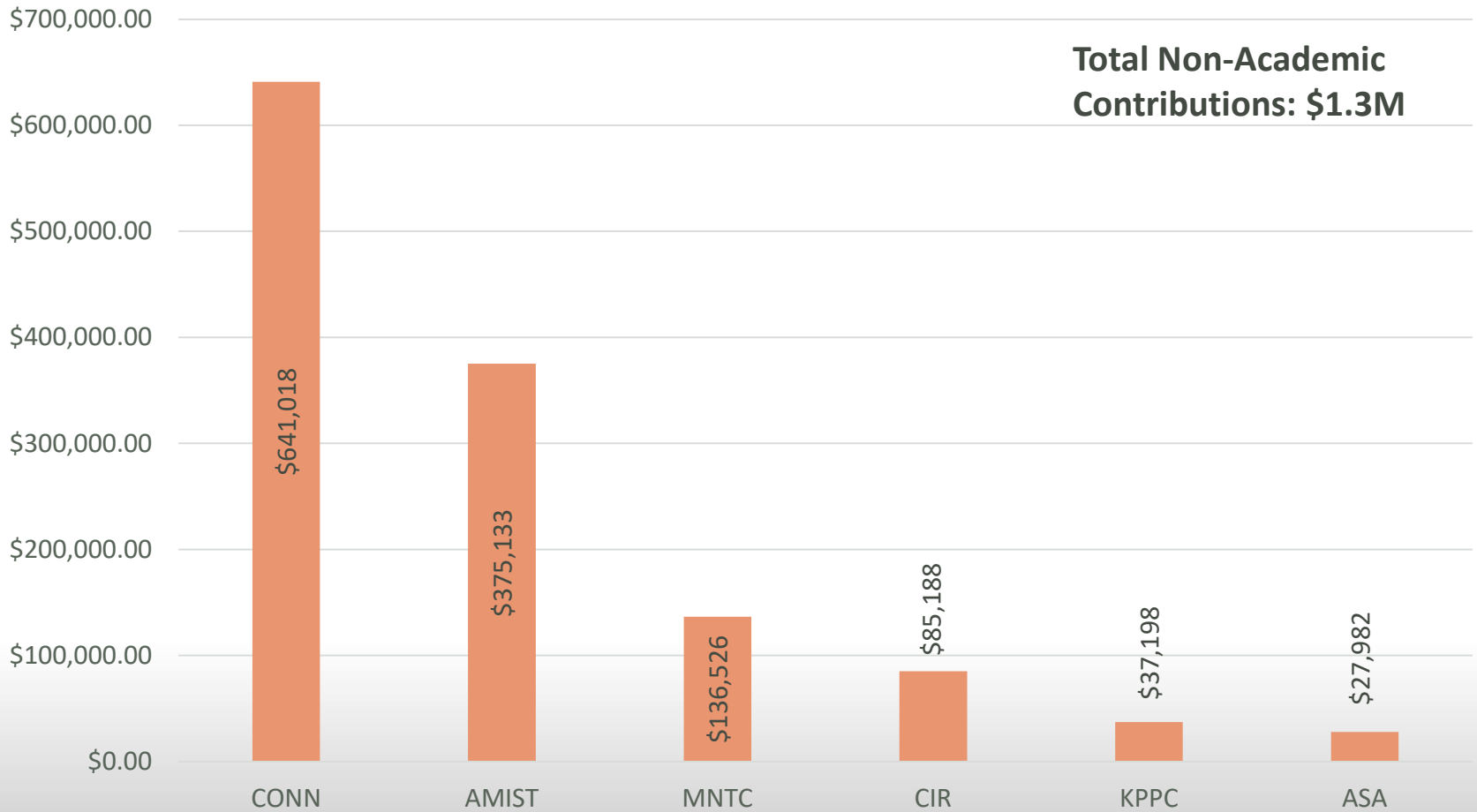
Includes TTT faculty, term faculty, and staff in each academic unit

TTT Faculty Average by Dept (based on % Collab)



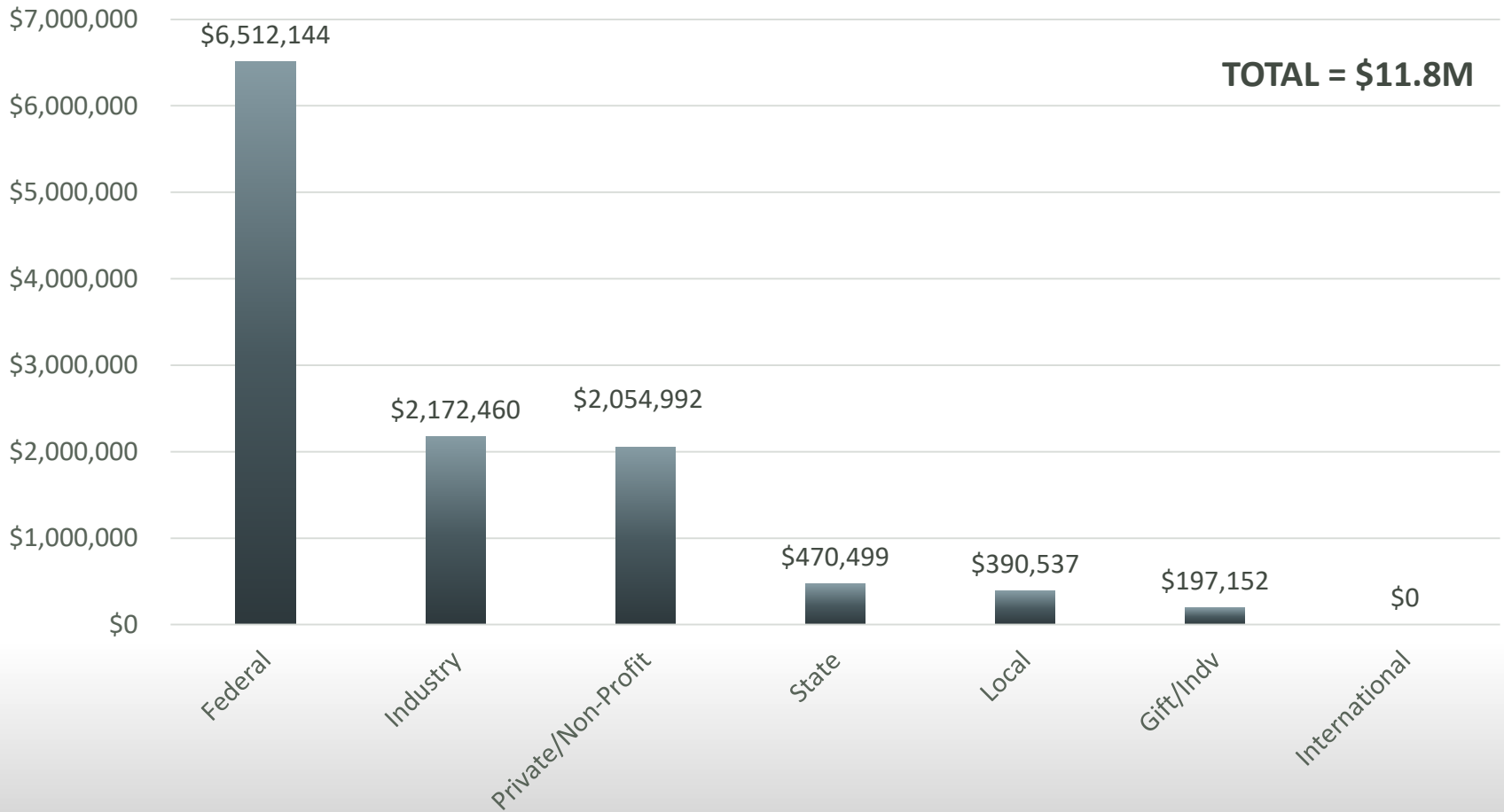
TTT = Tenured and Tenure Track
Term faculty and staff are not included

Research Expenditures by Centers and Non-Academic Departments (based on % Collab)



Includes contributions from associated research staff only. Associated faculty expenditures are reported in their home academic department.

