

Agenda

The 4th International Conference on Engineering Physics, MEMS-Biosensors and Their applications (ICEBA2023)

December 8&9, 2023

University of Science, 227 Nguyen Van Cu Street, District 5, Ho Chi Minh City, Vietnam

*1st day of Conference (December 8, Friday)

Time	Contents/Program	Note
07:30-08:45	Registration (Check list, nameplate, Abstract&Program,...)	-Lobby of conference room: Building I, University of Science, HCM city, Vietnam. -The secretary
1.OPENING CEREMONY &PLENARY SESSION Conference Hall I, Building I, 227 Nguyen Van Cu Str., District 5, HCMC		
09:00-09:10	1. Introduce Guests (MC)	<i>MC: Dr. Ho Thanh Huy (VNUHCM-US)</i>
09:10-09:25	2. Welcome speeches: - Welcome speech from the Vice president of VNUHCM-US: <i>Prof. Tran Minh Triet</i> ; - Speech from Co-General Chair of 4 th ICEBA2023: <i>Prof. Takahito Ono and Prof. Nguyen Van Hieu</i> ; - Speech from Program Chair of 4 th ICEBA2023: <i>Prof. Huynh Van Tuan</i> .	
09:25-09:35	3. Offer the gifts for invited speakers . Plenary invited talks. . Invited talks	Vice President of VNUHCM-US
09:40-09:50	4. The MoU signing ceremony for the host of the 6th ICEBA2025 conference in 2025	VNUHCM-University of Science, Tohoku University-Ono/Toda Lab and National Central University (Taiwan)
09:50-10:00	Coffee break	Lobby
10:00-11:50	5. Plenary invited talk Session: 15 min for talk and 5 min for discussion <i>Chair: Prof. Takahito Ono (Tohoku University, Japan)</i> <i>Co-Chair: Prof. Nguyen Van Hieu (VNUHCM, Vietnam)</i> Link google meet for online: https://meet.google.com/zeb-ddeo-ukh	
10:00-10:20	. Plenary #1 (code: PL-01). Prof. Takahito Ono <i>Tohoku University, Japan</i>	Micro/Nanosensors for Healthcare Applications
10:20-10:40	. Plenary #2 (code: PL-02) (online) Prof. Dao Viet Dzong <i>Griffith University, Australia</i>	High Performance MEMS Sensors

10:40-11:00	. Plenary #3 (code: PL-03) Prof. Kyeong-Sik Min <i>Kookmin University, Seoul, Korea</i>	Energy-efficient AI computing hardware by processing in memory and local learning
11:00-11:15	. Plenary #4 (code: PL-04) <i>(online)</i> Dr. Pham Thanh Trung <i>NISM, University of Namur, Belgium</i>	New transfer technique for graphene and other 2D materials on Si substrates for electronic devices
11:15-11:30	. Plenary #5 (code: PL-05) <i>(online)</i> Prof. Congo Tak Shing Ching <i>National Chung Hsing University, Taiwan</i>	Biological matter recognition using micro-interdigitated electrode array and electrical impedance spectroscopy
11:30-11:50	. Plenary #6 (code: PL-06) Prof. Kun-Yu Lai <i>DOP, National Central University, Taiwan</i>	InGaN quantum well: A new material for surface-enhanced Raman spectroscopy

2. POSTER SESSION 11:40-12:30;

Lobby of Conference Hall I, Building I, 227 Nguyen Van Cu Str., District 5, HCMC

- Chair: Prof. Vu Thi Hanh Thu (VNUHCM-US, Vietnam);
- Co-Chair: Dr. Nguyen Quang Khoi (VNUHCM-US, Vietnam);
- Technical Assistant: Huynh Thanh Nhan-MSc

From Session 1	S1.01-P, S1.02-P, S1.03-P, S1.04-P, S1.05-P, S1.06-P, S1.07-P, S1.08-P;
From Session 2	S2.01-P, S2.02-P, S2.03-P, S2.04-P, S2.05-P, S2.06-P;
From Session 3	S3.01-P, S3.02-P, S3.03-P;
From Session 4	S4.01-P, S4.02-P, S4.03-P;
From Session 5	S5.01-P, S5.02-P, S5.03-P;
From Session 6	S6.01-P, S6.02-P, S6.03-P;

