

The
Biomedical Engineering Society

University of Rochester Student Chapter

Inside this issue:

New Faculty Advisor: Dr. Regine Choe	2
BME Fall Picnic	2
BMES Annual Conference	3
Coulter College Competition	4
What I did over the Summer...	4

Volume 9, Issue 1

October 2013

Letter From The BMES President

The Biomedical Engineering Society (BMES) chapter of the University of Rochester strives to promote professionalism and networking in the field of Biomedical Engineering. Our goal as an organization is to form connections between undergraduate students, graduate students, faculty, and other staff of the department through a number of sponsored events. The BME fall picnic, alumni talks, concentration panel talks, and industry tours are just some of the many events we host to encourage such interactions.

One of our most successful programs is the student-mentoring program. By matching up upperclassmen BME students with underclassmen, the overall goal of the program is to help transition students and guide them through their underclassmen years. Anyone that still would like to have a mentor can contact bme.mentor@gmail.com.

We are very excited to host Dr. Federspiel from the University of Pittsburgh this semester. Dr. Federspiel is a Rochester Alum who has founded a medical start-up company based out of Pittsburgh. His current research emphasizes the development of medical devices regarding biotransport and bioseparation processes.

BMES holds executive board meetings on

Monday nights at 8pm in Goergen 239. We encourage both prospective and current members to attend. If anyone has any ideas regarding events or professionals they would like to bring to the U of R, please feel free to contact me, or attend a meeting.

Becoming a national BMES member has benefits including access to the national job board, attendance to conferences and networking to other professionals in the society. You can find more information at bmes.org. This year, with help from the department and scholarships from the National BMES, we were able to send 16 undergraduates to the National Conference in Seattle, Washington to present research the students are involved in.

Sincerely,
Tiffany Kobee



Greetings from the new BMES Advisor: Dr. Regine Choe

I would like to welcome every BME student to the exciting start of the 2013-2014 academic year. I am delighted to be the new faculty advisor for the BMES student chapter at UR. The chapter has an extraordinary track record and outstanding student participation. My goal as the advisor is to learn how the UR BMES chapter functions and to serve as a bridge between BME students and faculty members to provide better support, communication, and interaction. I would welcome any help and suggestions in this regard.

From what I have seen so far, BMES is a great organization that provides robust opportunities to our students outside of the classroom in leadership and event organization, skills that will be beneficial throughout your lifetime. I would like more BME students to join BMES to get involved and learn these skills. In particular, BMES can provide opportunities

for those who are doing undergraduate research to present their work at the BMES annual meeting. For BMES board members, I would like to see the continuation of great work with aspirations of reaching for more general member involvement, and the formulation of a 5 year plan to continue your legacy.



-Dr. Regine Choe, BMES Faculty Advisor

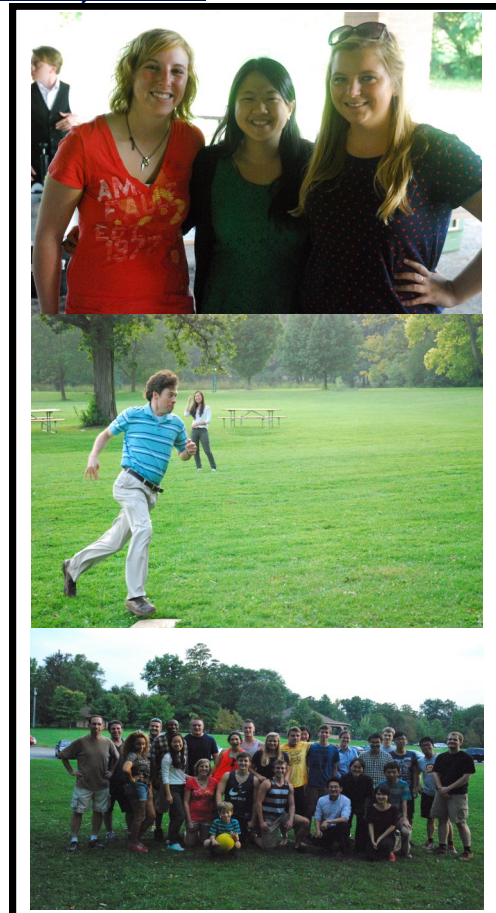
BME Fall Picnic on September 20th, 2012

For the first time in years, there was sunshine and warmth on the day of the annual Biomedical Engineering Department Barbeque! Held on a Friday evening in September at the local Genesee Valley Park, students and faculty enjoyed tasty food from the well-known Dinosaur BBQ. Since the weather was so fantastic, the Students vs. Faculty Kickball game was held. Earlier in the day, Professor Laurel Carney had thrown down the gauntlet to the students:

‘Dear BME Undergrads – We understand that you’re challenging the BME Faculty to a game of Kickball at the picnic today – What you may not have considered is that many of our Faculty started playing Kickball BEFORE Kickball was even invented! You don’t Stand A Chance! See you there! And may the best team win!’

Professor Carney and her team put up a strong effort. The score was not closely kept throughout the game, so no one is sure of the true winner. Engineers can be athletic! Professor McAleavey has quite the kick, getting a few home runs for his team. Other key players for the faculty included Dr. Nam and Dr. Choe. Overall, the picnic brought out around 100 BME students and faculty to enjoy the food, the kickball game, and the company of each other.

