News

Annual Minnesota Neuromodulation Symposium Call for Abstracts
Submission Deadline: March 1, 2016

The 2016 Minnesota Neuromodulation Symposium is pleased to call for high quality abstracts reporting scientific work on any aspects of neuromodulation, including DBS, TMS, tDCS, tACS, tFUS, and neuromodulation related research on imaging, control, devices, and robotics. All accepted abstracts will be presented in the poster session. In addition, this year we will select up to six highest quality and innovative works for a short presentation in the plenary session.

SAVE the DATE. Details to come in January.

Joan Bechtold Receives the 2016 Orthopaedic Research Society Women’s Leadership Award
Dr. Joan Bechtold, Professor of Orthopaedic Surgery and IEM Member, was selected as the recipient of the 2016 Orthopaedic Research Society’s (ORS) Women’s Leadership Award. This award is “given every year to recognize a woman biologist, clinician, or engineer who, throughout her professional lifetime, has made significant contributions to the understanding of the musculoskeletal system and musculoskeletal diseases and injuries. She will have also demonstrated outstanding leadership through service to the professional community and mentorship of colleagues and trainees.” Dr. Bechtold, who is the past President of ORS, will be presented the award on Sunday March 6th at the 2016 Annual Meeting of the Orthopaedic Research Society in Orlando, Florida.

Robert Sweet Receives the 2015 Cook Medical “Arthur” Award
IEM Member Dr. Robert M. Sweet, Associate Professor of Urology, and Director of the University of Minnesota’s Center for Research in Education and Simulation Technologies (CREST), was awarded the 2015 Cook Medical Arthur Award at the 33rd Annual World Congress of Endourology, held in London this past October. WCE’s award committee presents the Arthur award each year in honor of the lifetime achievements of world-renowned urologist Dr. Arthur D. Smith. The award is presented to an urologist who is within 10 years of completing residency or fellowship, and who has already achieved distinction through myriad contributions to the field of Endourology in research and teaching.

SLS Blog: Congratulations Dr. Robert Sweet

IEM Seed Funding Leads to NSF Grant for Taner Akkin
Dr. Taner Akkin, Associate Professor of Biomedical Engineering and IEM Member, was awarded with an NSF grant and funding from the Bob Allison Ataxia Research Center totaling $500,000 for his brain imaging research initially supported by an IEM seed grant. The research aims to develop an optical imaging technique to study the anatomical changes associated with spinocerebellar ataxia type 1 (SCA1),
which is a fatal inherited neurodegenerative disease,” and aims to “enable a comprehensive three-dimensional reconstruction of the brain and cerebellum, and support quantitative assessments on white matter content and circuitry.” Dr. Akkin is performing this research with Dr. Harry T. Orr, Professor of Laboratory Medicine and Pathology and director of Institute for Translational Neuroscience.

Henry Buchwald Inducted Into ACH Academies for Excellence
IEM Member Dr. Henry Buchwald, Professor of Surgery and Biomedical Engineering, was inducted into the Academic Health Center’s Academy for Excellence in Health Research on November 16th. A component of the ACH’s Academies for Excellence, the Academy for Excellence in Health Research “is intended to serve as the highest recognition of excellence in research by AHC faculty. Those selected have enhanced the research identity of the University of Minnesota through sustained nationally- and internationally-recognized biomedical or health-related research in their field.” Dr. Buchwald is among three 2015 inductees and forty inductees since the Academy was initiated in 2003.

IEM Members Working to Improve Recovery from Stroke
IEM Members Drs. Bin He, James Carey, and Andrew Grande were profiled by the University of Minnesota Foundation for their work in developing treatments that could help stroke patients regain some of their functionality. Dr. Bin He, IEM Director and Professor of Biomedical Engineering, is exploring how the application of his Brain-Computer Interface (BCI) technology can restore this functionality by stimulating and reactivating the brain tissue that has been injured. Dr. James R. Carey, Professor of Physical Medicine and Rehabilitation, is exploring the approach of strengthening areas of the brain affected by stroke by temporarily inhibiting unaffected areas. Dr. Andrew W. Grande, Assistant Professor, Neurosurgery and Co-director of the University of Minnesota’s Earl Grande Stroke and Stem Cell Laboratory, is exploring how genetically-reprogramming glial cells can transform them into mature neurons. These approaches can have a tremendous impact as approximately 800,000 Americans experience a stroke annually, and there are approximately 6.5 million stroke survivors in the U.S.

Stephen Haines & Samuel Levine Researching the Long-Term Results of Acoustic Neuroma-Removal Technique
IEM Members Drs. Stephen J. Haines and Samuel C. Levine are determining whether a technique of removing acoustic neuromas that seeks to preserve hearing and facial control, will work in the long-term. As reported by the University of Minnesota Foundation, the procedure significantly improved outcomes from what had been the standard procedure. Through this technique, “About 70 percent of our patients retained their hearing,” says Dr. Stephen J. Haines, Professor and Department Head, Department of Neurosurgery and Lyle A. French Chair.

Drs. Haines and Levine started publishing their findings in 1993. Due to the longevity of their collaboration, the technique has now been performed for a long enough period of time to measure its effectiveness. “The thing that’s powerful is when you get 25 to 30 years’ worth of data,” says Dr. Samuel C. Levine, a Professor in the departments of Neurosurgery and Otolaryngology, who started the database from which the results are being studied. “If it turned out that we preserved hearing right after surgery, but it was all gone in five years, that wouldn’t be a strong reason to have the operation,” says Haines. “But if it’s going to last the rest of their lives, it would make a huge difference in indication for the surgery. It made a big difference for Sally.”

