Message from the Head
Visualizing Research
Midwest BME Career Conference
Student Image of Research Contest
Recent Graduates: B.S., M.S., Ph.D.

Bioengineering West Campus Expansion
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Spotlight on BOA

Bioengineering Student Research Image Contest winner
"Blood territories from artificial cerebral vascular model"
(Chih-Yang Hsu)

Bioengineering Student Research Image Contest winner
"Contact Lens Electrode Array (CLEAR Lens™)
(Zahra Haddad Derfahi)
Welcome to the Spring 2013 Newsletter. Major developments and events continue to intersect with Bioengineering at UIC. At the time I am writing this, I look forward to a major event we are hosting, the Midwest BME Career Conference (MBECC) 2013. This will occur on April 19, 2013 at the UIC Forum. This is 1 of 3 regional Career Conferences organized annually throughout the nation by the Biomedical Engineering Society (BMES). Students from other bioengineering programs from all over the Midwest will be joining our students to learn about different career opportunities -- from industry small and large, R&D, and government to medical and clinical environments -- and mingle with representatives from many of the employers of BioE graduates. A good number of our own alumni are participating in career panel sessions and a career networking session.

In addition, Dr. William J. Heetderks, MD, PhD, Director of Extramural Science Programs at the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at NIH will deliver the opening keynote presentation at MBECC. See: http://bmes.org/files/Dr_Heetderks%20Bio%20-%20Webpage.pdf. I look forward to Dr. Heetderks’ remarks about the future of biomedical imaging and bioengineering research, and the presentation from the other keynote presenter, Dr. Thomas Dudar, the only Baxter Distinguished Engineer currently at Baxter International, Inc. See: http://bmes.org/files/Thomas%20Dudar%20Bio%20-%20Webpage.pdf. Dr. Dudar has been very active in engaging UIC Bioengineering, most recently through Baxter’s sponsorship of our new Interdisciplinary Medical Product Development sequence, an alternate Senior Design route for our undergraduates. The agenda for the day can be found at: http://bmes.org/agendamidwest.

Please look inside our newsletter to learn more about this event, as well as other events and the recent successes of our students and faculty. I’ll take this opportunity to draw attention to a recent “success” of UIC overall. It was ranked 11th on a list of the world’s best young universities published by Times Higher Education of the U.K. (It was the 3rd highest rank of any U.S. institution.) The list, the first Times Higher Education “100 Under 50,” uses the same 13 performance indicators as the Times Higher Education World University Rankings, but with a reduced weighting for subjective indicators of academic reputation. According to Phil Baty, editor of the rankings, “The new ranking gives us a glimpse of the future, hinting at who the future Harvard and Cambridge universities may be.” For more details see http://news.uic.edu/uic-ranked-11th-of-worlds-best-young-universities-2.

The University of Illinois at Chicago Circle (UICC) was founded in 1965. In 1982, UICC merged with the University of Illinois Medical Center to create the University of Illinois at Chicago (UIC). Though at a young institution, UIC Bioengineering is one of the oldest Bioengineering programs in the country, founded in 1965, and graduating undergraduates since 1969 and graduates since 1972. It was the 3rd undergraduate program in the country to receive accreditation by ABET for its undergraduate program.

As always, thank you for helping support our continued strive for excellence. Gifts targeted to the department continue to help us achieve our strategic goals, and could include opportunities to endow a named professorship, scholarship, laboratory, or special facility or program. See our “Give to UIC BioE” button on our website at bioe.uic.edu. In addition to financial support, I know that the network of UIC BioE alumni and friends will continue to help our students find internship and employment opportunities. Your generous donation of your time and talents at events like MBECC 2013 are emblematic of this support.

Finally, I am always happy to meet our alumni and friends and welcome your visit. And, please join our Facebook group at https://www.facebook.com/pages/University-of-Illinois-at-Chicago-Bioengineering-Department/105025706334490?ref=ts

Sincerely,

Thomas J. Royston
CAVE2™, a next-generation large-scale virtual-reality environment, is a hybrid system that combines the benefits of both scalable-resolution display walls and virtual-reality systems to create a seamless 2D/3D environment that supports both information-rich analysis as well as virtual-reality simulation exploration at a resolution matching human visual acuity. The system is funded by the NSF MRI program and the Department of Energy. Grants such as these enable EVL to continue to provide state-of-the-art visualization instrumentation to research scientists and educational opportunities to UIC students. EVL's visualization and virtual-reality instruments are developed by its faculty, staff and students, and used by EVL-affiliated UIC colleges and departments, including Bioengineering, Computer Science, Geoscience, Medicine, Communications, Education, and Art. These instruments enable graduate students to conduct research toward their degrees, and attract and inspire undergraduates to pursue graduate degrees. Additionally, EVL has engaged scores of children through its outreach efforts with the public schools and museums.

