Message from the Head
Richard and Loan Hill Reception
New Faculty & New Grants
Guaranteed Internship Program

Faculty and Student Awards
David Eddington and SLAS
NSF REU and RET Programs
Engineering World Health

Pictured (left to right): College of Medicine Dean Dimitri Azar, University of Illinois Board of Trustees Member and Former State Attorney Patrick Fitzgerald, College of Engineering Dean Peter Nelson, UIC Chancellor Paula Allen-Meares, Alumnus Richard Hill, wife Loan Hill, University of Illinois President Robert Easter, and Head of Bioengineering Thomas Royston at a university reception recognizing the Hills for their years of philanthropic support to UIC Engineering and Bioengineering.
Dear Friends of UIC Bioengineering,

Welcome to the Spring 2014 Newsletter. While we are in Spring Semester at UIC, with the weather we’ve had the past few months we may as well name it Winter Semester, as we endure what is now ranked as the third worst winter on record in Chicago history, in terms of both cold and snowfall. It may be second or first by the time you are reading this.

Despite the cold and snow, things continue to heat up in UIC Bioengineering as we approach the end of our 49th year of continuous operation of our undergraduate and graduate degree programs and as word of our new name and all of the exciting developments get out. In our last issue, we were proud to announce the transformative gift to the department from one of our very successful alumni, Richard Hill, and his wife Loan Hill. We are now beginning to put that gift to work on several fronts, including an endowed faculty search which is underway. We’ll have more developments to report in time for our next newsletter.

In this issue, meet our newest faculty addition to the department, Vuk Uskokovic, PhD, who prior to joining us had spent several years at UC San Francisco working with someone many of you know, Tejal Desai, PhD, who was in our department from 2002-2007. We also have features on several of our faculty and students who have had banner years, in terms of well-deserved recognition and awards. Follow David Eddington, PhD, as he progressed from SLAS attendee to the top of their organization. I would also like to congratulate Drs. Christos Takoudis and Andreas Linninger for their independent ten year running of two distinct NSF-sponsored Research Experiences for Undergraduates (REU) programs. While these programs have ended, Dr. Linninger’s NSF-sponsored Research Experiences for Teachers (RET) program continues. Finally, read about how some of our students are taking the initiative to develop new projects, build prototypes, and compete in design competitions around the country.

In our Fall 2013 newsletter, we told you about an exciting new initiative led by the College of Engineering to guarantee a paid summer internship experience in a company or paid research lab experience at UIC to all incoming freshman in engineering after their first year of school provided they meet certain GPA and coursework benchmarks. More information about the program can be found at: [http://engineering.uic.edu/bin/view/COE/InternshipProgram](http://engineering.uic.edu/bin/view/COE/InternshipProgram). In bioengineering twenty-five outstanding freshmen have qualified for this program. We are now actively engaging with industry to identify internship opportunities for these students. If you are aware of such an opportunity, please contact me directly at troyston@uic.edu. This initiative is groundbreaking in higher education and has received a lot of press. We know that students who have internship experiences do better finding a rewarding job upon graduation and we also know that the first internship is the toughest one to get.

As always, thank you for helping support our continued strive for excellence. Gifts targeted to the department help us achieve our strategic goals, and could include opportunities to endowed 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. I am always happy to meet our alumni and friends and welcome your visit. And, please join our Facebook group; see the link on the back cover.

Sincerely,

Thomas J. Royston

**A History of UIC’s Department of Bioengineering**

- **1965**: Founded as a program created by three institutions: University of Illinois at Chicago Circle (UICC), University of Illinois at the Medical Center (UIMC), Presbyterian – St. Luke’s Hospital.
- **1966**: Offers undergraduate and graduate degrees in Bioengineering
- **1969**: Awarded first undergraduate degree in Bioengineering
- **1972**: Awarded one of the first ten NIH Bioengineering Training Grants in the nation
- **1976**: Awarded first graduate degree under the College of Medicine
- **1982**: UIC Accreditation of BS in BioE (3rd in the US)
- **1992**: UIC formed by merger of UIC with UIMC

**THE RICHARD AND LOAN HILL FOUNDATION**

**UIC DEPARTMENT OF BIOENGINEERING**

**COE**

**UIC UNIVERSITY OF ILLINOIS AT CHICAGO**
Richard & Loan Hill Reception

Alumnus Richard Hill speaking about the future of Bioengineering.

