

Thursday, December 18


Thursday, December 18 7:30 - 8:30 (Asia/Saigon)

Registration 

Thursday, December 18 8:30 - 9:00 (Asia/Saigon)

Opening ceremony 

Thursday, December 18 9:00 - 10:00 (Asia/Saigon)

Keynote speech #1: AI for Scientific Discovery: A New Frontier by Prof. Truyen Tran, Head of AI, Health and Science, Applied Artificial Intelligence Initiative, Deakin University 

Chair: Nguyen Thanh Thuy (VNU Ha Noi, Vietnam)

Thursday, December 18 10:00 - 10:30 (Asia/Saigon)

Coffee break 

Thursday, December 18 10:30 - 12:00 (Asia/Saigon)

AI1: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chairs: Huu Quan Do (Van Lang University, Vietnam), Truong Khang Nguyen (Van Lang University, Vietnam)

Identification of Major Psychiatric Disorders from Imbalanced Resting-State EEG Using Hybrid Fusion of CNN and TabTransformer 

Loan Thi Thanh Mai, Linh Hong Ngoc Le, Duy Tri Nguyen Ho and Tri Nguyen, Ho Duy (University of Information Technology, VNU-HCM, Vietnam)

Towards Intelligent Enterprise Assistants: Leveraging RAG to Connect LLMs with Structured Business Data 

Dat Thanh Dang (University of Information Technology, Vietnam); Dung Ha Nguyen (UIT, VNU HCMC, Vietnam); Binh Thanh Nguyen (University of Information Technology & Geminisoft, Vietnam)

Rethinking Adversarial Robustness: The Role of Input Transformations 

Hanh Thi-My Nguyen, Khoa Tran, Quan Minh Phan and Ngoc Hoang Luong (University of Information Technology, Vietnam)

Parameter-Space Data Distillation in Generative Models 

Hoang-Minh Do (University of Science, VNU-HCM, Vietnam); Thai Son Tran (Ho Chi Minh City University of Science, Vietnam)

Multi-Modal Attention Fusion Network for Marine Diesel Engine Fault Diagnosis with Limited Single-Sensor Vibration Data 

Nam Pham Van (Hanoi University of Industry, Vietnam); Linh Hoai Tran (Hanoi University of Science and Technology, Vietnam)

COM1: Communications, Networking, Internet of Things, Cloud Computing

Room: J.05.03

Chairs: Ngoc-Tan Nguyen (VNU-University of Engineering and Technology, Vietnam), Tri-Hai Nguyen (Van Lang University, Vietnam)

Multihop Relaying-Assisted NOMA IoT Networks with Short-Packet URLLCs 

Ngo Hoang Tu (Van Lang University, Vietnam); Huynh Van Hoa (Posts and Telecommunications Institute of Technology, Vietnam); Thien Thanh Tran (Ho Chi Minh City University of Transport, Vietnam); Vo Nguyen Quoc Bao (Van Lang University, Vietnam)

Energy-Efficient Resource Allocation in O-RAN Using Soft Actor-Critic 

Tri-Hai Nguyen, Huy T. Nguyen and Vo Nguyen Quoc Bao (Van Lang University, Vietnam); Thanh-Dat Le (Dell Technologies, Canada); Luong Vuong Nguyen (FPT University, Vietnam); O-Joun Lee (The Catholic University of Korea, Bucheon, South Korea, Korea (South))

Effective Deterministic WiFi Handover Mechanism with Fuzzy-Inspired Stability Checks 

Lam Binh Nguyen Phan (University of Science - VNUHCM, Vietnam); Anh Thai Nguyen and Ngo Hoang Tu (Van Lang University, Vietnam)

High-Fidelity Beam Selection in the Upper Mid-Band Using Digital Twin Ray-Tracing and Deep Learning 

Hyunseok Noh, Taeje Park and Wonjin Sung (Sogang University, Korea (South))

Development of Water Quality Monitoring Systems Based on Internet of Things and Deep Learning 

