



28th ACIS International Winter Virtual Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD2024-Winter)



4-6 December, 2024

**National Chin-Yi University of Technology, Taichung
Taiwan**

<https://acisinternational.org/conferences/snpd2024-winter/>

Organizing Committee

General Chair

Wen-Yuan Chen National Chin-Yi University of Technology, Taiwan

Conference Chairs

Shu-Ching Chen Florida International University, USA
Win-Jet Luo National Chin-Yi University of Technology, Taiwan
Sheng-Chih Yang National Chin-Yi University of Technology, Taiwan

Program Chair

Masahide Nakamura Kobe University, Japan
Huber Nieto-Chaupis Universidad Autónoma del Perú, Peru
Hsiung-Cheng Lin National Chin-Yi University of Technology, Taiwan

Registration Co-Chair

Chuin-Mu Wang National Chin-Yi University of Technology, Taiwan
Ruey-Maw Chen National Chin-Yi University of Technology, Taiwan

Local Arrangement Chair

Chia-Chen Lin National Chin-Yi University of Technology, Taiwan
Jun-Juh Yan National Chin-Yi University of Technology, Taiwan

Publicity Co-Chairs

Ing.habil.Roland Stenzel Dresden University of Applied Sciences, Germany
Mei-Ling Shyu University of Miami, USA
Mei Wang Xi'an University of Science and Technology, China
Narayan C. Debnath Eastern International University, Vietnam
Trung Pham University of Talca, Chile
Vincent CS Lee Monash University, Australia
Ming-Yi Tsai National Chin-Yi University of Technology, Taiwan
Sheng-Chih Yang National Chin-Yi University of Technology, Taiwan

Finance Chair

Hsin-Chiang You National Chin-Yi University of Technology, Taiwan

Publication Chair

Worajit Setthapun (Sai) Chiang Mai Rajabhat University, Thailand

Program at a Glance

Thursday, December 5, 2024

Time(GMT+8)	Session	Location
09:00AM - 10:30AM	Regular Session 1	Virtual
10:30AM - 12:00PM	Regular Session 2	
12:00PM - 01:00PM	Break	
01:00PM - 02:30PM	Regular Session 3	
02:30PM - 04:00PM	Workshop	

Friday, December 6, 2024

Time (GMT+8)	Session	Location
09:00AM - 10:30AM	Special Session (1-1)	Virtual
10:30AM - 12:00PM	Special Session (1-2)	

Program Schedule

Thursday, December 5, 2024

09:00AM - 10:30AM(GMT+8) – Regular Session 1

Chair: Prof. Chu-En Lin(National Chin-Yi University of Technology)

Google Meet: <https://meet.google.com/juq-yavt-gbx>

Multimedia-Based Testbot for Detecting Malware-Hiding Behaviors
Zhiyong Shan and Sathyanarayanan Vimalan

Advances and Evaluation of Intelligent Techniques in Short-Term Load Forecasting
Jamshaid Iqbal Janjua

A Sentiment and Emotion Analytics Framework for Social Media News
Fu-Shing Sun and Miao Guo

A prototype of digital student ID system based on verifiable credentials
Takashi Yamaguchi, Ryo Itokawa and Eisuke Ito

A certification process for testing software components for security properties
Yongpil Geum

From Java to Flutter: Evaluating Modern Frameworks in Mobile App Development with Semantic Editor
Balachandran Nair Sumadevi Sarada

10:30AM - 12:00PM(GMT+8) – Regular Session 2

Chair: Prof. Meng-Hua Yen(National Chin-Yi University of Technology)

Google Meet: <https://meet.google.com/zvc-vnrq-std>

Application of Partial Least Squares Regression Method to Estimate Analysis of Overcut Phenomenon in Wire Cutting
Shao Hsien Chen and Chien-Wei Lu

Research and Implementation of Key Technologies for Anti-Fraud in Medical Insurance Based on Big Data
Yi Wang and Wenqian Shang

Gain Ratio for Intrusion Detection Systems in Network Security
Ayomide Oyemaja and Zheni Utic

FPGA Implementation of Low-Latency Cipher LTLBC and its Security Evaluation
Yusuke Nozaki, Shu Takemoto and Masaya Yoshikawa

