Speakers

1. Invited Lecture

Real-time distributed and personalized learning with applications to energy

Anthony Kuh

Professor, Department of Electrical Engineering University of Hawaii at Manoa

Email: kuh@hawaii.edu

Short Biography

Anthony Kuhreceived his B.S. in Electrical Engineering and Computer Science at the University of California, Berkeley in 1979, an M.S. in Electrical Engineering from Stanford University in 1980, and a Ph.D. in Electrical Engineering from Princeton University in 1987.He previously worked at AT&T Bell Laboratories and has been on the faculty in Electrical Engineering at the University of Hawai'i since 1986. He is currently a Professor in the Department and previously served as Department Chair. His research is in the area of neural networks and machine learning, adaptive signal processing, sensor networks, and renewable energy and smart grid applications. He won a National Science Foundation Presidential Young Investigator Award and is an IEEE Fellow. From 2017 –2021 he served as program director for NSF in the Electrical, Communications, and Cyber Systems (ECCS) division working in the Energy, Power, Control, and Network (EPCN) group. At NSF he also assisted in initiatives including Harnessing the Data Revolution (HDR), the Mathematics of Deep Learning (MoDL), the AI Institutes, Cyber Physical Systems (CPS), and Smart and Connected Communities.He previously served on the Awards Board of the IEEE Signal Processing Society and is President of the Asia Pacific Signal and Information Processing Association.

2. Keynote Lecture

Plasma aided combustion and green manufacturing

Yiguang Ju

Professor, Department of Mechanical and Aerospace Engineering, Princeton University

Email: yju@princeton.edu

Short Biography

  Yiguang Ju is the Robert Porter Patterson Professor at Princeton University. He received his bachelor degree from Tsinghua University in 1986, and his PhD degree in Mechanical and Aerospace Engineering from Tohoku

University in 1994.　He was appointed as an Assistant and Associate Professor at Tohoku University from 1995 to 1999, and as a Chang-Jiang Professor and the Director of Thermo-physics Institute at Tsinghua University in 2000. He joined Princeton University in 2001. Ju's research interests include combustion, alternative fuels, propulsion, plasma chemistry, and energy materials for low carbon energy conversion and manufacturing. He has published more than 260 journal articles. He is an ASME Fellow and an inaugural Fellow of the Combustion Institute. He served as the chair of US Sections of the Combustion Institute, Board of Director of the Combustion Institute, the NASA rocket study committee, and the NAS steering committee for NASA decadal survey on biological and physical sciences research in space. He received the Bessel Research Award from von Humboldt Foundation, NASA Director's appreciation award, the AIAA Propellants and Combustion award (2021), and the Alfred C. Egerton Gold Medal from the Combustion Institute (2022).

3. Keynote Lecture

Understanding Distributed Agreement as the Fabric of Distributed and Decentralized　Infrastructures

Xavier Défago

Professor, Department of Computer Science,, Tokyo Institute of Technology

,Email: defago@c.titech.ac.jp

Short Biography

Xavier Défago is a professor in the School of Computing at Tokyo Institute of Technology. He is also a member of the Center for Cybersecurity Research and Education at Tokyo Institute of Technology. He obtained master (1995) and PhD (2000) in computer science from the Swiss Federal Institute of Technology in Lausanne (EPFL) in Switzerland. He was a research intern at NEC C&C central research laboratories in 1995-1996. Before his current position at Tokyo Tech, he was a faculty member at the Japan Advanced Institute of Science and Technology (JAIST).
Meanwhile, he has also been a PRESTO researcher for the Japan Science and Technology Agency (JST), and an invited researcher for CNRS (France) at Sorbonne University (Paris, France) and at Inria Sophia Antipolis (France).
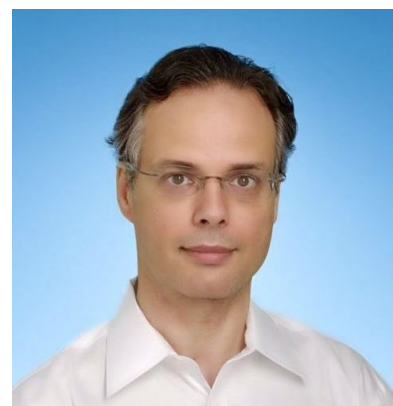
He is a member of the IFIP working group 10.4 on dependable computing and fault-tolerance. He served as program chair of several international conferences in distributed systems and dependability (DSN 2023, SRDS 2014, ICDCS 2012, SSS 2011).
His research interests include various aspects of dependable and secure distributed systems, cooperative robotics, embedded systems, and programming languages. He is involved in joint research on blockchain-based distributed energy trading with Mitsubishi Electric Corporation, on self-driving vehicle networks with the University of Tokyo, and on the formal verification of multi-robots algorithms with Sorbonne University and University of Lyon I (France).

