

**2023 International Conference on Security and Information  
Technologies with AI, Internet Computing and Big-data Applications  
Dec. 7-9, 2023, Chihlee University of Technology, New Taipei City.**

Dec. 7 10:50 - 12:30 Session 1 ( Session Room 1, 8F, General Teaching Building)

	Paper No.	Title
<b>Multimedia Security</b>  Chair: Prof. Jheng-Jia Huang	2	High Quality Reversible Data Hiding in Videos based on Prediction Error Histogram Shifting
	5	Image Interpolation Utilizing Neighboring Pixels as References in Conjunction with Multilayer perceptron neural networks
	15	Reversible data hiding in encrypted image based on Huffman coding and block encryption
	65	Authentication of Image Fidelity in Watermarking-QR-Code Approving Copyright Systems
	93	Embedding capacity raising in data hiding method based on interpolation and histogram shifting
	96	A Zero-watermarking Image Scheme in Normalized Cross-correlation with Robust Copyright Protections

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Dec. 7 13:30 - 15:20 Session 2 ( Session Room 1, 8F, General Teaching Building)

Network Security (I)  Chair: Prof. Po-Wen Chi	Paper No.	Title
	9	A Novel Approach for Detecting and Analyzing Cyber-Attacks in Cyber-Physical Systems
	20	White-box Penetration Testing for Hash Collision Attack on Web Applications
	37	Towards Zero Trust for Financial Sectors: A Proposed Framework on Trust Evaluation
	43	Infrastructure with Flexibility and Transparency for IoT Networks
	89	AI-Powered Precision Medicine: Transforming Healthcare through In-Depth Analysis of Medical Case Studies
	16	Analysis and Detection of Abnormal Transactions on Ethereum

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Dec. 7 13:30 - 15:20 Session 3 (Session Room 2 , 8F, General Teaching Building)		
	Paper No.	Title
Artificial Intelligence (I)  Chair: Prof. Chung-Fu Lu	10	Feasibility Analysis Study on Constructing a Grid Intrusion Detection System Using Semi-Supervised Learning Models
	33	Securing NLP Systems: A Comprehensive AI-Based Approach
	42	A new scheme modeling gym membership transactions with NFT systems
	82	A Text to Human-like Speech Using Tacotron -based TTS Model
	83	Malware classification based on CNN-SVM deep learning architecture with transfer learning
	85	Enhancing Project Programming Hour Prediction with Regression Analysis Techniques – A Case Study of Company D

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Dec. 8 10:50 - 12:30 Session 4 ( Session Room 1, 8F, General Teaching Building)

Network Security (II) Chair: Prof. Patrick Chen	Paper No.	Title
	12	A New Traceable One-time Address Scheme Secure Against Privilege Escalation Attack
	22	An Object-based Multi-level Authentication Framework for AR e-book
	24	An Door Lock System Based on Visual Cryptography
	28	Automatic APT Attack Reconstruction Supporting Lateral Movement
	36	Using Open-Source Intelligence to Archive Criminal Organizations
	86	FIDO-based Access Control Mechanism in Named Data Networking

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Dec. 8 10:50 - 12:30 Session 5 ( Session Room 2, 8F, General Teaching Building)

Artificial Intelligence (II) Chair: Prof. Tzu-Wei Lin	Paper No.	Title
	14	Empirical Approach to a Fine-Tuning using Forgetting in Large Language Models
	21	Automatic Wound Segmentation and Analysis with Deep Convolutional Neural Networks
	31	Prediction of the Prevalence of COVID-19 Using Epidemic Differential Equations and Deep Learning Network
	41	Russo-Ukrainian War on Facebook: A Temporal and Spatial Study Based on BERTopic modeling
	53	A Performance Study of Selected Machine Learning Techniques for Predicting Heart Diseases
	94	Unmanned Aerial Vehicles Detection Using CNN-Transfer Learning

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Dec. 9 10:00 - 10:50 Session 6 ( International Conference Hall, 8F, General Teaching Building)\_)

	Paper No.	Title
Learning & Defense	3	Multi-head Temporal Learning for Human Activity Recognition using Smartphone
Chair: Prof. Jia-Ning Luo	7	Windows Registry Attack and Defense: Behavior Analysis and Persistence Detection Based on ETW
	29	Device identification technology within the Network Address Translation devices

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Dec. 9 10:00 - 10:50 Session 7 ( Session Room 2, 8F, General Teaching Building)

	Paper No.	Title
Fuzz Testing & Analysis Chair: Prof. Hsing-Chung Chen	6	Prediction of processing parameters based on multi-objective Bayesian optimization combined with machine learning model for high frequency heat treatment of metals
	39	Protocol Security Fuzz Testing with Data Augmentation
	88	Preserving the higher coverage guided of an ICS-oriented fuzzy testing technique

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Dec. 9 11:00 - 12:40 Session 8 ( Session Room 1, 8F, General Teaching Building)

Security Application Chair: Prof. Tzu-Wei Lin	Paper No.	Title
	19	Video Access Control Aligned with Health Education Classification
	32	Information and Public Opinion Analysis Platform Based on Social Media
	38	Analysis the domain name of fraud investigation sites with the lexical entailment recognition methods
	44	The Evaluation Approach for Indoor Design Usability Based on Gaussian Mixed Model
	63	A Lightweight Deep Leakage Prevention Model with Mixing Multi-Gradients
	62	PP-3FAT Scheme for 5G-IoHT Telemedicine Systems



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Dec. 9 11:00 - 12:40 Session 9 ( Session Room 2, 8F, General Teaching Building)

Cryptography, Blockchain & IoT  Chair: Prof. Yi-Fan Tseng	Paper No.	Title
	4	Enhanced Lightweight Authenticated Key Agreement Protocol with Privacy Protection for Vehicle Cloud Computing
	8	An Extended Euclidean Algorithm Implementation over Ciphertext Space
	11	Cryptanalysis to Ciphertext-Policy Attribute-Based Encryption of Liu et al and Amirthavalli et al
	71	Implementation and Analysis for Side-channel Attack based on Denoising Autoencoder
	98	Design and Implementation of a Secure AIoT-based Health Promotion Prescription Systems for Community-Based Healthcare Promotion Services
	101	Implementation and application of Decentralized Financial Lending System based on Blockchain