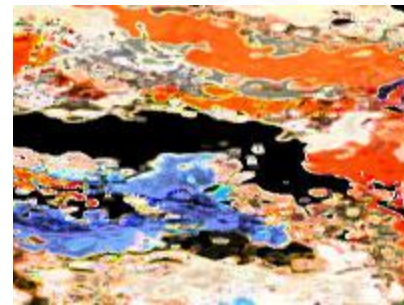
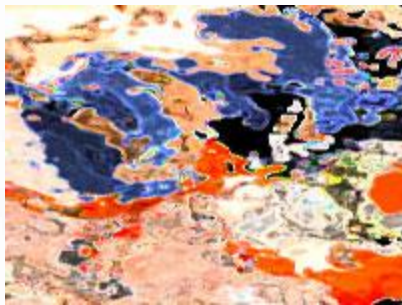

Welcome to the
University of Florida
and the
Center for Particulate and Surfactant Systems



Jennifer Sinclair Curtis
Associate Dean for Research
College of Engineering

NSF Industry-University Cooperative Research Centers (I/UCRC)

<http://www.nsf.gov/eng/iip/iucrc/>

Lead the way to a new era of partnership between universities and industry

- Feature high-quality, industrially-relevant fundamental research
 - Strong industrial collaboration in research and education
 - Direct transfer of university-developed ideas, research results, and technology to U.S. industry
 - Provide the next generation of scientists and engineers with a broad, industrially oriented perspective
-

UF Engineering leads 3 other IUCRCs

- **Cloud and Autonomic Computing Center** – Jose Fortes, Electrical and Computer Engineering
- **Center for High-Performance Reconfigurable Computing**– Alan George, Electrical and Computer Engineering
- **Multi-functional Integrated System Technology** –Toshi Nishida, Electrical and Computer Engineering
- Participant in **Center for Cyber-Physical Systems for the Hospital Operating Room** with Houston Methodist Hospital Research Institute and University of Houston

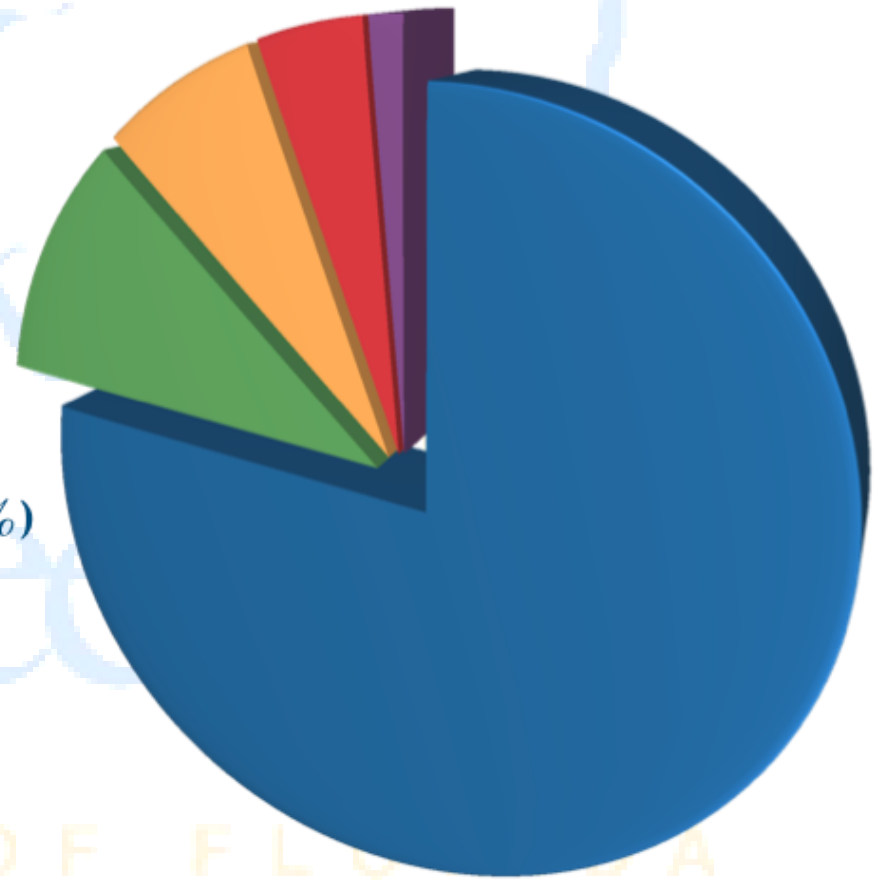
COE Research Awards by Prime Sponsor Type

