

**2020 MOST Science and Technology
International Cooperation Research Symposium
North America - Asia Pacific - Europe
科技部國際科技合作研究成果發表會**

**AGENDA
議程**

TUESDAY, OCTOBER 20	
8:30–9:00	REGISTRATION
9:00–9:30	OPENING CEREMONY & GROUP PHOTO <u>Welcome Remarks:</u> Dr. Dar-Bin Shieh 謝達斌 科技部 政務次長 Deputy Minister, Ministry of Science and Technology, Taiwan
	Mr. Omer Caspi (柯思畢) 駐台北以色列經濟文化辦事處 代表 Representative, Israel Economic and Cultural Office in Taipei Mr. Guido Tielman (譚敬南) 荷蘭在台辦事處 代表 Representative, Netherlands Office in Taipei
9:30–10:10	KEYNOTE SPEECH The niche and outlook of Taiwan's smart healthcare <u>Speaker: Mr. Ethan Tu 杜奕瑾</u> 台灣人工智慧實驗室 創辦人暨執行長 Founder & CEO, Taiwan AI Labs
10:10–10:30	COFFEE BREAK
10:30–12:30	BREAKOUT SESSION I <u>Panel A: Medical Science & Application 醫學科學與應用</u> <u>Moderator: Dr. Cheng-Yu Chen 陳震宇</u> 臺北醫學大學 醫學系放射線學科 教授兼副校長 Professor, Department of Radiology, School of Medicine and Vice-President, Taipei Medical University
	<ul style="list-style-type: none"> ● Age-associated Alterations in Redox-sensitive Genes in the Rostral Ventrolateral Medulla in Neural Mechanism of Hypertension Induced by Nitric Oxide Deficiency Dr. Julie Y.H. Chan 華瑜 (臺捷) 高雄長庚紀念醫院 生物醫學轉譯研究所 特聘講座教授

	<p>Distinguished Chair Professor, Institute for Translational Research in Biomedicine, Kaohsiung Chang Gung Memorial Hospital</p> <ul style="list-style-type: none"> ● Prokineticin Receptor-1 Agonist as a Promising Agent to Reverse Anthracycline-Induced Cardiotoxicity in Breast Cancer Dr. Wing-Yan Michael Chan 陳永恩 (臺歐盟) 國立中正大學 生物醫學科學系 教授兼系主任 Professor and Director, Department of Biomedical Sciences, National Chung Cheng University ● Emerging and Re-emerging Zoonotic Parasitosis Caused by Fish-Borne Parasites: Health Risk Associated with Consumption of Fishes Dr. Chia-Kwung Fan 范家堃 (臺斯洛伐克) 臺北醫學大學 醫學系分子寄生蟲暨熱帶疾病學科 教授兼醫學院國際熱帶醫學研究中心主任 Professor, Department of Molecular Parasitology and Tropical Diseases & Director of the Research Center of International Tropical Medicine, College of Medicine, Taipei Medical University ● LASer direct writing for metal oxide elecTRONIC devices for health monitoring (LASTRONIC) Dr. Hsiao-Wen Zan 冉曉雯 (臺法) 國立交通大學 光電工程學系 教授 Professor, Department of Photonics, National Chiao Tung University ● A remote-control mechanism for sensing pHo in TALK1 channels Dr. Shi-Bing Yang 楊世斌 (臺奧地利) 中央研究院 生物醫學科學研究所 助理研究員 Assistant Research Fellow, Institute of Biomedical Sciences, Academia Sinica ● Monocarboxylate Transporter -1-Mediated Lactate Accumulation Promotes Nucleus Pulposus Degeneration Under Hypoxia in 3D Multilayered Intervertebral Disc Degeneration Model Dr. Po-Liang Lai 賴伯亮 (臺印度) 林口長庚紀念醫院 骨科部 脊椎科 教授及主任兼骨骼關節研究中心主任 Professor and Chief, Spine Section of Department of Orthopedic Surgery & Director of the Bone and Joint Research Center, Chang Gung Memorial Hospital Linkou Branch ● Dr. Chi-Yun Wang 王琪芸 (代發表) 明志科技大學 創新科技應用於生物醫學暨醫療照護產品研發國際博士學位學程 助理教授 Assistant Professor, International Ph.D. Program in Innovative Technology of Biomedical Engineering and Medical Devices, Ming Chi University of Technology <p>Panel B: Medical Science & Application 醫學科學與應用</p> <p>Moderator: Dr. Cheng-Chang Lien 連正章 國立陽明大學 神經科學研究所 特聘教授兼所長</p>
--	---