FY20 Research Expenditures by Funding Source (based on % Collab)



Research Expenditure Trend by Funding Source (FY16 – FY20)

Funding Source	2016	2017	2018	2019	2020
Federal	\$2,321,385	\$4,335,632	\$5,448,989	\$6,350,397	\$6,512,144
Industry	\$1,192,346	\$2,093,121	\$2,461,589	\$3,615,376	\$2,172,460
Gifts	\$1,326,708	\$501,409	\$521,384	\$248,235	\$197,152
International	\$898,180	\$122,139	\$30,747	\$7,589	\$0
Local	\$1,378,232	\$333,929	\$362,466	\$331,572	\$390,537
Private Non-Profit	\$113,274	\$2,402,782	\$1,768,568	\$1,867,518	\$2,054,992
State	\$492,168	\$565,764	\$419,896	\$572,291	\$470,499
Total	\$682,885	\$10,354,779	\$11,013,643	\$12,992,981	\$11,797,785

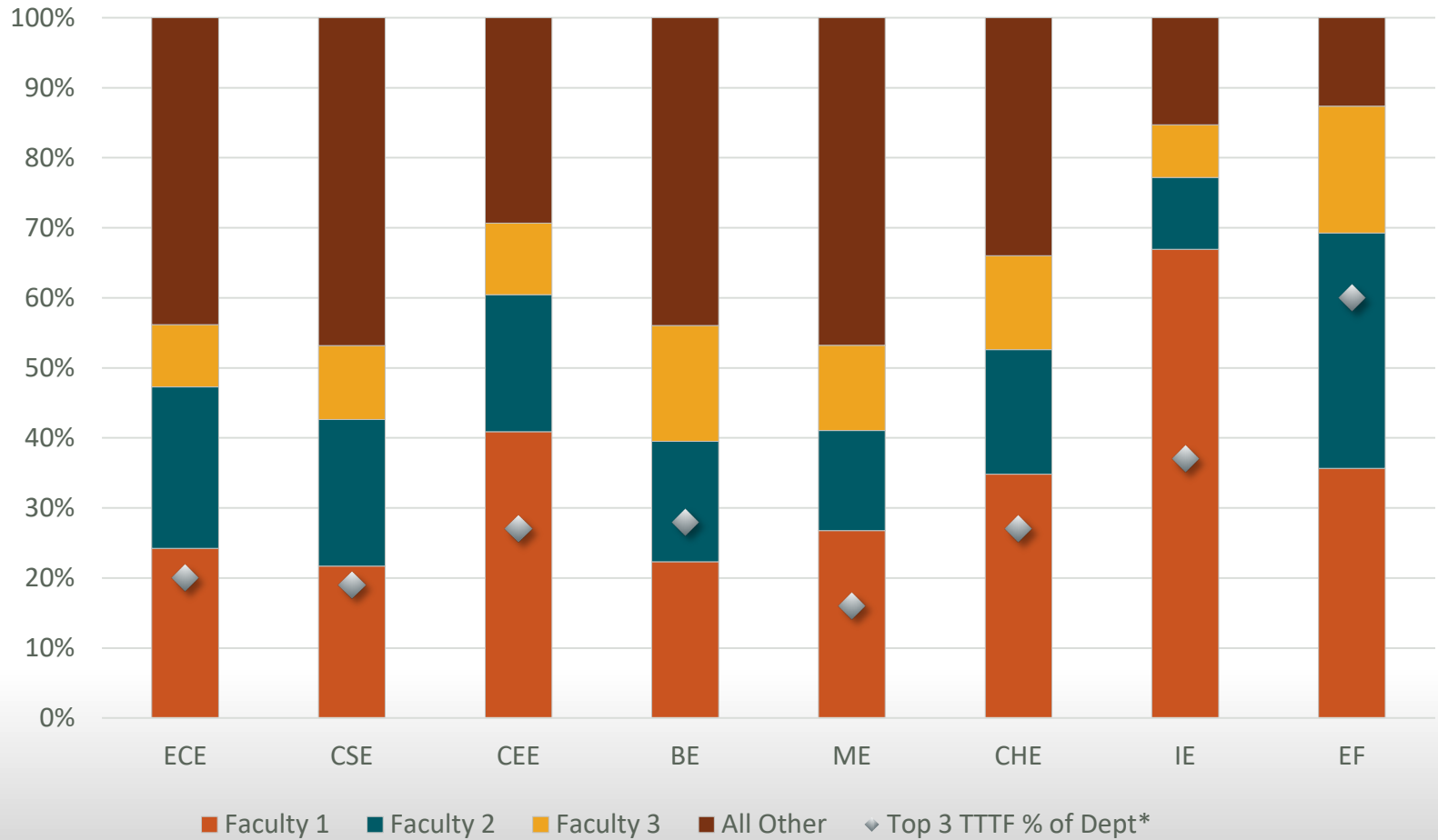
Research Expenditure Trend by Academic Department (FY16 – FY20)

Department	2016	2017	2018	2019	2020
BE	\$2,321,385	\$1,529,655	\$1,220,573	\$1,887,747	\$1,566,238
CEE	\$1,192,346	\$1,093,857	\$1,034,264	\$1,418,662	\$1,603,025
CHE	\$1,326,708	\$1,324,133	\$937,828	\$1,261,123	\$823,952
CSE	\$898,180	\$1,145,750	\$1,649,501	\$2,027,103	\$2,141,615
ECE	\$1,378,232	\$1,907,240	\$2,516,088	\$2,549,665	\$2,905,234
EF	\$113,274	\$307,758	\$284,181	\$305,234	\$167,938
IE	\$492,168	\$556,969	\$635,012	\$758,741	\$443,345
ME	\$682,885	\$769,901	\$1,018,599	\$1,191,410	\$843,394
Total	\$8,405,178	\$8,635,263	\$9,296,046	\$11,399,685	\$10,494,740

Research Expenditure Trend by Centers and Non-Academic Departments (FY16 – FY20)

