EMI Elections to the Board of Governors Meet the Official Nominees

The EMI Nominating Committee met to review the nominations received from the general membership and, following article <u>7.4.3 of the EMI bylaws</u>, established the slate of candidates below for two open positions on the Board of Governors to serve from October 1, 2022 to September 30, 2025.

The EMI Board has ratified the list of candidates established by the EMI Nominating Committee.

Members of EMI who are eligible to vote (*EMI members who are not students and who are current with their membership dues by the date of record – May 19*) will receive their email ballot from **support@directvote.net** (*please allow all e-mails from this address*) with log-in credentials, on or about **May 23, 2022**.



Jia-Liang Le, Ph.D., P.E., M.ASCE Professor of Civil, Environmental, and Geo-Engineering University of Minnesota

Short Bio: Dr. Jia-Liang Le is Professor of Civil, Environmental, and Geo- Engineering at the University of Minnesota. He earned his Bachelor of Engineering (First Class Honors) and Master of Engineering in Civil Engineering from the National University of Singapore, and a Ph.D. in Structural Engineering and Mechanics from Northwestern University. He is a registered Professional Engineer in Minnesota and a member of American Society of Civil Engineers (ASCE), American Concrete Institute (ACI), and Society of Engineering Science (SES). His research interests include fracture mechanics, probabilistic mechanics, scaling, computational mechanics, and structural reliability. He published two books and over 70 journal papers. He currently chairs the ASCE-ACI joint committee on fracture mechanics, Engineering Failure Analysis, and Science China Technological Sciences. He has received several research awards including the Army Research Office Young Investigator Award, the EMI Leonardo da Vinci Award from ASCE, and the Society of Engineering Science Young Investigator Medal.

Vision Statement: Engineering mechanics is a beautiful scientific discipline rooted at the intersection of science and engineering. It impacts almost every aspect of our daily life including energy efficient building structures, sustainable transportation infrastructure, resilient lifeline systems, novel construction materials, advanced microelectronic devices, innovative medical devices, etc. ASCE EMI has been a flagship professional society in this field. I feel very fortunate and proud to be part of this very vibrant scientific community.

I attended my first EMI conference in 2008 when I was a graduate student. Since then, I have been a regular attendee of both US based and international EMI conferences. I regard the EMI as my home

community. I have been actively participating in different services in EMI. I am currently the associate editor of the ASCE J. Eng. Mechanics, and member of the technical committees on probabilistic methods and computational mechanics. I have been co-organizing the mini-symposium on quasibrittle fracture mechanics annually for the EMI conference since 2013.

I am privileged to be considered for the EMI Board of Governors. Looking forward, I hope to contribute to the EMI community in the following ways: 1) strengthen the bridge between EMI and other professional societies including the Society of Engineering Science and the American Concrete Institute through activities such as promoting EMI activities to these communities and initiating joint technical committees, 2) promoting diversity and equity in EMI through organizing outreach events during the EMI conferences (undergraduate research forum, career path panel, round-table discussion session on emerging topics), and 3) broaden the impact of the work of the EMI community through encouraging and organizing ASCE special publications and special issues for the Journal of Engineering Mechanics.



Richard A. Regueiro, Ph.D., A.M.ASCE Department of Civil, Environmental, and Architectural Engineering University of Colorado Boulder