Son Do-Phi (University of Information Technology - VNUHCM, Vietnam); Tram Bui-Thi-Ngoc (UIT - VNUHCM, Vietnam); Cong Pham-Dinh and Bao Nguyen-Van (University of Information Technology - VNUHCM, Vietnam); Thuat Nguyen-Khanh (UIT - VNUHCM, Vietnam); Quan Le-Trung (University of Information Technology - VNUHCM, Vietnam)

CYB1: Cyber-Security, Cryptography, Blockchain & Applications

Room: J.05.05

Chair: Minh Tuan Tran (The University of Queensland, Australia)

Balancing Defence and Operational Stability: Resilience-Oriented Reinforcement Learning for Autonomous Critical Infrastructure Cyber Defence 

Minh Tuan Tran and Ryan Ko (The University of Queensland, Australia)

The Simplest Side-channel Protection of AES-dedicated Circuit for Last-round Attack by CPA 

Tomoaki Ukezono (Kindai University & Humanity-Oriented Science and Engineering, Japan); Saishi Taira (Kindai University, Japan)

Hybrid Federated Learning with TabTransformer and FedMADE-GSA for IoT Intrusion Detection

Trong-Thua Huynh, Hy Thanh Phan and Nguyen Thi Bich Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Gioi Le Ho (Posts and Telecommunications Institute of Technology, Vietnam & No, Vietnam); Trí Quốc Nguyễn Đình (Posts and Telecommunications Institute of Technology, Vietnam)

Proof-of-Merit: A Reputation-Weighted VRF-PoA Consensus and Governance for Educational Blockchains

Tuan-Dung Tran, Huynh Phan Gia Bao, Tra Minh Trong, Tong Thuan Nguyen and Ngan Nguyen B.K (University of Information Technology, VNU-HCM, Vietnam); Van-Hau Pham (University of Information Technology, Vietnam)

A SHAP-Based Explainable AI Approach for Intrusion Detection Models

Xuan-Bach Luong (Vietnam National University, Hanoi, Vietnam); Thi-Ngan Pham (The Vietnamese People's Police Academy, Vietnam); Khanh-Tung Nguyen (Vietnam National University, Hanoi, Vietnam); Phuong-Diep An (Banking Academy of Vietnam, Vietnam); Ha Quang Thuy (VNU-University of Engineering and Technology, Vietnam)

IMA1: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Thi-Ngoc-Hanh Le (International University - VNU-HCM, Vietnam)

A Knowledge Distillation Approach for Diffusion-based Generative Skin Lesion Segmentation

Viet-Hoang Doan (University of Information Technology, Vietnam); Danh Thanh Nguyen (University of Information Technology, Vietnam & Vietnam National University of Ho Chi Minh City, Vietnam); Tuan-Kiet Ngo and Vinh-Tiep Nguyen (University of Information Technology, Vietnam)

SSCMFDNet: An Efficient Network Incorporating Self-Correlation and Spatial Attention for Copy-Move Forgery Detection

Toan Tan Nguyen (University of Information Technology, Vietnam)

Material-aware Style Transfer for Lacquer paintings

Thi-Ngoc-Hanh Le (International University - VNU-HCM, Vietnam); Khang Gia Pham (International University, VNU-HCM, Vietnam); Van Sinh Nguyen (International University of Ho Chi Minh City, Vietnam)

From Discriminative Regions to Complete Masks: CAM-SAM Fusion for Weakly Supervised Semantic Segmentation

Nhi Yen Huynh (University of Information Technology, Vietnam & Vietnam National University, Ho Chi Minh City, Vietnam); An Tran Khuong Nguyen (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam); Tien-Dung Mai (University of Information Technology & Vietnam National University of Ho Chi Minh City (VNUHCM), Vietnam)

O2O: Fine-Tuning Diffusion Models with Reinforcement Learning Using a Hybrid of Generated and Real Images

Hoa Nguyen, Vinh-Tiep Nguyen, Ngoc Hoang Luong and Son Nguyen Thanh (University of Information Technology, Vietnam)

Poster #1

Room: J.05.Hallway

Chairs: Tri Nhut Do (University of IT (UIT) - VNUHCM, Vietnam), Chau Thi Huyen Ly (Van Lang University, Vietnam)