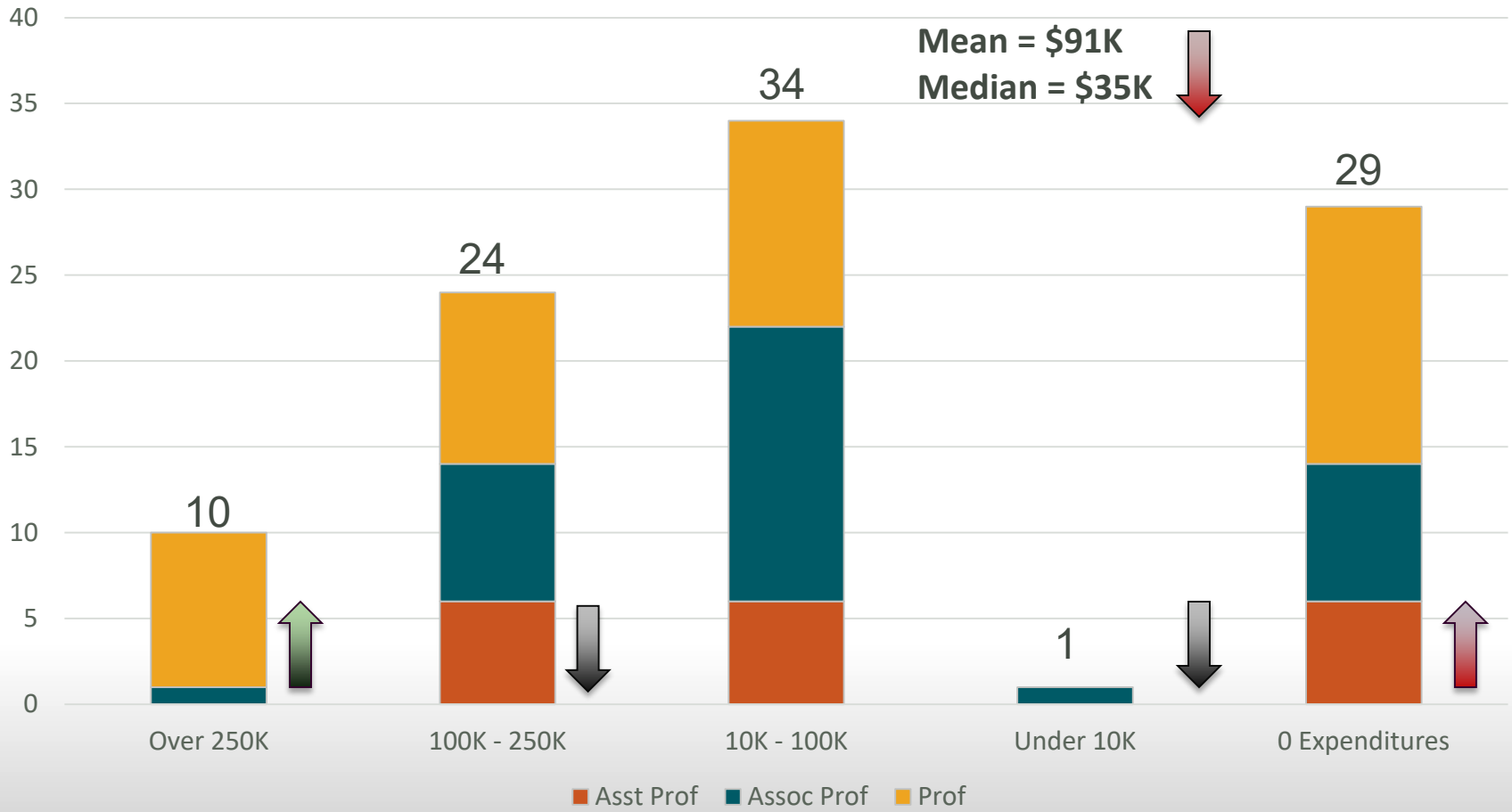
Department	2016	2017	2018	2019	2020
AMIST	\$345,234	\$465,776	\$310,905	\$484,467	\$375,133
ASA	\$3,302	\$4,011	\$3,084	\$84,243	\$27,983
CIR	\$84,911	\$173,820	\$228,083	\$80,721	\$85,188
CONN	\$587,118	\$683,387	\$619,761	\$557,178	\$641,018
KPPC	\$238,547	\$266,158	\$345,364	\$191,489	\$37,198
MNTC	\$151,369	\$124,373	\$209,952	\$195,196	\$136,526
<i>Total</i>	<i>\$1,410,481</i>	<i>\$1,717,525</i>	<i>\$1,717,149</i>	<i>\$1,593,294</i>	<i>\$1,303,045</i>

Research Expenditures by Department with Top 3 TTTF Stacked (based on % Collab)



* Represents the ratio of top 3 faculty to total number of TTTF per department. (i.e. The top 3 ECE faculty represent 20% of the dept. faculty and are responsible for 55% of faculty expenditures.)

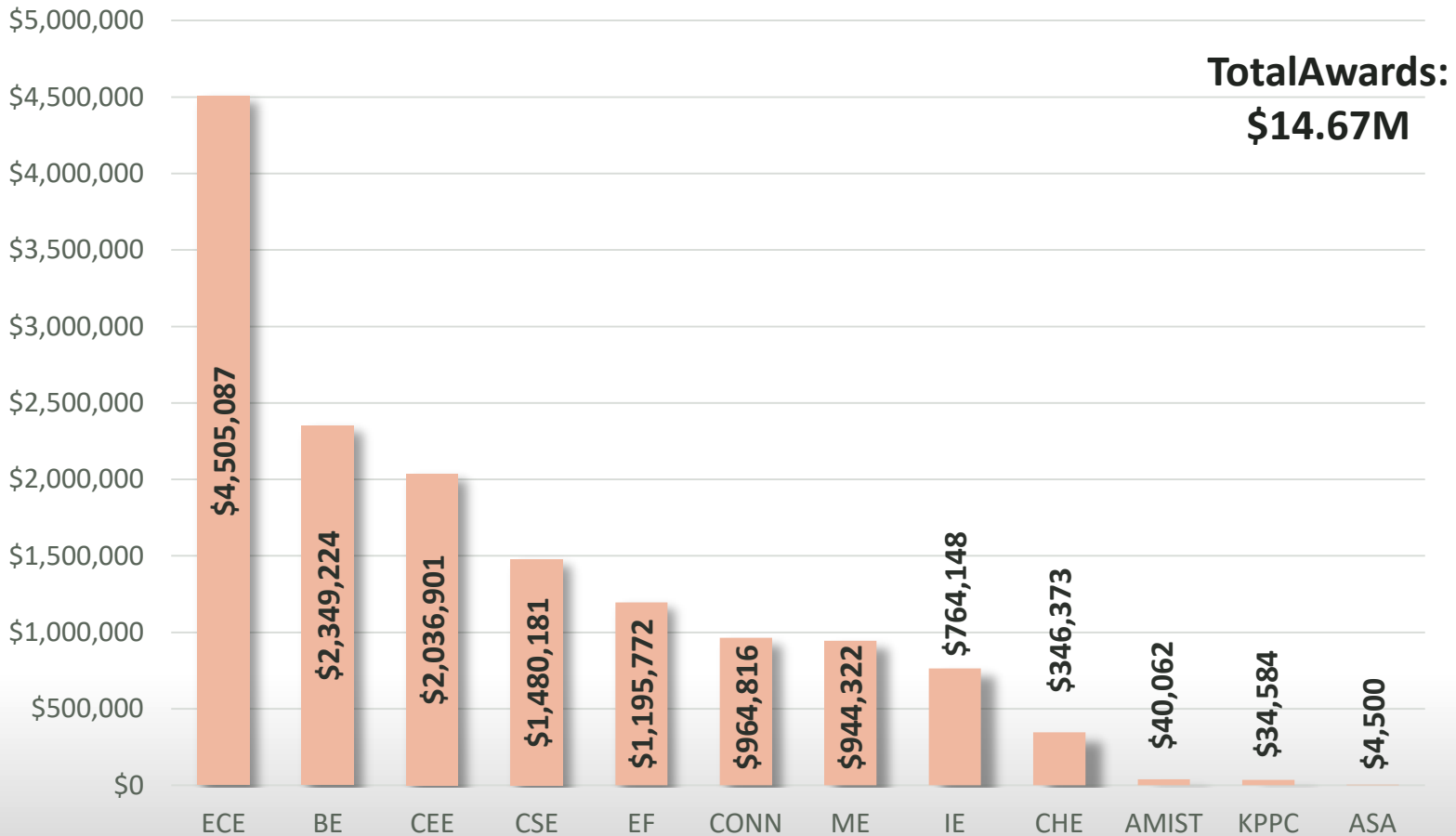
Distribution of TTT Faculty by Research Expenditures (based on % Collab)



