

Academy of Electrical and Computer Engineering (AECE)
Minutes of Annual Business Meeting
Thursday, April 20, 2017

Members Attending:

Eric Aschinger	James Paunicka
Michael Basler	George Schindler
Edward Bradley, Jr.	Donald Shaw
Richard Eimer	John Skain
Michael Emanuel	George Tomazi
Alan Erickson	Donald Shaw
Kelvin Erickson	John Skain
Vincent Kunderman	George Tomazi
Leonard Laskowski	Tom Van Doren
Dennis Leitterman	Roger Volk
David McNabb	Ronald Willoughby
Steven McNabb	
Charles Naslund	Joining via WebEx:
Paul Nauert	Kevin Schindler
Nealon, Mark	David Sizemore
Owens, Ken	Steve Watkins

The annual Meeting of the Academy of Electrical and Computer Engineering was held Thursday, April 20, 2017 and called to order at 8:00 a.m. The meeting was held in the Comfort Suites Conference Center. President George Schindler chaired the meeting.

Dr. Daryl Beetner, Department Chair, welcomed the Academy members. Participant introductions were made.

Dr. Kurt Kosbar reported on behalf of the Scholarship Committee. He reported that the Academy has three endowed scholarships generating funds for five scholarships at a level of \$1,535 each. The operating account was used to provide funds for four scholarships, with three paying \$1,500 each and the other \$4,000. These scholarships are awarded to students who have a combined household income of less than \$40k (as reported on federal student aid form), are making normal progress toward their degree, have a strong GPA, and are an EE or CpE major. The recipients were: Kyle Avola, Robert Branson, Feyd Carr, Nicholas Hausladen, Seth Haygood, Alyson Jones, Fei Lin, Anthony Nguyen, and Chelsea Shaffer. Rachael Engle received the \$4,000 scholarship awarded from the operating account designated for an incoming freshman.

Dr. Kosbar then reported on the travel awards provided by the Academy. He reported that \$4,500 in student travel was supported through Academy funds. These awards were made to individuals or teams with the purpose of providing support for students to attend a conference or symposium to present a paper, or for teams to travel to a design competition. Both undergraduate and graduate students were funded. Individuals could receive up to \$500 and

teams up to \$1,000 of support. A total of four individual and four team awards were made. The individual recipients were: Seaar Al-Dabooni, Atieh Talibzadehghahroudi, Ahmad Alzahrani, and Vikram Roy Chowdhury. Team recipients were: Rocket Design Team, IEEE Robotics Team, Formula SAE Team, and Mars Rover Design Team.

Members of the Mars Rover Design Team then presented a short presentation. The team was founded in 2012. It is a student led and student managed team made up of approximately 60 undergraduates. They will be traveling in May 2017 to the Mars Rover Challenge in Hanksville, UT. The \$500 they received through the travel award will assist with covering expenses for the 16 students who will be traveling to the competition.

Dr. Chulsoon Hwang, one of the new electrical engineering faculty members, then presented to the members. Dr. Hwang received his BS in 2007, MS in 2009 and PhD in 2012, all from the Korea Advanced Institute of Science and Technology. He worked for Samsung Electronics from 2012-2015 before joining Missouri S&T in 2015 as a Visiting Assistant Professor. He moved to the position of Assistant Professor in 2016. His areas of interest include signal/power integrity and electromagnetic interference. Dr. Hwang is a member of the Center for Electromagnetic Compatibility Lab on the S&T campus. He is currently teaching Introduction to Electronic Devices and Introduction to VLSI.

Members of the IEEE Robotics Team then presented. The team was a recipient of travel funds from the Academy. With these funds they were able to attend the IEEE Region 5 Conference Robotics Competition in Denver, CO in March 2017. The team placed 22nd out of 32 teams.

Dr. Richard Brow, Interim Vice Provost and Dean of College of Engineering and Computing, provided an overview of the college. Dr. Brow reported that this had been a year of transition. Interviews are being conducted for a new, permanent Dean whom should be in place by summer; four engineering departments have, or will soon have new chairs; sixteen new T/TT/NTT teaching faculty have been hired since August 2016; and twenty faculty searches are underway, including 9 best-in-class (BIC) hires.