5G-Enabled Smart Farming Communication Systems for Rural Malaysia 

Wai Yie Leong (INTI International University, Malaysia)

GPTViet: An Open-Source Vietnamese Foundation Model from Pretraining to Domain Specialization 

Truong-Thang Nguyen (Institute of Information Technology & Vietnam Academy of Science and Technology, Vietnam); Nhiem Tran (Foxconn, Taiwan); Ngoc Truong-Thi-Minh (Vietnam Academy of Science and Technology, Vietnam); Thanh Le-Hoang (Vietnam Academy of Science and Technology, Vietnam); Kien Bui-De (Institute of Information Technology, Vietnam); Manh Dong Tran (Institute of Information Technology of Vietnam Academy of Science and Technology, Vietnam)

A Hybrid Estimation of Steering Vector - Based MVDR Beamformer in Annoying Environment 

Quan Trong The (Posts and Telecommunications Institute of Technology, Vietnam); Nguyen Thi Huyen Chau (Thang Long University, Vietnam)

Designing of Real-Time Control Hardware System for Quadcopters Using PX4 Firmware 

Phat Huu Nguyen, Phong Nguyen Nam, Duong Nguyen Canh, Dung Nguyen Viet and Dung Hoang Tuan (Hanoi University of Science and Technology, Vietnam); Bach Hoang Xuan (HUS High School, Vietnam); Dung Lai Tri and Quang Hoang Van (Hanoi University of Science and Technology, Vietnam)

Computer Vision in Agriculture: Cacao Bean Sorting Using Deep Learning 

Marife A. Rosales and Angelita M Pagcaliwagan (Polytechnic University of the Philippines, Philippines)

Swin-PResU: Hybrid SwinViT and Pruned Residual CNN for Precise Brain Tumor MRI Segmentation 

Nguyen Phuc Nguyen, Hang Thi Thu Dang, Vu Viet Truong, Ngo Hoang Tu and Anh Thai Nguyen (Van Lang University, Vietnam)

A Case Study with Concurrency and Data-Tensor Parallelism Scenarios in vLLM 

Duc Tuan Chu, Tien Son Pham, Sang Pham and Quan Hong Tran (Efficient Computing Research Group, Vietnam); Tuan Anh Mai (FPT Software AI Center, Vietnam); Xuan Truong Nguyen (Seoul National University, Korea (South)); Tuan Thanh Dao (Moreh Vietnam, Vietnam)

Leveraging In-Context Adversarial Augmentation for Improved Natural Language Inference Performance 

Quang-Dung Dang (Posts and Telecommunications Institute of Technology, Vietnam); Ly-Huynh Phan (Posts and Telecommunications Institute of Technology (PTIT), Vietnam); Van-Tung Bui and Dat Dinh Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Chi Minh Hieu Nguyen (Posts and Telecommunications Institute of Technology (PTIT), Vietnam); Truong-Giang Nguyen and Van-Thuong Vu (Posts and Telecommunications Institute of Technology, Vietnam)

Location Recommendation System for Opening a New Coffee Shop 

Huu-Khang Nguyen (International University, Vietnam); Trang T.D. Nguyen (Nha Trang University, Vietnam); Phu Pham (Ho Chi Minh City University of Technology - HUTECH, Vietnam); Loan Nguyen (International University, VNU-HCM, Vietnam)

Cross-Task Parameter Efficiency: Analyzing Pruning Effects on Discriminative and Generative Performance 

Son Do Anh Thai, Huy Quoc Pham and Thai Son Tran (Ho Chi Minh City University of Science, Vietnam)

IsaacLab vs. gym-pybullet-drones: A Comparative Study of UAV Simulators for Reinforcement Learning 

Phuc Nguyen-Duong-Hoang, Phan Van Tai and Son Ngoc Pham (UIT, Vietnam); Chuong Dang-Le-Bao (University of Information and Technology, Vietnam); Quan Le-Trung (University of Information Technology - VNUHCM, Vietnam)

A Segment-Based CRM System with high personalization using AI Agents and RPA to enhance Customer Lifetime Value in E-commerce 

