IEM News

IEM’s 3rd Annual Inspire Conference and new online certificate courses for high school students feature the University’s efforts to address COVID-19
On Friday, November 6, IEM will virtually host its 3rd Annual Inspire Conference for Minnesota high school students. The Conference will focus on the University’s efforts to rapidly design, develop and manufacture urgently-needed alternatives to N95 face masks, hospital gowns, and micro containment systems. For students who seek to learn more about these and many other COVID-19 efforts at the University, IEM will offer free medicine-centric and engineering-centric online certificate courses. Learn more about the IEM Inspire Program.

IEM announces awardees of Engineering in Medicine Fellowship
IEM is proud to announce the 2020-2021 Engineering in Medicine Doctoral Fellowships. This Fellowship, which is available to students of IEM members, includes a $25,000 stipend plus $2,500 for professional development. Tuition and subsidized Graduate Assistant health plan are also covered. The 2020-2021 IEM Engineering in Medicine Doctoral Fellows can be found here.

IEM member feature: Alexander Opitz
IEM Member Dr. Alexander Opitz (Assistant Professor in Biomedical Engineering and MnDrive Neuromodulation Scholar) was recently awarded a Brain Initiative R01. Opitz’s grant, titled “Traveling Wave Transcranial Alternating Current Stimulation for the Control of Large-Scale Brain Networks,” outlines the development of a new way to stimulate connected brain regions. This grant will expand on two recently published papers in Science Advances and Nature Communications on the use of electrical stimulation to affect spike timing in neural networks.

This award is Dr. Opitz’s third R01 in just three years since joining the University of Minnesota, totaling $6.8M dollars in federal funding. In addition, Dr. Opitz is a Co-Investigator on four NIH grants with faculty members at the UMN Medical School investigating the use of noninvasive neuromodulation for a range of psychiatric and neurological disorders. Dr. Opitz’s research comprises computational modeling, technology development, and basic physiology with a focus on clinical translation. This year, he organized a two-day virtual “Computational Modeling in Non-Invasive Brain Stimulation” workshop at the University of Minnesota, which had 200 attendees from 50 institutions worldwide. Dr. Opitz continues to push novel directions in the noninvasive neuromodulation field and has greatly strengthened the profile of the University of Minnesota in this research area.

News on IEM Member COVID-19 Efforts
Pinar Karaca-Mandic discusses rapid spread of COVID-19 with Star Tribune
New Minnesota COVID-19 milestone shows significant amount of virus transmission, health officials say
David Odde and Mark Osborn profiled for their efforts to address the COVID-19 pandemic
“The audacity to do something”

IEM COVID-19 RESPONSE
Click here for more information

IEM Member Highlights

Kelvin Lim leads study on effectiveness of tDCS and cognitive training for treating alcohol use disorder in veterans
Effects of tDCS Paired with Cognitive Training on Brain Networks Associated with Alcohol Use Disorder in Veterans

Hubert Lim is senior author of a cover article in Science Translational Medicine on a new treatment for tinnitus; discusses study with KARE11 and Science Podcasts
Visiting a once-watery asteroid, and how buzzing the tongue can treat tinnitus

New research could help millions who suffer from tinnitus | Biomedical Engineering

Clinical trial shows promise for tinnitus treatment

Michael McAlpine is senior researcher on 3D printing unique microfluidic channels for sensors and on curved surfaces
Researchers 3D print unique micro-scale fluid channels used for medical testing

Emil Lou leads clinical trial of CRISPR genetic engineering to treat gastrointestinal cancers
U of M opens first of its kind Phase I/II clinical trial to treat metastatic gastrointestinal epithelial cancer using CRISPR edited immune cells

Walter Low and colleagues publish research showing public support for use of chimeras for generating human organs and cells for transplantation
Published Study in Stem Cell Reports

Survey finds American support for human-animal chimera research

Announcements

Registration is open for SoPE and MILI Webinar “Diversity and Inclusion in Medical Technology Innovation,” 12-1 P.M. on Friday, November 6th, co-sponsored by IEM, OTC, and several other UMN entities

The Medical Industry Leadership Institute and the MN Chapter of the Society of Physician Entrepreneurs (SoPE) are co-hosting this webinar aimed to bring awareness to the lack of diversity and inclusion in the medical technology space, specifically addressing innovation. Dr. Siatta Dunbar, physician at Fairview Health Services will moderate a discussion with Kathy Tune (Board Chair and CFO/COO, Odanata Health), Kwame Ulmer (Venture Partner at Wavemaker and Founding Member of MedTechColor), and Martha Sewall (Executive in Residence for Discovery Launch Pad at the UMN Office of Technology Commercialization) on how to overcome the barriers and encourage innovation within underrepresented groups in order to diversify the pool of
innovators.  
**REGISTER HERE.**

Advanced registration is required.

**Registration is open for virtual ICI Academy of Innovation on Sunday, December 6th: “The Challenging Global Landscape for Academia and Industry; Design Thinking Meets Digital Healthcare Transformation”**

**Registration** is open for the annual ICI Global Innovation Summit’s [Academy of Innovation](#), featuring Paul Iaizzo, IEM Associate Director, Professional Education and Outreach, Will Durfee, Director of IEM’s Clinical Engagement Program and Tim Laske, IEM Industrial Advisory Board Member and Vice President of Research and Business Development, Medtronic AF Solutions. The event, normally held in Israel, will be held virtually this year, making this a great opportunity for all of who have an interest in this event to participate.

**Registration is open for the 3rd Annual University of Minnesota's Nano Center and IEM 2020 Nanomedicine Workshop taking place on November 10 and 11, 1-3PM (CST)**

The Nanomedicine Workshop offers attendees an introduction to the world of nanomedicine, covering topics including nanoscale biosensors, nanostructured biosurfaces, and nanoparticle drug delivery. The workshop features presenters from a variety of institutions and academic backgrounds, describing their work in applying nanoscience to the life sciences.

There is no charge to attend this workshop, but preregistration is required. A log-in link will be provided to all registrants shortly before the event.

**REGISTER TO ATTEND.** We hope to see you at the virtual Workshop!

**For more information:** Go to [Nanomedicine Workshop](#) or contact Dr. Jim Marti at [jmarti@umn.edu](mailto:jmarti@umn.edu) (612-224-6534).