

# 2023 年度國立臺灣科技大學暨學術合作夥伴聯合成果發表會

## 2023 TAIWAN TECH Joint Research Workshop

主辦單位：國立臺灣科技大學

Organizer：National Taiwan University of Science and Technology

協辦單位：臺北醫學大學、日本德島大學、日本九州工業大學、印尼萬隆理工學院

Co-organizer：Taipei Medical University、  
Tokushima University (Japan)  
Kyushu Institute of Technology (Japan)  
Institut Teknologi Bandung (Indonesia)

活動日期：112 年 8 月 24 日 (星期四)

Date: August 24<sup>th</sup>, 2023

時間：9:00-16:30

Time: 9:00-16:30

活動地點：國立臺灣科技大學國際大樓 201 室 (臺北市大安區基隆路 4 段 43 號)

Venue: Room 201 International Building, National Taiwan University of Science and Technology (Taiwan Tech) (No.43, Keelung Rd., Sec.4, Da'an Dist., Taipei City 106335, Taiwan)

Time	Agenda		
09:00-09:20	Opening Ceremony(Welcome speech) Taiwan Tech Taipei Medical University Tokushima University Kyushu Institute of Technology Institut Teknologi Bandung		
09:20-09:30	Coffee Break		
09:30-12:00	<b>Session A</b> TAIWAN TECH-TMU 2022 Joint Research <b>Room: IB-201</b>	<b>Session B</b> TAIWAN TECH-TU 2022 Joint Research <b>Room: IB-202</b>	<b>Session C</b> TAIWAN TECH-ITB 2022 Joint Research <b>Room: IB-302</b>
12:00-13:30	Lunch		
13:30-16:30	<b>Session D</b> TAIWAN TECH-Kyushu 2022 Joint Research <b>Room: IB-201</b>	<b>Session E</b> TAIWAN TECH-TU 2023 Joint Research <b>Room: IB-202</b>	

**【Session A】 TAIWAN TECH-TMU 2022 Joint Research Projects**Chairman: 簡銘賢副研發長(北醫)、廖愛禾副研發長(臺科)

Time	Project Title	Presenter
09:30-09:45	用於皮膚治療與重建之1064nm長/短脈衝光纖雷射之研發與實驗 廖顯奎老師(Taiwan Tech) / 蔡秀欣老師(TMU)	廖顯奎老師
09:45-10:00	利用人工智慧偵測動態影像中職場搬抬工作者之受傷風險 徐繼聖老師(Taiwan Tech) / 康峻宏老師(TMU)	徐繼聖老師
10:00-10:15	失眠者照明指標之研究 陳鴻興老師(Taiwan Tech) / 郭淑芬老師(TMU)	陳鴻興老師
10:15-10:30	開發仿生具蠕動功能之立體腸道晶片，探討腸道細胞對於小分子抗癌藥物的吸收及生理影響 陳品銓老師(Taiwan Tech) / 謝堅銘老師(TMU)	宋明晏同學
10:30-10:45	應用 VR 教材於護理學生之學習成效 黃國禎老師(Taiwan Tech) / 張靜宜老師(TMU)	張靜宜老師
10:45-11:00	具透明質酸-石墨烯量子點奈米顆粒之組織黏合劑用於半月板黏合及再生 江偉宏老師(Taiwan Tech) / 翁培鈞老師(TMU)	翁培鈞老師
11:00-11:15	活性氧應答抗氧化奈米載體於氧化壓力下對軟骨細胞之效用 鄭詠馨老師(Taiwan Tech) / 楊凱強老師(TMU)	鄭詠馨老師
11:15-11:30	腎臟超音波人工智慧模型預測慢性腎臟發炎程度 沈哲州老師(Taiwan Tech) / 林彥仲老師(TMU)	沈哲洲老師
11:30-11:45	新型鎂鈣合金於人工骨修復物之開發應用 黃崧任老師(Taiwan Tech) / 范芳瑜老師(TMU)	黃崧任老師
11:45-12:00	開發應用於引導骨再生之複合生醫有機無機填充材料 施劭儒老師(Taiwan Tech) / 吳孟晃老師(TMU)	施劭儒老師