Richard and Loan Hill with current Bioengineering students.

(Left to right): Medicine Dean Dimitri Azar, Loan Hill, Richard Hill, Chancellor Paula Allen-Meares, Engineering Dean Pete Nelson

New Faculty

Dr. Vuk Uskoković

On January 1, 2014, Dr. Vuk Uskoković joined the UIC Richard and Loan Hill Department of Bioengineering as a Tenure-Track Assistant Professor. Dr. Uskoković’s prior appointment was with the Department of Bioengineering and Therapeutic Sciences at the University of California, San Francisco, where he worked on figuring out the ways to achieve the oral delivery of drugs that are otherwise undeliverable by such means, such as peptides and antibodies. The research Dr. Uskoković is bringing to UIC involves the design of a new generation of biomaterials for hard tissue engineering, particularly in the treatment of bone disease. His main research interests in the long term include nanostructured materials for drug delivery and tissue engineering applications.

Dr. Uskoković is also a former member of the Department of Preventive and Restorative Dental Sciences at the University of California, San Francisco, where he worked to understand the basic mechanism of tooth enamel formation through a biomimetic study setting and the ways this knowledge could be utilized in noninvasive regeneration of this tissue. At the Center for Advanced Materials Processing at Clarkson University in Potsdam, NY, he created colloidal cholesterol and demonstrated that high salt intake has direct repercussions on precipitation of atherosclerotic plaque in coronary disease. Dr. Uskoković’s work at the Advanced Materials Department at Jožef Stefan Institute in Ljubljana, Slovenia, elucidated elementary chemical pathways involved in the formation of magnetic nanoparticles, including ferrites and rare-earth manganites, in reverse micelles and other types of microemulsions and their applicability in the treatment of cancer via hyperthermia.

Dr. Uskoković has degrees in Physical Chemistry, Materials Science and Engineering and Nanoscience and Nanotechnologies. Throughout his career he has authored close to 40 research articles and an equal number of critical reviews and book chapters. He has also composed pieces for guitar trios and published studies in the fields of cognitive science, ecoscience, philosophy, theosophy and other fields of arts and humanities. Dr. Uskoković declares himself as an anarchist and in the classroom teaches a combination of empathy and subversiveness as the key to creative thinking. As a postdoc, he avidly represented the postdoc population in California and elsewhere by presiding over their numerous associations. From 2011 he has been a research fellow of the National Institute of Dental and Craniofacial Research and in 2013 he was awarded a Certificate for Innovation by the American Chemical Society. The bulk of his work has been funded by the National Institutes of Health and the National Science Foundation.

Selected New Grants since Fall 2013 (November) issue:

The Translational Design of Medical Devices grant enhances the existing Interdisciplinary Medical Product Development (IMPD) senior design capstone course by providing a comprehensive translational design experience. Students between their junior and senior year will experience the clinical environment first hand during this paid internship. This exciting new program is essentially a precursor to the IMPD class that allows students to identify real needs as they shadow medical personnel in a UIC clinical environment. Through collaboration with doctors at the UIC Hospital, students will witness medical procedures, philosophy of approach by the practitioners, participate in problem-solving sessions, and identify problems or difficulties that can potentially serve as a future opportunity for improvement through bioengineering design.

The grant also helps fund materials and supplies for a Fused Deposition Modeling rapid prototyping machine. This new capability will allow students to build iterative prototypes and test these new devices into the capstone design sequence. This will eliminate a major barrier during the usual product design process. The success of the program lies in exposing students to the entire medical product development cycle, beginning in the earliest stages of needs assessment. This new program is another commitment by the department to help students gain experience outside the typical classroom.

Takoudis, Christos (PI):
“Computational Design and Atomic Layer Deposition Synthesis of Stereochemically”,
Univ. of Connecticut $359,214 (9/1/13-8/31/16)

Kotche, Miiri (PI):
“Translational Design of Medical Devices”,
National Institutes of Health (NIH) Team-Based Design in Biomedical Engineering Education Program. Co-Is: John Hetling and Thomas J. Royston. $213,945 (4/1/14 - 3/31/19)
“Paid internships are one way that we can give our students the experience they need to succeed and help them connect to the professional world,” said Peter Nelson, dean of the engineering college, “especially since that first internship is the hardest to find.”