12:00PM - 13:00PM(GMT+8) –Break

01:00PM - 02:30PM(GMT+8) – Regular Session 3

Chair: Prof. Hsiung-Cheng Lin(National Chin-Yi University of Technology)

Google Meet: <https://meet.google.com/vux-fdto-gmx>

Prediction of Next Global Pandemic Through Non-Commutative Algebra

Huber Nieto-Chaupis

Machine Learning for Solving Quantum Box Without Explicit Quantum Mechanics

Huber Nieto-Chaupis

Quantum Mechanics Without Quantum Formalism Through Machine Learning

Huber Nieto-Chaupis

Perceptron Replaces Friis Equation to Calculate Received Power

Huber Nieto-Chaupis

Enhancing the Cloud Security over Topic Modelling

Sabbir M. Saleh, Nazim Madhavji and John Steinbacher

02:30PM - 04:00PM(GMT+8) – Workshop

Chair: Prof. Sheng-Wei Huang(National Chin-Yi University of Technology)

Google Meet: <https://meet.google.com/itm-hqvp-cav>

On Accuracy of ML-based Functional Size Approximation Models on Effort Estimation

Kaoru Yokogawa, Sousuke Amasaki, Hirohisa Aman and Tomoyuki Yokogawa

Optimizing Transformer Based Inference Efficiency using CMM-D

Shubham Subhash

Scaling Transformer Inference Through CPU and Memory Optimization

Shubham Subhash

Game AI with Human-like Decision Making Using Reinforcement Learning in First-person Shooter Games

Kazuki Futatsuike

Exploring the Interpretability of Deep Learning Based Material Property Prediction Methods

Zahra Jahedibashiz, William Richards, Xin Zhang, James Quinlan, Yuqi Song

Post-Surgery Wrist Fracture Patients Handling a Virtual Object in an Augmented Reality Environment

Chun Wei Yew, Mei-Hsuan Wu, Pei-Syuan Wu and Kai Way Li

Friday, December 6, 2024

09:00AM - 10:30AM(GMT+8) – Special Session (1-1)

Chair: Prof. Chi-Chun Chen(National Chin-Yi University of Technology)

Google Meet: <https://meet.google.com/eyu-aogq-hzf>

Effects of Thermal Treatment to the Sensitivity of the Polycrystalline Silicon Nanowire Field Effect Transistor Biosensors

Chi-Chang Wu, Shih-Jhao Li, Yuan-Nan Tsai, Yi-Chun Huang, Yi-Ching Cheng, Yu-Fan Chang

Development of an Automated LiDAR-Based Eight-Arm Maze for Cognitive Memory Assessment in Traumatic Brain Injury Rats

Yu-Rui Hung Shu Cing Wu Lung-Chih Kuo Chi-Chun Chen

Fatigue Driving Monitoring System Based on Multi-source Information Feature Fusion

Li-Yun Chi, Yan-Yao Lan, Liang-Hung Wang, Chun Kuo

Design of Dynamic Synchronized Random Keys Utilizing Chaotic Extremum Coding

C. H. Lin, G. H. Hu, C. W. Ho, H. L. Mu and J. J. Yan

10:30AM - 12:00PM(GMT+8) – Special Session (1-2)

Chair: Prof. Chin-Yi Cheng(National Yunlin University of Science and Technology)

Google Meet: <https://meet.google.com/oqw-tuot-rrc>

Improved Mahalanobis-Taguchi System versus Convolutional Neural Networks for Acoustic Signal Recognition: A Case Study on Car Window Motor Sound Monitoring

Chin-Yi Cheng, Chen-En Shi and Ilham Saputra

The Influences of Seed Layer Thickness on The Properties of ZnO Nanowire for The Piezoelectric Sensor

Ming-Cheng Kao, Kai-Huang Chen, Jun-Hong Weng, Chih-Hung Chiang and Tsung-Kuei Kang

Improving Power Disaster Prevention Efficiency Through Smart Sensors and Automated Monitoring Systems

Hsuan-Chao Huang, Jheng Hua Huang and Pei-Yu Wang

Automatic Parking Spot and Route Location Using Google Maps and Fuzzy Logic

Po-Sheng Chen and Shih-Yen Huang

A Study on Data Encryption and Decryption Framework for Real-Time Audiovisual Transmission in Drones

Hang Hong Kuo and Pin Hao Chiu