Short Bio: Richard Regueiro received his PhD in Civil and Environmental Engineering from Stanford University in 1998 and became a member of the technical staff at Sandia National Laboratories, California from 1998 to 2005. In 2005, he began his academic career in the Department of Civil, Environmental, and Architectural Engineering at the University of Colorado Boulder (CU Boulder), where he is now full professor. His teaching and research focus on computational multiscale multiphysics materials modeling for simulating inelastic deformation and failure in heterogeneous porous media, including saturated and partially saturated soil and rock, unbonded particulate materials (sand, gravel, metallic powders), bonded particulate materials (sandstone, concrete, energetic materials), and soft biological tissues (ocular lens, lung parenchyma, vertebral disk). Scales of interest range from the microstructural and ultrastructural to the continuum. He has project leadership experience formerly as PI for an ONR MURI project, and currently as PI for a DOE PSAAP Center. He has served in various CU Boulder leadership positions such as Associate Chair for undergraduate and graduate education. He continues to serve the EMI as an Associate Editor for the ASCE Journal of Engineering Mechanics. He was previously Chair of the Modeling Inelasticity and Multiscale Behavior Committee of EMI.

Vision Statement: It would be an honor to serve you on the Board of Governors (BoG) of the Engineering Mechanics Institute (EMI). We are unique group of mechanics educators, researchers, and industrial consultants and practitioners who make up EMI. Together, we focus on mechanics problems of relevance not only in civil engineering but also in bioengineering, manufacturing, aerospace, extraterrestrial geomechanics, material science, chemical engineering, renewable energy, sustainable materials processes, carbon sequestration, defense, ... the list goes on. Through our engineering

mechanics research, we take advantage of modern advances in machine learning, in-situ experimental diagnostics, inverse methods, multiscale modeling, V&V/UQ, and exascale computing, for instance. I was fortunate to have been trained as a civil engineer both in my undergraduate and graduate studies, yet with a focus on structural mechanics, geomechanics, continuum mechanics, and computational mechanics, leading to a broad application space. As a member of the BoG of EMI, I would continue EMI's tradition of recruiting new members not only from civil engineering but the broader engineering mechanics community as a whole, as well as emphasizing diversity and inclusion. I would also work to strengthen EMI's ties with both US and non-US academic institutions, national laboratories, and industry collaborators, bringing them together at our annual conference, whether in the US or abroad. It would be an honor to represent you and help diversify the EMI membership in activities sponsored by EMI and the broader mechanics community.



Ertugrul Taciroglu, Ph.D., F.EMI, M.ASCE Professor and Department Chair Civil & Environmental Engineering Department The University of California, Los Angeles

Short Bio: Ertugrul Taciroglu earned a B.S. degree in 1993 from Istanbul Technical University and M.S. and Ph.D. degrees from the University of Illinois at Urbana-Champaign (UIUC) in 1995 and 1998, respectively. After a stint at the Center for Simulation of Advanced Rockets (UIUC) as a postdoctoral research associate, he joined the Civil & Environmental Engineering Department at UCLA in 2001, where he is a Professor and Department Chair currently. His research activities span the disciplines of theoretical & applied mechanics, and structural & geotechnical engineering. He is presently conducting projects on soil-structure interaction, system identification, and regional risk and resilience assessment for natural hazards. Dr. Taciroglu is the 2006 recipient of a U.S. National Science Foundation CAREER award and the 2011 Walter Huber Prize of the American Society of Civil Engineers (ASCE). He was elected a Fellow of the ASCE Engineering Mechanics Institute in 2015. He is a Section Editor of the ASCE Journal of Structural Engineering and serves on the editorial boards of Soil Dynamics & Earthquake Engineering, Structural Control & Health Monitoring, and Earthquake Spectra.

Vision Statement: I have been involved with the Engineering Mechanics Institute since its inception in 2007 and have benefitted immensely from it. It offered me a community to grow within as a young professional, and I was glad to see the continued growth and popularity of its conferences over the years. I have served as an Associate Editor of EMI's flagship Journal of Engineering Mechanics for more than a decade and the Computational Mechanics Committee—first as a member of it and later as its chair—for numerous years. My most recent role within the EMI has been my service as a member of its Board of Governors. As my term is ending in this capacity, I was compelled to continue this service to the EMI and help the Board to develop and implement new initiatives, which, I believe are essential for creating a sustainable and financially viable future for EMI, which has generally operated on uncomfortably tight financial margins. These include the development of a robust extramural sponsorship program, monetized educational products that target our recipient industries, and other

measures that need to be coordinated with ASCE. I am ready to devise viable strategies with the Board and implement them. I believe the institutional memory I will be bringing into this effort will be essential, hence my interest in this nomination.



