

Academy of Electrical and Computer Engineering (AECE)
Minutes of Annual Business Meeting
Thursday, April 19, 2012

Members Attending:

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| Max Anderson | Michael Apprill | Richard Arnold |
| Eric Aschinger | Jonas Bereisa, Jr. | Edward Bradley |
| Lloyd Brunkhorst | Richard Eimer | Kelvin Erickson |
| Mark Fehlig | Barry Freiner | James Fricke |
| Mike Herron | Leonard Laskowski | Dennis Leitertman |
| Kory Mathews | Joe Monie, Jr. | J. Derald Morgan |
| Stephen R. Nelson | Michael Perry | Walter Reed |
| Neal Schaeffer | George Schindler | Donald Shaw |
| John Skain | Daniel Smith | Keith Stanek |
| Paul Stigall | Thomas Sweeney | Cynthia Tang |
| George Tomazi | Thomas Van Doren | Jon Vaninger |
| Roger Volk | David Wang | |

The annual Meeting of the Academy of Electrical and Computer Engineering was held Thursday, April 19, 2012 and called to order at 8:00 a.m. The meeting was held in the Southwestern Bell Cultural Center. President Dennis Leitertman chaired the meeting.

Dr. Kelvin Erickson, Department Chair, welcomed the Academy members. Introductions were made.

Dr. Kurt Kosbar gave a report for the Scholarship Committee. He reported that the Academy awarded a total of eleven scholarships this year. Four scholarships were awarded from the endowed scholarship account. Two of the scholarships were \$1,500 a piece and the other two were for \$1,150. The AECE Board approved awarding an additional \$700 from the operating budget so that all four students would receive \$1,500 awards. These scholarships are awarded to students who have completed a FASFA form (application for federal student financial aid) and have a combined household income of less than \$40k. The recipients were: Jason Buchanan, Christopher Crance, Jesse Rafferty and Krystal Thomason. Six scholarships were awarded from the non-endowed account for \$1,500 each. These scholarships are awarded to students based on need and academic performance. The recipients were: Scott Miller, Kayla Ninh, Kathleen Venhaus, Bradley Trapp, Janell Woolsey and Derek Welty. One scholarship was awarded from the non-endowed account for \$4,000. This scholarship was awarded to an incoming freshman based on need and academic performance. The recipient was Joshua Lynn.

The Academy members then heard presentations from some of the scholarship recipients.

Joshua Lynn is the oldest of three children from Springfield, MO. He plans to pursue a double major (electrical and computer engineering). Joshua chose electrical and computer engineering after taking an Applied Math course in high school. He enjoys working with computers and

electronics and the ability to provide solutions to problems. Joshua says that one of the people that inspired him the most, other than his parents, was Nicola Tesla.

Christopher Crance is the second of four children from Lee Summit, MO. His hobbies include photography, hunting, fishing and FIRST Robotics. Christopher is an Eagle Scout. He chose S&T because it was a top engineering school, he loved the small school/small town environment, and of course, because his older brother attended. Christopher is the President and Co-Founder of the FIRST Alumni Association and has been very involved in IEEE since his freshman year. He worked for Burns & McDonnell last summer and has secured an internship with Black & Veatch for this summer.

Dr. Randy Moss, Professor of Electrical and Computer Engineering, provided an update on the research project he presented to the Academy last year. Dr. Moss stated that the SkinScan research project is progressing. The main funding has been provided by Stoecker & Associates (\$13k/month), but they currently have a total of \$1.25M in proposals pending. They plan to continue to collect cases in 2012-2013 and continue work on developing the system. In June 2012 they hope to submit a letter to the FDA requesting a meeting, followed by an investigational device meeting in August 2012, and then a validation of software in July 2012.

Jason Northern, Development Officer, provided a campus update. He reported that the new annual giving club created to assist the Student Design and Experimental Learning Center was being introduced this year. The "Miners By Design" club will have annual giving levels from \$500 - \$25,000. He spoke about the new emphasis the University is placing on thanking and recognizing donors. Every donor now receives a personalized than you.

Mr. Northern reported that the Order of the Golden Shillelagh (OGS) now has 1,425 members representing 826 household. The Academy participation rate in OGS is 17%. They are scheduled to induct 30 new members during their meeting this year. He also reported that the state has \$1.1M in lottery funds that they will match dollar for dollar (individuals only) in \$20K increments. The scholarship may be named by the donor. In order to receive the matching funds from the state, all funds must be received in full by April 30, 2013.

Dr. Yiyu Shi, the newest computer engineering faculty member, then presented to the Academy. Dr. Shi obtained his B.S. from Tsinghua University in China in 2005, M.S. and Ph.D. from University of California-Los Angeles in 2007 and 2009. His research interests include advanced technologies for very large scale integrated circuits, with a focus on three-dimensional integrated circuits. Dr. Shi's instructional focus is CpE 311 Introduction to VLSI Design, CpE 318 Digital System Modeling, and CpE 409 Advanced topics in VLSI CAD.

Dr. Erickson then updated the Academy on the Vision 2020 process. He reported that the university had put the process on hold for a year. The ECE department plans to go forward in their planning, while the university reviews the resources they will need to accomplish their current goals. He asked the committee what the ECE department's goal should be – to be one of the top 25 engineering departments in the nation or to prepare graduates for their careers? Dr. Erickson reported that the ECE department's assessment would include: curriculum, administration of department, laboratories, scholarships, physical facility, fundraising, teaching

quality, student participation, recruiting and administration, research, and funding from companies. Dennis will follow up with an email for input on the assessment process.

Dennis Leitnerman called the business meeting to order by welcoming the new inductees that were present.

