

**Monthly Faculty Meeting  
Department of Electrical Engineering**

**Present:** Roger Dougal, Chair

Mohammad Ali	Krishna Mandal
Seongtae Bae	David Matolak
Andrea Benigni	Enrico Santi
Charles Brice	Grigory Simin
MVS Chandrashekhara	Jamie Steadman
Yinchao Chen	Guoan Wang
Herbert Ginn	Xiaofeng Wang
Paul Huray	Bin Zhang
Asif Khan	

**Absent:**

**Recorder:** Nat Paterson

The meeting was called to order by Dr. Roger Dougal at 3:30 p.m. in EE Conference Room 3A75 on April 21, 2016.

**1. Announcements –**

- Spring 2016 IAB meeting – Friday April 22 between 9:45 to 12:45 in 3A75
- Last Spring Teaching Discussion Group – Thursday April 28 at 12 PM in Faculty Lounge – Bring your own lunch
- Spring 2016 Commencements --
- CEC's Cording Ceremony – Friday May 6 at 5:30 PM at Seawell's
- USC –
  - BS – May 6 at 3 PM at Colonial Life Arena
  - MS – May 7 at 3 PM at Colonial Life Arena
  - PhD – May 7 at 1:00 PM at Koger Center
- UG Summit for Faculty – May 10 at Russell House
- Spring 2016 Peer evaluation of teaching – classroom & content due May 15
- Biennial Curriculum Retreat – Fri May 13, all day, followed by reception at Dr. Dougal's house
- SCAMP – South Carolina Alliance for Minority Participation – hosting 2 students in summer 2016 – deadline late May 2016

**2. Committee Reports –**

**I. Undergraduate Committee – Dr. Simin**

**Report #1 -- Summary of Summer & fall 2016 Advisement & Registration**

- 165 out of 187 have been advised, 151 have registered
- Summer 2016 -- 21 enrolled in ELCT 302, 16 in ELCT 331
- Fall 2016 – Courses with maximum capacity – ELCT 301, 363, 403, 530, 551\*, and 572\* (\*=course with streaming section in 3A75)

**Reminder to all advisors:**

- Prerequisite requirement is very important. Make sure to always compare the advisement form to the curriculum sheet.
- Prerequisite waiver is not given out casually. Please help students select courses without having to request for waivers.
- Encourage students to discuss their future plan as early as possible.

**Next actions:**

- Increase advertisement on low enrolled courses via listserve
- Investigate reason(s) of low enrollment in other research fields

**Report #2 -- Fall 2016 Scholarship Offers** (See appendix A for details)

- 5 EE applicants qualified to receive scholarships – 2 awarded CEC scholarships and 3 awarded EE specific scholarships
- 32 current students applied for scholarships – 13 awarded

**Discussions:**

- Received very small fraction of the college scholarships due to the quality of incoming freshmen.

**Next actions:**

- Develop a way to recruit top high school students
- Develop a more aggressive scholarship offering plan to increase

**Report #3 – Summary of Spring 2016 Big Friday tours**

- very small group of prospective students interested in our program
- need to find ways to reach high school students to increase the interest

**Recommendations for change**

- Update our program brochures and other marketing materials to showcase the current and relevant projects like an electrical car
- Focus on increasing number of transferred students from 2 year technical colleges in SC.

**Next actions:**

- Dr. Chandra will contact the Outreach office to work on the marketing material revision.

**II. Graduate Committee – Dr. Ginn****Report #1 – One-year graduate program advertisement on IEEE Supplier Marketplace**  
(<http://spectrumsuppliermarketplace.com/>)

Dr. Ginn presented to the faculty the banner developed to advertise our graduate program on the website as a new initiative to recruit more graduate students.

**Report #2 – Summary of Graduate Committee activities and future plans****Key Items Completed Spring 16:**

- Admitted 8 MS/ME and 15 PhD students
- Implemented the new PhD qualifying exam – thanks for the questions!
- Improved the processes for the ME comp exam and Individual Study course.
- Developed a Degree Progress Report to help keep students on track for timely graduation
- Completed SACS assessment report and plan for grad programs

**Key Items for Fall 2016:**

- Grad program assessment plan updates
- Develop a sustainable recruiting plan to maintain the size of the graduate program

**Next actions:**

- Email a copy of a degree progression report to all students

- Revise the 2016-2017 SACS assessment plan

### III. Faculty Development Committee – Dr. Ali

**Discussion #1 – Future faculty hiring** -- need to develop/identify opportunities for hiring in our department as early as possible so we can present our plan to the dean for authorization.