The college currently has 185 T/TT faculty, 24 NTT faculty, 5 lecturers, 34 researchers and 73 staff members. The college is comprised of nine departments (and Freshman Engineering) with sixteen accredited undergraduate programs.

The college has seen record numbers in enrollment, with 5,842 undergraduate and 1,633 graduate students. Efforts are currently being made to bring in more US graduate students. The average CEC teaching load is up 20% since 2012.

Dr. Hamidreza Modares, another new electrical engineering faculty member, then presented. Dr. Modares received his BS from the University of Tehran in 2004, MS from Shahrood University of Technology in 2006, his PhD from Ferdowsi University of Mashhad in 2009, and a second PhD from University of Texas at Arlington in 2015. His research interests include: autonomous control of dynamical systems using machine learning techniques, cooperative distributed multi-agent systems, game theory based control of dynamical systems in contested and resource limited environments, secure and resilient control of distributed control systems, and event-

trigger control. He is currently teaching graduate level courses with focus on robust, adaptive, and nonlinear control and undergraduate courses with focus on discrete-linear systems, control systems, and intelligent robotics.

Dr. Daryl Beetner then provided an update of the department. The big news, of course, was the fire that took place in December 2016. The department is nearly fully functional again, with almost all faculty and staff moved back into their offices. The remodeling will continue into next year.

Dr. Beetner reported that overall enrollment for the department was at 738 students (508 undergraduates and 230 graduates). The number of off-campus students continues to grow, currently we have 55 undergraduate and 38 graduate students off-campus. The department has 31 T/TT faculty and 5 teaching faculty (2 in Springfield). We've lost two faculty positions, but currently have four searches in process.

Dr. Beetner reported on numerous student awards from the last year. They include:

- IEEE/HKN Outstanding Student Award – Emily Hernandez
- HKN Outstanding Chapter Award – for the 15th time!
- IEEE Region 5 Outstanding Student Member – Leann Krieger
- IEEE St. Louis Section – Outstanding Student Branch
- IEEE St. Louis Section Outstanding Young Engineer – Trevor McCasland
- IEEE St. Louis Section Outstanding Student Member – Katie Brinker
- IEEE Electromagnetic Compatibility Symposium, Best Student Design, 2016 – Ali Foudazi, Atieh Talebzadeh, Omid Hoseini
- Region 5 Student Electronic Circuit Design Competition, First Place – Li Guan, Matthew Wedewer

Faculty awards and honors included:

- Joe Stanley – IEEE/HKN C. Homes MacDonalld Outstanding Teaching Award
- David Pommerenke – Richard R. Stoddard Award for Outstanding Performance in EMC
- Steve Watkins – President-Elect of IEEE/HKN
- Mariesa Crow – IEEE Power and Energy Society Outstanding Engineering Educator
- Amardeep Kaur – St. Louis Section Outstanding Branch Counselor
- Jonathan Kimball – Deans Scholar
- Theresa Swift and Joe Stanley – Deans Teaching Scholar
- Sandra Martin – Staff Excellence Award
- Mehdi Ferdowsi – Faculty Excellence Award
- Rosa Zheng – Faculty Research Award
- Steve Watkins – Faculty Service Award
- Kelvin Erickson – Faculty Teaching Award
- Theresa Swift – Faculty Achievement Award

Dr. Beetner provided an update on some of the ongoing initiatives.

They included:

- The department is currently searching for an Advising and Recruiting Specialist.

- Improvements are being made to the Senior Design course.
- Distance education continues to grow.
- The Communications Lab has been upgraded thanks to funds donated by alumni.

New initiatives include:

- Sophomore Seminar
- Increasing undergraduate research opportunities
- Combined BS/MS program
- Move Academy Room and Emeritus offices
- Remodel Student Lounge into active learning workspace

Chelsea Shaffer, scholarship recipient, then made a short presentation to the Academy. Chelsea is from Sullivan, MO. She graduate 5th in her class from Sullivan High School. Chelsea found her passion for engineering while participating in the Missouri Innovation Academy at Missouri State University. She is currently dual majoring in electrical and computer engineering.

Members then heard a presentation by the HOME (Home Organization and Monitoring of Energy) Senior Design Team. Members of the team included: Shelby Esterlein, Katherine Overend, Ripal Patel and Jacob Self.