Lunch time (12:30-13:30)

3. PARALLEL SESSION: 14:00-16:30

Invited talk: 20 min (15 min for talk and 5 min for discussion);

Oral presentation: 15min (12 min for talk and 3 min for discussion)

Session 1. Applied Physics, Engineering Physics, Nuclear Engineering

Room B40 (4th floor, Building B), 227 Nguyen Van Cu Str., District 5, HCMC

- Chair: Prof. Vo Luong Hong Phuoc (VNUHCM-University of Science, Vietnam)
- Co-Chair: Asst. prof. Vu The Dang (Osaka Metropolitan University, Japan)
- Secretary: Nguyen Duy Khanh

Schedule	Name of invited speakers	Title of talks
----------	--------------------------	----------------

14:00-14:20	Invited talk S1-01-I <i>Prof. Vo Luong Hong Phuoc (VNUHCM-US, Vietnam)</i>	Developing a Smart Water Quality Monitoring System Using IoT Technologies
14:20-14:40	Invited talk S1-02-I <i>Asst. prof. Vu The Dang (Osaka Metropolitan University, Japan)</i>	Application of energy-resolving neutron imaging to major-component analyses of materials using four-channel superconducting detector.
14:40-14:55	Oral S1-01-O Doan Thi Thanh Nhan	Self-absorption correction, gross-alpha radioactivity measurements using gas proportional counter
Coffee break (15:00-15:15)		
15:15-15:30	Oral S1-02-O Nguyen Bui Trung Kien <i>VNUHCN- University of Science</i>	Strain Effect on the Anomalous Hall Conductivity of Fe bcc
15:30-15:45	Oral S1-03-O Pham Nguyen Duy Phuong	Interpretation of logging while drilling (LWD) documentation at the gray well, East mine Cuu Long Basin.
15:45-16:00	Oral S1-04-O Doan Thi Thanh Nhan	Preliminary study on radon concentrations in the South Plain of Vietnam's groundwater aquifers. Concentrations of radon in Tien Giang province's groundwater aquifers
16:00-16:15	Oral S1-05-O Nguyen Duc Anh	Simulating Climate Impacts on Rice Agroecosystems in An Giang Province: Pests, Yield, and Resources
16:15-16:30	Oral S1-06-O Huynh Thanh Tuan	The influence of water- based drilling mud and oil-based drilling mud on well logging in Nam Con Son Basin.

Session 2. Semiconductor Technologies, Materials, Device and Related

Room B41 (4th floor, Building B), 227 Nguyen Van Cu Str., District 5, HCMC

- *Chair: Prof. Le Vu Tuan Hung (VNUHCM-US, Vietnam);*

- *Co-Chair: Prof. Kun Yu Lai (NCU-Taiwan) and Prof. Nguyen Hoang Nam (Hanoi VNU-University of Science, Vietnam)*

- *Secretary: Nguyen Anh Thu*

14:00-14:20	Invited talk S2-01-I <i>Prof. Le Vu Tuan Hung (VNUHCM-US, Vietnam)</i>	Role of semiconductor and metal nanoparticles heterojunction in enhancing the SERS signal for detection the banned chemical trace in food, drug, and cosmetic.
14:20-14:40	Invited talk S2-02-I <i>Dr. Nguyen Quang Khoi (VNUHCM-US, Vietnam)</i>	Study of steady state thermal model for white LEDs thermal management application at encapsulant level
14:40-15:00	Invited talk S2-03-I <i>Prof. Nguyen Hoang Nam (Hanoi VNU-University of Science, Vietnam)</i>	Development of wound healing techniques using stem-cell spray gun and bio-nanomembranes
Coffee break (15:00-15:15)		
15:15-15:30	Oral S2-01-O Dr. Nguyen Van Men (AGU)	Plasmon properties in spin polarized double-layer graphene structures
15:30-15:45	Oral S2-02-O Dr. Nguyen Thi Thanh Van	Design and numerical analysis of an active Micro-T sinusoidal mixer with integrated microelectrode cavity.