\*10 mins oral, 5 mins Q&amp;A for each presentation

**【Session B】 TAIWAN TECH- TU 2022 Joint Research Projects****Chairman: Prof. Mikito Yasuzawa**

<b>Time</b>	<b>Project Title</b>	<b>Presenter</b>
09:30-09:45	<b>Developing new track-etched microporous membrane electrodes with enzyme-free electrocatalyst for on-line monitoring uric acid level by flow-based biosensing platform</b> Asst. Prof. Min-Hsin Yeh (Taiwan Tech) / A.P. Hitoshi Mizuguchi (TU)	Asst. Prof. Min-Hsin Yeh
09:45-10:00	<b>Enhanced photoluminescence property of nano composite ceramic phosphors</b> Prof. Shao-Ju Shih (Taiwan Tech) / A.P. Masatsugu Oishi (TU)	Prof. Shao-Ju Shih
10:00-10:15	<b>Learning-based De-raining Algorithms for Video System of Drone</b> Prof. Jenq-Shiou Leu (Taiwan Tech) / A.P. Tian Song (TU)	A.P. Tian Song
10:15-10:30	<b>Cellulose nanofiber as a nucleating agent for elastomeric foam</b> Prof. Shu-Kai Yeh (Taiwan Tech) / A.P. Antonio Norio Nakagaito (TU)	Prof. Shu-Kai Yeh
10:30-10:45	<b>Preparation and electrocatalytic properties of Pt/Au bimetallic nanoparticles modified copper hydroxide nanosheet electrode</b> Prof. Meng-Yi Bai (Taiwan Tech) / Asst. Prof. Masashi Kurashina (TU)	Asst. Prof. Masashi Kurashina
10:45-11:00	<b>Smart/High Capacity Optical Sensing and Communication II</b> Prof. Shien-Kuei Liaw (Taiwan Tech) / A.P. Hiroki Kishikawa (TU)	Prof. Shien-Kuei Liaw

\*10 mins oral, 5 mins Q&amp;A for each presentation

**【Session C】 TAIWAN TECH- ITB 2022 Joint Research Projects****Chairman: Dr. Rino R. Mukti**

<b>Time</b>	<b>Project Title</b>	<b>Presenter</b>
09:30-09:45	<b>Drama-Theoretic Collaborative Support System: Capturing Actors' Emotional Process to Build Novel Negotiation Model and Resource Allocation Plan</b> Prof. Kung-Jeng Wang (Taiwan Tech) / Asst. Prof. Pri Hermawan (ITB)	Asst. Prof. Pri Hermawan
09:45-10:00	<b>A Contactless and Continuous Vital Sign Monitoring System Using Radar Technology and Artificial Intelligence</b> Prof. Ding-Bing Lin (Taiwan Tech) / Asst. Prof. Nur Ahmadi (ITB)	Prof. Ding-Bing Lin
10:00-10:15	<b>Application and Optimization of Machine Learning on Smart Structural Vibration Control</b> A.P. Pei-Ching Chen (Taiwan Tech)/ Prof. Herlien Dwiarti Setio (ITB)	A.P. Pei-Ching Chen
10:15-10:30	<b>Designing Self Assembly Two-Dimensional Bimetallic Metal Organic Frameworks from Metal Complex for High-Performances Asymmetric Supercapacitor</b> Asst. Prof. Min-Hsin Yeh (Taiwan Tech) / Prof. Brian Yulianto (ITB)	Asst. Prof. Min-Hsin Yeh
10:30-10:45	<b>Radius and packing optimization of the discretization process on stainless steels corrosion analysis</b> Prof. Vincent F. Yu (Taiwan Tech) / Asst. Prof. Udjianna Sekteria Pasaribu (ITB)	Professor Udjianna S. Pasaribu
10:45-11:00	<b>Low-Cost Hardware Accelerator for Object Detection based on YOLOv3</b> Prof. Chang-Hong Lin (Taiwan Tech) / Prof. Trio Adiono (ITB)	Prof. Chang-Hong Lin

