



Members' Newsletter – September 2022

TE2022 Conference Update (Jul 5-8, 2023 @MIT)

<https://te2022.org>

After several years of virtual events, TE2022 was successfully held this July at MIT in Cambridge, Massachusetts, USA.

TE2022 was designed to promote healing from several pandemic years and a return to face-to-face scholarship and community building.

Each day was organized with keynote speakers, panel discussions, paper presentations, hands-on experiments, and social events. Amongst more than 150 paper proposals from 24 nations, 82 were reviewed and selected for presentation. Additionally, 12 were selected as posters. In the end, more than 130 attendees embraced in person dialogue, leading to a vibrant and successful scholarly event.

We were lucky to be joined by colleagues from engineering and scholars who study engineering. Professor Dan Hastings, the Associate Dean of Engineering at MIT and Head of the Aeronautics and Astronautics department kicked off the conference with a welcome. Each day was organized thematically: engineering education on the first day, engineering practice on the second day, and research on engineering on the final day.

Keynotes on engineering education were kicked off by Dr. Babi Mitra discussing *"Is Engineering Education Delivering? Cross-departmental Engineering Education at MIT"*, and Dr. Ruth Graham on *"COVID-19: A Catalyst for Change in Global Engineering Education"*. The second day, emphasizing engineering practice included Prof. Oli de Weck on *"Technology Roadmapping and Development"*, Prof. Richard de Neufville led a back and forth dialogue on *"Flexibility in System Design"*, and Chandrakant D. Patel shared his west coast professional experience with *"The Rise of the T-Shaped: Multidisciplinary depth and breadth in light of cyber-physical-human systems."* Finally, as the third day focused on research on engineering, Prof. Christine Ortiz shared her experiences at MIT and with Station 1, discussing *"Socially-Directed Science and Technology"*.

Dr. Mitra led a panel on trends in engineering education on the first day, Dr. Donna Rhodes led a panel on the second day on engineering practice with an emphasis on the role of digital transformation, and Prof. Paul Grogan of Stevens Institute of Technology led a panel on day three regarding research on engineering.

Prof. Wes Harris, the incoming Vice President of the National Academy of Engineering in the United States, shared his welcome at a gala dinner overlooking the Charles River at sunset, challenging ISTE to be bold, and to seek the principles and fundamentals of transdisciplinary and systems engineering.

Conference participants had the opportunity on each day to join in engineering teamwork experiments, including one from MIT regarding the tradeoffs in design of a hypothetical Martian city, "Star City", and another an interactive stakeholder simulation towards reduction of greenhouse gases (GHG) in the maritime industry.

ISTE Membership

Since the last newsletter we have grown from 129 to 175 members. Please continue to promote the Society through your networks and if you see any opportunities for us to reach new audiences, please let us know.

We would like to take this chance to welcome new members Dr. Iryna Heiets, from RMIT in Australia; Tomiya Kimura from Keio University, Japan; Laurent Lioté from UCL, UK; Eva María Guerra Leal from EGADE Business School, Mexico; Laura Arenas from Universidad de Barcelona, Spain, and Kendrik Yan Hong LIM, from Nanyang Technological University, Singapore.

Dr. Iryna Heiets is a Senior Lecturer in Aviation at RMIT University. Iryna's research focuses on air transportation management, aviation strategy, game theory, coopetition strategy, airline marketing, and operations. Dr. Iryna received her Ph.D. from the National University (Ukraine), where she studied in Bachelors and Master's programs and then worked as an Assistant and Associate Professor at the Department of Air Transportation Management leading a major redevelopment of the program. Prior to coming to RMIT University, Dr. Iryna visited the Université de Montpellier in France as a Post-doctorate and improve her qualification in Embry-Riddle Aeronautical University in the USA studied E-business. She had been granted the Ministry of Education and Science of Ukraine (Kyiv, UA, 2014) and the European Commission grant (Brussels, BE, 2015). Dr. Iryna also served as a guest lecturer at Sumy State University. She coordinates and teaches about six courses every year in Melbourne, Singapore, and Hong Kong. Dr. Iryna leads the way in terms of bringing blended learning and technology to the classroom. She regularly presents the results of her research at conferences around the world.

I am Tomiya Kimura, a PhD candidate at Keio University SDM. I studied Industrial Engineering at university and knowledge management at Master's degree. I usually work for a tire manufacturing company in Japan. I worked for the company for 9 years in a manufacturing plant and 4 years in a technical center in Thailand, where I developed production strategies for 13 plants in India, Indonesia, Vietnam, Taiwan, Thailand and China.

