

FOR PRACTITIONER REPRESENTATIVE
For a Three-Year Term 1 January 2020 – 31 December 2022



PETER L. ELKIN (M'19) Dr. Peter L. Elkin serves as Professor and Chair of the University at Buffalo (UB) Department of Biomedical Informatics. He is also a Professor of Internal Medicine, Surgery and Pathology at the University at Buffalo. Dr. Peter L. Elkin has served as a tenured Professor of Medicine at the Mount Sinai School of Medicine. In this capacity, he was the Center Director of Biomedical Informatics, Vice-Chairman of the Department of Internal Medicine and the Vice-President of Mount Sinai hospital for Biomedical and Translational Informatics. Prior to Mount Sinai Dr. Elkin was a Professor at the Mayo Clinic in Rochester, MN. Dr. Elkin has published over 190 peer-reviewed publications. He received his Bachelor of Science from Union College and his M.D. from New York Medical College. He did his Internal Medicine residency at the Lahey Clinic and his NIH/NLM sponsored fellowship in Medical Informatics at Harvard Medical School and the Massachusetts General Hospital. Dr. Elkin has been working in Biomedical Informatics since 1981 and has been actively researching health big data science since 1987. He is the primary author of the American National Standards Institute's (ANSI) national standard on Quality Indicators for Controlled Health Vocabularies ASTM E2087, which has also been approved by ISO TC 215 as a Technical Specification (TS17117). He has chaired Health and Human Service's HITSP Technical Committee on Population Health. Dr. Elkin served as the co-chair of the AHIC Transition Planning Group. Dr. Elkin is a Master of the American College of Physicians and a Fellow of the American College of Medical Informatics and a Fellow of the New York Academy of Medicine. Dr. Elkin was the founding chair of the International Medical Informatics Associations Working Group on Human Factors Engineering for Health Informatics. Dr. Elkin is the Editor of the Springer Informatics Textbook, Terminology and Terminological Systems. He was awarded the Mayo Department of Medicine's Laureate Award for 2005. Dr. Elkin is the index recipient of the Homer R. Warner award for outstanding contribution to the field of Medical Informatics. Dr. Elkin is the Informatics lead on the University at Buffalo CTSA award. He is the program director on both the Clinical Informatics Fellowship at UB and the NIH NLM T15 Training program. Dr. Elkin was elected an inaugural fellow of the American Medical Informatics Association.

Position Statement: I am committed to improving health and healthcare nationally. I have been involved in both national and international Health IT policy for many years. I would enjoy the opportunity to serve as one of the practitioners on the IEEE committee in medicine. In addition to my research, I still practice both in the inpatient and outpatient settings and I teach medical students, residents and fellows. I look forward to sharing my experience and expertise with the leadership team.



FAISAL M. KHAN (S'00-M'08) Faisal M. Khan, PH.D. is the Executive Director of Advanced Analytics and Artificial Intelligence at AstraZeneca. His work focuses on the intersections of data science, biostatistics, bioimaging, personalized medicine, and healthcare delivery. His career has encompassed all aspects of healthcare and biomedical analytics, including diagnostics, devices, clinical trials/therapeutics, and payers/insurance. Dr. Khan has worked or consulted across academia and industry with both startups and Fortune-50 companies. He has over 90 published papers, abstracts, and patents. Faisal holds a BS and MS in Computer Engineering from Lehigh University, and a PhD in Computer Science from Rutgers University.

Position Statement: I am interested in serving as a Practitioner Representative for the term starting in January 2020.

I am interested in the development and applications of technology at the intersections of medicine and biology. I have extensive experience in leading computational and statistical analytics across the biomedical healthcare space including diagnostics, devices, therapeutics and insurance payers, in academia and industry (small start-ups and large Fortune 50 companies). I am currently an Executive Director of Advanced Analytics and Artificial Intelligence at AstraZeneca. I am a former Senior Director of Data Science at Aetna where I led a team performing predictive modeling on big data for healthcare costs and claim operations. I have worked in developing predictive analytic platforms for molecular diagnostics and other patient services as well as creating innovative predictive analytics for clinical trials and drug development.

In addition to my industrial experience, I have remained connected to academia, serving as an adjunct lecturer at Rutgers University for 16 semesters. I have been able to maintain those connections between industry and academia, both for research, and in developing future scientists.

As an attendee at previous EMB sponsored conferences, I have seen first-hand the fantastic work the organization is undertaking. Not only am I interested in ensuring that the frontiers of research continue to expand, but I have a special interest in making sure that the technical and non-technical career development of scientists in this field is addressed. I would also like to explore opportunities to further encourage and nurture cross disciplinary collaborations, within and across academia and industry.