CAVE2 benefits large-scale collaboratories of discipline scientists in need of advanced cyberinfrastructure, providing them with new and more intuitive ways of interacting with their data. In addition, CAVE2 benefits computer scientists interested in providing knowledge workers with better ways to manage the scale and complexity of their data, by enabling them to study a wide range of new problems at the intersection of human-computer interaction, virtual reality, computer graphics, high-performance computing, high-speed networking, and computer-supported cooperative work.

A collaboration of bioengineering, neurosurgery, and computer science has led to research of hemodynamics in the human brain. Advanced vascular modeling has allowed the Laboratory for Product and Process Design (LPPD), led by Dr. Andreas Linninger, to create fully connected structures of the human arteries, veins, and capillaries. Medical images are reconstructed with enhanced microvasculature by automated software developed with the lab. Fluid simulations on these patient-specific models allow the team to retrieve quantitative information such as blood flow, pressure, and oxygen concentration.

The LPPD has partnered with the Electronic Visualization Laboratory (EVL) in order to produce advanced visualizations of their modeling and simulation results. The resulting brain vessel networks are displayed in EVL's CAVE2™ System, a 320° cylinder of tiled 3d displays, as shown in the figures. This allows neurosurgeons, medical students, and academic researchers to explore vast amounts of data in a collaborative fashion. It also exposes phenomena in the microvasculature that is otherwise too small to detect at physiological scale.

For more information, see the recent Associated Press story on this project at: http://bigstory.ap.org/article/future-science-using-3d-worlds-visualize-data and visit the CAVE2 website at: http://www.evl.uic.edu/core.php?mod=4&type=1&indi=424
The UIC Department of Bioengineering in conjunction with BMES is proud to host the 2013 Midwest Biomedical Engineering Career Conference (MBECC) at the UIC Forum. The conference is specifically designed for biomedical engineering students (undergraduate, graduate and post-docs) and recent grads and provides career information as well as networking opportunities with companies.

MBECC began as a student-focused career conference for biomedical engineers in 2006 and continued for 6 years. The conference was sponsored by the non-profit BME Career Alliance. From small beginnings, MBECC has grown to host 300 attendees with representation from the majority of the Midwest biomedical engineering programs and multiple medical device, pharmaceutical and med tech companies. The first MBECC in Chicago developed from the previously successful CUBIC conference, co-hosted by Northwestern University, IIT and the University of Illinois at Chicago. The purpose of the Midwest Biomedical Engineering Career conference is to educate biomedical engineers on career opportunities, provide networking for employers and students/alumni of BME programs and showcase ongoing research at BME programs. The conference is a primary way for regional companies to connect with numerous talented biomedical engineers from the large group of universities in and around the Midwest.

Keynote Speakers

**Dr. William J. Heetderks, M.D., Ph.D.**
Director of Extramural Science Programs
National Institute of Biomedical Imaging and Bioengineering (NIBIB) National Institutes of Health (NIH)


**Thomas Dudar, Ph.D.**
Baxter Distinguished Engineer
Baxter International Inc.


Dr. Diego Orozco is a senior research engineer with extensive experience in joint biomechanics and wear assessment of total joint replacement devices at Zimmer Inc where he is currently the manager of the Tribology research labs. Dr. Orozco also holds an adjunct assistant professor appointment at the University of Valparaiso (Indiana), where he teaches introductory bioengineering courses to mechanical and electrical undergraduate students. Dr. Orozco, a native from Mexico, earned his M.S. (as a Fulbright grantee) and his Ph.D. degrees in bioengineering from the University of Illinois at Chicago. He also holds a B.S. in computer science from Colima University (Mexico).