The University of Illinois at Chicago College of Engineering is the first in the country to guarantee all incoming freshmen placement in a paid internship the summer following their first year, provided they meet the required criteria. The goal of the program is to expose students to real world work experience in conjunction with their education and eventually making the post-graduation transition easier. Equally important is the development of strategic corporate partnerships. To this effect, the Guaranteed Internship Program connects UIC’s engineering students with companies and organizations. Incoming engineering freshman have the highest average ACT scores in the University. As part of the program, each incoming engineering freshman class is guaranteed a paid internship the summer following their first year at a collaborating company or current UIC research lab. The UIC College of Engineering currently has more than 150 projects funded by $66 million in grants. Each internship lasts for at least eight weeks and for students placed in outside companies and organizations, the expected pay is between $15 to $25 per hour. For students placed within UIC research labs, the expected pay is $10 per hour. Since 2012, over 300 companies and organizations have hired UIC engineering students and alumni as interns and full-time employees. For students that are interested in the program, please visit http://www.ecc.uic.edu/ECC/InternshipProgram. For companies that would like more information on how to post internships, please email engrjobs@uic.edu or call 312-996-2311.

UIC College of Medicine Faculty Awards

Each year, the College of Medicine recognizes faculty from each department for their contributions to the University. The Rising Star Award nominees are selected based on their potential to be future leaders in their field. Nominees for the Departmental Faculty of the Year Award are selected from mid-career and senior faculty based on demonstrated excellence in teaching, research or clinical service.

Dr. David Eddington received the Rising Star Award in recognition of his significant accomplishments in microfluidics to clinical diagnostics and experimental biology. Pictured with Department Head Thomas Royston and Dean Dimitri Azar.

Dr. Jose Oberholzer (joint appointment in Surgery and Bioengineering) received the Departmental Faculty of the Year Award for Surgery for outstanding contributions as the Director of the Islet and Pancreas Transplant Program and the Chief of the Division of Transplantation. Pictured with Surgery Department Head Enrico Benedetti and Dean Dimitri Azar.

Dr. Michael Cho received the Departmental Faculty of the Year Award for his many significant accomplishments as a researcher and scholar in cell and tissue engineering.
Eddington will bring David Eddington, Ph.D., back to where he started. He first came to the event through the SLAS Tony B. Travel Awards Program as a young assistant professor. From podium presentations through organizing panels and tracks, he now sits at the top of the organizational chart for the event, a vantage point he greatly enjoys for its opportunity to influence programming.

“Ever since that first meeting I attended, I have sent students almost every year to the SLAS Annual Conference and Exhibition,” says Eddington, who is the Scientific Program Planning Committee Conference Co-Chair of SLAS2014. “As I have participated in SLAS, I have become more involved in the meeting planning. I have found that the higher up you go in meeting organization with SLAS the fewer tasks there are to do,” he says with a chuckle. “It’s more a matter of overseeing others who are doing the heavy lifting.” Eddington shares the task with fellow Co-Chair Michele Cleary, Ph.D., of Merck Research Laboratories in New Jersey. “Our goal in planning this year’s event was to expand what we had to offer to the community and bring some new folks through the conference who haven’t attended before,” Eddington explains. “The track chairs have invited a lot of interesting session chairs, and the topics have broadened and expanded as the planning unfolds.”

Organizing this SLAS conference is important to Eddington. “We hope to provide a nice environment in which people can connect,” he says, adding that his personal focus on microfluidics draws a close-knit group that greatly benefits from their exposure to SLAS conferences. “You get to know people who work with microfluidics a bit better; it’s more intimate,” he observes. Thanks to the expanding conference content and the generous support offered through the SLAS Tony B. Travel Award Program, Eddington feels that the event is definitely on the radar of more professionals in the microfluidics area. “It’s good to be around other folks and to hear about their work,” he says. “I know that my ideas about research develop further after learning what others are doing. You can think about your own problems from a different perspective and return to the lab with new inspiration.”