4. Invited Lecture

New Catalyst Design for Clean Energy Transition

Xu Rong

Research Director for Engineering and Physical Sciences

Co-Director, Singapore Energy Centre

Professor, School of Chemical and Biomedical Engineering, Nanyang Technological University

Cluster Director, Renewables & Low-Carbon Generation (Solar)

Energy Research Institute @ NTU (ERI@N)

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Short Biography

Dr Rong Xu received her Bachelor, Master and Ph.D. degrees in Chemical Engineering from National University of Singapore. She joined Nanyang Technological University (NTU) as an Assistant Professor in 2004 and was promoted to Associate Professor in 2010 and Professor in 2017. Her lab has actively worked in the field of photo-, electro-, and thermal catalysts for energy and environmental applications. She was one of the Highly Cited Researchers 2020 by Clarivate Analytics. She is currently an Associate Editor of Journal of Catalysis, and EnergyChem. She is also an Editorial Board Member of ACS Sustainable Chemistry & Engineering, ACS Central Science, and Chemical Engineering Journal. She has served as the Associate Chair Research (2011-2014) and Interim Chair (2017-2019) of the School of Chemical & Biomedical Engineering, NTU. She is currently the Research Director of Engineering and Physical Sciences in Senior Vice President Research's office. She is also the founding Director and currently the co-Director of Singapore Energy Centre (SgEC), an industrial consortium with its mission to develop innovative solutions to meet the growing energy demand through research and education. In her role as a lecturer, she is devoted to teaching foundation courses for engineering training, including Mass & Energy Balance and Heat Transfer.

5. Keynote Lecture

Electrifying Synthesis: Toward Green Sustainable Organic Synthesis and Beyond

Shinsuke Inagi

Professor, Department of Chemical Science and Engineering, Tokyo Institute of Technology
Email: inagi@cap.mac.titech.ac.jp

Short Biography

Shinsuke Inagi received his PhD at Kyoto University in the field of polymer chemistry in 2007. After a postdoctoral research at Kyoto University, he started his academic carrier at Tokyo Institute of Technology as an Assistant Professor in 2007.Since then, he engaged in research on electrosynthesis.He was later promoted to Lecture in 2011 and Associate Professor in 2015. Since April 2022, he is Full Professor in the same institute.He was concurrently a PRESTO researcher at the Japan Science and Technology Agency (JST) (2018-2022).He is the recipient of numerous prizes, including the 2019 Tajima Prize of the International Society of Electrochemistry (ISE)and the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology (The Young Scientists' Prize of MEXT).He serves on Editorial Advisory Board of ChemElectroChem.His current research interests include the electrosynthesis of novel polymeric and functional materials obtained with the aid of Bipolar Electrochemistry.He is currently leading a research group of young and active professors (Sustainable and Functional Redox Chemistry Group), launched in the Chemical Society of Japan (CSJ).

6. Keynote Lecture

Turquoise Hydrogen - A possible solution for Renewable Energy Scarce Countries in Energy Transition Period

Chan Siew Hwa

Co-Director, Energy Research Institute @ NTU (ERI@N)
Professor, School of Mechanical & Aerospace Engineering, Nanyang Technological University
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Short Biography

Dr CHAN Siew Hwa is a Fellow of Academy of Engineering, Singapore (SAEng), a Fellow of ASEAN Academy of Engineering and Technology (AAET), President's Chair in Energy and a professor in Nanyang Technological University (NTU). He joined NTU in 1991 after obtaining his PhD and subsequently working as a post-doctoral researcher at Imperial College London. He leads the hydrogen and fuel cell research at Energy Research Institute @ NTU. Since 2017, he has been appointed as Senior Vice President of China-Singapore International Joint Research Institute in China-Singapore Guangzhou Knowledge City, focusing on incubation and commercialization of technologies. Dr Chan has been active in serving academic & research communities and industries such as Singapore's covering focal point for the Sub-committee on Sustainable Energy Research (SCSER) under the ASEAN Committee on Science, Technology, and Innovation (COSTI), Ministry of Trade and Industry (MTI) Singapore's Future Energy Technology (Hydrogen) Watch Group, NUS's Governing Board of Centre for Hydrogen Innovation, Advisory Board of Total SA and Sydrogen Energy, etc. He is also active in commercialization of technologies including 12 technology licensing. Dr Chan was a Director of Maz Energy Pte Ltd (2004 – 2022) with core business in nitroparaffin-based fuel additives and founded Xin Xiang (Guangzhou) Hydrogen Technologies Co., Ltd., which is a tech-company manufacturing key components of PEMFC. He has published ~300 refereed journal papers with total citations of >15K and h-index of 64. He was a recipient of NTU's Teacher-of-the-year, Nanyang Award (Research Excellence), Nanyang Award (Innovation Entrepreneurship), George-Stephenson Medal from IMechE, UK, Outstanding Scientific Achievement from International Association of Hydrogen Energy (IAHE), USA, Star of Innovation Talent award from Guangzhou government, World's Most Influential Scientific Minds from Thomson-Reuters, etc.