15:45-16:00	Oral S2-03-O Dr. Do Duc Cuong	Large Enhancement of Intrinsic Spin Hall Conductivity of β -W Based Alloys
16:00-16:15	Oral S2-04-O Cu Duy Thanh (NCU- Taiwan)	High-Reflectivity Mo/Si Multilayer Mirrors for EUV Applications Fabricated by Ion Beam Sputtering

Session 3. MEMS, Biosensors and Application

Room B42 (4th floor, Building B), 227 Nguyen Van Cu Str., District 5, HCMC

- Chair: Prof. Nguyen Van Toan (Tohoku Univ, Japan);
- Co-Chair: Prof. Nguyen Van Hieu (VNUHCM, Vietnam);
- Secretary: Nguyen Hoang Quan-MSc (Hand phone:0938551383)

14:00-14:20	Invited talk S3-01-I Prof. Nguyen Van Hieu (VNUHCM, Vietnam)	Using ML for determine the optimal size of the heat sink for high performance of Thermoelectric generators (TEGs) in the Aquaponic farm.
14:20-14:40	Invited talk S3-02-I Prof. Nguyen Van Toan (Tohoku Univ.-Japan)	Nanoengineered micro-supercapacitors for self-powered wireless sensing systems
14:40-15:00	Invited talk S3-03-I Dr. Hitoshi Nishino (Tamagawa Holdings Co., Japan)	A high-precision 3-dimensional micro-mirror actuated by piezo-actuators

Coffee break (15:00-15:15)

15:15-15:30	Oral S3-01-O Dr. Sura Nguyen (THSM, Mexico)	Characterizing joule heating effects on carbon nanofibers: Calculating the temperature coefficient of resistance for precise nanostructure growth control
15:30-15:45	Oral S3-02-O Zhijian Zhao (Japan)	High-sensitivity magnetic field sensor using magnetic torque
15:45-16:00	Oral S3-03-O Yi-Hsiu KAO (Japan)	Enzyme-based Chemiresistive Creatinine Biosensor
16:00-16:15	Oral S3-04-O Nguyen Hoang Quan	A power management circuit of Thermoelectric Generator (TEGs) using wakeup-timer IC toward the applications in green agriculture
16:30-16:45	Oral S3-05-O Dr. Tran Ngoc Dang Khoa (IUH)	High-sensitivity magnetic field sensor using magnetic torque

Session 4. Microelectronics, Embedded System and AI&IoT

Room E 205 (2nd floor, Building E), 227 Nguyen Van Cu Str., District 5, HCMC

- Chair: Prof. Kyeong-Sik Min (KMU, Korea)
- Co-Chair: Dr. Nguyen Chi Nhan (VNUHCM-US, Vietnam) and Prof. Jongsun Kim (Hongik University, Korea)
- Secretary: Nguyen Phuoc Hoang Khang-MSc (Hand phone:0918035984)

14:00-14:20	Invited talk S4-01-I Prof. Hoang Trang (VNUHCM-UT, Vietnam)	A Novel Framework, methods of AI to Optimize in Designing Analog IC
14:20-14:40	Invited talk S4-02-I Dr. Nguyen Chi Nhan (VNUHCM-US, Vietnam)	Predicting the content of toxic substances in aquaculture water using machine learning approaches