Natural Curiosity

Inspiration and the creative process are important in Eddington’s role as an associate professor in the Department of Bioengineering at the University of Illinois at Chicago (UIC) and as principal investigator of the Biological Microsystems Laboratory. As he manages research and mentors inquisitive and enthusiastic students, he sees a bit of his past. “I guess I was always curious about how things worked. I always wondered why certain things happened a particular way. With science you can dive into those questions and unravel those mysteries,” says Eddington. “I always did sciency projects, but it was not until I got into a real research lab as an undergrad that I began to see what the process was about, how interesting it was and what role I might have in research. That’s when I found myself moving into science.”

After completing his bachelor’s degree in materials science and engineering at the University of Illinois at Urbana-Champaign (UIUC), he continued his education with an M.S. and a Ph.D. in biomedical engineering at the University of Wisconsin-Madison (UW-Madison). Throughout the course of his graduate work, Eddington learned how to fabricate microfluidic devices and discovered the ins and outs of the technology. During his post-doctoral years, Eddington served as a postdoctoral fellow of the National Institutes of Health Ruth L. Kirschstein National Research Service Award (NIH-NRSA). In this role, the native Chicagoan spent time on both coasts at the University of California, San Diego (UC San Diego) Department of Bioengineering and at the Harvard-Massachusetts Institute of Technology (MIT) Division of Health.
Elementary-aged students enjoy the experience more, but sometimes "When we are trying to get this research funded, a lot of the time the different oxygen conditions. "We're developing devices that can expose classes," he explains, adding that both groups have their unique appeal.

Spreading the Word about Science
Keeping that curiosity and zeal for research in the face of challenges is fundamental. "Always having enthusiasm for what you do goes a long way toward maintaining momentum for projects. If you can stay motivated, you can motivate other people as well," says Eddington. He finds that the SLAS Annual Conference and Exhibition offers the proper broad perspective needed to keep science students and professionals engaged and focused on their field. "The show floor of the meeting is really amazing. That's why I like students to go to this meeting to see all the automation technologies that are out there. I also like to see them take advantage of the career prep workshops that are offered," he says.

Eddington encourages those who have submitted abstracts to spread the word about SLAS2014. "Please tell your friends and colleagues about this meeting! We want to get the word out," he stresses, adding that this grassroots effort adds increased momentum to conference attendance. Eddington's enthusiasm for engaging people in science is not limited to conference attendance and mentoring graduate-level students. As part of his National Science Foundation (NSF) funding, he established an outreach program for elementary and high school students that he describes as quite rewarding and exciting. "We started the outreach program by identifying easy-to-work-with groups that seem to have frequent outings: the Girl Scouts and high school science classes," he explains, adding that both groups have their unique appeal. "Elementary-aged students enjoy the experience more, but sometimes lack the focus and get a little too excited. They are just happy messing around in the lab. Some of the high school students really like it as well, but the majority of the students in those groups are already considering science or technology as a major. For them, it is a solidifying instead of a transforming experience. With the younger students you can really spark a new interest which is fun."

Eddington plans to set up more lab outings for the Girl Scouts in the near future and adds that the next time a group comes to visit, his daughter Kendall will be old enough to join the fun. "Up until now, my girls have been too young to participate in our outreach programs at the lab. They do enjoy visiting the lab and looking at things under the microscope," he says. "They also really like drawing on the whiteboards in my office."

On a Roll
Weekends typically find all the Eddingtons outside the lab and on a bike trail. Eddington, his wife, Janice, and daughters, Kendall (8), Cameron (6) and Avery (4), like the freedom of following the many paths that thread through the Chicago area and Northern Illinois. "This summer, I jumped on a bike path that follows Chicago's I & M canal and camped out in a state park with a friend. Then we rode back the next day," Eddington says. He reports that he feels more focused when he returns to lab work after these excursions. "A few times a year I will take off on a bike tour for a few days. Those are the trips in which you are chugging away at miles, letting your mind wander and thinking about what's going on in the lab from a different perspective," Eddington explains. Through those years of conference attendance and serving in volunteer capacities, he has learned the ropes and understands what participants are seeking. In fact, Eddington draws a comparison between cycling and attending conferences: "Cycling in general is about getting away and clearing your head. I can say the same about traveling to meetings. You're not distracted by the business of the day as you are at work with managing the lab, students stopping by and preparing for lectures. You can think about things with a certain amount of focus. Conferences give you that important time to step away from work and see something new."
For the past ten summers, undergraduate students from universities around the country have come to Chicago to attend the UIC NSF REU program hosted by Dr. Christos Takoudis and the UIC Bioengineering Department. Ten to twelve paid internships are provided through a National Science Foundation Research Experiences for Undergraduates (REU) program. Summer REU participants use this opportunity to conduct research on novel advanced materials and processing with applications to engineering in an academic setting as well as enjoy what the city of Chicago has to offer.