Alexandros A. Taflanidis, Ph.D., A.M.ASCE Professor in the Department of Civil and Environmental Engineering and Earth Sciences Notre Dame University

Short Bio: Dr. Alexandros Taflanidis is Professor in the Department of Civil and Environmental Engineering and Earth Sciences at the University of Notre Dame. He holds a concurrent position at the Department of Aerospace and Mechanical Engineering, and he is a fellow of the Kellogg Institute of International Studies, the Pulte Institute for Global Development, and the Fitzgerald Institute for Real Estate. He received his Bachelors (2002) and Masters (2003) in Civil Engineering from the Aristotle University of Thessaloniki, Greece. He got his PhD in Civil Engineering with a minor in Control and Dynamical Systems from the California Institute of Technology (2008). His research and teaching focus on uncertainty quantification and uncertainty-conscious analysis/design, with applications to dynamical system design, natural hazard risk mitigation, and sustainability/resilience of civil infrastructure systems. A special area of interest for his group is the integration of computational statistics techniques in coastal risk assessment and real-time emergency response management, developing practical tools to guide planning decisions of different stakeholders through partnerships with the Army Corps of Engineers, FEMA, NOAA and the NSF SimCenter (part of the Natural Hazard Engineering Research Infrastructure network). Dr. Taflanidis has also a strong interest in applications of engineering for international development, working with students to discover engineering innovations that empower vulnerable communities to build resilience to hazards, while training the next generation of global citizens.

He has been recognized with the 2021 Walter L. Huber Civil Engineering Research Prize, the 2018 EMI Award for Excellence in Service, the 2019 and 2014 Joyce C.S.C Awards for Excellence in Undergraduate Teaching, the 2020 Kellogg Institute for International Development Award for Excellence in Undergraduate Advising, and the 2014 NCEEES Award for best undergraduate project linking undergraduates to the professional practice. He is a member of the EMI Probabilistic Methods Committee and Dynamics Committee, serving as the former's Chair, Vice Chair and Control Group member for the past six years. He is also a member of the editorial board of the Journal of Structural Engineering, the Journal of Uncertainty Quantification and Earthquake Engineering and Structural Dynamics, while also currently serving as a Guest Editor for the Journal of Engineering Mechanics and the Bulletin of Earthquake Engineering.

Vision Statement: Over the past 14 years I have called EMI my academic home, and I have watched with excitement as our community has flourished and expanded over the years. In fact, I was fortunate to begin my service to the EMI community when my career and the institute itself were both in their

infancy. The manner in which this community has received and supported me from my earliest days as a mechanician has inspired my deep commitment to contribute in every way possible to EMI's continued success. Moreover, having grown up professionally with the institute, I have been able to see it from different vantages: as a student and eventually full member attending all EMI conferences since 2008, as a frequent mini-symposia organizer, and as a conference co-chair for the 2012 EMI/PMC conference at the University of Notre Dame. Within its technical division, I have similarly served as a member of both the Probabilistic Methods Committee and the Dynamics Committee, as the organizer of the former's Student Paper Competition (2013-2017), a regular judge for that competition, and ultimately a member of the leadership team of that committee (concluding now six years of service as a control member, vice-chair and chair). I am currently also serving as one of the guest editors for the Journal of Engineering Mechanics Special Collection on the EMI Conference Student Competition Finalist Papers. This body of contributions to EMI, recognized by my receipt of the 2018 EMI Award for Excellence in Service, provides strong evidence of the servant leadership I now humbly want to continue as a member of EMI's Board of Governors (BoG).