Tuyet Quan Quan, Trinh and Thi Minh Phuong Luong (University of Economics and Law, VNU-HCM, Vietnam); Nhan Tri Bang (AI Lab Vietnam JSC, Vietnam); Hoanh-Su Le (University of Economics and Law, VNU-HCM, Vietnam)

Conversational Smart Assistant on a Microcontroller with Cloud-Based LLM Function Offloading 

Dang Quoc-Minh Do, Nguyen Hoang Nguyen, Quang Nho-Dang Nguyen and Tuan Anh Hoang (University of Science - VNUHCM, Vietnam); Khoa Quoc Nguyen (University of Science - VNUHCM Vietnam, Vietnam); Huu-Thuan Huynh (Ho Chi Minh City - University of Science, Vietnam)

Deep Learning-Based Emotion Recognition Using Electroencephalogram Signals 

Duy Nguyen (Gunma University, Japan); Trung Anh Trong Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Minh Tuan Nguyen (Posts and Telecommunications Institute of Technology (PTIT), Vietnam); Kou Yamada (Gunma University, Japan)

A Hybrid Framework for Semi-Automated Traffic Annotation: Integrating YOLOv11 Object Detection with CLIP Semantic Verification 

Hai Chi Nguyen, Hai Huu Son Le, Phuc Minh Nguyen, Ngo Hoang Tu and Anh Thai Nguyen (Van Lang University, Vietnam)

Thursday, December 18 12:00 - 13:30 (Asia/Saigon)

Lunch break at J.01 

Thursday, December 18 13:30 - 15:00 (Asia/Saigon)

AI2: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chairs: Minh-Phung Bui (Van Lang University, Ho Chi Minh City, Vietnam), Truong Khang Nguyen (Van Lang University, Vietnam)

An effective credit scoring model via advanced outlier detection and balanced sampling integration 

Chinh Pham (Banking Academy of Viet Nam, Vietnam); Huynh Trinh and Long Quoc Tran (VNU University of Engineering and Technology, Vietnam)

Debate-to-Decide: A Deliberative Multi-Agent Framework for Fair and Explainable Student Credit Scoring 

Trinh Tran Tran and Ngọc Bích Phạm Thị (University of Information Technology); Ngo Nguyen Duc Thang and Luu Quynh Anh (University of Economics and Law, Vietnam); Nguyen Minh Bao and Nguyen Phuong Quyen (University of Information Technology, Vietnam); Tuan-Dung Tran (University of Information

Technology, VNU-HCM, Vietnam)

An On-Chip Spiking Neural Network Using Auto-Plasticity Synapses for Unsupervised Learning in Edge AI Applications 

Trung-Khanh Le, Trong-Tu Bui and Duc-Hung Le (University of Science, VNU-HCM, Vietnam)

A Dialogue-based Multimodal Retrieval Framework for Vietnamese E-commerce RAG System 

Thuan Dinh Nguyen, Vy Ngoc Tuong Hồ, Ho, Thuan Phat Ngo, Huynh Minh Huy Nguyen and Minh Nhut Nguyen (University of Information Technology, Vietnam)

Deep Learning-Based Recognition of Selected Filipino Sign Language Phrases 

Robert Gallena De Luna (Polytechnic University of the Philippines, Philippines & University of Sto. Tomas, Philippines); Kriztel Anne R Girang, Jan Earl Laurenz D. Lucido, Leigh Francis E Marasigan, Cindy Nicole D. Santos and Marie Louise C. Sebidos (Polytechnic University of the Philippines, Philippines)

COM2: Communications, Networking, Internet of Things, Cloud Computing

Room: J.05.03

Chairs: Thai-Mai Dinh (VNU University of Engineering and Technology, Vietnam), Wai Yie Leong (INTI International University, Malaysia)

Optimizing Mixed-Resolution ADC Allocation Under Bit-Budget Constraints in LDPC-Coded Massive MIMO 

Hung Dang, Phong Dao and Tuan Hoang (Posts and Telecommunications Institute of Technology, Vietnam)

Waveform Design for Multi-Target Detection in the Integrated Sensing and Communication System 

Truong Quang Can (VNU University of Engineering and Technology, Vietnam); Trung Ninh Bui (University of Engineering and Technology, VNU-Hanoi, Vietnam); Thai-Mai Dinh (VNU University of Engineering and Technology, Vietnam)