Many students apply to the program yearly and those selected receive a working stipend as well as full housing. During the ten week program, participants work with a collaborating faculty member’s lab on current research projects throughout the university. Students are engaged in lab experiments, field experiences, data collection, and interactions with researchers in the field of study. The program introduces students to current research, recent developments, and helps them understand the interactive roles in research. “The overall goal is to create a stronger and more diverse workforce of scientists, engineers, and technologist across the frontier of science and engineering” says Dr. Christos Takoudis.

While full time research is important, the program does emphasize work balance and extracurricular activities while allowing participants to adapt and fully immerse themselves in a new city. To make this transition easier, the program begins with an orientation. Weekly group meetings and presentations help track progress and let the other participants in on the current status of their peers. In addition, throughout the program, students visit companies in the greater Chicago area, such as Baxter and Nalco, as well as national research labs such as Argonne National Lab and Fermi Lab to experience research firsthand. Social events such as concerts, sporting events and dinners provide a relaxed atmosphere for students to get to know each other.

This will be the final year Dr. Takoudis will be sponsoring the program. Dr. Jeremiah Abiade from the Department of Mechanical and Industrial Engineering and Dr. Lucy Shi from the Electrical and Computer Engineering Department have taken over in continuing the program here at UIC with a new REU proposal to the NSF. Throughout Dr. Takoudis’s tenure with the program, approximately a hundred students completed the program. Based on data from the past six years, 80% of the students have gone on to graduate school.

Students learned how to work with people from other disciplines in a multidisciplinary environment. “Probably the most significant way the UIC REU contributed to my life was by confirming that graduate education was the right path for me…. The UIC NSF REU program developed my research skills, motivated me to pursue a PhD, and prepared me for future career successes” says Joel Abrahamson, one of Takoudis’ NSF REU former students who later on received an NSF Graduate Research Fellowship and his PhD from MIT.

Dr. Takoudis is extremely grateful for the continuous financial support of the National Science Foundation and is particularly indebted to Dr. Gregory Jursich’s contributions and help in running the UIC REU NSF program during the last several years.
The Chicago Science Teacher Research (CSTR) program directed by UIC bioengineering professor Andreas Linninger is an initiative by the faculty of three UIC Colleges in a strategic partnership with the Chicago Public School authorities and industrial interest groups whose major goal is to engage in-service teachers in emerging technologies and cutting edge research. The Research Experience for Teacher (RET) at UIC offers interdisciplinary projects in state-of-the-art research laboratories for eleven fellows.

Each year, eleven teachers are chosen to engage in research apprenticeship for seven full weeks. The program is open to all K-12 teachers and community college faculty. The fellows receive a working stipend as well as possible continuing education credit at the graduate level. Once the fellows have been selected, they immerse themselves in a discovery-based learning program by actively conducting research mentored by UIC faculty across five different departments. The research labs at UIC and Rush University Medical Center have staff providing great mentorship as well as cutting edge, state-of-the-art facilities and equipment. Throughout the program, their curriculum will involve training, seminars, collaboration with students and faculty, weekly group meetings, video teaching module, working on their project, and presenting their research.