	<p>Distinguished Professor and Director, Institute of Neuroscience, National Yang-Ming University</p> <ul style="list-style-type: none"> High efficient and selectable concentration of bacteremia and rapid bacterial antibiotic susceptibility test through electrokinetic concentration microdevice Dr. Fan-Gang Tseng 曾繁根 (臺蒙) 國立清華大學 工程與系統科學系 特聘教授兼研發長兼生醫科技研究中心副主任 Distinguished Professor, Department of Engineering and System Science & Deputy Director of the Biomedical Technology Research Center & Vice President for Research and Development, National Tsing Hua University Dual application of Pt/Au nano-alloy electrode in neutral enzyme-free glucose detection and biofuel cell Dr. Gou-Jen Wang 王國禎 (臺俄) 國立中興大學 機械工程學系 特聘教授兼工學院院長 Distinguished Professor, Department of Mechanical Engineering & Dean of College of Engineering, National Chung Hsing University Anti-cancer cellular immunotherapy using activated macrophages with optical imaging Dr. Yun-Ming Wang 王雲銘 (臺俄) 國立交通大學 生物科技學系 教授兼生物科技學院副院長 Professor, Department of Biological Science and Technology & Vice Dean of the College of Biological Science and Technology, National Chiao Tung University LVV-hemorphin-7 (LVV-H7) plays a role in antinociception in a rat model of alcohol-induced pain disorders Dr. Eagle Yi-Kung Huang 黃翊恭 (臺波) 國防醫學院 藥理學科暨藥理學研究所 教授兼所長及主任 Professor and Director, Department of Pharmacology, National Defense Medical Center Point-of-Care diagnostic kits from dengue to COVID-19 Dr. Day-Yu Chao 趙黛瑜 (臺菲) 國立中興大學 微生物與公共衛生學研究所 教授 Professor, Institute of Microbiology and Public Health, National Chung Hsing University
12:30–14:00	BUFFET LUNCH WITH CULTURAL FAIR
14:00–16:00	BREAKOUT SESSION II
	Panel A: Basic Sciences 基礎科學 Moderator: Dr. Tsz-King Henry Wong 王子敬 中央研究院 物理研究所 研究員兼副所長 Research Fellow and Deputy Director, Institute of Physics, Academia Sinica