\*10 mins oral, 5 mins Q&amp;A for each presentation

**【Session D】 TAIWAN TECH- Kyushu 2022 Joint Research Projects**  
**Chairman: Prof. Dr. Tohru Kamiya**

Time	Project Title	Presenter
13:30-13:45	<b>Development of rechargeable Zinc-air batteries with noble metal free electrocatalysts</b> Prof. Wei-Nien Su (Taiwan Tech) / Prof. Tingli MA (Kyushu)	Prof. Wei-Nien Su
14:45-15:00	<b>Development of an impingement-based rapid-cooling system for liquid vitrification and cryopreservation</b> Asst. Prof. Hsiu-Yang Tseng (Taiwan Tech) / Prof. Gyoko Nagayama (Kyushu)	Asst. Prof. Hsiu-Yang Tseng
15:00-15:15	<b>Constant Frequency Through Echelle Grating for pectral-Domain Optical Coherence Tomography on a Single Silicon Platform and its Fusion with AI-Optics</b> Prof. Shih-Hsiang Hsu (Taiwan Tech) / Asst. Prof. Masanori Takabayashi (Kyushu)	Prof. Shih-Hsiang Hsu
15:15-15:30	<b>Deep Learning based IoT in outdoor, remote and farming environments</b> Prof. Jenq-Shiou Leu (Taiwan Tech) / Prof. Mario Koeppen (Kyushu)	PhD. Setya Widyawan Prakosa
15:30-15:45	<b>High Efficiency Network Architecture Design for Mobility Load Balancing</b> Asst. Prof. Yi-Wei Ma (Taiwan Tech) / Prof. Kazuya Tsukamoto (Kyushu)	Asst. Prof. Yi-Wei Ma
15:45-16:00	<b>Decision-making Support System of LCC-based Maintenance Strategies for Steel Bridges</b> Prof. Chien-Kuo Chiu (Taiwan Tech) / Prof. Eiki Yamaguchi (Kyushu)	PhD. Lorddy Zefanya Nugroho
16:00-16:15	<b>Design and Study of Various Types of Optical Wireless Communication System</b> Prof. Shien-Kuei Liaw (Taiwan Tech) / Prof. Hiroshi Ochi (Kyushu)	Prof. Shien-Kuei Liaw

\*10 mins oral, 5 mins Q&A for each presentation

**【Session E】 TAIWAN TECH- TU 2023 Joint Research Projects****Chairman: Prof. Mikito Yasuzawa**

<b>Time</b>	<b>Project Title</b>	<b>Presenter</b>
13:30-13:45	<b>Structure and formation mechanism of ultra-thin films formed by aliphatic amines for corrosion protection in steam power generation</b> Prof. Yian Tai (Taiwan Tech) / A.P. Ken Yoshida (TU)	Prof. Ken Yoshida
14:45-15:00	<b>Smart/High Capacity Optical Sensing and Communication III</b> Prof. Shien-Kuei Liaw(Taiwan Tech) / A.P. Hiroki Kishikawa (TU)	Prof. Shien-Kuei Liaw
15:00-15:15	<b>Development of Tungsten Oxysulfide based nanocomposite for solar light-driven photocatalytic removal of organic pollutants</b> Prof. Chang-Mou Wu (Taiwan Tech) / A.P. Pankaj Madhukar Koinkar (TU)	Prof. Chang-Mou Wu
15:15-15:30	<b>A new metal cluster composed of Au@Pt -Cu electrode for CO<sub>2</sub> and NO<sub>x</sub> detection and reduction.</b> Prof. Meng-Yi Bai (Taiwan Tech) / Asst. Prof. Masashi Kurashina (TU)	Asst. Prof. Masashi Kurashina
15:30-15:45	<b>Integration of Carbon-based Electrocatalysts via Heteroatomic Doping Engineering for Online-Monitoring Flow-based Electrochemical Dissolved Oxygen Sensor</b> Asst. Prof. Min-Hsin Yeh (Taiwan Tech) / A.P. Hitoshi Mizuguchi (TU)	Asst. Prof. Min-Hsin Yeh

\*10 mins oral, 5 mins Q&amp;A for each presentation