VIRTUAL IEEE-NEMS 2022

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RM 001	RM 002	RM 003	RM 004	RM 005	RM 006	RM 007
https://reurl.cc/mGmYLM	https://reurl.cc/Kpa9Ag	https://reurl.cc/zMd5W6	https://reurl.cc/g0qYzX	https://reurl.cc/bkOmnM	https://reurl.cc/Np7xpp	https://reurl.cc/RjZkj9

April 14 [Thursday] (UTC+8)							
Time (UTC+8)	**RM 001**						
08:55-09:00	**Opening Ceremony**						
09:00-09:45	EDOM Plenary Lecture 1: **Akihiro Kusumi**, Okinawa Institute of Science and Technology Graduate University ***Metastable Nano-liquid Signaling Platforms on the Cell Membrane as Revealed by Single Molecular Imaging***					Chair: Tim Yeh	
09:45-10:30	EDOM Plenary Lecture 2: **Burn J. Lin,** National Tsing Hua University ***Lithography Advances to Shrink IC by a Million Times***					Chair: Thomas Lei	
10:30-10:40	***Break (10 min)***						
10:40-11:10	**RM 001**		**RM 002**		**RM 003**		
	Keynote Lecture 1 **Dino Di Carlo**, University of California, Los Angeles ***Lab on a Particle Technology to Scale Biological Research 1000-fold*** Chair: Eric Chiou		Keynote Lecture 2 **Hiroshi Toshiyoshi**, The University of Tokyo ***Silicon Oxide Electret as a Power Generation Material*** Chair: Wibool Piyawattanametha		Keynote Lecture 3 **Katsuo Kurabayashi**, University of Michigan, Ann Arbor ***Plasmo-Opto-Electro-Fluidic Biosensors for Critical Care Medicine*** Chair: Aaron Ohta		
11:10-12:40	**RM 001**	**RM 002**	**RM 003**	**RM 004**	**RM 005**	**RM 006**	**RM 007**
	Invited Session T1.1	Invited Session T1.2	Invited Session T1.3	Invited Session T1.4	Invited Session T1.5	Invited Session T1.6	Invited Session T1.7
	Novel Micro/Nano Systems for Bio and Energy Applications Chair: Sung-Yong Park	**Advanced Nanofluidic Systems for Single Molecule Detection** Chair: Wei-Lun Hsu	**Functional Materials and NEMS/MEMS** Chair: Akio Higo	**Advanced Fabrication Technologies for Nano/Micro Systems** Chair: Yoshikazu Hirai	**Emerging Micro- and Nano-scale Sensing and Manipulation Techniques** Chair: Tim Yeh	**MEMS/NEMS Based Microfluidic and Medical Devices** Chair: Sang-Seok Lee	**Wearable / Stretchable Sensors and Liquid-Metal Systems** Chair: Aaron Ohta
12:40-12:50	***Break (10 min)***						
12:50-14:20	Invited Session T2.1 **Smart Mechatronics for Energy Harvesting** Chair: Daisuke Yamane	Regular Session T2.2 **Micro/Nano Fluidics** **Paper ID: 103, 110, 118, 119, 133, 134** Chair: Yu-Jui (Ray) Fan	Regular Session T2.3 **Micro/Nano Electro-Mechanical Systems I** **Paper ID: 114, 127, 128, 130, 138, 145** Chair: Cheng-Hsin Chuang	Regular Session T2.4 **Molecular Sensors, Actuators, & Systems I** **Paper ID: 115, 120, 121, 122, 135, 136** Chair: Pin-Chuan Chen	Regular Session T2.5 **Nanobiology / Nanomedicine** **Paper ID: 107, 108, 165, 166, 171, 174** Chair: Chi-Shuo Chen	Regular Session T2.6 **Nanomaterial Based Devices and Systems I** **Paper ID: 109, 126, 131, 141** Chair: Hsieh-Fu Tsai	