I am willing and able to dedicate the time needed to serve the relevant activities and responsibilities.



LUIS KUN (M'83-SM'84-F'06-LF'16) Dr. Luis Kun graduated from the Merchant Marine Academy in Uruguay and holds a BSEE; MSEE and Ph.D. degree in BME all from UCLA. A (Lifetime) Fellow of the IEEE, the American Institute for Medical and Biological Engineering, and the International Academy of Medical and Biological Engineering. He is a Distinguished Professor Emeritus of National Security Affairs (CHDS) and was Professor of Homeland Security at the National Defense University (2003-2015). He is Editor in Chief of Springer's Journal of Health and Technology. He spent 14 years at IBM; was Director of Medical Systems Technology at Cedars Sinai Medical Center. As Senior IT Advisor to AHCPR he formulated the IT vision and was the lead staff for High Performance Computers and Communications program and Telehealth. In July 1997, as invited speaker to the White House, he was largely responsible for the first Telemedicine Homecare Legislation signed by President Clinton, August 1997. Represented the DHHS Secretary at a Forum of Health Care Ministers on Telecommunications and the Health Care Industry in Mexico. While a Distinguished Fellow at the CDC, as Acting Chief IT Officer for the National Immunization Program he formulated their IT vision on 10/2000. Kun received many awards including: AIMBE's first-ever Fellow Advocate Award in 2009; IEEE-USA Citation of Honor Award, "For exemplary contributions in the inception and implementation of a health care IT vision in the US." 2011 Golden Core Award by the IEEE CS. Named: "Profesor Honoris Causa" Favaloro University, (Argentina); "Distinguished Visitor" by City of Puebla, Mexico (9/4/2013).

Position Statement: I have been involved with EMBS for the past 40 years in different capacities. Many of my contributions are at the intersection of healthcare, public health, national security and information technology disciplines, with science and technology public policy. While at IBM my focus was on technology: developed the first six clinical applications for the IBM PC; one of the pioneers on bedside terminals for Intensive Care; developer of a semi-expert, real-time, clinical decision support system, technical manager of the Nursing Point of Care System, the BME in the team of four that developed the first Teleradiology system and the first Picture Archival and Communications Systems to run on an IBM platform. During the 1996-97-98, I prepared for the Clinton/Gore administration, documents supporting: Electronic Health Records, Telemedicine Clinical Decision Support to the US Congress in addition to HIPAA security/privacy of medical information, and the Next Generation Internet. During the Bush Administration, while at NDU, I prepared to Congress 3 Special issues of the EMBS magazine on BME and: Bioterrorism, Homeland Security and the Health and Public Health Critical Infrastructures (2002,04,08 respectively). Very active on the Distinguished Lecturer Program for EMBS, SSIT and CS (in the 2013-2017, 75 lectures worldwide). Gave the inaugural speech to the IEEE-EMBC 2010 in Buenos Aires. Represent EMBS on the Board of Governors of the IEEE-SSIT. Supports the concept of providing Fast Access Internet (net neutrality) to every household, as the "utility of the 21st century", to avoid for example a digital divide in homecare delivery.



EDWARD H. LIVINGSTON (M'14) Edward H. Livingston, M.D., F.A.C.S., A.G.A.F., has served as Deputy Editor for Clinical Content of JAMA, The Journal of the American Medical Association since July 1, 2012. Before that, he was a Contributing Editor at JAMA for 3 years.

Born and raised in Los Angeles, Dr. Livingston received his Medical Degree from UCLA. He completed a General Surgery Residency at UCLA and served as the Administrative Chief Resident for Surgery in 1992. After Residency, he remained on the faculty at UCLA eventually serving as Assistant Dean of the Medical School and Surgical Service Line Director for the VA Greater Los Angeles Health Care System. He also founded the UCLA bariatric surgery program.

In 2003, he moved to Dallas to become the Professor and Chairman of GI and Endocrine Surgery at the University Of Texas Southwestern School Of Medicine. During this time period, Dr. Livingston headed the VA's national effort in bariatric surgery quality improvement. He was appointed as a Professor of Biomedical Engineering in 2007 at the University of Texas Arlington. Dr. Livingston became Chairman of the Graduate Program in Biomedical Engineering at UTSW in 2010.

Dr. Livingston has had peer review funding and has published in excess of 150 peer reviewed papers as well as numerous other scientific writings. He has also served on numerous local and national committees and is a past president of the Association of VA Surgeons. He continues to serve as a Professor of Surgery at UTSW.