UIC Alumni participating in panel sessions at MBECC:
- Terry Chiganos, MD (ER Physician)
- Elizabeth Bell-Masen, M.S. (Abbvie)
- Diego Orozco, Ph.D. (Zimmer)
- William Pietrzak, Ph.D. (Biomet)
- Katharine Rojahn (Baxter)
- Jesse Vasquez (FDA)

UIC faculty and current students participating in panel sessions at MBECC
- Robert Bailey, Ph.D.
  (Professor of Epidemiology)
- Michael Cho, Ph.D.
  (Professor of Bioengineering)
- Golnar Doroudian
  (Graduate student in Bioengineering)
- Tim Erickson, MD
  (Director of Center for Global Health)
- Dan Hyhorchukz, Ph.D.
  (Director of Global Environmental Health)
- James Patton, Ph.D.
  (Professor of Bioengineering)
- Thomas J. Royston, Ph.D.
  (Head of Bioengineering)
- Terry Vanden Hoek, MD
  (Head of Emergency Medicine)
- Allen Ye
  (MD/PhD student in MSTP program)

UIC Forum – University of Illinois at Chicago
New Grants  
Fall 2012

Jun Cheng  “Laser therapy with NIR femtosecond laser irradiation in promoting wound healing”, UIC Campus Research Board $20,000 (01/01/13 – 12/31/13)


David Eddington (PI), Jalees Rehman (Co-PI)  “IDBR-B - Precise Oxygen Landscapes for Cells and Tissues in Culture”, NSF $597,850 (06/01/13 – 05/31/16)

Dieter Klatt  “Phase-contrast based MRI for the measurement of volumetric strain induced by harmonic waves: Method development and feasibility study”, UIC Campus Research Board $20,000 (01/01/13 – 12/31/13)

Andreas Linninger  “EAGER: Computational Investigation of the Distributed Decentralized Control of Cerebral Blood Flow”, NSF $70,000 (01/01/13 - 12/31/14)

Ao Ma  “Phosphoregulation Of Linesin Motor Domain Structure Dynamic and Function”, NIH $59,207 (01/01/13 – 04/30/13)

Thomas Royston (Co-I), E. Douglas Lewandowski (PI)  “Gender Effects on Remodeling of Lipid and Sarcomere Dynamics in Hypertrophy”, NIH $2,100,000 (01/15/13 - 11/30/16)

Bioengineering Student Image of Research Contest:

1st Place Winner – Chih-Yang Hsu (Andreas Linninger’s Lab)

Blood territories from artificial cerebral vascular model.

This figure shows the territories that the anterior cerebral arteries (ACA), middle cerebral arteries (MCA), and posterior cerebral arteries supply. ACA territories are shown in red, MCA territories are shown in green, and PCA territories are shown in blue. The blood distribution is the result of hemodynamic simulation form the LPPD vascular model. For the venous collection, the color also displays the proportion of blood collecting from each territory.

2nd Place Winner – Zahra Haddad Derafshi (John Hetling’s Lab)

Upper panel shows positions of recording electrodes in the Contact Lens Electrode Array (CLEAR Lens™) pioneered by the Hetling Lab; lower panel shows the multielectrode electroretinogram (meERG) signals recorded using the novel CLEAR LensTM. These signals can be analyzed to reveal small areas of functional deficit in the retina, and so may be useful for early detection of eye diseases such as glaucoma.

Honorable Mentions

“Smiling endothelial cell” - Michael Mkrtchjan

“The Human Brain: The Puzzle of our Times” – Kevin Tangen, Ian Gould, Ying Hsu, and Thomas Marininn
2012 Department of Bioengineering

PhD Recipients
Below are the Department of Bioengineering doctoral graduates for Summer and Fall 2012

Summer 2012
Rebecca Bell, PhD Bioengineering
The Effects of Mechanical Loading and ADAMTS5 Activity in a Tendinopathy Mode
Advisor: Wang

Cari Launiere, PhD Bioengineering
Molecular to Microscale Technologies for Immunoaffinity Based Tumor Cell Capture in Microchannels
Advisor: Eddington

Dong Young Lee, PhD Bioengineering
The Application of Microfluidics on Pancreatic Islets; Cell Imaging, Perifusion, and Dynamic Culture
Advisor: Oberholzer

Tsai-Chin Wu, PhD Bioengineering
Biomedical Diagnostics Using Mammade Nanostructures Integrated with Biomolecules
Advisor: Stroscio

Lan Yue, PhD Bioengineering
Azobenzene-Conjugated Propofol-Derivatives for Light-Control of GABA(A) Receptors in Vision Restoration
Advisor: Pepperberg

Morten Kallberg, PhD Bioinformatics
Computational Investigation of Signaling Regimens using Proteomics Data
Advisor: Lu