- Bottom-up collection of what new opportunities may exist, then develop concrete proposals
- Consider building on existing strengths (where clear there will be continuing research opportunities)
- Create new strengths where we have opportunity to become national player in emerging area
- The dean would like to focus on research collaboration across departments or colleges

#### Discussion:

- The main focus should be on hiring a good and competent person that will add strength to our department
- Develop a plan to hire faculty without costing too much startup fund

#### Next actions:

- Dr. Ali will request a one-page hiring focus form each faculty or a research group.
- The summary will be presented in next meeting.

### IV. Report of Chair –

**Report #1 – Summary of Committee Preference survey on Blackboard** – the faculty were asked to respond to a survey regarding their committee task preference. The result of this survey will be used to rearrange the department's committee organization and assign closely faculty to the duty they will be enthusiastic to do.

#### Next actions:

- Announce the new committee organization in the next meeting.

#### Report #2 – Observations from ECEDHA Conference

- Freshman-year experience –
  - Romel Gomez, U of Maryland – Terrific course, somewhat similar to our 101, using well-developed hardware experiments that abstract the yet-unattainable complexity from some essential and popular concepts. Develops appreciation and appetite for deeper technical content later. Key features:
    - Have the very best researchers/lecturers deliver topic modules as guest lectures
    - Carefully develop hardware/software support for topic modules so that complexity is hidden
    - Example: using wavelength division multiplexing to carry rock and classical music over red and blue lightwaves through the same fiber, then use a filter to pick which one to listen to. Then show how to separate the light using a diffraction grating to introduce fourier, show modulation of light, show detection and amplification.
  - Harry Powell, Uva – presented a good approach to system-level thinking beginning at the freshman level. Quite different than what we are doing.
  - Gireeja Ranade, UC Berkeley – described an innovative first year course, but looked unachievable for our students
- Many colleges are creating college-wide MakerSpaces for capstone design. We need this too.

- Some programs now making their entire BS program available online, including labs, and including online TAs.
- Working group on ECE Branding and Vision is expected to receive funding from NSF. Most citizens seem to be unaware of the critical role of EEs in everything from brain research to gravitational waves, much less in product development.
- Note that, at NSF, CISE is the largest funded program, larger than all other engineering and larger than all other sciences.
- Very inspiring presentation by Max Nikias, EE and President of USC (Southern Cal), describing what we can learn about leadership by reading the classics (calling on his Greek heritage).

**Next actions:**

- Related PowerPoint presentations from ECEDHA will be forwarded to the faculty as reference when available.
- Look for volunteer(s) to develop an online course
- Develop a way to increase collaboration with Computer Engineering to receive more funding form CISE program

**Report #3 – Our research outlook** – A summary graph of department’s external research funding was presented to the faculty as a tool for everyone to use in their future proposal submission and plan. See **Appendix B.**

**Next actions:**

- The chair will develop a graph to track proposal submission and awards ratio.