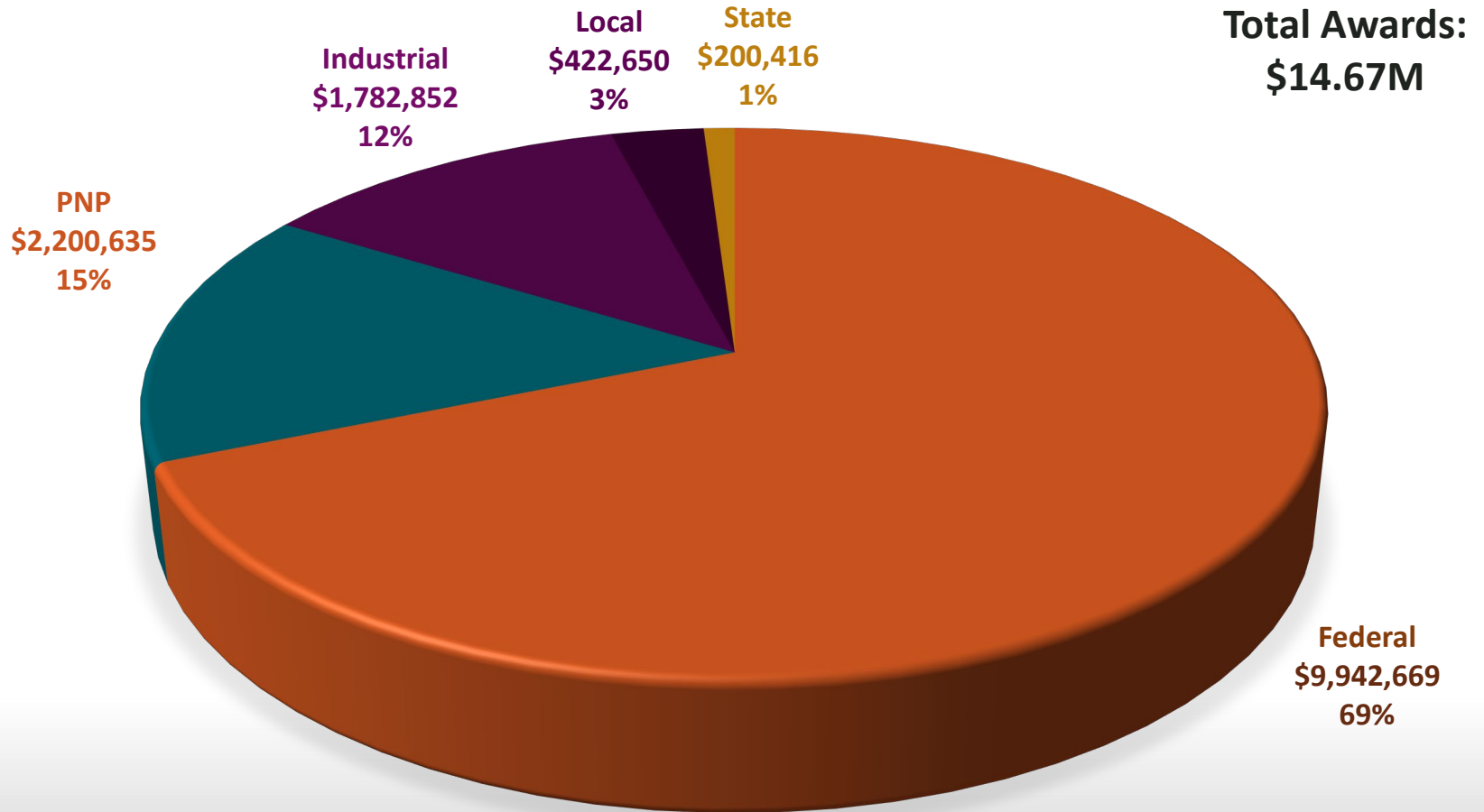
TTT = Tenured and Tenure Track
Arrows represent the change in numbers from the previous year.

Awarded Grants FY20

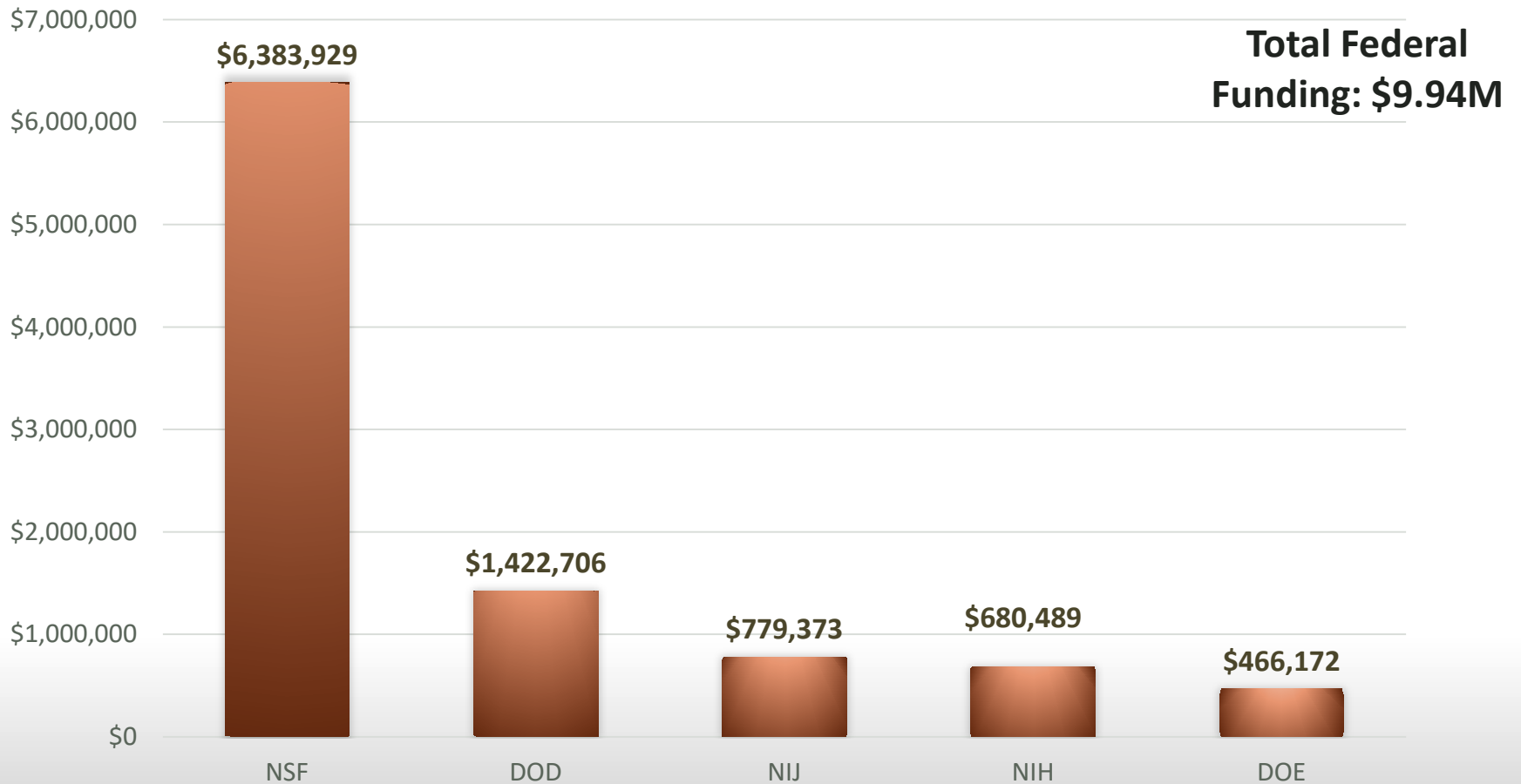
AWARDS BY DEPARTMENT (BASED ON PI)



AWARDS BY FUNDING SOURCE (BASED ON PI)

