

Program

The 3rd International Symposium on Sustainable Healthcare and Plasma Innovation for Future Society 2025

January 20 - 23, 2025 | Chiang Mai University, Thailand

DAY 1

JANUARY 20th, 2025

Time	Detail
10.30 - 16.00	Excursion (Extra charge)
18.00 - 22.00	Reception Dinner (Invited only) @The Brick Startup Space

DAY 2

JANUARY 21st, 2025

Venue: Uniserv Chiang Mai University, Thailand (Inthanin Room)

Time	Detail
08.30 - 09.00	Registration
09.00 - 09.05	Welcome Address: Pitiwat Wattanachai (Chair of Symposium 2025 and Director of SCIENCE AND TECHNOLOGY PARK (STEP), CHIANG MAI UNIVERSITY, THAILAND)
09.05 - 09.10	Introductory Speech: Choongsik Bae (Representative of Symposium, KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA)
09.10 - 09.15	Opening Ceremony: Tanyanuparb Anantana (Vice President of CHIANG MAI UNIVERSITY, THAILAND)
09.15 - 09.25	Give a thank to sponsorship
09.25 - 09.30	Photo Session
Session Chair: Pitiwat Wattanachai (CMU)	
09.30 - 10.10	Plenary talk 1: Daesoo Kim KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Shining lights on Parkinson's Disease
10.10 - 10.25	Refreshment
10.25 - 11.05	Plenary talk 2: Dumnoensun Pruksakorn CHIANG MAI UNIVERSITY, THAILAND TOPIC: Transforming Cancer Care: Liquid Biopsy Revolutionizes Osteosarcoma Detection and Monitoring
Session Chair: Choongsik Bae (KAIST)	
11.05 - 11.45	Plenary talk 3: Yong Sup Choi KOREA INSTITUTE OF FUSION ENERGY, KOREA TOPIC: Plasma Technology of IPT-KFE for Sustainable Society

DAY 2

JANUARY 21st, 2025

Venue: Uniserv Chiang Mai University, Thailand (Inthanin Room)

Time	Detail
11.45 - 13.00	Luncheon
Session Chair:	Choongsik Bae (KAIST)
13.00 - 13.40	Plenary talk 4: Komgrit Leksakul CHIANG MAI UNIVERSITY, THAILAND TOPIC: Advancing Plasma Medicine: Innovations and Perspectives for Sustainable Healthcare in Thailand
Session 1:	Healthcare Innovations
Session Chair:	Hyung-Soon Park (KAIST), Chawan Manaspon (CMU)
13.40 - 14.05	Invited talk 1: Jeongyoun Ahn KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Predicting Sleep-Wake Times from Wearable Sensor Data Using Change Point Detection
14.05 - 14.30	Invited talk 2: Patiwet Wuttisarnwattana CHIANG MAI UNIVERSITY, THAILAND TOPIC: Revolutionizing Oral Cancer Screening: AI-Powered Digital Platforms for Early Detection
14.30 - 14.55	Invited talk 3: Minee-Liane Choi KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Organoid-Based Drug Testbed Using AI for Brain Disorders
14.55 - 15.20	Invited talk 4: Surat Tanprawate CHIANG MAI UNIVERSITY, THAILAND TOPIC: Building AI-Powered Ecosystems for Smarter Migraine Care: From Connected Care to Personalized Interventions
15.20 - 15.30	Refreshment
Session Chair:	Jeongyoun Ahn (KAIST), Patiwet Wuttisarnwattana (CMU)
15.30 - 15.55	Invited talk 5: Hyung-Soon Park KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: BCI-based Hand Rehabilitation Robot for Neurorehabilitation Post Stroke
15.55 - 16.20	Invited talk 6: Chawan Manaspon CHIANG MAI UNIVERSITY, THAILAND TOPIC: Nitrided Ti-6Al-4V: A Catalyst for Increase Mineralization and Osteogenic Marker Expression
16.20 - 16.45	Invited talk 7: Jihyeon Yeom KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Chiroptical Materials for AI-Healthcare Platforms

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Time	Detail
16.45 - 17.10	Invited talk 8: Song Ih Ahn KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Microengineered Blood-Brain Tumor Barrier Model for Personalized Glioblastoma Therapy
18.00 - 21.00	Banquet @ Na Nirand Romantic Boutique Resort

DAY 3
JANUARY 22nd, 2025

Venue: Uniserv Chiang Mai University, Thailand (Inthanin Room)