The goal of the program is to introduce concept, research, and equipment that would not normally be available at their schools. Once the fellows have completed the program, participants are encouraged to continue with follow-up research and collaboration with their research mentors. Their new knowledge and experiences hopefully trickle down to their own students and expose these young students to science and research at a young age leading to an increased interest in engineering and science. For more information, please visit: http://vienna.bioengr.uic.edu/RET.html

I love getting to see science in action! This has given me practical applications of the facts I have known for years; I'm excited to get back to my classroom and share this with my students! ~ Elizabeth Smith (West Aurora High School)

Any situation, in which I learn, makes me a better teacher. The RET experience is giving me the opportunity to sharpen old skills and learn new ones. It is exciting and stimulating. I hope to be better able to direct my students' aspirations as well giving more solid scientific information. This RET experience is a great thing. ~ Kathy Budach Augustyn (Evergreen Park High School)
New Graduates & Student Awards

2013 Department of Bioengineering PhD recipients
(Below are the Department of Bioengineering doctoral graduates for Fall 2013)

Fall 2013
Emily Mugler, PhD Bioengineering
Investigation of Speech for Communicative Brain-Computer Interface
Advisor: James Patton

Damian Roqueiro, PhD Bioinformatics
Computational Methods to Study Gene Regulation Using Genomic, Epigenomic and Chromosome Conformation Data
Advisor: Yang Dai

Sathya Subramanian, MS Bioengineering
Speckle Tracking Echocardiography Detects Strain Changes in Murine Heart during Acute Ischemia Perfusion
Advisor: David Geenen

Jacqueline Thomas, MS Bioengineering
Suture Technique Influences the Biomechanical Integrity of Pectoralis Major Repairs
Advisor: Vincent Wang

2013 Department of Bioengineering MS recipients
(Below are the Department of Bioengineering Masters graduates for Fall 2013)

Fall 2013
Bhavisha Chapatwala, MS Bioinformatics
Identification of microRNA Functional Targets Based on microRNA and mRNA Co-Expression Network Analysis
Advisor: Yang Dai

Mathew Mani, MS Bioinformatics
Moonlighting Protein Database (MoonProt): A Database for Proteins That Are Known to Moonlight
Advisor: Constance Jeffery

Sagar Nadimpalli, MS Bioengineering
Wound Care Diagnosis: A Multidisciplinary Pilot Study using FT-IR Imaging and Non-Invasive Testing
Advisor: William Ennis

Gurunadh Parinandi, MS Bioinformatics
Computational Prediction of Pharmacodynamic Drug Interactions Using Public Gene Expression Data
Advisor: Yves Lussier

Sweetu Patel, MS Bioengineering
Functionalization and Characterization of CP-Ti and Ti6Al-4V Surfaces for Biomedical Implants
Advisor: Christos Takoudis

Student Awards & Honorable Mentions

Moria Fisher of Patton’s Lab was awarded the NCCR Robotics: International PhD/postdoc exchange for women researchers Initiative working at ETH Zurich, Switzerland

Farah Shareef & Taneka Jones of Cho’s Lab win 2013 Chancellor’s Grad Research Fellowship

Melissa Wardlow from Cho’s Lab wins 1st place Illinois Louis Stokes Alliances for Minority Science Competition
Last year, UIC EWH (Engineering World Health) had a few members showing up to each general body meeting. This year, the number has ballooned up to 30-40 members consistently attending. The increase can be attributed to the new projects that UIC EWH has implemented this past year. Each year, UIC EWH builds Electro-surgery unit testers, which is a rare and important tool for health care facilities in developing areas. These devices are used to create incisions via the use of high frequency electric current. It is essential to make sure the equipment is in working condition before use, but ESU tester are not readily available in developing countries. These devices typically cost $2,000, but EWH has created a tester that costs $18. UIC EWH builds about 72 of these kits to send to developing countries each year.

Also new to the mix this year is the EWH design project. The national EWH society develops a list of projects that they believe have the most positive impact for health care providers in developing countries. These needs are based on extensive interviews, and the final list of challenges is known as: the Projects That Matter. The board members of UIC EWH felt the need to contribute to this project and at the same time, help its members learn through real world experiences. Teams that design, work, and build these prototypes can submit them to various design competitions throughout the country.