Meeting adjourned at 5:25 PM

# Appendix A

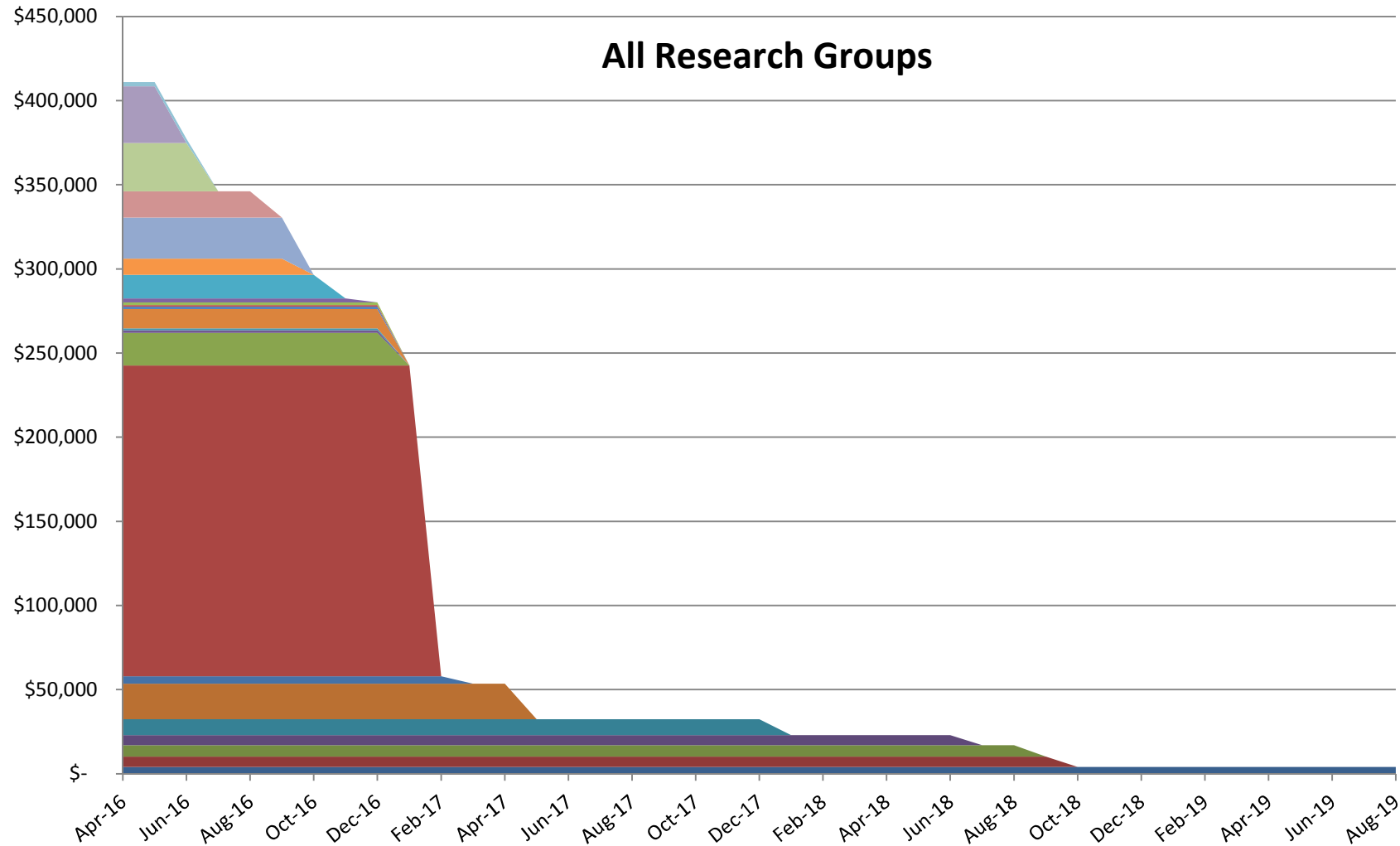
# Fall 2016 Scholarship

2016 Scholarship for Incoming Students					2016 Scholarship for Current Students				
Average for all Admitted Students					Scholarship Preferences				
GPA	4.1				>=3.5				
SAT	1240.9				>=1250				
ACT	27.7				>=28				
Index	8.0				>=8.00				
					Scholarship Preferences				
					1) GPA >=3.3				
					2) Years left: 1-2 years				
					3) Did not receive any other prior Departmental Fellowship as current student				
					4) Departmental Scholarships were awarded to the current students				
CEC Dept.	Qualified Incoming	CEC Scholarship			Dept. Scholarship		CEC Dept.	Current Student Scholarship	
		Awarded	% (Award/Qualified)	Index range	Awarded	Index range		Applied	Awarded
EE	5	2	40%	9.96-8.49	3	9.86-8.18	EE	32	13
Biomed	34	9	26%	9.97-9.21	7	9.32-8.2	Biomed	42	4
Chemical	52	4	8%	9.46-9.34	57	9.92-8.03	Chemical	36	12
Civil	24	5	21%	9.37-8.9	14	9.58-8.29	Civil	42	17
Com. Eng.	12	3	25%	9.69-8.65	5	9.69-8.65	Com. Eng.	57	6
Com. Sc	32	6	19%	9.15-8.83	11	9.93-8.44	Com. Sc	44	7
Mech	50	6	12%	10.0-9.61	15	9.86-8.18	Mech	129	27
Scholarship (\$1000/year for 4 years) Awarded to Incoming Students					Scholarship (\$500/year for 1-2 years) Awarded to Sophomore, Junior or Senior Students				
Data for Incoming Students with EE Major									
# of incoming Student:					115				
# of Student Applied for Scholarship:					15				
# of students qualified:					5				
# of Scholarship Awarded:					5				
2015: Offered 11, 6 have accepted, 5 have declined					2015: Offered 5; accepted 5				
EE is not getting enough good students to compete for the scholarships available for all CEC majors									
Funding of EE Department scholarship is low, so we could not offer awards to more incoming students which requires a commitment of at least \$1000/year for four years									



Appendix B

# Our Research Outlook



UNIVERSITY OF  
**SOUTH CAROLINA**  
College of Engineering  
and Computing