My research is visualization of tire manufacturing. I have contributed to the Journal of Visualization of Communication in Tire Manufacturing, Visualization of Tire Indirect Cost, and Visualization of Rehabilitated Tires.

In the future, I would like to focus my research on how to show the visualization of tire manufacturing to people on the factory floor and how to get them to make decisions based on it.

I am Laurent Lioté, a 3rd year Public Policy PhD student at UCL, looking at the interplay between engineers, policy makers and technology in delivering the UK's net zero transition. I am applying ethnographic methods to uncover how engineers and policy makers interact across the UK government with a particular focus on renewable energy production modelling.

Prior to starting my PhD, I worked as an analyst for the business intelligence firm Informa, helping my clients understand IT market trends and adapt their strategies accordingly.

I hold a BSc in Social Anthropology ('13) and an MSc in Social Policy ('15) from the London School of Economics.

Eva María Guerra Leal is currently Director of the MBA and the EGADE - UNC Charlotte MBA in Global Business & Strategy program at EGADE Business School, Monterrey office. She also holds a certification in Business Analytics from the University of Texas at San Antonio and is a member of the Business School's Distinguished Faculty Circle.

Her areas of expertise include customer-centric and service-driven organizations, marketing strategies, organizational behavior, service management and business intelligence. Which in turn, have led her to cooperate since 2014 with Tecnológico de Monterrey in matters of teaching, innovation, research and consulting. Dr. Guerra also participated in the design of training units of the Tec21 and activities of the MFD+ models, the Institutional Committee of Classification of professors, and teaches online graduate courses and continuing education programs.

Her extensive experience in the financial services industry supports her participation in the Strategic Focus Research Group (GIEE), in Social Innovation and the Center for Financial Access, Inclusion and Research (FAIR). Likewise, her extraordinary work and outstanding academic background as Ph.D. in Business Administration has been distinguished on several occasions with the Intellectual Vitality, Service and Leadership award.

Laura Arenas holds a BSc in Economics from the Universidad Autónoma de Baja California, a Master's in Finance specializing in financial econometrics from EGADE Business School, a Master's in Executive Coaching from ISEP Instituto Superior de Estudios Psicológicos and is currently studying for a PhD in Business at the Universidad de Barcelona. Laura is focusing on analysis of the impact of innovation on banking and finance, investment in new technologies and risk and return modeling, and has published in different journals and book chapters. She is also involved in working groups related to decision-making and fuzzy sets and the financial and economic impacts of ESG. Laura was previously a Research and Teaching Assistant at the School of Economics at Tecnológico de Monterrey and is currently lecturing at the EALDE Business School and Universidad de Barcelona, imparting courses on IT Risk Management, IT Risk in Software and Applications, Risk Simulation and Modeling, Portfolio Management, and Internal Auditing. She has taught seminars and given conferences in Spain and internationally. Professionally, Laura has been associated to such companies as Deloitte, Morgan Stanley Capital International (MSCI), Banc Sabadell and CaixaBank Tech, working on programs related to Risk Modeling, IT Risk, Compliance and Regulatory Reporting.

*Kendrik Yan Hong LIM is currently pursuing a PhD specialising in Engineering Informatics at Nanyang Technological University, Singapore, with a particular focus on translating theoretical digital twin paradigms into industrial applications. He also leads projects as a research engineer at Singapore's Agency of Science and Technology (A*STAR). Kendrik holds a Bachelor's Degree in Mechanical Engineering from NTU, and completed a Master's Degree in Industrial Engineering from Chiba University, Japan, under a government scholarship.*

Interesting Publications

In this section we aim to identify publications which might be of interest to the community. If you come across any publications which you feel worthy of highlighting, please let us know.

Research Opportunities

New Centre for Transdisciplinary has just been established at Umeå University. They are holding an opening conference 26-28 October 22 [AI for good? The Opening Conference of TAIGA \(umu.se\)](#)

Other News

ISTE LinkedIn Group: Members have increased from 58 (16 June 2022), to 80 members (27th September 2022). To access the group, click on this link [ISTE LinkedIn Group](#).

We are keen to hear from our members. If you have anything you would like to include in the next edition of the ISTE newsletter, please email sl2091@bath.ac.uk