	<ul style="list-style-type: none"> • A note on the onset of the critical transition phenomenon in flow over a smooth circular cylinder Dr. Jiun-Jih Miao 苗君易 (臺俄) 國立成功大學 航空太空工程研究所 特聘教授 Distinguished Professor, Department of Aeronautics and Astronautics, National Cheng Kung University • Narrow Band Phosphors for the Application in Lighting and Backlighting of Light-Emitting Diodes Dr. Ru-Shi Liu 劉如熹 (臺波) 國立臺灣大學 化學系 特聘教授 Distinguished Professor, Department of Chemistry, National Taiwan University • Synthesis of Superatomic Alloys Stabilized by Dichalcogenolates Dr. Chen-Wei Liu 劉鎮維 (臺法) 國立東華大學 化學系 教授 Professor, Department of Chemistry, National Dong Hwa University
	<p>Panel B: Biological & Agricultural Sciences 生物科學與農學</p> <p>Moderator: Dr. Te-Yu Liao 廖德裕 國立中山大學 海洋科學系 副教授兼副研發長 Associate Professor, Department of Oceanography and Associate Vice President for Research & Development, National Sun Yat-sen University</p>
	<ul style="list-style-type: none"> • Integrated pest management in GAP and organic production of broccoli and strawberry under protected structures in Benguet and Mt. Province Dr. Wen-Hsin Chung 鍾文鑫 (臺菲) 國立中興大學 植物病理學系 教授 Professor, Department of Plant Pathology, National Chung Hsing University • Replicons and Infectious Copies in the Study of Animal Pathogens Dr. Chun-Yen Chu 朱純燕 (臺英) 國立屏東科技大學 動物疫苗科技研究所 教授兼動物用疫苗國際學位專班主任 Professor, Graduate Institute of Animal Vaccine Technology & Director of the International Degree Program in Animal Vaccine Technology, National Pingtung University of Science and Technology • Dr. Hsing-Chieh Wu 吳幸潔 (代發表) 國立屏東科技大學 動物用疫苗國際學位專班 助理教授兼國際事務處發展組組長 Assistant Professor, International Degree Program in Animal Vaccine Technology & Chief of Strategic Development Division of the Office of International Affairs, National Pingtung University of Science and Technology • Ascothoracida (Thecostraca, Crustacea) - parasites of cnidarians and echinoderms. The first in the world to reconstruct the phylogeny by using morphological and molecular approaches and evolution of the

	<p>parasitism within this group</p> <p>Dr. Kwok Kan Chan 陳國勤 (臺俄) 中央研究院 生物多樣性研究中心 研究員兼副主任 Research Fellow and Deputy Director, Biodiversity Research Center, Academia Sinica</p> <ul style="list-style-type: none"> ● Microbiomes in meromictic lakes in Siberia and West Mongolia <p>Dr. Sen-Lin Tang 湯森林 (臺蒙) 中央研究院 生物多樣性研究中心 研究員 Research Fellow, Biodiversity Research Center, Academia Sinica</p>
16:15–17:15	<p>MEET & EXCHANGE WORKSHOP</p> <ul style="list-style-type: none"> ● Mr. Rupert Cao 曹燮榮 加拿大駐臺北貿易辦事處 貿易暨投資處 副處長 Deputy Director of Trade & investment, Canadian Trade Office in Taipei ● Dr. Jérôme Bove 柏杰弘 法國在台協會 學術合作與文化處 科學與高等教育專員 Attaché for Scientific and Academic Cooperation, Bureau Français de Taipei ● Dr. Josef Goldberger 金郁夫 臺北德國學術交流資訊中心 主任 Director, German Academic Exchange Service (DAAD) Information Center Taipei ● Mr. Rahul Bhat 巴智勝 印度-台北協會 助理會長 Assistant Director General, Trade, Commerce and Science & Technology, India-Taipei Association ● Ms. Anouk van der Steen 艾珞珂 荷蘭在台辦事處 創新科技處處長 Attaché for Innovation, Technology & Science, Netherlands Office in Taipei ● Dr. Võ Hồng Mạnh 武紅孟 駐台北越南經濟文化辦事處 科技組 組長 Head of Science & Technology Division, The Vietnam Economic and Cultural Office in Taipei
17:15 -	END OF DAY 1
18:00	DINNER BANQUET (Invitation only)

