

## Core Faculty Continued

### **G Ali Mansoori, Ph.D., Professor**

BioE/Chem engr., Nanotechnology, Thermodynamics  
[mansoori@uic.edu](mailto:mansoori@uic.edu) 312.996.5592

### **Jose Oberholzer, M.D., Professor**

Surgery, Transplantation  
[jober@uic.edu](mailto:jober@uic.edu) 312.996.6771

### **William O'Neill, Ph.D., Professor**

Neuroscience, Pupillography  
[woneill@uic.edu](mailto:woneill@uic.edu) 312.413.2294

### **James Patton, Ph.D., Professor**

Robotics for therapeutic neuro-rehabilitation, Haptics, Human-machine interfaces, Neural control  
[pattonj@uic.edu](mailto:pattonj@uic.edu) 312.413.7664

### **Thomas Royston, Ph.D., Professor & Department Head**

Biomedical Acoustics, MR elastography  
[troyston@uic.edu](mailto:troyston@uic.edu) 312.996.2335

### **Tolou Shokuhfar, Ph.D., Associate Professor**

Nanotechnology and Nanomedicine, Orthopedic Implants  
[tolou@uic.edu](mailto:tolou@uic.edu) 312.413.9424

### **Michael Strocio, Ph.D., University Distinguished Professor**

Electrical & Comp. Eng./Bioengineering, Nanobiotechnology, Nanoelectronics, Integrated Bio-Nano complexes  
[strocio@uic.edu](mailto:strocio@uic.edu) 312.413.5968

### **Christos Takoudis, Ph.D., Professor**

Bioengineering/Chemical Engr., Biomaterials and nanotechnology, Chemical and biochemical interfacial engineering  
[takoudis@uic.edu](mailto:takoudis@uic.edu) 312.355.0859

### **Vuk Uskokovic, Ph.D., Assistant Professor**

Tissue engineering  
[uskok@uic.edu](mailto:uskok@uic.edu) 312.996.5946

### **Daniela Valdez-Jasso, Ph.D., Assistant Professor**

Soft-tissue biomechanics, Cardiovascular physiology, Pulmonary hypertension  
[dvj@uic.edu](mailto:dvj@uic.edu) 312.996.9252

### **Xincheng Yao, Ph.D., Professor**

Biomedical optics instrumentation, Optical imaging of retinal function,  
[xcy@uic.edu](mailto:xcy@uic.edu) 312.413.2016

## Areas of Concentration

### **Bioinformatics**

This field combines computer science with biomedicine to develop tools for identifying and understanding the genetic blueprint of life.

### **Biomechanics**

This specialization focuses on the biomechanical structure and function of tissues, organs and systems.

### **Biomedical Imaging**

This area focuses on the study of medical imaging methods including MRI, CT, ultrasound and nuclear medicine.

### **Biomolecular Engineering**

This area studies the design, analysis, and optimization of biological and biomedical processes.

### **Cell And Tissue Engineering**

This discipline allows one to repair or replace the function of natural tissue with bioengineered substitutes.

### **Neural Engineering**

This area emphasizes the design of interfaces between living and artificial systems, and the analysis of bioelectric signals, to repair, learn about, or exploit the properties of neural systems.

## Department of Bioengineering (MC 063)

### **East Campus**

851 S. Morgan St., 218 SEO  
Chicago, IL 60607  
Phone: 312.996.2335  
Fax: 312.996.5921

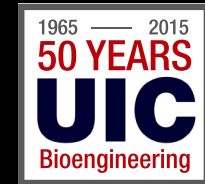
### **West Campus**

820 S. Wood St., W103 CSN  
Chicago, IL 60612  
Phone: 312.996.2330

### **For more information:**

[www.bioe.uic.edu](http://www.bioe.uic.edu)

THE RICHARD AND LOAN HILL  
**UIC** Department of  
UNIVERSITY OF ILLINOIS Bioengineering  
AT CHICAGO COLLEGE OF ENGINEERING  
COLLEGE OF MEDICINE



## Bioengineering at UIC: Its Mission and Some Background

The mission of the Department of Bioengineering is to provide an environment where students can achieve a high level of competence in the skills and knowledge inherent to the discipline of bioengineering. The discipline of bioengineering, which includes biomedical engineering, is distinguished by the application of quantitative engineering analysis and design to systems that include living components. Mastery of these skills and knowledge will prepare students for careers in the growing biomedical industry and for admission to graduate and professional schools.

Located in the heart of Chicago, the University of Illinois at Chicago (UIC) hosts a diverse constituency of students, attracted by the quality of UIC programs and the metropolitan setting. Recently, UIC was ranked third in the nation and thirteenth in the world for institutions under 50 years of age. Since Fall of 2011, the Department of Bioengineering is now in both the College of Engineering (COE) and the College of Medicine (COM) at UIC, home of one of the largest medical schools in the country. This is a new arrangement that is in line with trends in best practices at other top programs around the country.

The Department of Bioengineering at UIC employs a rigorous and energetic process of continuous improvement of its curricula. Historically, graduates of our undergraduate program enter positions in industry (large firms and biotech startups), professional schools (medicine, dentistry, nursing, pharmacy, law) and graduate programs. Alumni of our graduate M.S. and Ph.D. programs in Bioengineering and Bioinformatics have pursued careers in industry, academia, national research labs and medicine.

Current enrollment totals about 100 Doctoral (Ph.D.), 70 Master of Science (M.S.), and 300 undergraduate (Bachelor of Science, B.S.) students. There are currently 27 core faculty members and over 100 adjunct faculty members with homes in many departments throughout the Colleges of Liberal Arts & Sciences, Applied Health Sciences, Dentistry, Engineering, Medicine, and Pharmacy.