\$61.9M total for FY13-14

College of Engineering

University of Florida

- Federal Agencies - \$48.1M (78%)
- Corporations & Companies - \$6.3M (10%)
- Florida State Agencies - \$4.1M (7%)
- Local & Regional Gov't/Others - \$2.6M (4%)
- Foundations & Societies - \$800K (1%)



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Innovation

In Gator Engineering over the last five years:

- **556** invention disclosures submitted
- **904** US and Foreign patent applications submitted
- **266** US and Foreign patents issued
- **202** executed license and option agreements
 - **~25%** were exclusive
- **35** start-up companies
 - **5-6** annually since 2000
- **2X** the national average per research dollar in patents issued
- **4X** the national average per research dollar in the number of start-up companies

UNIVERSITY OF FLORIDA

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-

Faculty Productivity

Largest U.S. Engineering Colleges by Tenured/Tenure-Track Faculty Members

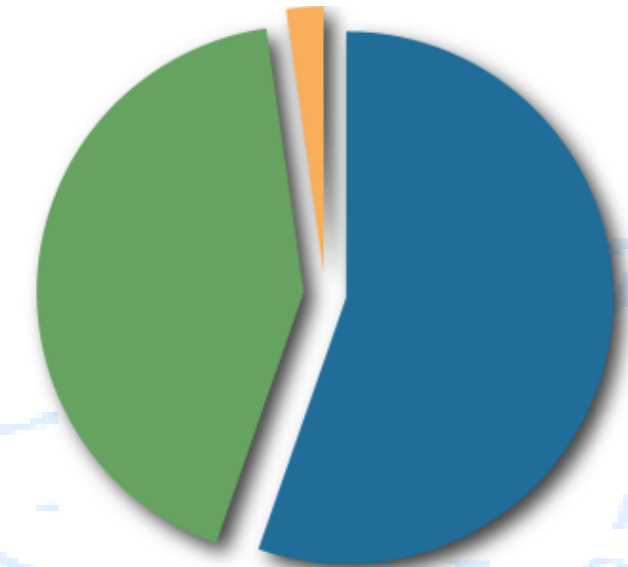
Source: Profiles of Engineering and Engineering Technology Colleges, ASEE 2013

Size Rank	School	Asst. Professor (M)	Asst. Professor (F)	Assoc. Professor (M)	Assoc. Professor (F)	Full Professor (M)	Full Professor (F)	Total
1	Georgia Institute of Technology	53	19	87	27	226	24	436
2	University of Illinois at Urbana-Champaign	60	22	83	15	210	16	406
3	Massachusetts Institute of Technology	34	16	49	15	235	35	384
4	University of Michigan	55	26	50	21	206	23	381
5	The Pennsylvania State University	53	17	68	15	177	23	353
6	Texas A&M University	40	14	113	12	133	16	328
7	North Carolina State University	51	12	74	18	159	12	326
8	Virginia Polytechnic Institute and State University	38	15	106	20	128	10	317
9	Purdue University	43	20	60	20	149	15	307
10	The University of Texas at Austin	43	18	48	9	148	11	277
11	The Ohio State University	35	8	78	17	117	12	267
12	University of Florida	27	12	84	16	117	8	264
T13	University of California at Berkeley	21	6	25	12	163	20	247
T13	Cornell University	29	16	47	9	133	13	247

14th most Bachelor's degrees awarded (1,030), 5th most Master's degrees awarded (995), and 11th most Doctoral degrees awarded (188)

All levels combined represented 1.4% of engineering degrees nationwide

Fall 2014 Graduate Enrollment: **2,268**



- Nonresident Alien (55%)
- Resident (43%)
- Unknown (2%)

*UF COE is #4 in the U.S. for
Hispanic PhD enrollment*

Graduate Degrees
Awarded in 2013: **1,183**

- **995** Master's Degrees
- **188** Doctoral Degrees

*Represents 2% of engineering
graduate degrees nationwide*

Student Quality

Curriculum and research experiences emphasize skills needed to succeed in industry. COE students were highly rated in terms of the number, character, and caliber of students hired by companies:

#1 at ExxonMobil

#3 at Intel

#3 at Lockheed Martin

Largest campus career fair in the Southeast (held twice per year)

- Virtually all major companies represented on technical and non-technical days
- UF Career Resource Center **ranked #1** by Princeton Review (2010 & 2012)

UNIVERSITY OF FLORIDA

Multidisciplinary undergraduate team effort

- 4-8 student members, faculty coach, and sponsor liaison
- Classroom & Laboratory Experience in two-semester (6 credits total)
- Authentic industry design and build projects
 - 600 hour scope
 - Hardware, software & process



An Undergraduate Program

R. Keith Stanfill, Director

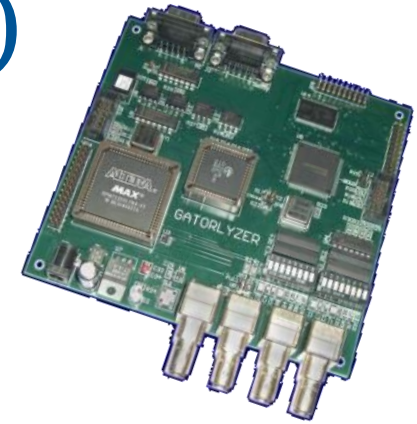
stanfill@ufl.edu

www.ippd.ufl.edu



IPPD Highlights (1995-2014)

- 427 projects from 100 sponsors
 - Typical contribution: \$23k per sponsor
 - Annually: 150 students, 25 projects
 - 2013/14: 24 projects, 140 students, ~\$500k support from sponsors
- > 75% of projects come from repeat sponsors
- 20 years of success



Preeminence/IT Performance – 2014-2015

Big Data

- **BME** Lin Yang (Univ of Kentucky)
- **ISE** Alfredo Garcia (Univ of Virginia)
- **MSE** Richard Hennig (Cornell Univ)
- 1 in **BME**, 1 in **MAE**

Human Centered Computing

- **CISE** Juan Gilbert, Christina Gardner-McCune, Kyla McMullen, Damon Woodard (Clemson Univ)

Neuroengineering

- **BME** Kevin Otto (Purdue Univ)
- **ECE** Karim Oweiss (Michigan State Univ)

Cybersecurity

- **CISE** Kevin Butler (Univ of Oregon)
- **CISE** Patrick Traynor (Georgia Tech)
- **ECE** Daniela Oliveira (Bowdoin College)

Renewable Energy

- **ECE** Arturo Bretas (Brazil)
- **ECE** Shuo Wang (UT San Antonio)
- **MAE** Jonathan Scheffe (ETH Zurich)

Autonomous Systems

- **MAE** Riccardo Bevilacqua (RPI)
- 1 in **ESSIE**, 1 in **MAE**

Materials Innovation

- 2 in **MSE**

Computer Graphics

- **CISE** Corey Toler-Franklin (UC Davis)

Nanomedicine

- **BME** Cherie Stabler (Univ of Miami)
- 1 in **BME**

Online Learning Institute

- 1 in **CISE**

Social Network Analysis

- 1 in **CISE**

Advanced Manufacturing

- 1 in **MAE**

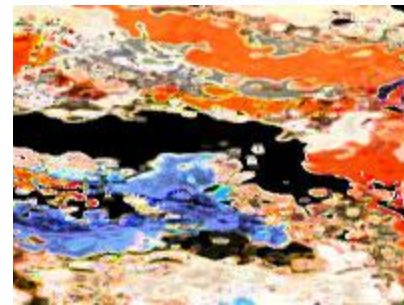
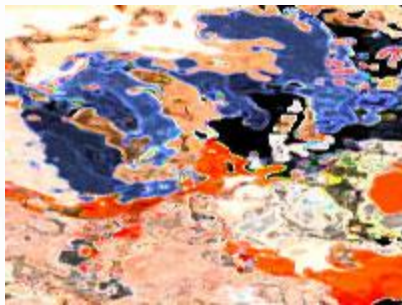
New UF President – An Engineer!



Kent Fuchs

- PhD in EE from UIUC
- Chair of ECE at Purdue
- Dean of Engineering at Cornell
- Provost at Cornell

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Engineering

University of Florida