WEDNESDAY, OCTOBER 21	
9:00–9:30	REGISTRATION
9:30–10:00	KEYNOTE SPEECH Why Taiwan matters in global semiconductor industry Speaker: Mr. Terry Tsao 曹世綸 國際半導體產業協會 全球行銷長暨臺灣區總裁 Global Chief Marketing Officer & President of Taiwan, SEMI
10:00–10:15	BREAK
10:15-12:15	BREAKOUT SESSION III
	Panel A: Public Well-Being Technology & Energy Resources 民生科技與能資源 Moderator: Dr. Ching-Ting Lee 李清庭 元智大學 電機工程學系 名譽講座教授兼副校長 Honor Chair Professor, Department of Electrical Engineering and Vice President, Yuan Ze University
	<ul style="list-style-type: none"> ● Mn oxide-based materials for aqueous asymmetric supercapacitors Dr. Chi-Chang Hu 胡啟章 (臺英) 國立清華大學 化學工程學系 清華講座教授 Tsing Hua Chair Professor, Department of Chemical Engineering, National Tsing Hua University ● Theoretical predictive models of interaction between varying and moving loads and bridges for structural health monitoring Dr. Tzu-Ho Wu 吳子和 (共同發表) 國立雲林科技大學 化學工程與材料工程系 助理教授 Assistant Professor, Department of Chemical and Materials Engineering, National Yunlin University of Science and Technology ● Experimental Investigation and Numerical Modeling of Tetrafluoromethane Abatement via Thermal Steam Plasma Dr. Yeong-Bin Yang 楊永斌 (臺捷) 國立臺灣大學 土木工程學系 特聘教授 Distinguished Professor, Department of Civil Engineering, National Taiwan University ● Experimental Investigation and Numerical Modeling of Tetrafluoromethane Abatement via Thermal Steam Plasma Dr. Jong-Dar Yau 姚忠達 (代發表) 淡江大學 土木工程學系 教授 Professor, Department of Architecture, Tamkang University ● Experimental Investigation and Numerical Modeling of Tetrafluoromethane Abatement via Thermal Steam Plasma Dr. Shiu-Wu Chau 趙修武 (臺捷) 國立臺灣大學 工程科學及海洋工程學系 教授兼能源研究中心創能 組長

	<p>Professor, Department of Engineering Science and Ocean Engineering & Team Leader at the Energy Research Center, National Taiwan University</p> <ul style="list-style-type: none"> • Designing new renewable nano-structured electrode and membrane materials for direct alkaline ethanol fuel cell <p>Dr. Shing-Jiang Jessie Lue 呂幸江 (臺歐盟) 長庚大學 化工與材料工程學系 教授</p> <p>Professor, Department of Chemical and Materials Engineering, Chang Gung University</p> <ul style="list-style-type: none"> • Heterogeneous CaO/SBA-15 catalysts for biodiesel production from Jatropha seed oil <p>Dr. Yu-Wen Chen 陳郁文 (臺印度) 國立中央大學 化學工程與材料工程學系 教授</p> <p>Professor, Department of Chemical and Materials Engineering, National Central University</p> <ul style="list-style-type: none"> • Direct Formic Acid Fuel Cell Based Power Supply for Portable Electric Devices <p>Dr. Hong-Ming Lin 林鴻明 (臺波) 大同大學 材料工程學系 教授</p> <p>Professor, Department of Materials Engineering, Tatung University</p>
Panel B: Earth and Environmental Science 地球與環境科學	
<p>Moderator: Dr. You-Hua Chu 朱有花 中央研究院 天文及天文物理研究所 特聘研究員 Distinguished Research Fellow, Institute of Astronomy and Astrophysics, Academia Sinica</p>	
	<ul style="list-style-type: none"> • Software-based GPS receiver development and its applications on ionospheric scintillation and ocean wave observations <p>Dr. Lung-Chih Tsai 蔡龍治 (臺德) 國立中央大學 太空及遙測研究中心 教授兼全球定位科學與應用研究中心主任</p> <p>Professor, Center for Space and Remote Sensing Research & Director of the GPS Science and Application Research Center, National Central University</p> <ul style="list-style-type: none"> • WaterNet: A Convolutional Neural Network for Chlorophyll-a Concentration Retrieval <p>Dr. Chao-Hung Lin 林昭宏 (臺菲) 國立成功大學 測量及空間資訊學系 教授</p> <p>Professor, Department of Geomatics, National Cheng Kung University</p> <ul style="list-style-type: none"> • Study of vegetation dynamics and climatic changes in Altai-Sayan region since Late Glacial by method of complex palaeoecological and isotopic research <p>Dr. Hong-Chun Li 李紅春 (臺俄) 國立臺灣大學 地質科學系暨研究所 教授</p> <p>Professor, Department of Geosciences, National Taiwan University</p> <ul style="list-style-type: none"> • Empirical, assimilation and first-principal ionospheric modeling for prediction and investigation of space weather using innovative