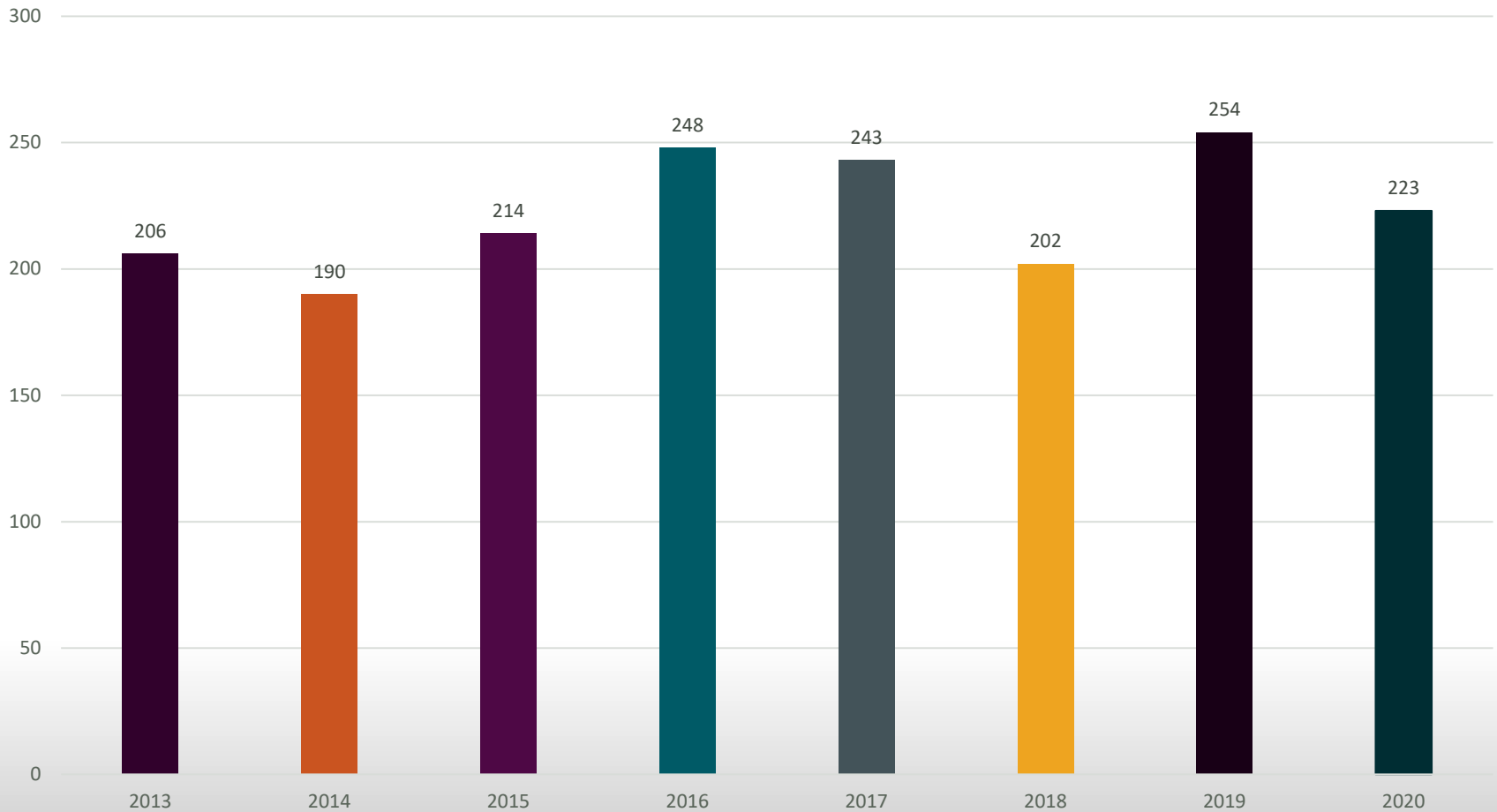


TOP FEDERAL FUNDING SOURCES (BASED ON PI)