George Tomazi made a motion to approve the minutes from the April 2011 meeting. Derald Morgan seconded the motion. Motion carried.

Revised bylaws were then reviewed and approved by paper ballots (35 yes, 0 no).

Roger Volk addressed the Academy in regards to annual donations. He suggested a \$400 donation to the Academy from each member annually. Mr. Volk also encouraged the members to become active in the Order of the Golden Shillelagh. He noted that \$10,000 annually in donations (total annual giving) will qualify an alum for participation in the club.

George Schindler explained the endowed scholarship budget for March 1, 2011 through February 29, 2012. The budget for the endowed scholarship is strictly informational so no vote was required.

Mr. Schindler then reviewed the 2011-2012 income and expenditures and the 2012 – 2013 proposed budget with the Academy. Richard Eimer made a motion to approve the proposed budget. George Tomazi seconded the motion. Motion carried.

Michael Perry gave a report for the Membership Committee. He encouraged the members to think about individuals they could nominate for membership. Nomination request letters will be sent out in June, with ballots being compiled in August and sent out in October, then new inductees will be contacted in December. Nominators should provide as much information as possible for the nominees.

Jim Fricke made the call for nominations to fill two vacant seats on the Board of Directors. Both seats will have terms expiring in 2015.

Jim Fricke made the motion to elect Mark Fehlig and re-elect Michael Perry to fill the seats. Leonard Laskowski seconded the motion. Motion carried.

Dennis Leitnerman reported that at the Chancellor's Academy Presidents Forum they would meet S&T's new Chancellor, Dr. Cheryl Schrader. He also reported that there would be a follow-up board meeting via teleconference on May 2, 2012.

Mr. Leitnerman reported that the next meeting of the AECE would take place on Thursday, April 18, 2013.

Dr. Kelvin Erickson gave a department update. He reported that for Fall 2011 the department had 420 undergraduate students (140 CpE, 251 EE, 29 MSU) and 225 graduate students (33

CpE, 192 EE). Research expenditures totaled \$7.5M. The department had 28 faculty members, 5 assistant teaching professors, and 14 staff members.

Dr. Erickson reported on the numerous student awards from the last year:

- Our students won the HKN Outstanding Chapter Award
- Alton B. Zerby and Carl T. Koerner Outstanding ECE Student Award – Kathryn Rodhouse
- IEC William L. Everitt Student Award of Excellence – Justin Schlechte and Kenneth Scott Campbell
- IEEE Larry K. Wilson Regional Student Activities Award – Kathryn Rodhouse
- IEEE Region 5 Student Paper-1st – Kathryn Rodhouse
- IEEE Region 5 Ethics Competition -2nd – Kevin Robison and Kathryn Rodhouse
- IEEE Region 5 Robotics Competition – 3rd – Corbin LeGrand, Max Eisenbaum, Blake Lemons, Tyler Clonts, Tim Johnson, Brad Collins

The department has one new faculty member, Dr. Theresa Odun-Ayo (electrical engineering) at MSU. Faculty awards were given to: Dr. Jun Fan (Faculty Research Award); Dr. Kurt Kosbar, Dr. John Seiffert, Dr. R. Joe Stanley, Dr. Reza Zoughi (Outstanding Teaching Awards); Dr. Daryl Beetner, Dr. Mariesa Crow, Dr. Jun Fan, Dr. Jonathan Kimball, and Mr. Roger Younger (Teaching Commendation Award). One patent was also issued – U.S. Patent No. 7,752,089, Adaptive Inventory Management Imaging System (J. Sarangapani, A. Ramachandran, C. Saygin, and K. Cha).

Dr. Erickson reported that the addition of EE emphasis areas has been approved. These areas are: Circuits and Electronics, Power and Energy, Communications and Signal Processing, Controls and Systems, and Optics and Devices. These areas will be available for students beginning in Fall 2012.

Other curriculum changes include: debating whether to have two linear systems courses (one for continuous and one for discrete) or whether one would be sufficient, reviewing content of the senior elective courses, and minors in EE and CpE.

Future curriculum changes will be renumbering the course using a 4-digit system. Example: 1xxx – 4xxx are undergraduate courses and 5xxx – 6xxx are graduate courses. This has been postponed until 2013.

The department strategic plan includes:

- working toward being ranked as top 25 in the nation
- establishing endowed teaching chair in circuits and computer engineering
- establishing a laboratory equipment endowment and senior design project endowment
- department to support 3 teams not in Student Design Center
- increase undergraduate and graduate enrollment
- offer more on-line courses
- increase female and minority faculty to 6
- increase scholarship/fellowship endowment

- expand research
- funding for new building addition
- three campus corporate partners on Academy
- support start-up and commercialization efforts of faculty and students

New initiatives include:

- Replace seats in four classrooms
- S&T Bot
- Lab equipment updates
- Classroom technology updates
- Cooperative program with MSU
- Blended learning courses
- More distance courses

Dr. Erickson then asked for volunteers to review the content of the senior elective courses.

Volunteers were as follows:

Power (machines, systems) – Keith Stigall and Donald Shaw

Semiconductor Devices – Stephen Nelson

Controls (linear control systems, PLCs) – Leonard Laskowski

Communications – Joe Monie, Kevin Schneider, and George Schindler

Electronics II – no volunteers

Dennis Letterman moved that the meeting be adjourned at 2:10 p.m. Roger Volk seconded the motion. Motion carried.

Minutes submitted by Roger Volk

May 5, 2012

The next AECE Meeting and Banquet of the Academy of Electrical and Computer Engineering will be Thursday, April 18, 2013. Mark your calendars and plan to attend.