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April 15 [Friday] (UTC+8)							
Time (UTC+8)	RM 001						
09:00-09:45	Hygeia Touch Plenary Lecture 3: **Robert S. Langer**, Massachusetts Institute of Technology ***Microtechnologies and Nanotechnologies in Drug Delivery*** Chair: Chao-Min Cheng						
09:45-10:30	EDOM Plenary Lecture 4: **Yi Cui**, Stanford University ***Reinventing Batteries through Nanoscience*** Chair: Keng-Hui Lin						
10:30-10:40	***Break (10 min)***						
10:40-11:10	**RM 001**		**RM 002**		**RM 003**		
	Keynote Lecture 4 **Jeff Wang**, John Hopkins University ***Droplet Microfluidics Enables Rapid Diagnostics and Antimicrobial Susceptibility Testing*** Chair: Cecil Chen		Keynote Lecture 5 **Michael Teitell**, University of California, Los Angeles ***Mitochondrial Transfer and Cell Fate Transitions*** Chair: Dean Ho		Keynote Lecture 6 **Chengkuo Lee**, National University of Singapore ***Artificial Intelligence Enabled Sensing Technologies and Applications in Metaverse*** Chair: Tak Sing Wong		
11:10-12:40	**RM 001**	**RM 002**	**RM 003**	**RM 004**	**RM 005**	**RM 006**	**RM 007**
	Regular Session F1.1 **CM Ho Best Paper Competition Paper ID: 124, 125, 158, 160** Chairs: Pak Kin Wong, Aaron Ohta	Invited Session F1.2 **Nano-constructs for Biosensing and Cellular Engineering** Chair: Aram Chung	Invited Session F1.3 **Microneedles** Chair: Zhihong Li	Invited Session F1.4 **The Impact of Inter-disciplinary Science** Chair: Tzu-En Lin	Invited Session F1.5 **Advanced Nanotool for NEMS** Chair: Koji Sugano	Invited Session F1.6 **Applications and Experimental Techniques for Economical Microfluidic Devices** Chair: Wei-Hsin Tien	Invited Session F1.7 **Advanced Bioelectronics and Biointerfaces** Chair: Huiliang Wang
12:40-12:50	***Break (10 min)***						
12:50-14:20	Regular Session F2.1 **Best Conference Paper Competition Paper ID: 104, 132, 139, 140** Chairs: Pak Kin Wong, Aaron Ohta	Invited Session F2.2 **Microfluidic Platforms for Cell Manipulation and Biomarker Detection** Chair: Ting-Hsuan Chen	Invited Session F2.3 **Wearable and Implantable NanoEnergy and NanoSystem (NENS)** Chair: Chengkuo Lee	Invited Session F2.4 **Translational Advances in Micro-, Nano- and Digital Medicine** Chair: Edward Kai-Hua Chow, Agata Blasiak	Regular Session F2.5 **Micro/Nano Electro-Mechanical Systems II Paper ID: 147, 149, 150, 151, 154, 159** Chair: Cheng-Hsin Chuang		

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April 16 [Saturday] (UTC+8)							
Time (UTC+8)	RM 001						
09:00-09:45	EDOM Plenary Lecture 5: **Ming C. Wu**, University of California, Berkeley ***Optoelectronic Tweezers – A New Optofluidic Platform for Single Cell Biology*** Chair: Eric Chiou						
09:45-10:15	**RM 001**		**RM 002**		**RM 003**		
	Keynote Lecture 7 **Dean Ho**, National University of Singapore ***Big Data versus Small Data: Optimizing N-of-1 Interventional Healthcare*** Chair: Edward Chow		Keynote Lecture 8 **John X.J. Zhang**, Dartmouth Engineering ***Nanotechnology in Bioenergy Harvesting and Sensing for Medical Implants*** Chair: Mark Cheng		Keynote Lecture 9 **Rahul Shendure**, Carbon Built ***CarbonBuilt – Taking Low Carbon Concrete from University Bench to Commercial Production*** Chair: Eric Chiou		
10:15-10:30	***Break (15 min)***						
10:30-12:00	**RM 001**	**RM 002**	**RM 003**	**RM 004**	**RM 005**	**RM 006**	**RM 007**
	Invited Session S1.1 **NEMS Emerging Applications** Chair: Mark Cheng	Invited Session S1.2 **Micro-/nano-Structure-Enabled Sensors** Chair: Faheng Zang	Invited Session S1.3 **Advanced Micro/Nano Photonics Technology** Chair: Guo-En Chang	Invited Session S1.4 **Biomaterials and Biosensors in Biomedical Application** Chair: Yu-Jui (Ray) Fan	Invited Session S1.5 **Micro/Nano Biosensing Technologies: From Diseases Diagnostics to Health Monitoring** Chair: Tak-Sing Wong	Invited Session S1.6 **NEMS for Human Sensing** Chair: Hiroyuki Kudo	Invited Session S1.7 **Engineering-Based Micro-physiological System (MPS): From Fundamentals to Commercial Applications** Chair: Ryuji Yokokawa
12:00-12:10	***Break (10 min)***						
12:10-13:40	Regular Session S2.1 **Best Student Paper Competition** **Paper ID: 113, 123, 137, 148, 173** Chairs: Pak Kin Wong, Aaron Ohta	Invited Session S2.2 **Microstructure Engineering and Applications** Chair: Chia-Wen Tsao	Regular Session S2.3 **Molecular Sensors, Actuators, & Systems II** **Paper ID: 143, 152, 156, 167, 170** Chair: Sanket Goel	Regular Session S2.4 **Micro/Nano Fluidics and Fabrication** **Paper ID: 142, 153, 169, 161, 162, 164** Chair: Yu-Jui (Ray) Fan	Regular Session S2.5 **Nanomaterial Based Devices and Systems II** **Paper ID: 146, 163, 168** Chair: Chi-Shuo Chen		