Edge Computing Framework for Remote Healthcare Communication in Orang Asli Villages 

Wai Yie Leong (INTI International University, Malaysia)

Deep learning-based cyber attack detection: A Comparative Study of Transformer and Convolutional Neural Network Architectures 

Nguyen Trung Hieu and Nguyen Hong Son (Posts and Telecommunications Institute of Technology, Vietnam)

Linear Detection in One-Bit Mixed-ADC Massive MIMO: Insights into Performance and Energy Efficiency 

Hung Dang, Anh T.L. Dang and Phuong M Duong (Posts and Telecommunications Institute of Technology, Vietnam)

CYB2: Cyber-Security, Cryptography, Blockchain & Applications

Room: J.05.05

Chair: Tri-Hai Nguyen (Van Lang University, Vietnam)

A Novel Model for Detecting Website Defacements Based on BERT and BiLSTM 

Dau Xuan Hoang, Nhat Xuan Mai and Mai Phuong Nguyen (Posts and Telecommunications Institute of Technology, Vietnam)

Mitigating HTLC Griefing Attacks with Commitment Bonds: A Game-Theoretic and Empirical Analysis 

Tuan-Dung Tran (University of Information Technology, VNU-HCM, Vietnam); Quoc-Khoi Le and Uyen Do (The UIT University - VNUHCM, Vietnam); Van-Hau Pham (University of Information Technology, Vietnam)

Imbalance-Robust Class-Aligned Vector Encoders for Android Malware Detection 

Chi Duc Luu, Truong Son Pham and Ngoc Anh Dung Pham (Le Quy Don Technical University, Vietnam)

Joint Representation Learning and Clustering for IoT Network Anomaly Detection 

Noi Huu Nguyen (Le Quy Don Technical University, Vietnam); Ngoc Tran (Network Security, Vietnam); Pavel Obukhov (Don State Technical University, Russia)

Phishing Website Detection via Multimodal Learning and Retrieval-Augmented Reasoning 

Duc Manh Doan and Khang Thien Do (University of Information Technology, Vietnam); Hien Do Thi Thu (University of Information Technology, VNU-HCM, Vietnam); Ngo Duc Hoang Son (University of Information Technology, Vietnam); Phan The Duy (University of Information Technology, VNU-HCM, Vietnam)

IMA2: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chairs: Thi-Ngoc-Hanh Le (International University - VNU-HCM, Vietnam), Thanh Vo Xuan (Van Lang University, Vietnam)

KGER: A Knowledge-Grounded Endoscopic Retrieval Framework with a Fused Bi-Encoder and Gemini Re-ranking Pipeline 

Hoang Duc-Huy Pham (University of Information Technology, Vietnam); Nguyen Pham Hoang Le (University of Information Technology, Vietnam & Vietnam National University Ho Chi Minh City, Vietnam); Hien Dinh Nhat Thai and Hoang Thach Minh (University of Information Technology, Vietnam)

A comparative performance analysis of deep learning-based motorcycle tracking models at urban intersections: a Vietnamese case study 

Vinh Nguyen Dang The (The Saigon International University, Vietnam); De-Thu Huynh (The Saigon International University, Ho Chi Minh City, Vietnam); Huy Truong Dinh (Vietnamese-German University, Vietnam)

SilkLDP: A Pixel-Level Annotated Dataset and Deep Learning Approach for Silkworm Disease Detection 

Ho Anh Khoi (University of Information Technology, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

Urban Perception Analysis via Transformer-based Image Segmentation: A Deep Dive into City Understanding 

Nam-Hai Hoang Le (University of Economics Ho Chi Minh City, Vietnam); Danh Thanh Nguyen (University of Information Technology, Vietnam & Vietnam National University of Ho Chi Minh City, Vietnam)

Detecting "Nine-Dash Line" Images in Digital Content via Faster R-CNN and DINOv2-Based Knowledge Distillation 

Tu Do Tran, Hieu Mai Danh and Long Dang Hoang (Posts and Telecommunications Institute of Technology, Vietnam)

