



AMERICAN INSTITUTE FOR MEDICAL
AND BIOLOGICAL ENGINEERING

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Institute Elects New Members of the College of Fellows

Washington, DC– The American Institute for Medical and Biological Engineering (AIMBE) announced the election of 82 new members of the College of Fellows. The newly elected Fellows were nominated and approved by current Fellows of the College, consisting of over 900 engineers and scientists.

Recipients of this honor are recognized for their outstanding achievements in medical and biological engineering. A formal induction ceremony will be held during the Institute's Annual Event at the National Academy of Sciences building in Washington, D.C. on February 21, 2007. For more information about the AIMBE Annual Event, please visit www.aimbe.org/annualevent.

"We are delighted to welcome the 82 newly elected Fellows of AIMBE," stated College of Fellows Chair Nicholas Peppas, Sc.D. "They represent some of the most imaginative and distinguished bioengineers in the field. Their contributions have had a major impact in biomedical devices and processes, treatment of diseases, and public policy related to all aspects of bioengineering. I am particularly happy to welcome a number of exceptional younger biological and medical engineers who lead the field with their inventions and contributions".

The College of Fellows leads the way in technological advancement, advocating for public policies facilitating progress in medical and biological research and development to benefit the public. Since 1991, AIMBE Fellows have helped to revolutionize medicine, engineering and related fields that enhance and extend the lives of people all over the world. Counting several Nobel Prize winners among them, through their work the Fellows also help protect the environment, lead to new national security safeguards and contribute to a better, healthier society in many other ways.

With Fellows in every U.S. state – and in nations around the world – the College includes leaders in industry as entrepreneurs, directors of research and development, and the corporate boardroom. Further, Fellows are heads of engineering and medical schools at major universities, along with some of the most respected professors and researchers at those institutions. Within academia, AIMBE Fellows are regularly recognized for their contributions in teaching, research, and innovation. Fellows are members of the National Academy of Engineering, the Institute of Medicine and the National Academy of

Sciences. Further, Fellows can be found outside the field of engineering, working in clinical settings and government.

AIMBE (www.aimbe.org) was founded in 1991 to establish a clear and comprehensive identity for the field of medical and biological engineering – which is the bridge between the principles of engineering science and practice, and the problems and issues of biological and medical science and practice. Representing over 75,000 bioengineers, AIMBE serves and coordinates a broad constituency of medical and biological scientists and practitioners, scientific and engineering societies, academic departments and industries.

Newly Elected Members of the College of Fellows' Class of 2008 are:

Tulay Adali, Ph.D.

University of Maryland, Baltimore County

For outstanding research, mentorship, and leadership in the field of biomedical imaging and signal processing

Russ B. Altman, M.D., Ph.D.

Stanford University

Research contributions in structural bioinformatics, pharmacogenetics, and natural language processing applications in biology

Bahman Anvari, Ph.D.

University of California, Riverside

For pioneering research and development of laser-based technologies that are widely used for clinical treatment of selected dermatological disorders

Mara Aspinall

Genzyme Genetics

For leadership in the development, commercialization and teaching of biotechnology-based diagnostics and the implementation of personalized medicine

Nicholas Ayache, Ph.D.

INRIA Sophia-Antipolis Unit

For seminal contributions in the fields on medical image analysis and surgical simulation and robotics

Julia E. Babensee, Ph.D.

Georgia Institute of Technology

For pioneering applications of immunology to the understanding of the host response to biomaterials and combination products

Fernando E. Boada, Ph.D.

University of Pittsburgh Medical Center

For pioneering contributions to functional and metabolic magnetic resonance imaging and its applications to cancer and stroke diagnosis and treatment monitoring in humans

Andreas S. Bommarius, Ph.D.

Parker H. Petit Institute of Bioengineering and Bioscience

For contributions to protein-based catalysis and stability and to biocatalysis processes in industry and academia

Robert J. Butera, Ph.D.

Georgia Institute of Technology

For contributions to computational neuroscience, novel approaches to electrophysiology experiments, and neuroengineering

Richard E. Carson, Ph.D.

Yale University

For significant contributions to the field of quantitative functional brain imaging and tracer kinetic modeling using Positron Emission Tomography

Judy L. Cezeaux, Ph.D.