I hope to use the BoG as a platform to further amplify my service to EMI and our vibrant community. If elected I plan to focus my immediate efforts on actively engaging and recruiting EMI's next generation. Personally, early exposure to a welcoming EMI community vitally shaped my academic views and accelerated my professional trajectory. I am eager now to create the same opportunities for other early career mechanicians. I recognize that the ongoing pandemic, while undoubtedly impacting all of us, disproportionately affected students and other early career professionals by robbing them of opportunities to network and share their scholarship with the border community. Building upon my past experience with student competitions and the current special collection, I will prioritize creating new opportunities to engage/re-engage early career mechanicians, establishing additional incentives/mechanisms for their participation in our conferences and new venues for exposure to the institute. The lack of exposure to one another's work and ideas has been the greatest loss of the pandemic for us all, thus I hope to also renew exposure for the institute more broadly, working to expand our connections internationally as well as with federal agencies domestically, leveraging my personal contacts and collaborations with different agencies and research networks. The latter will be vital to telling the important story of EMI's contributions to society, including creating opportunities (and reasons) to attend our annual conference, and cultivating new relationships that can maintain EMI's relevance in a rapidly evolving research landscape.



Haim Waisman, Ph.D. Associate Professor Department of Civil Engineering and Engineering Mechanics Columbia University

Short Bio: Haim Waisman is an Associate Professor of Civil Engineering and Engineering Mechanics at Columbia University. His research interests are in computational fracture mechanics, for which he develops advanced finite element methods for modeling and design-optimization of structures under extreme conditions. Dr. Waisman obtained his Bachelor and Master degrees in Aerospace Engineering

from the Technion-Israel Institute of Technology, and a Doctorate in Civil Engineering from Rensselaer Polytechnic Institute in 2005. He was a post-doctoral fellow at the Scientific Computing Research Center (SCOREC) at RPI and at the Mechanical Engineering department at Northwestern University, before joining Columbia University in 2008. Dr. Waisman is the recipient of the 2012 Department of Energy Early Career Award, the 2014 Leonardo Da Vinci Award from the Engineering Mechanics Institute of ASCE and was named fellow of EMI in 2022. He is currently serving as an associate editor for the Journal of Engineering Mechanics, the executive council of the US Association for Computational Mechanics (USACM) and is the past chair of the EMI computational mechanics committee.

Vision Statement: With your support, I wish to be elected to the EMI Board of Governors, so that I can bring in new ideas to better serve our community. Advancing Engineering Mechanics through research, education and community service has been the primary goal of my career. Thus, my affiliation with EMI, where I find my natural fit to be, has been longstanding.

I have been an active EMI member attending and participating almost all EMI conferences since 2008. Let me briefly highlight key service and leadership activities that I have carried out over the years: (i) membership in three technical committees, (ii) consistent organization of minisymposia and tracks in EMI conferences, and serving on the scientific board of many EMI conferences, (iii) chairing the Computational Mechanics committee for two years, during which the committee membership, student participation as well as the committee activities greatly expanded, (iv) participation in the EMI strategic planning committee, which collected data and advised the Board how to move forward, (v) serving as an Associate Editor for Journal of Engineering Mechanics, during which I also guest edited a successful special issue for JEM, and (vi) serving as a co-chair of the 2021 EMI conference at Columbia University, which under the pandemic circumstances at the time, can be regarded a successful conference.

If elected, I will bring my experience and enthusiasm, and strive to lead EMI into the future by: (i) providing new ideas for broadening and growing EMI participation (with the attempt to reduce conference registration costs), while making sure the quality and "family feel" of EMI remains unchanged, (ii) developing a new and interactive educational program for our community, aimed at enriching our knowledge in the diverse topics of Engineering Mechanics, strengthening the interaction between EMI members, and engaging the community throughout the year, and (iii) developing new connections and enhancing current ties with National Labs, Industry, and neighboring organizations, such as USACM and ASME, where I have a significant overlap.