Time	Detail
Session 1: Healthcare Innovations Session Chair: Inkyu Park (KAIST), Sarawut Kumphune (CMU)	
08.30 - 08.55	Invited talk 9: Hyungsoo Kim KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Stretchable Dielectric Barrier Discharge Plasma Source for Healthcare Applications
08.55 - 09.20	Invited talk 10: Sarawut Kumphune CHIANG MAI UNIVERSITY, THAILAND TOPIC: Cardio-Therapeutic Potential of Recombinant Human Anti-Protease Protein and Its Nanomedical Application
09.20 - 09.45	Invited talk 11: Seong Su Kim KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Sensors for Structural Health Monitoring of Lightweight Medical Equipment
09.45 - 10.10	Invited talk 12: Inkyu Park KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Smart Sensor Technologies for Healthcare and Medical Application
10.10 - 10.20	Refreshment
10.20 - 10.45	Invited talk 13: Radom Pongvuthithum CHIANG MAI UNIVERSITY, THAILAND TOPIC: Medical Device Development for Thailand's Aging Society
Session 2: Plasma Engineering and Applications Session Chair: Pak-Man Yiu (Taiwan), Pongsawat Premphet (CMU)	
10.45 - 11.10	Invited talk 1: Chan Beum Park KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Activating Redox Biocatalysis by Light-Induced Electron Transfer

DAY 3

JANUARY 22nd, 2025

Venue: Uniserv Chiang Mai University, Thailand (Inthanin Room)

Time	Detail
Session 2: Plasma Engineering and Applications	
Session Chair: Pak-Man Yiu (Taiwan), Pongsawat Premphet (CMU)	
11.10 - 11.35	Invited talk 2: Pak-Man Yiu MING CHI UNIVERSITY OF SCIENCE AND TECHNOLOGY, TAIWAN TOPIC: Development of A Nano-textured SUS316 Superhydrophilic Coating for Protein Capturing in Medical Applications
11.35 - 12.00	Invited talk 3: Arlee Tamman THAILAND INSTITUTE OF NUCLEAR TECHNOLOGY, THAILAND TOPIC: Methane-to-Hydrogen Conversion Using Atmospheric Pressure Plasma Reactor with Honeycomb Electrode
12.00 - 13.00	Luncheon
Session Chair: Choncharoen Sawangrat (CMU), Khanit Matra (SWU)	
13.00 - 13.25	Invited talk 4: Seong Bong Kim KOREA INSTITUTE OF FUSION ENERGY, KOREA TOPIC: Rotary Magnetron Sputtering with an ECR Plasma
13.25 - 13.50	Invited talk 5: Khanit Matra SRINAKARINWIROT UNIVERSITY, THAILAND TOPIC: Enhancing Microgreen Cultivation with Innovative Multiple-Point Corona Discharge Plasma Technology
13.50 - 14.15	Invited talk 6: Young Kounng Lee KOREA INSTITUTE OF FUSION ENERGY, KOREA TOPIC: The Transcriptional Regulation of Plant Growth by Plasma-Activated Water
14.15 - 14.40	Invited talk 7: Sanghoo Park KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Empowering Optical Diagnostics with Image-Based Spectral Analysis via Multi-Objective Supervised Learning
Session Chair: Yong Sup Choi (KFE), Arlee Tummon (TINT)	
14.40 - 15.05	Invited talk 8: Seungil Park KOREA INSTITUTE OF FUSION ENERGY, KOREA TOPIC: Study on Biomaterials Derived from Natural Products Using Low-Temperature Plasma
15.05 - 15.30	Invited talk 9: Yong-Jin Yoon KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY, KOREA TOPIC: Bio 3D Printing for Biomedical: Hydrogels for Actuator, Scaffold and Dressing

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JANUARY 22nd, 2025

Venue: Uniserv Chiang Mai University, Thailand (Inthanin Room)

Time	Detail
15.30 - 15.40	Refreshment
15.40 - 16.05	Invited talk 10: Isara Wattananapakasem MAEJO-PHRAE CAMPUS, THAILAND TOPIC: Plasma Technology on the Functional Properties of Black Glutinous Rice and Its Application in Food Functional and Cosmetics
16.05 - 16.30	Invited talk 11: Wei-Yu Chen MING CHI UNIVERSITY OF SCIENCE AND TECHNOLOGY, TAIWAN TOPIC: Cold Atmospheric Plasma Polymerization for Tailored Functional Surfaces
Session Chair: Sanghoo Park (KAIST), Wei-Yu Chen (MCUT)	
16.30 - 16.45	Oral presentation 1: Natpaphan Yawut CHIANG MAI UNIVERSITY, THAILAND TOPIC: Enhancing Glioblastoma Cell Apoptosis with Optimized Plasma-Activated RONS
16.45 - 17.00	Oral presentation 2: Kochakon Moonsub CHIANG MAI UNIVERSITY, THAILAND TOPIC: Enhancing Pathogen Inactivation: A Synergistic Approach with Plasma-Activated Water
17.00 - 17.15	Oral presentation 3: Phanumas Sojithamporn CHIANG MAI UNIVERSITY, THAILAND TOPIC: Optimizing plasma-activated Water for Enhanced Microbial Control in Agricultural Produce Processing
17.15 - 17.25	Poster Presentation Award
17.25 - 17.30	Closing Ceremony

DAY 4
JANUARY 23rd, 2025

Venue: As designed

Time	Detail
Session 3: Technical Tour/Lab Visit/ Collaboration	
09.00 - 11.00	Visiting the Clinical Trial Center and Material Science Research Center
11.00 - 12.00	Discussion
12.00 - 13.00	Luncheon