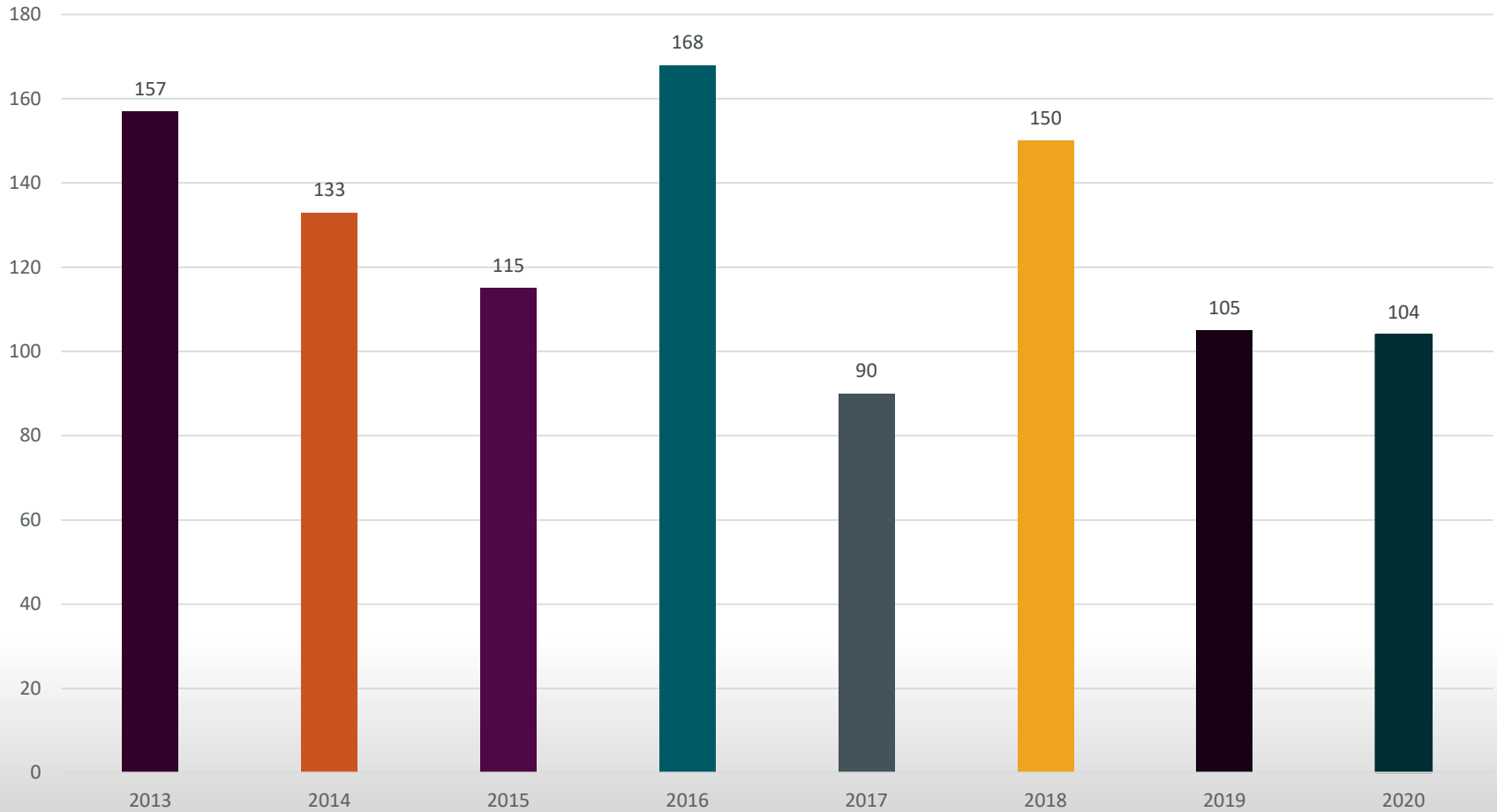


CY20 Publications Information

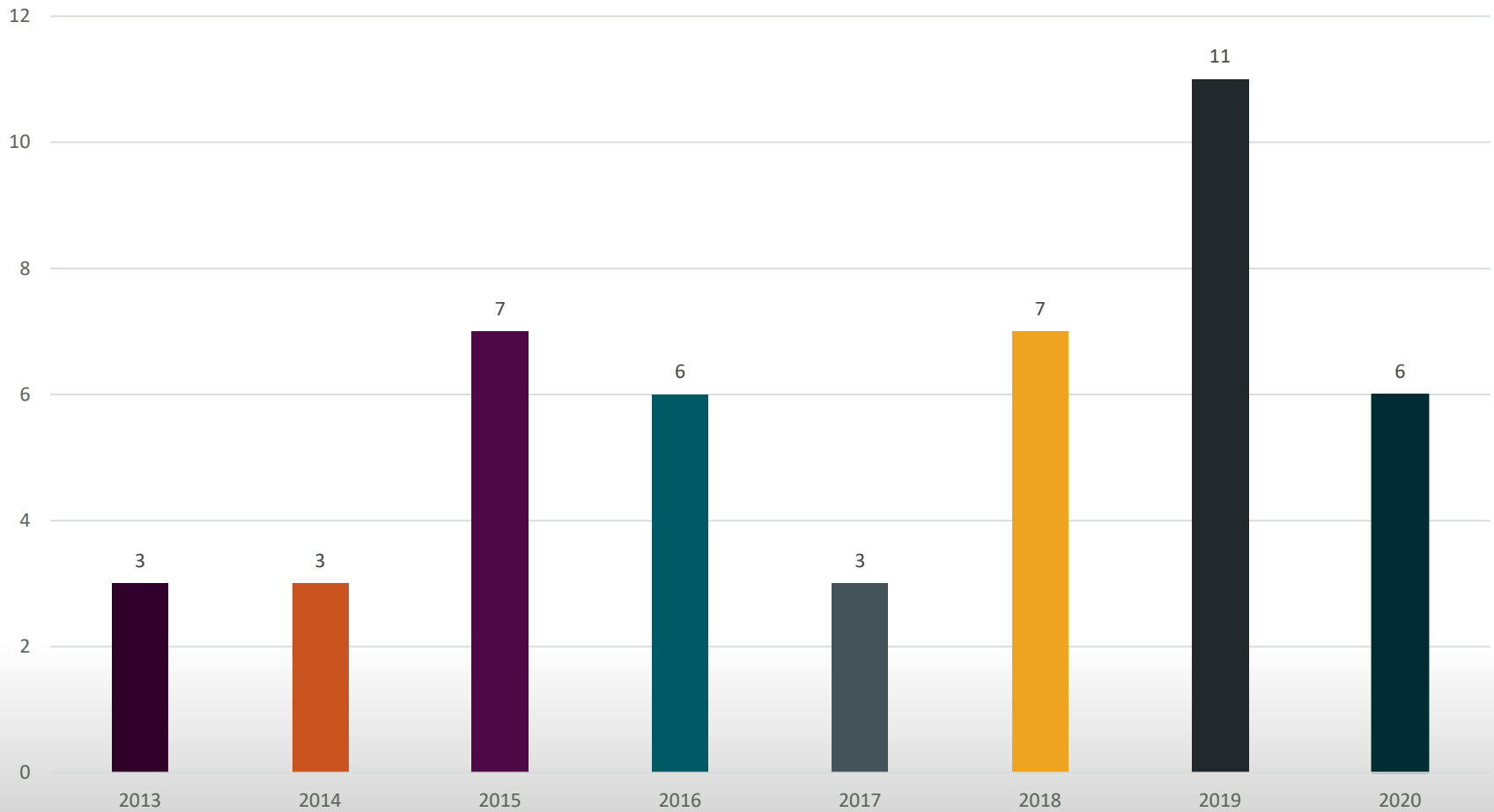
Speed School Journal Publications



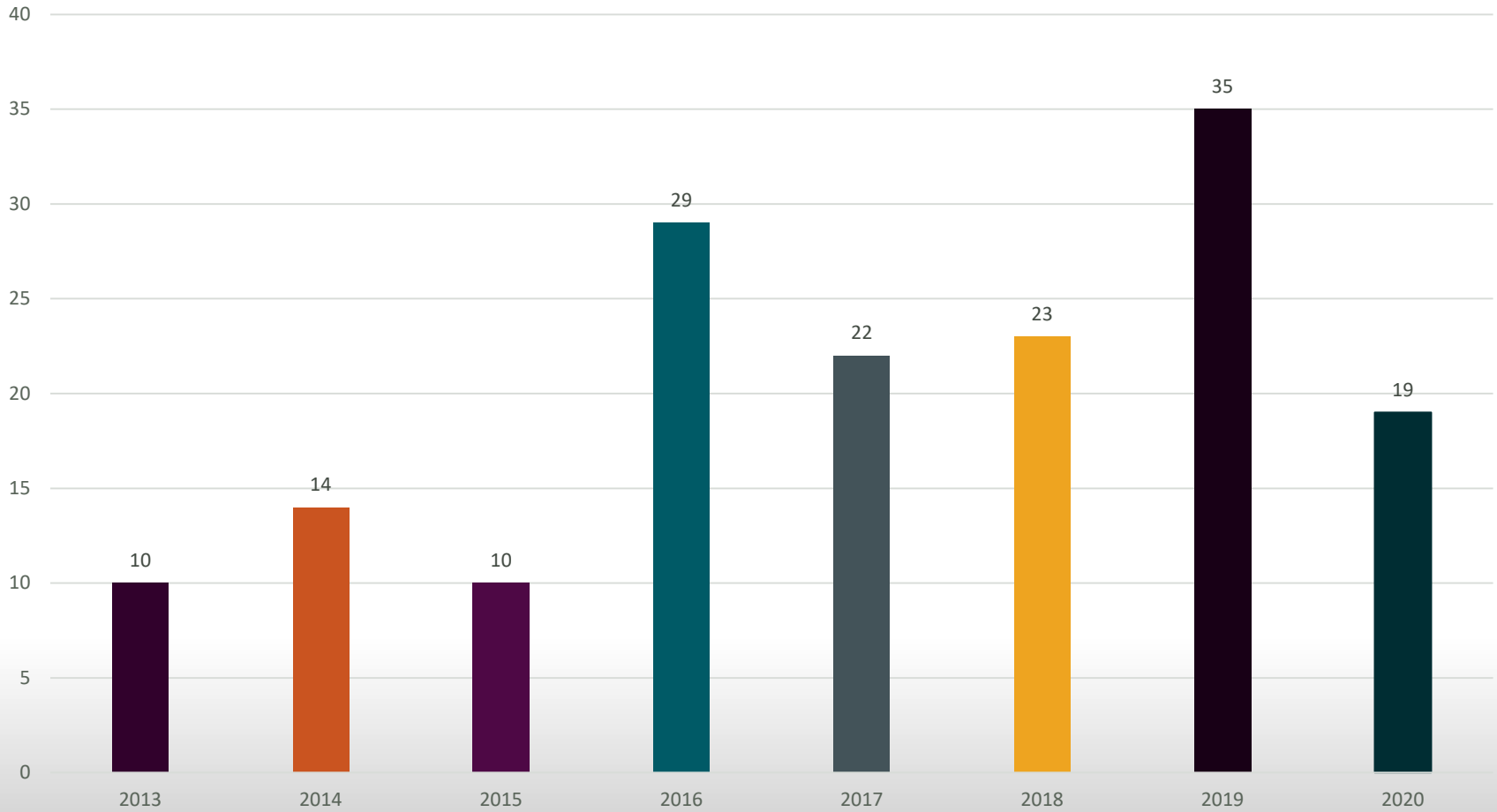