Jason Northern, Development Office, provided a University Advancement update. He reported that “Rolla Rising” is the new campus campaign, which will end in 2020. Schrenk Hall’s construction has been completed adding 99,000 square feet of new construction to campus. Ground will break soon for the new Student Design Center expansion. This expansion will double the space for the center.

He reminded everyone that on Friday, October 6th OGS would host an event in Denver, CO in conjunction with the Solar Decathlon. This will include a dinner and new member meet and greet. Then, on Saturday, October 7th, the induction ceremony and 40th anniversary gala will be held.

George Schindler called the business meeting to order by welcoming the new inductees that were present.

Ronald Willoughby made a motion to approve the minutes from the April 2016 meeting. Alan Erickson seconded the motion. Motion carried.

Michael Emanuel explained the Treasurer’s reports. Richard Eimer made a motion to accept the financial reports as prepared. Dennis Leitterman seconded the motion. Motion carried.

John Skain gave a report for the Membership Committee. He reported that seven new members would be inducted into the Academy this year and reminded everyone to send in their nominations for next year.

Eric Aschinger then presented the Nominations Committee report. Richard Eimer asked for a vote by acclamation for John Skain and Neal Schaeffer (3 year term) to fill the two vacant board

seats, and for Leonard Laskowski to fill the vacant Secretary/Treasurer (3 year term) position. Motion carried.

George Schindler then gave a report on the 20/20 Endowed Scholarships. Student Financial Aid had been awarding these scholarships without AECE or department input. This issue has been resolved with the help of the Development office. The revised endowment documents have been signed and are now in effect.

Dave McNabb gave an overview of the Chancellor's Academy Presidents Forum. Many ideas were brought forward from the various academies. Some of the ideas included: pairing new members with current members to get them up to speed on the Academy and to get them involved, getting new members involved in committees, meeting with student groups to see how Academy can get more involved.

George Schindler then reviewed the AECE Strategic Plan. Over the past year the following themes have seen progress.

Theme B – Provide support to the students of the ECE department

- Provide Endowed and general fund scholarships
 - Continue to provide scholarships
 - Provided 6 scholarships from the endowments and 5 from the Operating Account
- Partner with student organizations to provide mentoring
 - Provided funding to IEEE Student Branch for finals week snacks
 - Provided panel for IEEE Student Branch meeting

Theme C – Provide support to the ECE department

- Provide for a lab endowment and grow the endowment
 - Completed funding for lab endowment

Theme D – Provide guidance to department chair, faculty and students

- Provide annual feedback to the ECE department (also meets ABET requirement)
 - Provided feedback at the annual meeting and board meeting

Theme E – Promote the department and university

- Provide funding for student teams to travel to external competitions and seminars
 - Developed AECE Student Travel Program
 - Awarded travel funding to 8 entities (individuals and teams)

Future strategy implementation includes:

- Continue to budget for travel funding and finals week effort
- Need volunteers for “Mentoring to Student Design Teams” (Theme B, Lever C)
- Need volunteers for “Provide industry input in support of faculty proposals” (Theme D, Lever C)
- Continue to work with IEEE Student Branch on mentoring, add HKN if possible.

Mr. Schindler then gave a brief overview of annual giving and meeting expenses. He reported that last year's giving was \$15,444. The total out-of-pocket expense for the annual meeting last

year was \$980, which is up from the previous year but much better than it used to be. It was reported that 94% of members contribute to S&T and that 32% of our membership are OGS members.

George then reported that the lab endowment was fully funded in 2016, and at the end of March 2017 had generated \$347.

Michael Emanuel presented the proposed budget for the 2017-2018 operating year. Richard Eimer made a motion to accept the budget as presented. Roger Volk seconded the motion. Motion carried.

Roger reported that the next meeting of the AECE would take place on Thursday, April 19th, 2018.

Members then heard a presentation by the UAV Microwave Imaging System Senior Design Team. Members of the team included: Katie Brinker, Matt Dvorsky, Cody Edwards and John Gallion.

Alan Erickson made a motion to adjourn the meeting at 3:50 p.m. Richard Eimer seconded the motion. Motion carried.

Minutes submitted by David McNabb

May 10, 2017

The next AECE Meeting and Banquet of the Academy of Electrical and Computer Engineering will be Thursday, April 19, 2018. Mark your calendars and plan to attend.