Position Statement: 1) I am the Deputy Editor for Clinical Reviews and Education at the Journal of the American Medical Association. I've been working with the IEEE – EMBS for the last several years fostering communication between the engineering and clinical communities. By virtue of my role at JAMA, I hope to promote advances in biomedical engineering to the general medical readership of our journal.

2) I have been working with the leadership of some of the IEE journals to find ways to share publications to better inform our respective disciplines about research advances.

3) My involvement with the JAMA-IEEE-EMBS partnership convinced me to run for the AdCom position so that I can facilitate clinician involvement in Biomedical Engineering and to enhance the collaboration between our respective disciplines.

4) As a clinician with a background in BME, I think it is imperative for clinicians to work with engineers to foster the development of better tools clinicians can have to treat patients. I believe that participating in the AdCom will help with that mission.



JOHN TOROUS (S'03-M'07-GSM'08-M'12) John Torous, MD MBI a psychiatrist with a background in electrical engineering, clinical informatics, and computer sciences. My work focuses on creating new mental health technologies to advance understanding of early psychosis, and guiding their safe and evidence based use in clinical care. With my combined background I have built and programmed mental health research apps, conducted several app evaluation studies with clinical populations, and published over 50 peer-reviewed papers related to mobile mental health technologies with a focus on schizophrenia. However, I also understand that technology alone is not a panacea and am interested in its appropriate uses as well as its limitation. I have studied the ethical implications of smartphone apps in clinical care and co-chair the American Psychiatric Association work group on innovation as well as advise the NIH's All of Use one million person study on its smartphone based mood research. Generating transparent, reproducible, and actionable mobile health research results is my passion. Thus this EPINET CSC project is an exciting opportunity to apply my combined skillset to create, implement, and openly share digital mental health tools that will advance care.

Position Statement: John Torous is dual board certified in psychiatry and clinical informatics. As a representative he seeks to bridge the engineering and clinical worlds to ensure EMBS continues to be the trust source of expertise in the evolving digital health space. John has been committed to IEEE since a student and served as president of IEEE student branch chapter at UC Berkeley when studying electrical engineering and computer sciences. He has been passionate in advocating for the safe and ethical use of digital health technology while also educating the clinical community about the need to partner with and learn from the EMBS community. His work in digital mental health was featured on cover of IEEE Spectrum in April 2017. As a representative, he will seek to form stronger ties between EMBS and clinical communities through sponsoring joint meeting sessions, helping EMBS members navigate the medical publication landscape, and connecting members interested in digital mental health work. He will also reach out to potential junior members to boost numbers of new members and support efforts around standards in digital health.



NANCEY TREVANIAN TSAI (AM'16-M'17-SM'18) Nancey Trevanian Tsai, MD is a board certified Sports Medicine Physician, Diplomate of the American Board of Physical Medicine and Rehabilitation. She is a Clinical Professor of Neurosurgery at the Medical University of South Carolina. She is a past Chair of the American Council on Exercise, a past Chair of the South Carolina Medical Association Young Physicians Section, a member of the Medical Society of South Carolina, an officer of the South Carolina section of the IEEE. She has a provisional and utility patent for the Blink Reflexometer, a full patent in Australia and Japan, with full US patent pending. She is the President of RADx Technologies, a holistic training program ("Injury Prevention Health Technology for the Growing Athlete"). She has also been a member of the USA Field Archery Team in 2010, 2012, and a national coach for USA Archery/Para-archery.

Position Statement: As a senior member and section officer of IEEE who has achieved success in academic medicine, private practice, as well as being an innovator, and entrepreneur, I have experience with process and overcoming systemic and social barriers to creating meaningful change. One of the mid-life and career challenges is to articulate the necessary elements to assist others in finding fulfillment in their work, their life. Fortunately, I have reached a state where I am able to give of my time and energy freely and am heeding the call to contribute.

The IEEE is one of the few organizations that has continue to evolve, encompassing a wide berth of industries that have specialty interest and use for electronics and engineering. Remarkably, it has maintained a relatively wholesome reputation, focused on efficiency, effectiveness, and productivity.

Medicine and Biology continue to be areas where there are gender and racial discrepancies in promotions and remuneration, and it is difficult to identify whether this is a learned phenomenon or yet another false ceiling to break through. The myths and unspoken beliefs lead to inaccurate research findings and confounding outcomes when deployed. By challenging known and unnamed assumptions in science and technology, a symphony of diverse voices and perspectives may elevate industry to greater harmony for the human state.

I am grateful to have the time, energy, and stability to serve in this capacity. I look forward to engaging with our members meaningfully.