Speed School Conference Proceedings



Speed School Books Published

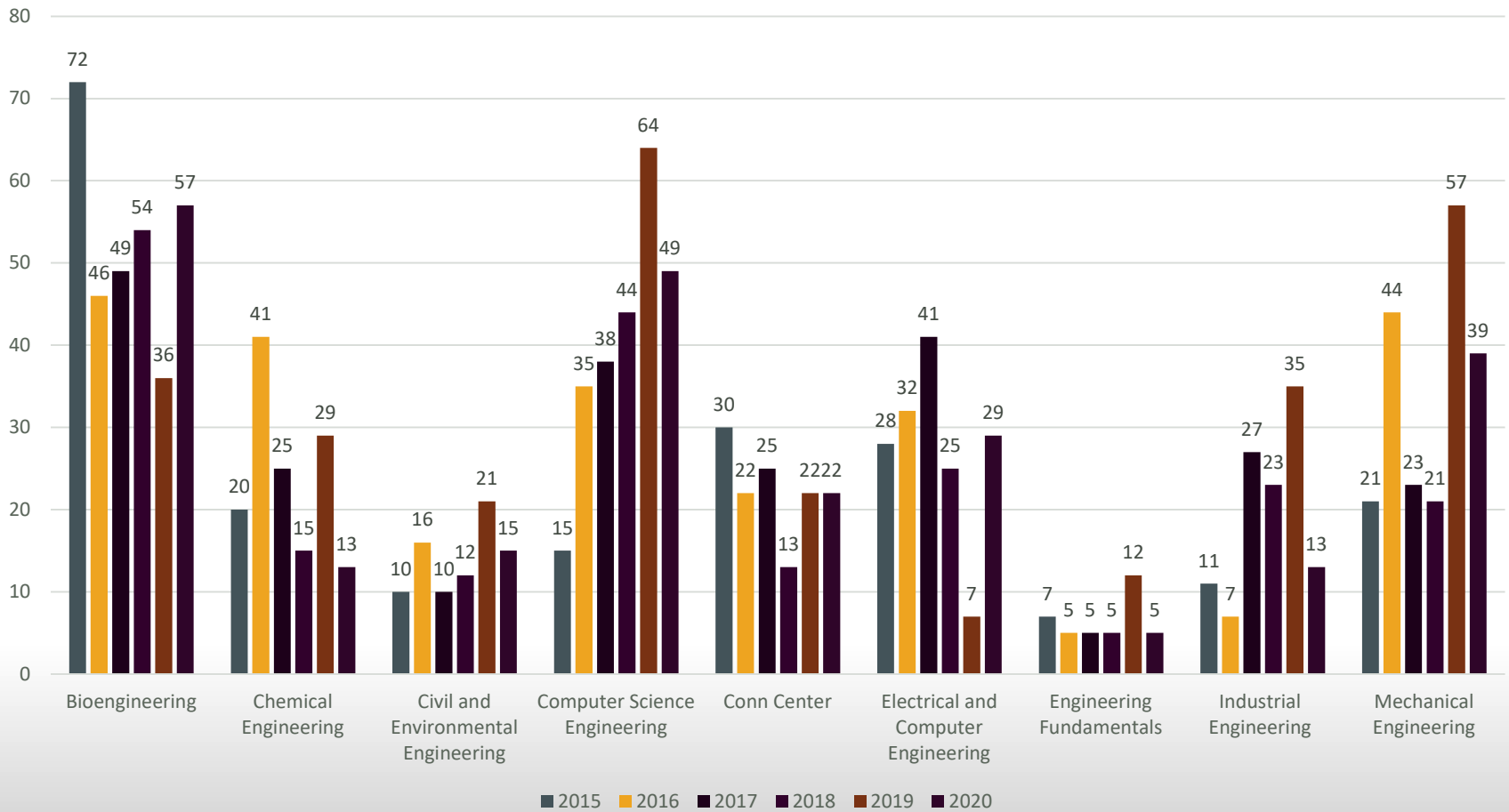


Speed School Book Chapters

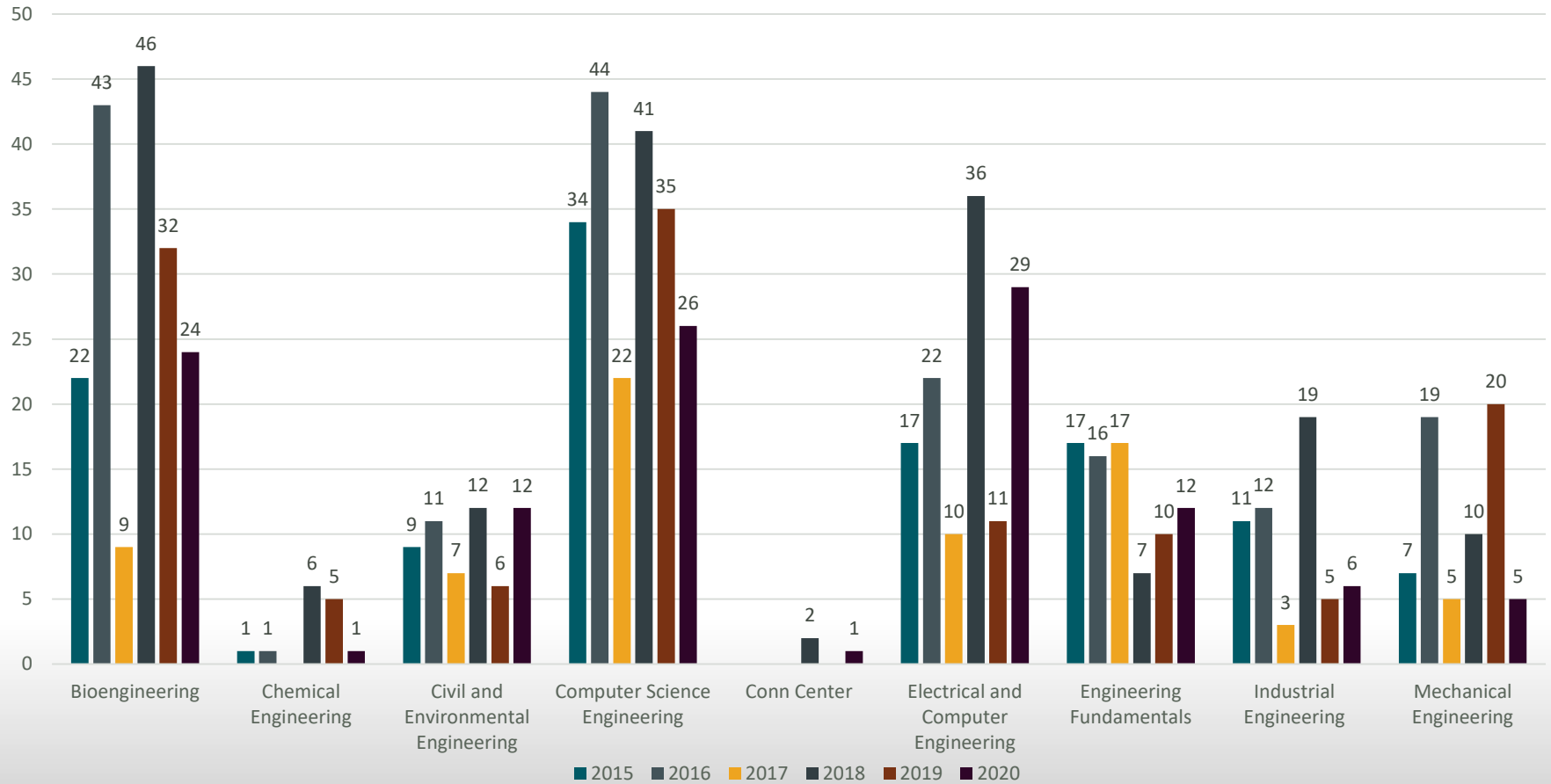


CY20 Publications By Department