14:40-15:00	Invited talk S4-03-I <i>Prof. Truong Ngoc Son (HCM University of Technology and Education, Vietnam)</i>	Optimized memristor crossbar array for neuromorphic computing system
Coffee break (15:00-15:15)		
15:15-15:35	Invited talk S4-04-I <i>Prof. Jongsun Kim (School of Electronic & Electrical Engineering, Hongik University, Korea)</i>	Design of on-chip clock generators for energy efficient chiplet-based systems
15:35-15:50	Oral S4-01-O Nguyen Hoang Trong	An Efficient Design of 45nm Charge-Pump Phase-Locked Loop Architecture for Sub-1G IoT Applications
15:50-16:05	Oral S4-02-O Lu Trung Tin	Enhanced Fuzzy Logic Control for Overcoming Intrinsic Resistance in Inverted Pendulum Systems
16:05-16:20	Oral S4-03-O Phan Tan Phuc	Optimizing Solar Energy Efficiency in Zero Energy House: An Incremental Conductance MPPT-Based Approach
16:20-16:35	Oral S4-04-O Tran Thi Linh	Naturalistic Driving Action Recognition and Driver Drowsiness Detection System
16:35-16:50	Oral S4-05-O Lam Hong Phuc	Energy Management Strategy for Decarbonized Energy Sources in DC Residential Microgrid
Session 5. Computing Science, Simulation and Modeling Room E.206 (2 nd floor, Building E), 227 Nguyen Van Cu Str., District 5, HCMC - Chair: Prof. Huynh Van Tuan (VNUHCM-US,Vietnam) - Co-chair: Dr. Do Duc Cuong(VNUHCM-US,Vietnam) - Secretary: Dr. Trinh Thi Ly (Hand phone: 0565592094)		
14:00-14:20	Invited talk S5-01-I <i>Dr. Vo Hong Hai (VUHCM-US)</i>	Development of an FPGA-Based Pulse-Height Analyzer for Scintillation Detectors in Gamma Energy Spectroscopy
14:20-14:35	Oral S5-01-O <i>Dr. Le Nguyen Hoa Tien</i>	Calculating the Wave Propagation in Cu Lao Dung Mangrove Forest (Soc Trang) using WAPROMAN model
14:35-14:50	Oral S5-02-O Nguyen Duy Thong	Estimation of thickness samples using gamma scattering techniques based on Machine learning approach
Coffee break (15:00-15:15)		
15:15-15:30	Oral S5-03-O Huynh Quoc Viet	Applied the Maximal Overlap Discrete Wavelet Transform and Short Time Fourier Transform layers for classify the electroencephalography of schizophrenia patients
15:30-15:45	Oral S5-04-O Phan Tung Anh	Optimization of power calculation using LQR control, stability analysis with Lyapunov Equation and Sensor fault monitoring for Wind Turbines
15:45-16:00	Oral S5-05-O Tran Hoang Nhut	Detection and diagnosis of rice leaf disease using deep convolutional neural network.

Session 6. Biomedical Engineering and Medical devices

Room B.43 (4th floor, Building B), 227 Nguyen Van Cu Str., District 5, HCMC

- Chair: Prof. Pham Thi Thu Hien (VNUHCM-UI, Vietnam)
- Co-Chair: Dr. Huynh Chan Khon (VNUHCM-IU, Vietnam)
- Secretary: Nguyen Thi Tu Trinh (Hand phone: 0833155679)

14:00-14:20	Invited talk S6-01-I Prof. Pham Thi Thu Hien (VNUHCM-UI, Vietnam)	Detection and classification of breast cancer utilizing polarization images and artificial intelligence (AI) model
14:20-14:40	Invited talk S6-02-I Dr. Huynh Chan Khon (VNUHCM-IU, Vietnam)	Development of electrowetting on dielectric based digital microfluidic platform toward automated molecular biology assay
14:40-15:00	Oral S6-01-O Dinh Thanh Dat	A Novel Cancer Cells Recognizer Tracking Starvation-Induced Lipid Trafficking into Mitochondria
Coffee break (15:00-15:15)		
15:15-15:30	Oral S6-02-O Hua Thi Hoang Yen	Denoising And Enhancing Image Quality For Detection Accuracy In Mammograms
15:30-15:45	Oral S6-03-O Le, Thi Thu Ngoc (Taiwan)	Maintaining the Postharvest Fruit Quality using UV-C LED System
15:45-16:00	Oral S6-04-O Phan Thien Luan (Taiwan)	Development of a handheld impedance analyzer using AD5941

4. MEETING OF PROGRAM COMMITTEE FOR ICEBA2024

* Time: 17:00-17:30

* Location: Room B40, Building B, 227 Nguyen Van Cu Str., District 5, HCMC

* Participant: Scientific committee, Program committee, Local committee and other guests

5. DINNER PARTY OF ICEBA2023 CONFERENCE

* Time: 18:00-20:00 ((Departure at 17:45 by walk)

* Location: 241 Restaurant (45 Pham Viet Chanh Str., District 1, HCM city)

* Participant: VIP guests, Invited speakers, Scientific Committee, Program Committee, Local Committee, Participants,...

*Program: the summary of ICEBA2023, poster prize, thanks gifts, closing remark and dinner.

***2nd day of Conference (December 9, Saturday):** Tutorial Session and City tour