Trainees of Kalpna Gupta’s Laboratory Receive Abstract Achievement Award
Huy Tran and Dr. Jianxun Lei received “Abstract Achievement Awards” from the American Society of Hematology, during its meeting in Orlando, Florida, Dec 5th to 8th. Both are trainees of Dr. Kalpna Gupta, Professor of Medicine, Hematology, Oncology and Transplantation, and co-chair of the IEM Cellular and Molecular Bioengineering Theme. Awards were given for Huy Tran’s abstract, “Induced Mast cell-extracellular traps impart resistance to therapy in a sickle microenvironment” and Dr. Lei’s abstract, “Pharmacological inhibition of TLR4 reduces mast cell activation, neuroinflammation and hyperalgesia in sickle mice.” These merit-based awards, in the amount of $500, are offered to “trainees who are chosen
to present an abstract, of which they are the first and senior author and presenter, at the ASH annual meeting.”

American Society of Hematology: 2015 Abstract Achievement Award Recipients

David Jacobs Co-Authors Study Published in JAMA Psychiatry
Dr. David R. Jacobs, Professor of Epidemiology & Community Health, and IEM Member, was the co-author of a study published recently in “JAMA Psychiatry” that links television-watching and low levels of physical activity with lower cognitive function in midlife. The study followed more than 3,000 adults for 25 years, from early adulthood to midlife, addressing both their television viewing habits and levels of exercise at least three times per year.
The study was also featured in “Ars Technica”, which highlighted that the study is among the first to include the impact of television-watching and cardiorespiratory fitness on midlife cognitive function. According to that article, “these risk behaviors may be critical targets for prevention of cognitive aging even before middle age.”
Ars Technica: TV-Binging Exercise-Skipping Linked to Poor Cognitive Function
JAMA Psychiatry: Effect of Early Patterns of Physical Activity and Television Viewing on Midlife Cognitive Function

Ron Siegel and SuPing Lyu Edit Textbook on Drug-Device Combinations
Dr. Ronald A. Siegel, Professor of Pharmaceutics and IEM Member and Dr. SuPing Lyu, Senior Principal Scientist at Medtronic, and IEM Industrial Fellow were credited with editing the first edition of a new textbook published by Wiley, “Drug-device Combinations for Chronic Diseases.” Released on November 4, 2015, and now available online this month, the textbook details “the concepts and technologies of drug-device combination products” and “includes case studies of important products that either significantly shape our technologies and thinking, or contribute to current healthcare practice.”
Wiley: Drug-device Combinations for Chronic Diseases

Hubert Lim Discusses the Effectiveness of Sound Therapy
Dr. Hubert H. Lim, Assistant Professor of Biomedical Engineering, Institute for Translational Neuroscience Scholar, and IEM Member, was interviewed by Minnesota CBS affiliate WCCO about the practice of sound therapy, which can be used to treat conditions commonly addressed by more traditional treatments, such as chiropractic intervention or massage therapy. Dr. Lim’s lab is exploring if and how these types of physiological and neural effects can be systematically controlled to relieve certain disease symptoms or enhance other conventional treatments, leading to new directions in integrative medicine.
According to Dr. Lim, “it is clearly doing something in the body, in the brain. When you measure signals in the body you will see the heart rate will change, people will sweat or have chills for different types of sounds, so it is clearly causing a physiological neural effect.”
CBS Minnesota: Ancient Treatment Sound Therapy Rediscovered in Minnesota

Announcements

Applications Now Being Accepted for the 2016-2017 Medical Devices Center Innovation Fellows Program
Application deadline: January 20, 2016
The University of Minnesota's Medical Devices Center (MDC), an IEM affiliated Center, is recruiting dynamic and motivated individuals to join its cross-disciplinary team of Medical Device Innovators for one year of collaborative medical device innovation. Applicants must be dedicated to improving human health and well-being and committed to working in a cross-disciplinary team.
The Fellows Program has been very successful with 82 patents filed from 168 invention disclosures from the program since its inception in 2008. The Fellows have partnered with more than 200 entrepreneurs, physicians, investors, global institutions, and executives from leading medical device companies such as Medtronic, Boston Scientific, and St. Jude Medical. The team of Fellows collaborate with each other as well as with field experts and industry leaders to solve a variety of healthcare needs, including medical devices designed for cardiovascular diseases, diabetes, cancer, neurological disorders, pediatric illness, and neonatal care.
How to Apply: Complete and submit the online application with supporting documents (cover letter, CV, essay and references) for Requisition Number 305988 at the University Employment Opportunities website. For more information about the application process, contact ifpinfo@umn.edu.

IEM is pleased to promote, on behalf of the University of Minnesota’s Clinical and Translational Science Institute (CTSI), an upcoming Mock Study Section that simulates an NIH Study Section. This event is designed for UMN* and Mayo Clinic* trainees (pre- and post-doctoral) and junior faculty who are writing career development (F,K) and R01 grants. Participants will review previously submitted R, K or F applications and then participate in a formal discussion and review of the grants. At the conclusion of the review, participants will have an opportunity to compare their critiques with the actual feedback provided by the NIH. Each section is co-chaired by experienced University of Minnesota and Mayo Clinic faculty. The objective is to educate early investigators in the grant review process and assist in making their grants more competitive in today’s funding climate.

Requirements: As with the real NIH Study Sections all participant experts (you) are required to attend and participate fully. The time commitment is 4-5 hours total which includes participation in the Mock Study Section on January 14th.
*This event is invite only

Register

Note: As space is limited, some who register after capacity is reached will be given the option to attend as an observer. Observers are not required to complete pre-work.