	<p>observations</p> <p>Dr. Loren Chang 張起維 (臺俄) 國立中央大學 太空科學研究所 教授 Professor, Department Of Space Science & Engineering, National Central University</p>
12:15–13:15	LUNCH
13:15-14:15	<p>MEET & EXCHANGE WORKSHOP</p> <ul style="list-style-type: none"> ● Dr. Jérôme Bove 柏杰弘 法國在台協會 學術合作與文化處 科學與高等教育專員 Attaché for Scientific and Academic Cooperation, Bureau Français de Taipei ● Dr. Josef Goldberger 金郁夫 臺北德國學術交流資訊中心 主任 Director, German Academic Exchange Service (DAAD) Information Center Taipei ● Ms. Olimpia Kot-Giletycz 高琳雅 波蘭臺北辦事處 文化組 組長 Consular Affairs, Public and Cultural Diplomacy Expert, Polish Office in Taipei ● Mr. Patrick Boland 美國在台協會—台北辦事處 數位經濟官員 Digital Economy Officer, American Institute in Taiwan, Taipei Office
	BREAKOUT SESSION IV
	<p>Panel A: Nanotechnology & Materials Science 奈米科技與材料</p> <p>Moderator: Dr. Ta-Jen Yen 嚴大任 國立清華大學 材料科學工程學系 教授兼全球事務處全球長 Professor, Department of Materials Science and Engineering & Vice President for Global Affairs, National Tsing Hua University</p>
14:30–16:30	<ul style="list-style-type: none"> ● High-performance Organic Photovoltaic with Fluorinated Conjugated Polymers and Potassium-treated Zinc Oxide Electron Transport Layer Dr. Kung-Hwa Wei 韋光華 (臺美) 國立交通大學 材料科學與工程學系所 講座教授兼工學院院長 Chair Professor, Department of Materials Science and Engineering & Dean of College of Engineering, National Chiao Tung University ● Conjugated polymer/nanoparticle hybrid systems for opto-electronic interconversion: experiment, theory and computer simulation Dr. Show-An Chen 陳壽安 (臺俄) 國立清華大學 化學工程學系 清華特聘講座教授 Tsing Hua Honorary Chair Professor, Department of Chemical Engineering, National Tsing Hua University ● Tailoring of all oxide heterostructures by ion beams Dr. Ying-Hao Chu 朱英豪 (臺德) 國立交通大學 材料科學與工程學系所 特聘教授