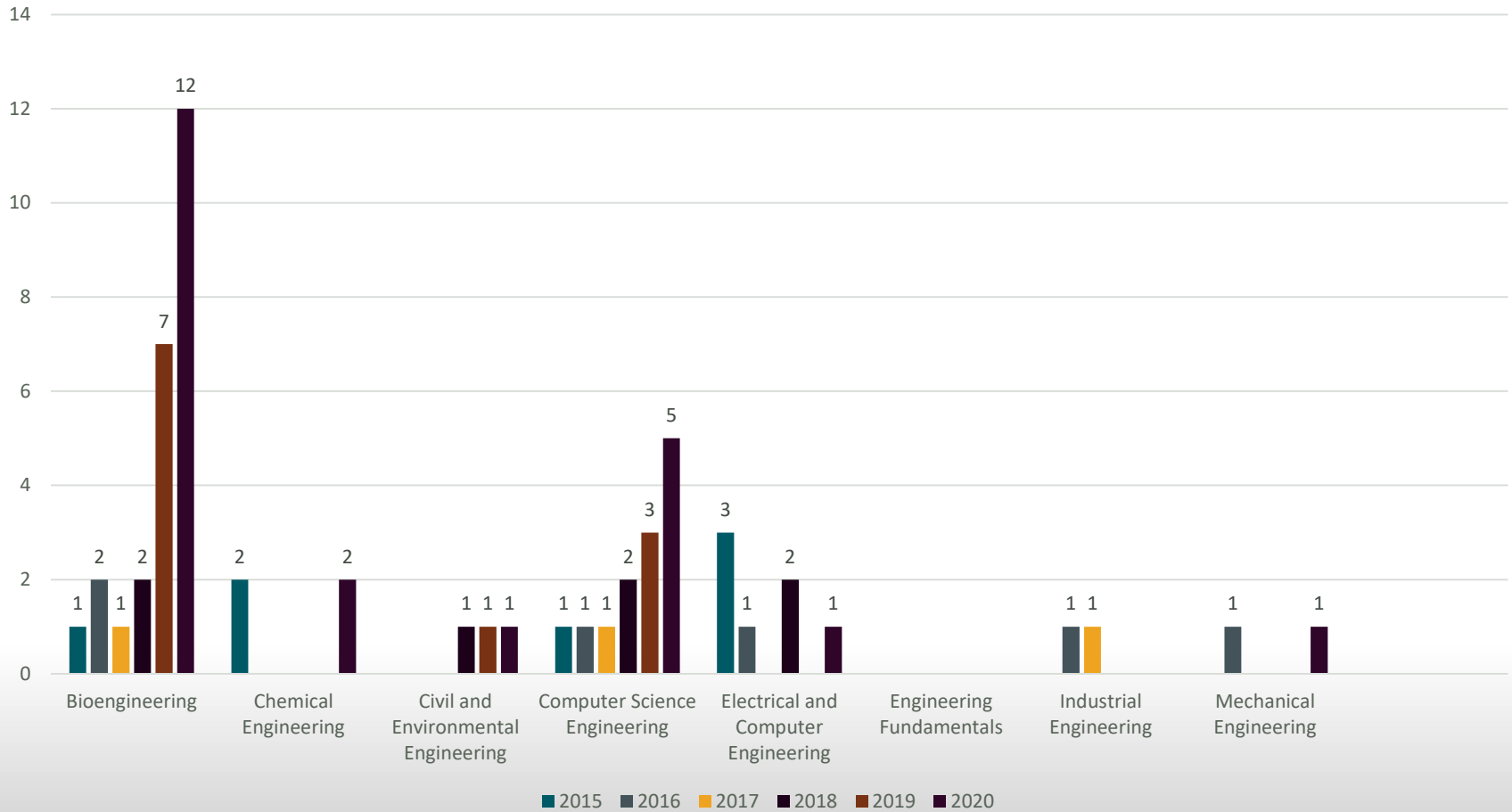
Journal Publications



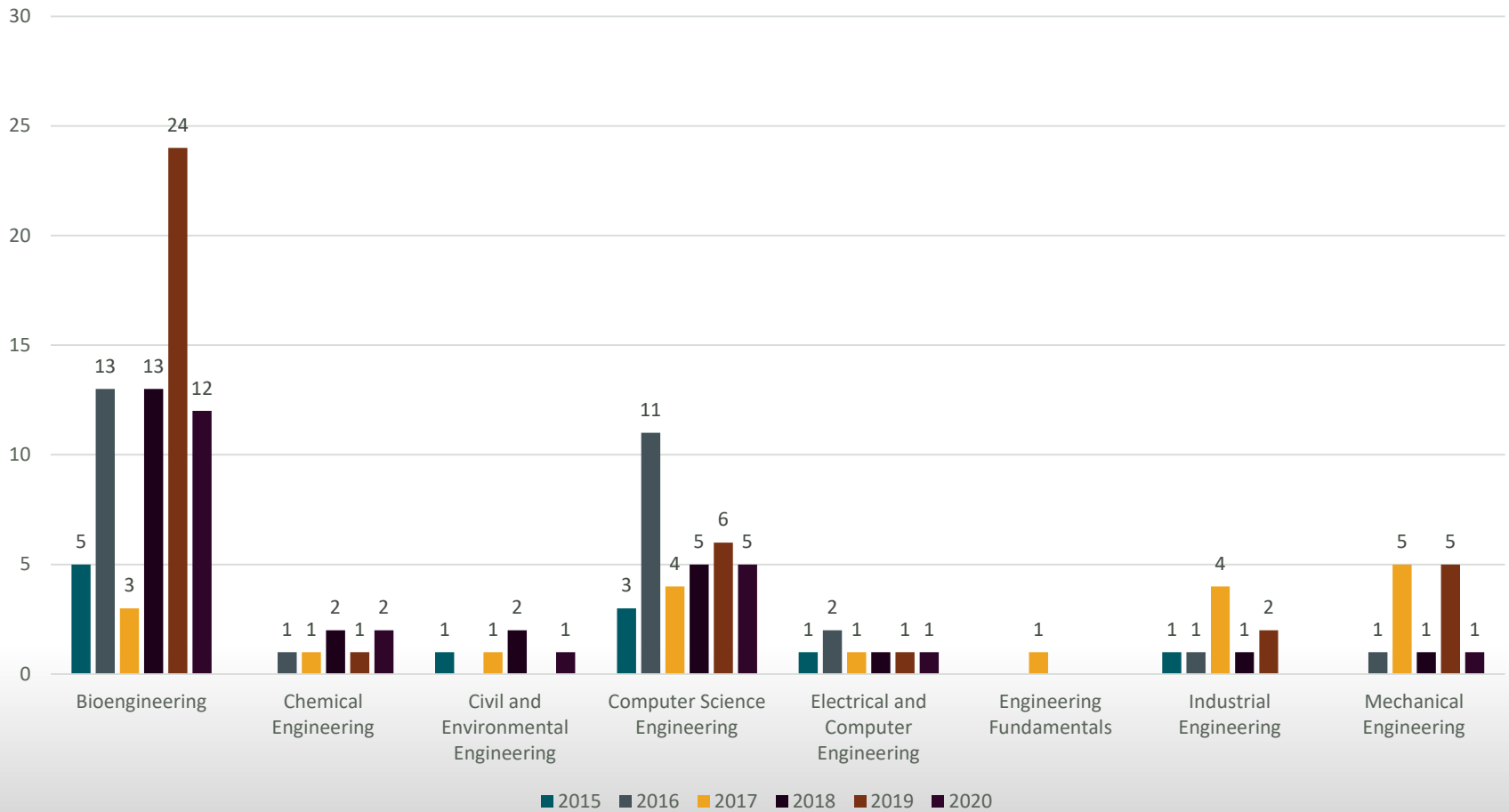
Conference Proceedings



Books Published



Book Chapters



Patents

Awarded Patents