Western New England College

In recognition of contributions to biomedical engineering undergraduate education, cell and tissue engineering, and prosthetic design validation

Matthew S. Croughan, Ph.D.

Keck Graduate Institute

For the contribution to the understanding and enhancement of large-scale processes of animal cell cultures

James A. Davidson, Ph.D.

Edwards Lifesciences

For contributions related to metal alloys which develop a ceramic surface upon heating treating and improvement of implanted devices

Mitchel J. Doktycz, Ph.D.

Oak Ridge National Laboratory

For integrating biophysical chemistry with nanobiotechnology to create innovative technologies for DNA characterizations, nanoliter handling, bioimaging and nanomanipulation

Thomas A. Einhorn, Ph.D.

Boston University School of Medicine

For fundamental discoveries and translational research in the biology and biomechanics of skeletal repair and regeneration

Solomon R. Eisenberg, Sc.D

Boston University

For significant contributions to understanding the biomechanics of articular cartilage and three-dimensional finite element modeling of human transthoracic defibrillation

Jennifer H. Elisseeff, Ph.D.

The Johns Hopkins University

For outstanding achievements in tissue engineering and the development and biological analysis of materials for regenerative medicine and clinical translation

John A. Engelhardt,

Knowledge Ventures, Inc.

For noteworthy achievement in the development of Orthopaedic Implants and Orthopaedic Products

Maxim D. Frank-Kamenetskii, Ph.D., D.Sc

Boston University

For highly innovative contributions to our understanding of triple helix structure and stability, and the molecular diagnostic technology to which it has led

Martin Fussenegger, Ph.D.

ETH Zurich; Institute for Chemical and Bioengineering

For pioneering contributions to cell culture engineering and molecular methods for diagnosis and therapy of disease at the genetic level

Richard J. Gregory, Ph.D.

Genzyme Corporation

For sustained and effective leadership of corporate scientific research in biotechnology leading to pioneering pharmacologic, medical device and diagnostic products

Stephen L. Grimes

Technology in Medicine (TiM)

Leadership in healthcare technology management, medical and information technology convergence and integration, and medical device security and risk management

George L. Grobe III, Ph.D.

Johnson & Johnson

For pioneering developments in the surface properties of biomaterials

Craig S. Henriquez, Ph.D.

Duke University

For outstanding contributions to the development of three-dimensional models of cardiac electrical activity that have aided our understanding of arrhythmias

Leonard Herzenberg, Ph.D.

Stanford University Medical School

For seminal contributions to the field of analytic cytology, combining immunology, genetics, mathematics and biomedical engineering and for being responsible for bringing the field of flow cytometry to everyday life

Mark S. Humayun, MD, PhD

Doheny Eye Institute, Doheny Vision Research Center

For extraordinary contributions to bioengineering, particularly in regards to application of an electronic device that restores vision to blind patients

Huabei Jiang, Ph.D.

University of Florida

For his creative and pioneering work in the imaging and detection of Breast Cancer and other debilitating diseases

Karan V.I.S. Kaler, Ph.D.

University of Calgary

For novel and innovative development of measurement methods and micro devices in biomedical engineering, biomedical instrumentation, and biological dielectrophoresis

Louis A. Kamentsky, Ph.D.

CompuCyte Corporation

Louis A. Kamentsky was the prime mover in the development of flow cytometry, an AIMBE Hall of Fame technology

Weiyuan J. Kao, Ph.D.

University of Wisconsin

Groundbreaking basic and translational research involving in-depth methodical analysis of cellular function mediated by biomaterial functionality

Brian D. Kelley, Ph.D.

Genentech, Inc.

For contributions in process sciences and biochemical engineering in developing cost-effective, robust processes for production of life-saving recombinant protein therapeutics

Klod Kokini, Ph.D.

Purdue University

For his seminal work in 3-dimensional modeling and validation of tissue engineered implants for orthopedic and vascular applications

Richard W. Korsmeyer, Ph.D.

Pfizer Global Research and Development

For distinguished leadership in pharmaceutical and biomedical technologies and for the development and commercialization of novel oral osmotic drug delivery systems, systems for EP2-selective agonists, supercritical fluid-based processes, and novel antibiotic formulations

Pascal Laugier, Ph.D.

Université Pierre et Marie Curie-Paris VI

In recognition of outstanding contributions to the field of Medical and Biological Engineering

Jie Liang, Ph.D.