-Emily Kwan (2016)



BMES Annual Conference

Twelve University of Rochester undergrads were selected to present their research at the 2013 Biomedical Engineering Society Annual Meeting and four other students attended the national conference for networking and learning about current research. This year's conference was held in Seattle, Washington at the Washington State Convention Center. The conference included presentations of current research, an engineering design competition, booths with graduate school and biomedical engineering company representatives, and a variety of workshops and speakers. While in Seattle the students also were able to tour the city, which included a trip to the Space Needle, the EMP Museum, and Pike's Place Public Market among others.

The conference was also important for making connections. Senior Amanda Chen described how "the conference was a valuable experience for me because I was able to meet a lot of researchers and professors that I am interested in doing future PhD work with. It was helpful to meet them in person and to watch presentations by current graduate students in their lab."

"I am definitely more prepared for applying to graduate school. The conference was a great opportunity to actually see what each school was like and network with the professors that conduct research there. I found out which colleges I wanted to go to and, more importantly, which colleges were not right for me," added senior Max Winkelman.

Junior, Stephanie Rigot claimed that she was "excited to have made so many networking connections that can increase my likelihood of getting accepted into graduate school and to have learned about all the research being conducted in my fields of interest."

Students were able to learn about grad school possibilities while also learning about current research being done there, "I loved being able to learn about recent developments in the field and meeting the scientists who are involved in that research. I left the conference with an appreciation for others' research and new ideas for my own," said senior Lousia Bauer.

Furthermore, students learned about the variety of career paths that they can take with a biomedical engineering degree, "I became very interested in the thought of working in the government through the VA or working in industry at a medical device company. In short, I learned that the possibilities are endless for a BME graduate," claimed senior Courtney Astembroski.

Students were able to experience how to share and discuss their successful projects at a professional level, which is a valuable skill in the research field. Attendees agreed that it was a wonderful opportunity that they were proud and excited to be a part of.

-Mary Bucklin (2016)

BMES Fundraiser

November 4th-8th
in Wilson Commons



On Sale

- Graduated Cylinders
- Koozies
- Blankets
- Mugs
- Polos

Coulter College at BMES in Seattle

The Coulter College competition celebrated its 2nd annual collaboration with the annual BMES conference this year in Seattle. The Coulter Foundation honors the innovative and influential inventor, Wallace H. Coulter and lives by the motto “science serving humanity”; their foundation supports translational biomedical research and has a history of partnership with BMES.

Teams from universities with graduate biomedical design program, such as the CMTI (Center for Medical Technology and Innovation) program are eligible for the application. The 2013 Rochester team consisted of Amanda Chen (BME '14), Tiffany Kobee (BME '14), Matt LeVasseur (BME '14), Laura Hobbs (BME '13), Erin Keegan (BME '13, CMTI), Spencer Klubben (BME '13, CMTI), Dr. Greg Gedowski, and Dr. Ankur Chandra. They competed with 13 teams from schools such as Washington University in St. Louis, Syracuse University, and Columbia University. Coulter instructors, venture capitalists, patent lawyers, and others provided lectures on regulatory foundation, reimbursement codes, intellectual property, funding sources, and more. The end goal of the program was for each team to pitch a concept addressing an unmet clinical need by designing a biomedical device for improving patient care.

Our university team pitched an idea for an in-home rehabilitation system that motivates the user and provides feedback to clinicians. The concept involved a

novel technology platform to guide and teach the user how to perform physical therapy at home, provide real-time feedback to the user on their performance, and send progress reports to clinicians. Additionally, the concept is assisted by a series of complimentary products that can be designed as patient-specific devices for collecting data relevant to physical therapy exercises. Specifically, the team framed the concept around a rehabilitation system specific to carpal tunnel release surgery therapy. After two exciting rounds of design pitches, our team placed 3rd overall and was given a monetary award as a prize.

-Amanda Chen (2014)



What I Did Over The Summer...

Over the summer, I spent three weeks in Oaxaca, Mexico as an intern for the organization Simply Smiles. Most of our time was spent in Oaxaca City, digging holes, mixing cement, and laying block for the volunteer dormitories being constructed. We spent time with children at the Casa Hogar children's home and hosted food and clothing distributions, a community meal, and several trips to a local park for families living at a garbage dump. We also drove 8 hours through the jungle to host a food distribution and hookworm clinic in a remote village. I absolutely loved this experience!

-Gina Demeo (2016)

I spent my summer in Los Angeles, interning at the House Research Institute where I was able to learn a lot about cochlear implants, psychoacoustics, and inner ear physiology. With the guidance of my mentor, Dr. Ray Goldsworthy, I ran a Forward and Simultaneous Masking Experiment on subjects with cochlear implants, comparing the data to normal hearing listeners. I was able to see a variety of aspects to research in the auditory system including recording from auditory neurons in rats and recording otoacoustic emissions in human listeners.

-Emily Kwan (2016)

This summer I worked at the Medical College of Wisconsin at the eye institute. I developed image quality metrics for images acquired by adaptive optics ophthalmic imaging.

-Gwen Musial (2014)

I worked as an Associate Specialist Administrative Services Intern at Merck & Co. While there I was in charge of design and performing a seed expansion ranging study for a few therapeutic proteins in order to combat Clostridium Difficile Infections.

-Cyrus Lambotte (2014)

This summer I worked on a multidisciplinary engineering project in Italy tracing the path of the Ancient Aqueduct of Arezzo. During the program we used geophysical and archeological techniques along with engineering principles to uncover a section of an aqueduct wall, all while being immersed in the Italian culture.

-Tiffany Kobee (2014)