Fall 2012
Maria Isabel Davila, PhD Bioengineering
Noncontact Extraction of Human Arterial Pulse with a Commercial Digital Color Video Camera
Advisor: Porges

Lei Huang, PhD Bioinformatics
Integrative Bioinformatics Approaches toward Systems-level Understanding of Breast Cancers
Advisor: Dai

Kirsteen Ryan Lugtu, PhD Bioengineering
Saccade Adaptation in Antipsychotic Naïve First-Episode Schizophrenia and Healthy Individuals
Advisor: Corcos

Maryam Abdul Majid Shafiq, PhD Bioengineering
Decellularized Human Cornea for Reconstructing the Corneal Epithelium and Anterior Stroma
Advisor: Hetling

Adam Michael Stewart, PhD Bioengineering
Utilizing Acoustic Features of Mammalian Vocalizations to Index the State of the Autonomic Nervous System
Advisor: Porges

2012 Department of Bioengineering
MS Recipients
Below are the Department of Bioengineering Masters graduates for Summer and Fall 2012

Summer 2012
Divya Arasu, MS Bioengineering
Atrial Connexin (40 and 43) Remodeling in Atrial Fibrillation
Advisor: Dudley

Stefanie Broviak, MS Bioengineering
Atrial Defect Augmentation with Kryptonite Bone Cement in Total Hip Replacement: Stability Analysis
Advisor: Amirouche

David Drucker, MS Bioengineering
Investigation of the Mechanical Response of the Anterior and Posterior Cervical and Lumbar Disc Bulge
Advisor: Amirouche

Maryam Hanif, MS Bioengineering
Spatial Distribution of Rat Oscillatory Potentials Evaluated using the Multi-Electrode Electrocorticogram
Advisor: Hetling

Kunal Shailesh Jariwala, MS Bioengineering
Impact Force on Human Body Resulted from Safety Harness during Slip-Related Falls in Gait
Advisor: Pai

Hamed Naimipour, MS Bioengineering
Modulation of Stem Cell Adipogenic Differentiation in Response to Mechano-Topographical Factors
Advisor: Cho

Sandeep Gorla, MS Bioinformatics
A Computational Genome-Wide Study of Protein Folding Rate
Advisor: Liang

Fall 2012
Yelena Krakova, MS Bioengineering
Development of a Multi-Electrode Electroretinography System and Characterization of meERG Signals in Rat
Advisor: Hetling

Wenbo Mu, MS Bioinformatics
A Local Genetic Algorithm for the Identification of Condition-Specific microRNA-Gene Modules
Advisor: Dai

Saadia Ranginwala, MS Bioengineering
Optical Detection of Immunoglobulin E
Advisor: Stroscio

Wei Shen, MS Bioengineering
Characterization of Bazooka and aPKC in Asymmetric Drosophila Cyst Stem Cell Division
Advisor: Cheng

Aishwarya Vaidyanathan, MS Bioengineering
Extended Monitoring of Osteogenesis using MRI-compatible Tissue Culture System
Advisor: Magin

Parvathi Viswanathan, MS Bioengineering
Characterization of Endothelial Elastic Properties and Gap Closure under Barrier-Regulatory Agonists
Advisor: Garcia

Jessica Yadav, MS Bioengineering
In vitro Implant Debris-Induced Inflammatory Responses Between Monocytes and Osteoclasts
Advisor: Patton

2012 Department of Bioengineering
BS Recipients
Below are the Department of Bioengineering B.S. graduates for Summer and Fall 2012

Summer 2012
Javier Alonso
Timothy Harris
Jorge Pantoja
Mohammad Pervaiz

Fall 2012
Grant Hartung
Utumporn Kaewken
David Lichtenfeld
Steven Mell
Vu Nguyen
Clara Odisho
BioE West Campus Renovations

Bioengineering is now undergoing renovation on the west side of the university campus. We have offices, labs and classrooms on both sides of campus, BioE-East and BioE-West. BioE-West houses the main offices and labs for Bioinformatics and MR Imaging faculty, as well as classrooms and meeting rooms to accommodate our increasing student enrollment, lab members, and new faculty. A state-of-the-art 30 cm bore 9.4 Tesla MR Imaging (MRI) system made possible by a $2 million dollar grant from NSF (PI: Richard Magin) is also contiguous with our west campus home. BioE-West, part of the College of Medicine space, is in the middle of the block surrounded by Polk-Wood-Taylor-Wolcott, and right next to university core facilities provided by the Research Resources Center (RRC) and the Biological Resources Lab (BRL).