University of Illinois at Chicago

For seminal contributions for developing geometric methods for computational prediction and characterization of protein function

Dorian Liepmann, Ph.D.

University of California, Berkeley

For outstanding seminal contributions to micro-fluidic technology and the study of the fluid mechanics associated with BioMEMS devices

Marybeth Lima, Ph.D., P.E., C.P.S.I.

Louisiana State University

For seminal contributions in biological and agricultural engineering education by integrating community work into the curriculum through service learning

Michael R. Loken, Ph.D.

Hematologies Inc.

Developed two-color flow cytometry techniques leading to multicolor fluorescence instruments for immunophenotyping of leukemias important for new cancer therapies

Costas D. Maranas, Ph.D.

The Pennsylvania State University

For outstanding contributions in computational design and optimization of biological systems, protein libraries, metabolic pathways, and regulatory networks

Patrick A. Mason, Ph.D.

Air Force Research Laboratory (AFRL/HE)

For outstanding contributions towards understanding the responses of the central and peripheral nervous systems to extreme stressors and how these responses influence behavior

Elliot R. McVeigh, Ph.D.

National Heart Lung and Blood Institute

For development of magnetic resonance tagging methods to measure cardiac function, including myocardial deformations, myocardial perfusion, and arterial pulse-wave velocity

Joseph Mizrahi, D.Sc.

Technion, Israel Institute of Technology

For seminal contributions to, and international recognition in, the fields of Rehabilitation Engineering, Orthopaedic Biomechanics, and Functional Electric Stimulation

Dimitrios Morikis, Ph.D.

University of California, Riverside

For developing a rational set of molecular-based methods for the prediction of the behavior of immune system proteins, regulators and inhibitors

Ashok Mulchandani, Ph.D.

University of California, Riverside

For pioneering research in biosensors for homeland security, environmental monitoring, and healthcare, bioengineering education, and service to the biotechnology community

Balaji Narasimhan, Ph.D.

Iowa State University

For pioneering work on the utilization of rational design models to develop the next generation of biodegradable drug delivery systems and vaccine delivery formulations

David J. Odde, Ph.D.

University of Minnesota

For pioneering research into the dynamics of microtubules and their role in cell growth and division

Jeffrey H. Omens, Ph.D.

University of California, San Diego

For outstanding contributions to cardiac biomechanics and bioengineering, and for elucidating the role of mechanotransduction in congestive heart failure

Raphael M. Ottenbrite, Ph.D.

Virginia Commonwealth University

For pioneering developments in the applications of novel biomaterials

Bradley E. Paden, Ph.D.

University of California

For outstanding contributions towards the development of magnetically levitated rotary blood pumps for adult and pediatric heart failure patients

Xiaochuan Pan, Ph.D.

The University of Chicago

For Dr. Pan's outstanding, fundamental contributions to science and engineering of non-invasive imaging and its biomedical applications

Dennis L. Parker, Ph.D.

University of Utah

Recognized for pioneering research and seminal contributions in MRI temperature measurement techniques and MRI angiography

David K. Peterson, Ph.D.

Advanced Bionics

Recognizing your creative solutions that have made diaphragm pacing, implantable defibrillators and pain management a commercial reality

Stephen M. Pizer, Ph.D.

The University of North Carolina at Chapel Hill

For his outstanding contribution to research and education related to improving medical imaging processing and display capabilities

David A. Puleo, Ph.D.

University of Kentucky

For pioneering contributions in cell-biomaterial interactions and for novel biomaterial-surface modifications to elicit specific and timely responses at bone-implant interfaces

Stephen A. Quake, Ph.D.

Stanford University

For contributions to biological automation, inventing microfluidic large-scale automation and the first demonstration of single molecular DNA sequencing

John M. Ramsey, Ph.D.

University of North Carolina

For Pioneering Efforts in the development and commercialization of lab-on-a-chip devices for drug discovery, healthcare and environmental monitoring

Anthony Ratcliffe, Ph.D.

Synthasome, Inc.

For the development of tissue-engineered products that aid in the repair, regeneration or replacement of damaged and/or diseased tissues and organs

Julia M. Ross, Ph.D.