## Seven things to know about Bioengineering (BioE) and UIC

**1 According to Forbes Women May 15, 2012: 'At No. 1, Biomedical engineering is the major that is most worth your tuition, time and effort.** Biomedical engineers (bioengineers) earn a median starting salary of \$53,800, which grows an average of 82% to \$97,800 by mid-career. Moreover, the Bureau of Labor Statistics projects a whopping 61.7% growth of job opportunities in the field (from 2010-2020) - the most of any other major on the list.

**2 UIC has one of the first degree-granting Bioengineering programs in the nation.** Program began in 1965 and received one of the first ten NIH Graduate Student Training Grants in Bioengineering (1966). Third program in the country to receive ABET accreditation for its undergraduate degree (1976). Just received continued accreditation renewal in 2014.

**3 First department at UIC to be in two colleges.** Like other leading biomedical engineering (BME)/BioE departments in the country, such as at Johns Hopkins and Stanford, since August 2011, UIC Bioengineering has been a full member of both the College of Engineering and the College of Medicine.

**4 In the same College as one of the largest Medical Schools in the country and in the same metropolitan region as 5 major academic medical research centers.** UIC College of Medicine, Rush, Loyola, Northwestern and University of Chicago. We collaborate with all of them on research. We have adjunct faculty from all of them in our department assisting in mentoring our students.

**5 Best of the Best undergraduate students at UIC.** Undergraduate students enrolled in Engineering have the highest average ACT scores of any college at UIC and at any time in UIC's history. Students enrolled in BioE consistently have among the highest average ACT scores of any program in Engineering at UIC.

**6 Most gender-balanced engineering field.** BioE has among the largest percentages of women of any engineering discipline at both undergraduate and graduate levels (30–45% female).

**7 Diversity is a strength and a source of pride for UIC and for BioE.** Based on data from the US Department of Education, UIC ranks first in the percentage enrollment of underrepresented minorities when compared with the top 19 members of the Association of American Universities in this category. UIC is the only University in this top 20 list that is in the Midwest with a Latino/Hispanic population exceeding 25%. UIC is officially designated as a Hispanic-serving institution.

## Core Faculty

**Jun Cheng, Ph.D., Assistant Professor**  
Live-cell imaging, Ultrafast laser microsurgery, Stem cell regulations  
[juncheng@uic.edu](mailto:juncheng@uic.edu) 312.996.2333

**Yang Dai, Ph.D., Associate Professor, Associate Director of Graduate Studies**  
Bioinformatics  
[yangdai@uic.edu](mailto:yangdai@uic.edu) 312.413.1487

**David Eddington, Ph.D., Associate Professor, Director of Graduate Studies**  
Microfluidics  
[dte@uic.edu](mailto:dte@uic.edu) 312.355.3278

**Hananeh Esmailbeigi, Ph.D., Clinical Assistant Professor**  
Neural engineering, Neural and biological signal processing, Bioinstrumentation, Global health device development  
[hesmai2@uic.edu](mailto:hesmai2@uic.edu) 312.355.3278

**John R. Hetling, Ph.D., Associate Professor, Director of Undergraduate Studies**  
Electrophysiology of vision, Functional Imaging  
[jhetli1@uic.edu](mailto:jhetli1@uic.edu) 312.413.8721

**Salman Khetani, Ph.D., Associate Professor,**  
Tissue Engineering, Biomaterials, Micro-fabrication & Micro-fluidics, Liver physiology, Drug development  
[skhetani@uic.edu](mailto:skhetani@uic.edu), 312.413.9872

**Dieter Klatt, Ph.D., Assistant Professor**  
Elastography, MRI, Motion-sensitive Imaging  
[dklatt@uic.edu](mailto:dklatt@uic.edu) 312.413.1747

**Miiri Kotche, Ph.D., Clinical Associate Professor**  
Interdisciplinary medical product development (IMPD), Senior design, Global health  
[mkotch2@uic.edu](mailto:mkotch2@uic.edu) 312.413.8641

**Terry Layton, Ph.D., Senior Lecturer**  
Senior Design, Medical device design, FDA regulations  
[tnl@uic.edu](mailto:tnl@uic.edu) 312.355.2148

**James Lee, Ph.D., Associate Professor**  
Alzheimer's disease, Membrane Physics, Cell signaling  
[leejam@uic.edu](mailto:leejam@uic.edu) 312.996.2335

**Alex Leow, M.D., Ph.D., Associate Professor**  
Board-certified in psychiatry, Computational neuroimaging  
[aleow@psych.uic.edu](mailto:aleow@psych.uic.edu) 312.768.8842

**Jie Liang, Ph.D., Professor**  
Bioinformatics, Computational systems biology  
[jliang@uic.edu](mailto:jliang@uic.edu) 312.355.1789

**Andreas Linninger, Ph.D., Professor**  
Drug delivery, Hemodynamics of the brain, Metabolic engineering, Bioprocess design, Biomechanics  
[linninge@uic.edu](mailto:linninge@uic.edu) - 312 413 7743

**Hui Lu, Ph.D., Associate Professor**  
Bioinformatics, Computational proteomics  
[huiLu@uic.edu](mailto:huiLu@uic.edu) 312.413.2021

**Richard Magin, Ph.D., University Distinguished Professor**  
MRI, Targeted drug delivery, Bioelectromagnetics  
[rmagin@uic.edu](mailto:rmagin@uic.edu) 312.413.5528

**Ao Ma, Ph.D., Associate Professor**  
Bioinformatics, Microtubules dynamic modeling  
[aoma@uic.edu](mailto:aoma@uic.edu) 312.413.2016