	<p>Distinguished Professor, Department of Materials Science and Engineering, National Chiao Tung University</p> <ul style="list-style-type: none"> • Low Temperature Two-Dimensional Layered Materials Toward Phase-Engineered Hybrid Films for innovative nanoelectronics Dr. Yu-Lun Chueh 闕郁倫 (臺韓) 國立清華大學 材料科學工程學系 教授 Professor, Department of Materials Science and Engineering, National Tsing Hua University • Triplet-Triplet Annihilation Upconversion Organic Light Emitting Diode Dr. Tien-Lung Chiu 邱天隆 (臺美) 元智大學 電機工程學系 教授 Professor, Department of Electrical Engineering, Yuan Ze University • Blue hazards and candlelight OLED based resolutions Dr. Jwo-Huei Jou 周卓輝 (臺立陶宛) 國立清華大學 材料科學工程學系 教授 Professor, Department of Materials Science and Engineering, National Tsing Hua University • Structural colors and absorption enhancement in dielectric metasurfaces Dr. Kuo-Ping Chen 陳國平 (臺美) 國立交通大學 影像與生醫光電研究所 副教授 Associate Professor, Institute of Imaging and Biomedical Photonics, National Chiao Tung University
<p>Panel B: Mechanical Sciences & ICT 機電與資通訊</p>	
<p>Moderator: Dr. Faa-Jeng Lin 林法正 國立中央大學 電機工程學系 講座教授 Chair Professor, Department of Electrical Engineering, National Central University 行政院 科技會報 科技政策諮詢委員 Member, Science and Technology Policy Advisory Office, Board of Science & Technology, Executive Yuan, Taiwan</p>	
	<ul style="list-style-type: none"> • Roadmap from Latency-Driven Cooperative Fog Computing to Energy-Aware Collaborative Beamforming and Edge Computing Dr. Ai-Chun Pang 逢愛君 (臺波) 國立臺灣大學 資訊工程學系暨研究所 教授兼電機資訊學院副院長 Professor, Department of Computer Science and Information Engineering & Associate Dean of the College of Electrical Engineering and Computer Science, National Taiwan University • Attention-Guided Weakly Supervised Deep Hashing through Tag Embeddings Dr. Te-Chuan Chiu 邱德泉 (代發表) 中央研究院 資訊科技創新研究中心 博士後研究 Postdoctoral Research Fellow, Research Center for Information Technology Innovation, Academia Sinica • Attention-Guided Weakly Supervised Deep Hashing through Tag Embeddings Dr. Wei-Ta Chu 朱威達 (臺印度)

	<p>國立成功大學 資訊工程學系 教授 Professor, Department of Computer Science and Information Engineering, National Cheng Kung University</p> <ul style="list-style-type: none"> Secure and Distributed Data Cloud for AI Platform between Taiwan and Japan <p>Dr. Weicheng Huang 黃維誠 (臺日) 國家實驗研究院 國家高速網路與計算中心 研究員 Research Fellow, National Center for High-performance Computing, National Applied Research Laboratories</p>
16:30-16:45	BREAK
16:45-17:00	CLOSING CEREMONY

KEYNOTE SPEAKER 專題講者

Day 1 - Tuesday, October 20, 9:30 – 10:10



Mr. Ethan Tu 杜奕瑾

Founder & CEO, Taiwan AI Labs
台灣人工智慧實驗室 創辦人暨執行長

Ethan Tu is the founder of Taiwan AI Labs and PTT Bulletin Board System.

He leads the researches that Taiwan AI Labs currently focuses on, “Smart Healthcare,” “Smart City,” and “Human-Computer Interaction.”

Prior to founding Taiwan AI Labs in 2017, Tu worked in the National Institutes of Health (NIH) to develop cancer detection systems and human genetic research in the US. In 2006, Tu started to work in Microsoft’s AI team and became a principal development manager in 2012.

Tu holds a bachelor’s degree and a master’s degree in computer science at National Taiwan University (NTU).

KEYNOTE SPEAKER 專題講者
Day 2 - Wednesday, October 21, 9:30 – 10:00



Mr. Terry Tsao 曹世綸

Global Chief Marketing Officer & President of Taiwan, SEMI
國際半導體產業協會 全球行銷長暨臺灣區總裁

As the Global Chief Marketing Officer and President of Taiwan, Terry Tsao leads global marketing activities at SEMI, including strategic, operational, product, and communications marketing. Tsao also oversees the association's programs, products, and services in Taiwan, and he is also responsible for relationships with SEMI members as well as with representatives of local industry, government, and academia. Additionally, he supports SEMI international programs serves members worldwide. He also managed SEMI South East Asia operation for 6 years as the President of SEMI South East Asia.

Prior to joining SEMI, Tsao was Managing Director of International Data Corporation in Taiwan. He has also served as APAC Marketing Director for Trend Micro, and held various management positions in Far Eastone Telecommunications, and Ogilvy. Tsao holds an MBA from Baruch College City University, New York, and an Executive MBA from National Taiwan University.