ECE Department Update

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Overview

• State of the department
• New and ongoing Initiatives
• Alumni donations and activities
STATE OF THE DEPARTMENT
Vision

• Student success is priority one
  – Unrivaled education
  – Great prospects
• World-class research and discovery
• A great place to learn, work, and grow
Overall: 749 (-21)
Undergrad. – 464 (+11)
  • EE – 290 (+5)
  • CpE – 174 (+6)

Graduate – 285 (-32)
  • EE – 228 (-20)
  • CpE – 57 (-12)
  • MS – 220 (-28)
  • PhD – 65 (-13)
Off-campus students

ECE Off Campus Fall Enrollment

ECE Off Campus Fall Enrollment

Undergrad.
- EE – 49 (+0)

Graduate – 37 (+9)
- EE – 26 (+2)
- CpE – 11 (+7)
Female enrollment

• % female EE at a (modest) historical high
• # female CpE grad students declined modestly, while number of males increased
Faculty

- 31 T/TT faculty
- 6 Teaching faculty
  - 2 in Springfield
- 3 Research faculty
- New faculty
  - Dr. Jie Huang
  - Dr. Ian Ferguson
  - Dr. Tayo Obafemi-Ajayi joins MSU program
- Searches:
  - Controls
  - EMC
  - Cindy Tang Endowed Chair (CpE)
  - Cooperative hire (Cyberphysical systems/communications)
Student awards

- Leann Krieger, HKN-IEEE Board of Governors
- Anthony Nguyen, first place at the IEEE St. Louis section Digital Black Box competition
- Kyle Harper and Kyle Gassell, first place IEEE Region 5 Circuit Design competition
- Justin Hoyt, second place IEEE Region 5 Paper competition
- Ben Conley, 2015 IEEE James Klouda Memorial Scholarship in EMC
Student awards

• HKN Outstanding Chapter Award
  – 14 years in a row!
• Keenan Johnson, runner up for the national IEEE-HKN Outstanding Student Award
• Jacob Self and Neil Heilman – national Power Engineering Society scholarship
• Ali Foudazi, American Society for non-destructive testing Graduate fellowship award
Faculty awards

• Dr. Sarangapani and Dr. Fan elevated to IEEE Fellow
  – 11 Fellows in ECE
• Dr. Xiao: 2015 IEEE Wireless Communications Technical Committee Recognition Award
  – NSF Program Director
• Dr. Erickson: IEEE Region 5 Outstanding Educator
• EMC Group: IEEE EMC Symposium Best paper, both Best Student papers, Student hardware design contest
• Dr. Zheng: Distinguished Lecturer of IEEE Vehicular Technology
Faculty awards

• Dr. Stanley
  – St. Louis Section Outstanding Educator Award
  – IEEE Region 5 Outstanding Educator Award
  – IEEE-USA national Achievement Award
• Drs. Fan and Xiao: S&T Faculty Excellence Award
• Dr. Pommerenke: S&T Faculty research Award
• Drs. Erickson, Kosbar, Sarangapani, Swift, Stanley, and Zoughi: S&T Outstanding Teaching Awards
• Dr. Wunsch: International Neural Network Society (INNS) Gabor Award

Dr. Stanley wins the national IEEE-USA Achievement Award
NEW AND ONGOING INITIATIVES
Status of ongoing initiatives

• Advising and Recruiting Specialist
  – On hold. Hoping for approval in Fall
• Focus on distance education
  – Created an Associate Chair for Distance Ed.
• Blended learning
  – Converting Circuits I to blended format
  – Incorporating blended learning in first week of labs
Status of ongoing initiatives

• Improved feedback and focus on outstanding teaching
  – Created a “Teaching Committee”

• Improved senior design experience
  – Senior Design “Czar”
  – Awards and contests
  – Strengthening expectations and rubrics

• Refresh strategic plan
  – Committee formed and working on a plan
ABET

- Visit in Sept. 2014
- Generally positive, but some issues to address
  - Allow students to take either Writing and Research or Technical Writing
  - Integrate applications of statistics throughout curriculum, in circuits, communications, electronics, and control
  - Revise Educational Objectives
  - Improve assessment measures
- Passed with flying colors!
  - Only concern was institutional support of facilities
Completed Initiative: Enhancement of Undergraduate Controls Labs

- $70k campus match, $90k donations
  - ECE Academy, Anheuser-Busch, Automation and Control Concepts, ArcelorMittal, Burns and McDonnell, CPM Beta Raven, Intelligrated, McEnery Automation, Nucor-Yamato Steel, Siemens, Dr. Keith Stanek

- Supports new required controls lab and new motion controls lab
New/Ongoing Initiative: Overhaul Communications Laboratory

- New lab exercises / lab equipment
- Supports modification to signal processing curriculum and new required communications lab
- Expect to fund through alumni endowments
- On the horizon: Advanced Computer Engineering Lab; HKN “maker space”
ALUMNI FUNDING / ACTIVITIES
Alumni funding

- Scholarships and Fellowships
  - Roughly $78k/yr scholarships and $50k/yr in fellowships
- Lab equipment
- Senior Design
- K-12 outreach
- Student organization events
- Better facilities
- Faculty teacher training
- and more…