Upon deciding which projects to work on, the board had to carefully choose projects they were passionate about without being too overly technical that it would deter new undergraduates from partaking in. In the end, they decided that they would work on three projects, two coming from the EWH Projects that Matter (Non-Legacy project) list and one project that came about from its own member. The two Non-legacy projects are the Bedside Device, which aims to develop an inexpensive communication device between patients and medical staff using VoIP, and the Surgical Lamp, which aims to develop an inexpensive and efficient lamp needed to provide enough light during a surgical procedure. Both projects draw upon basic engineering knowledge of capacitors and resistors. The final project is an original idea by undergraduate student Dan O’Neill dubbed the Knee Brace, in which the design goal is to stabilize and recover an injured knee. In addition, their goal is also to reduce the rehabilitation time. Currently, no brace on the market actually rehabilitates the knee.

The two Non-Legacy projects have 12 members each group and the Knee Brace project has 5 members. Members are comprised of undergraduate UIC Engineering students with a few graduate students helping. Dr. Miiri Kotche is the faculty advisor and helps with proposals, general directions, and resources. “EWH has really made great progress this last year. Tanvi and the team leaders are guiding teams through the engineering design process, from concept generation to prototyping. It’s been really exciting to see graduate students and upperclassmen taking a lead in projects related to global health, and at the same time working with freshmen who are interested in getting some hands-on design experience.” At this stage in the process, the designs have been completed and the next step is prototyping. Within a few months, these designs and prototypes will be submitted to eight national competitions. These projects engage students and offer them the experience of taking something they learned and applying it to a real world experiences. “Designing, meeting, building, attending and presenting is a long and tedious journey but it’s a journey that might someday help thousands of people in developing countries.” To find out more about EWH, please visit: http://www2.uic.edu/stud_orgs/prof/bmes/organizations/engineering-world-health-ewh/
Endowed Professorship and Chaired Faculty Search

The Richard and Loan Hill Department of Bioengineering at the University of Illinois at Chicago invites applications for tenured associate and full Professor positions seeded by a $6.5 million gift from Bioengineering alumnus, Richard Hill, and his wife, Loan Hill. In the next few years as we approach our 50th anniversary we will establish several endowed positions, with emphasis on recruiting world leaders in multiple areas of Bioengineering, including but not limited to bio-nanotechnology, computational systems biology, bio-imaging, regenerative medicine and rehabilitation engineering. UIC, located just west of downtown, is the largest public research university in the metropolitan Chicago area with a total annual budget of $2 billion and research expenditures of $335 million. The campus has 15 colleges and schools including the largest medical school in the country, serving one of the nation’s most diverse student populations, with a total student body of approximately 28,000, faculty of 2,000, and supporting staff of 8,000.

The Department of Bioengineering, jointly operated by the College of Engineering (CCE) and College of Medicine (COM) at UIC, has 18 full-time tenured/tenure-track faculty and over 100 adjunct faculty, with 260 undergraduate, 50 MS and 110 PhD students. While Bioengineering has been a part of the University since 1965, in the last fifteen years 15 new faculty have been recruited to the department. A graduate major in Bioinformatics was established in 2003, with current enrollment of 30 PhD students. The department has a long tradition of working closely with health and life science researchers at UIC, as well as with investigators at four other major academic medical centers in the Chicago area, to pursue interdisciplinary research.

Duties:

We seek world leaders who will engage in transformational bioengineering or bioinformatics research. Applicants should be outstanding technically in their basic science and engineering niche, yet have a strong collaborative interest in specific application areas. Individuals that can bridge areas of existing expertise in the department with each other and with expertise found elsewhere at UIC and in the Chicago region, such as areas fostered by the Chicago Biomedical Consortium and the following interdepartmental UIC Centers – Cancer Center, Center for Clinical and Translational Science, Center for Cardiovascular Research – or who can leverage other unique regional facilities, such as Argonne National Lab, are especially encouraged to apply.

Qualifications:

- Ph.D. in bioengineering or a related field
- Current tenured associate or full Professor at a University and/or hospital

This will be an ongoing open and continuous search process. The desired start date for these positions is as early as August 16, 2014. The University of Illinois at Chicago is a major research university with a strong commitment to serve its highly diverse community. As such, UIC especially welcomes applications from women, underrepresented minority group members, persons with disabilities, members of sexual minority groups and others who would enrich the University’s research, teaching, and Great Cities’ mission. The University of Illinois at Chicago is an Affirmative Action/Equal Opportunity employer.

Apply electronically at:
https://jobs.uic.edu/job-board/job-details?jobID=37730