BioE-West has a new front reception area staffed during normal working hours as well as a digital bulletin board at the main entrance to keep students informed of upcoming seminars, events and news. Three new classrooms for small groups (up to 20) have been renovated. New broadcast capabilities allow students on either side of campus to log on to watch our weekly seminars in real time without having to commute between the two campuses.
We’re proud to introduce the members of our new External Advisory Board. These individuals help our department bridge the gap between Academia and Industry, and provide valuable feedback on our continuous curriculum improvement process. They also help open doors to the industry side of Bioengineering, and are internal champions for the Department.

**UIC Bioengineering Alumni Board Members:**

**Bill Pietrzak**

UIC has been a big part of Bill Pietrzak’s life, even before it was called UIC. Bill originally attended the campus in the 1970’s when it was called the University of Illinois at Chicago Circle Campus. After obtaining his B.S. in Bioengineering in 1977, he took an engineering position at Wesley-Jessen in Chicago, which develops and manufactures contact lenses. In 1979, Bill returned to UIC to pursue a Ph.D. in bioengineering, with a focus on biomaterial science. While in graduate school, Bill continued to work at Wesley-Jessen. In the late 1970’s and early 1980’s, UIC Bioengineering had a synthetic blood research program headed by Dr. Irving F. Miller. The idea was to extract hemoglobin from outdated banked blood and encapsulate it in tiny artificial lipid vesicles (liposomes) to create synthetic erythrocytes that could be a universal donor. Bill studied the stability of this product in an effort to extend the shelf-life. Following his Ph.D. in 1988, Bill joined a start-up company in Indianapolis to develop laser angioplasty technology to open clogged arteries. As the cardiovascular laser market began to wane, Bill decided to relocate to Warsaw, Indiana, better known as the “Orthopedic Capital of the World”, where three of the world’s largest joint replacement developers/manufacturers are headquartered. Bill has been with Biomet for over 20 years and has developed products such as bone anchors, the world’s first biodegradable craniofacial fixation system, and novel bone graft materials. He also performs clinical research on joint replacement products. Much of his work has been published in leading medical and scientific journals and presented at national meetings, with nearly 90 publications to date, including an edited book on musculoskeletal tissue regeneration. Bill was recently inducted in the College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE) and is one of about 100 PhDs with membership in the American Academy of Orthopedic Surgeons.

Bill remains active with the UIC Bioengineering Department as Adjunct Research Professor of Bioengineering, mentoring Bioengineering Senior Design and MS students, serving as Engineering Expo judge, and being on the Industrial Advisory Board. In recognition of his efforts, in 2002 he was presented with the Outstanding Engineering Alumni Award. Bill credits the undergraduate and graduate education he received at UIC with much of the success he has enjoyed throughout his varied career. He feels that his UIC experience embodies the adage “Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime.”
Jesse Vazquez

Mr. Jesse Vazquez is a medical device specialist in the U.S. Food and Drug Administration’s Chicago District. He conducts inspections of medical device manufacturers domestically and abroad. In addition to these duties, Mr. Vazquez also conducts inspections related to biological research monitoring, food facilities, and blood banking facilities. He received his B.S. in biomedical engineering from the University of Illinois at Chicago in 2000 and began his career at the FDA immediately after his graduation. Mr. Vazquez has received various awards locally and internationally including the Department of Health and Human Services “Equal Opportunity Achievement Award” for promoting diversity in the workplace; Department of Health and Human Services “Commissioner’s Special Citation” for exceptional and outstanding performance during the recruitment, placement and training of new Consumer Safety Officers; and Department of Health and Human Services “Group Recognition” for superior performance investigating the link between several food borne outbreaks occurring nationwide.