University of Maryland, Baltimore County

For pioneering work on the elucidation of adhesion mechanisms and design of novel pharmacological strategies to treat blood-borne staphylococcal infections, and for leading contributions to the interrelationship between blood clot formation and cardiovascular infection mechanisms

James P. Runt, Ph.D.

Penn State University

For contributions to the characterization and clinical application of polymers for biomedical applications

Ann B. Salamone, Ph.D.

Rochal Industries

For pioneering developments in wound and skin care

Richard T. Schoephoerster, Ph.D.

University of Texas at El Paso

For pioneering developments in biofluid mechanics and cardiovascular devices

Lewis B. Schwartz, M.D.

Abbott Laboratories

Lewis Schwartz brings a unique blend of engineering, surgery and industrial experience that creates and fosters partnerships between academia, medicine and industry investigating novel therapeutic solutions for vascular disease

Shalaby W. Shalaby, Ph.D.

Poly-Med, Inc.

For his pioneering role and innovation in the field of polymeric medical devices

Gary C. Sieck, Ph.D.

Mayo Clinic

Dr. Sieck has excelled in scientific contributions, mentorship, leadership, service, and education - locally, nationally, and internationally, for over 30 years

Paul H. Stypulkowski, Ph.D.

Medtronic Neuromodulation

For significant contributions to the development of the cochlear prosthesis, hearing aids and Deep Brain Stimulation treatments for movement disorders, epilepsy and psychiatric disorders

Kuo-Li Paul Sung, Ph.D.

University of California, San Diego

For seminal contributions to the understanding of the molecular and cellular basis of biomechanics of ligaments and blood cells

Melody A. Swartz, Ph.D.

Ecole Polytechnique Federale de Lausanne

For pioneering contributions to the elucidation of novel biophysical mechanisms of morphogenesis and cell homing involving interstitial flow

Charles A. Taylor, Ph.D.

Stanford University

For fundamental advances in cardiovascular modeling and imaging, including methods for image-based modeling of blood flow and vessel wall dynamics

D. Lansing Taylor, Ph.D.

Cellumen, Inc.

For the development of fluorescent analog cytochemistry and automated fluorescence microscope systems, and founding the field of high-content screening

Arthur J. Tipton, Ph.D.

Brookwood Pharmaceuticals

For the development of biodegradable polymers and novel drug delivery systems

Richard W. Treharne III, Ph.D.

Active Implants Corporation

For noteworthy achievement in the development and regulation of orthopedic Implants and biomaterials

Gerrit J. van den Engh, Ph.D.

University of Washington

For seminal physics and engineering contributions to the design and application of high speed cell separation and sorting technologies

Marjolein C.H. van der Meulen, Ph.D.

Cornell University

For seminal contributions to Skeletal Mechanobiology and Bone Mechanics and for major contributions to student and faculty diversity

Daniel B. Vigneron, Ph.D.

University of California, San Francisco

Engineering and development of multi-channel coils, pulse sequences for characterization of brain tumors, prostate cancer, degenerative neurological conditions and pediatrics

Michael J. Vonesh, Ph.D.

W.L. Gore and Associates

For contributions to cardiac ultrasound imaging and the development of innovative medical products in the cardiovascular area

Alan S. Waggoner, Ph.D.

Carnegie Mellon University

For outstanding contributions to biotechnology and biomedical research through the development of novel engineered fluorescent probes

Conrad Wall III, Ph.D.

Harvard Medical School

For outstanding contributions to the development of bioengineering-based clinical vestibular tests, analyses and design of vestibular prostheses

David R. Walt, Ph.D.

Tufts University

For development of optical sensors and arrays useful in the fields of bioanalytical chemistry, biochemical technology, and industry

Robert O. Williams III, Ph.D.

The University of Texas at Austin

For pioneering studies of novel methods of microparticle formulations for drug delivery

Jack Winters, Ph.D.

Marquette University

For contributions in Biomechanics, Muscle Modeling, Movement Science, Telerehabilitation and Accessible Medical Instrumentation

Peter Zandstra, Ph.D.

University of Toronto

For pioneering research integrating engineering and biological approaches in stem cell biotechnology, gene therapy and organ transplantation

Cheng Zhu, Ph.D.

Georgia Institute of Technology

For his contributions to the biophysical understanding of adhesion and signaling of cells in the immune and vascular system

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