Elizabeth Bell-Masen

Elizabeth Bell received her bachelor’s degree in bioengineering with a concentration in cell and tissue engineering from the University of Illinois at Chicago. Upon graduation, she decided to pursue her career in ballet and continued on this path for two years. She returned to school and obtained a master’s degree in mechanical engineering in the Acoustic and Vibrations Laboratory at the University of Illinois at Chicago. Her master’s work leveraged her undergraduate degree and culminated in her thesis, which was titled “Pulse Wave Velocity Measurements with a Novel Piezoelectric Sensor”. She joined the Abbott Laboratories Engineering Professional Development Program. While in this program she gained experience in the Pharmaceutical, Biologic, Nutritional and Vascular divisions of Abbott Laboratories. She is currently a senior process engineer at AbbVie Bioresearch Center (formerly Abbott Bioresearch Center) in Worcester, MA where she supports the cGMP manufacture of clinical and commercial biologic pharmaceuticals. Her work with Abbott/AbbVie has resulted in multiple company awards and an article in the company’s engineering newsletter.
Student Awards

2012 UIC College of Medicine Research Gold Medal First Prize
Predictive Modeling and Biomechanical Microengineering of Stem Cells to Enhance Differentiation by Amit Paul, David Franz, Sumaira Yahya, Shan Sun, and Michael Cho (advisor)

VisWeek 2012 Seattle WA, USA Best Poster Honorable Mention for SciVi 2012 Whole-Brain Vascular Reconstruction, Simulation, and Visualization by Thomas Marrinan, Ian Gould, Chih-Yang Hsu & Andreas Linninger (advisor)

International Anesthesia Research Society 1st place in Kosaka Awards & Best in Category for poster
Interpatient Variability in Intrathecal Drug Distribution: Cerebrospinal Fluid Pulsatile Magnitude, Frequency, Solution Baricity, and Toxicity Risks by Ying Hsu & Andreas Linninger (advisor)

Annual Stem Cell & Regenerative Medicine Program 2nd Place in Outstanding Research Award in Stem Cell & Regenerative Medicine Lineage Dependant Biomechanical Remodeling of Stem Cells During Differentiation by Amit Paul, Sumaira Yahya, along with mentors Drs. Shan Sun and Michael Cho

Mimics Innovation Awards 2012 2nd place in Innovations in computer aided engineering category
Personalized gene silencing therapies in the human central nervous system by Ying Hsu, Ashly Karim, Madhawa Hettiarachchi, Andreas Linninger (advisor)

Advanced Study Institute on Global Healthcare Challenges in Turkey on July, 2012 Distinguished PhD Student speaker
Micro-scale Technology: A Cosset for Microfluidic-Based Axonal Neurobiology by Hugo Caicedo, Scott Brady (advisor)

2012 UIC Engineering Expo Sara Lee Award for Environmental and Human Sustainability
Treating Lower Respiratory Infections in Developing Countries with Mechancially-Powered Nebulizers. by Aimee Bobko, Amber Langston, Alexandra Rybczynska, John Hetling (advisor)

2012 Spring Symposium & student research conference in STEM 1st place in Bioengineering Oral Presentation (graduate level)
Open-top compartmentalized cell culture chamber for the study of axonal transport in neurons by Hugo Caicedo, Tuklika Samma, Gustavo Pigino and Scott Brady(Advisor)

2012 Chicago Area Undergraduate Research Symposium
Megan Rexius: CCTS pre-doc support for Translational Research Award

Gerardo Mauleon: Chancellor’s Graduate Research Fellowship award
Arman Butt, Zhihnan Wang, Chih-Yang Hsu –2012 Fall TA Awards - voted by student peers
Andre Daniel Paredes: DFI fellowship (2012-2013)

Farnaz Abdollahi - Chancellor’s graduate multi-disciplinary research fellowship, 2012 and Graduate student presenter award, 2012

Ian Gould, Thomas Marrinan - 2012 UIC Image of Research Competition 1st Place
Project Title: Artificially created cortical functional blood unit.

Ying Hsu - 2012 International Anesthesia Research Society 2012 annual meeting for anesthesiologists, residents, and medical……… researchers, 1st Place in Kosaka award (basic science research) and “Best in Category” in Regional Anesthesia Category...Project Title:……

Interpatient Variability in Intrathecal Drug Distribution: Cerebrospinal Fluid Pulsatile Magnitude, Frequency, Solution Baricity, and Toxicity Risks. (Advisor: Linninger)

Ying Hsu, Indu Venugopal, and Eric Lueshen - 2012 RNAi Research and Therapeutics Conference, Oral Presentation selected from Exemplary Submitted Abstracts. Project Title: Improving Gene Silencing Efficiency in vivo with Organ-wide Quantitative Design of siRNA Infusions.

Ying Hsu, Ashly Karim, and Madhawa Hettiarachchi - 2012 in Computer-aided Engineering category, 2nd place MIMICS innovation award. Project Title: Personalized gene silencing therapies in the human central nervous system.

Congrats to BioE student Vishal Krishna Varma, who will be inducted as a member of the Activities Honor Society on April 18, 2013. This prestigious honor society was founded 63 years ago at Navy Pier to recognize student leaders who contribute to campus life through their involvement in student organizations in an exemplary way. Inductees are outstanding students who have been active in at least three diverse student activities, with a key leadership role in at least one of the three, as well as at least 72 credit hours. Only 14 students, campus-wide, will be inducted this year. Vishal has been the president of Engineering World Health, a student organization in our department. EWH was in its infancy when Vishal was elected president, and now has a membership of over 30 students. He is currently guiding the group to begin work on two student-directed projects, including a low cost blood pressure monitor and a solar powered portable sterilizer. Vishal was also one of the original founding members of the Bioengineering Organizational Alliance (BOA) student organization at UIC, helping to create and maintain their website.
The Bioengineering Organizational Alliance (BOA) at University of Illinois at Chicago is UIC’s unique take on a Bioengineering Club. BOA is an all-encompassing hub of resource, opportunity, assistance, recreation, and networking through which its members can increase exposure to bioengineering, and prepare for life after graduation. BOA is an umbrella organization that includes a variety of different Bioengineering related sub organizations. The sub organizations of BOA are: Alpha Eta Mu Beta (AEMB) - Biomedical Honors Society, Bioengineering Volunteering Program (BVP), External Bioengineering Exposure (EBE), Internal Bioengineering Exposure (IBE), Biomedical Engineering Society (BMES), BioPhysical Society (BPS), Engineering World Health (EWH), Newsletter, Stem Cell Society, and Tutoring Program.

BOA has been active since August 2011, but over the last year it has expanded significantly. For instance, BOA has a mentoring program to allow undergraduate bioengineers to receive one-on-one guidance and support from experienced upperclassmen or graduate students. BOA also sponsors a tutoring program that hosts study sessions for bioengineers, as well as providing volunteer tutors to help out. In addition, BOA’s Internal Bioengineering Exposure program has set up an alliance between bioengineering faculty and students. The goal is to expose students to research by allowing undergraduates to obtain research experience.

One of the organizations BOA works with is Engineering World Health (EWH). Together BOA and EWH hold biweekly diagnostic equipment building workshops. This allows students to gain hands on experience with biotechnology. This year students have been building an electrosurgical unit tester. Running diagnostics on electrosurgical units has not been possible in underdeveloped countries; so many electrosurgical units go unused. Our goal is to make these diagnostic tools accessible to these health care facilities so that they can test their equipment and perform surgeries without having to worry about any malfunctions.

BOA’s Stem Cell Society has arranged for tours of research and industry laboratories. BOA also hosts General Body Meeting that includes invited speaker events. The speakers are industry professionals, graduate school admissions officers, bioengineering professors, and alumni. The speakers share their insight and experience with current students.

BOA’s primary focus is to improve the experience of the bioengineering students at UIC, but as well as that, BOA’s also interested in increasing the exposure of high school students to the field of Bioengineering. BOA’s Bioengineering Volunteering Program and External Bioengineering Program, visit high schools to increase high school students’ understanding of the bioengineering field, and to encourage them to pursue their study in this field. This year BOA has invited several high school students to the Engineering Exposition, in order to expose them to the Bioengineering Senior Design projects.
Department of Bioengineering (MC 063)
College of Engineering
Science and Engineering Offices
851 South Morgan Street, Room 218
Chicago, Illinois 60607-7052

Please follow our Facebook and LinkedIn group.


http://www.linkedin.com/groups?gid=4923944&trk=myg_ugrp_ovr

About the Conference

Reasons you should attend:

• Get educated on BME career opportunities
• Network with employers and students/alumni of BME programs from a large group of universities in and around the Midwest
• Showcase ongoing research at BME programs

Agenda

Registration: 7:30 am — 4:00 pm
Keynotes & Breakout Sessions: 8:20 am — 4:00 pm
Career Networking Session/Reception: 4:00 — 6:00 pm

UIC Forum
725 W. Roosevelt Road
(MC-126)
Chicago, IL 60605

2013 Midwest Biomedical Engineering Career Conference
Sponsored by UIC Department of Bioengineering
Register, submit abstract, and more information at www.bmes.org/BMECC

Friday, April 19, 2013 – UIC Forum