Poster #2

Room: J.05.Hallway

Chairs: Van Binh Nguyen (International University, Vietnam), Phong Thanh Tran (Physics and Engineering Physics, Vietnam & University of Science, Vietnam)

A Comparative Study of Optimization Methods for Building Energy Optimization

Chi Minh Hieu Nguyen (Posts and Telecommunications Institute of Technology (PTIT), Vietnam); Anh Tuan Dang (PTIT, Vietnam)

Latency and Energy Aware Service Migration in UAV-enabled MEC Wireless Sensor Networks

Quang Nhat Tran (Van Lang University, Vietnam); Xuan-An Bui (Viet Nam, Vietnam); Nguyen Van Chien (Ho Chi Minh City University of Transport, Vietnam); Dac-Binh Ha (Duy Tan University, Vietnam)

Natural Evolution Strategy for Camouflaged Adversarial Patches

Viet Duc Bui and Chi Duc Luu (Le Quy Don Technical University, Vietnam)

Enhancing Surgical Instrument Localization Using Image Processing

Van Binh Nguyen (International University, Vietnam); Duc Tan Ha (Can Tho Central General Hospital, Vietnam)

A Computer Vision-Based Mobile System for Efficient Event Attendance Management Using Quick Response Codes and Facial Recognition

Tri Nhut Do (University of IT (UIT) - VNUHCM, Vietnam)

TaK-Fuzz: Transaction-aware Knowledge Smart Contract Fuzzing with Retrieval-Augmented Generation and Language Models

Nguyen Ho Nhat Khoa (University of Information Technology, Vietnam & None, Vietnam); Nguyen Thanh Kiet and Vo Truong Trung Hieu (University of Information Technology, Vietnam); Hao Truong Thi Hoang (University of Information Technology, Vietnam & UIT, Vietnam); Phan The Duy (University of Information Technology, VNU-HCM, Vietnam)

Mind the Gap: On the Practical Utility of SHAP for Deep Learning-Based Intrusion Detection

Phuc Hao Do (Danang Architecture University, Vietnam); Tran Duc Le (University of Wisconsin-Stout, USA); Truong Duy Dinh (Posts and Telecommunications Institute of Technology, Vietnam); Van Dai Pham (FPT University, Vietnam)

A Quad-core 32-bit RISC-V CPU Implementation with Design Verification on 130nm CMOS Process

Nhon Le Thanh Nguyen (University of Science - VNUHCM, Taiwan & Faraday Technology, Vietnam); Minh Khai Ma, Bao Thuong T Cao and Duc-Hung Le (University of Science, VNU-HCM, Vietnam)

Genetic Algorithm Optimized Controllers for Wind Power Fluctuation Mitigation in Power Grids

Phong Thanh Tran (Physics and Engineering Physics, Vietnam & University of Science, Vietnam); Yen Thi Hoang Hua (University of Science-VNU HCM, Vietnam); Thuan Nguyet Phan (University of Science Ho Chi Minh City & Vietnam National University, Ho Chi Minh City, Vietnam); Chau Thi Huyen Ly (Van Lang University, Vietnam)

CFD-Based Analysis of Car Aerodynamic Performances under Restricted Operating Conditions 

An Duy Le, Anh Le Dang and Minh Hoang Do (Delta Global School, Vietnam); Ngo Van He (Hanoi University of Science and Technology, Vietnam)

Wideband Circularly Polarized Reconfigurable Antenna for Internet of Medical Things Applications 

Nguyen Tran (Phenikaa University, Vietnam); Hung Pham-Duy, Thai Dinh Nguyen and Tu Le-Tuan (PHENIKAA University, Vietnam)

AI Conferences Made Easy by AI - A Case Study at MIWAI 2025 

Tai Quoc To, Long Song Thien Nguyen, Canh Hung Nguyen, Nguyen Le Bao, Minh Tam Nguyen and Thanh Tung Nguyen (Ho Chi Minh City University of Technology (HCMUT), Vietnam); Chattrakul Sombattheera (Maha Sarakham University, Thailand); Quan Thanh Tho (Ho Chi Minh City University of Technology, Vietnam)

Relation-based Quintuple Extraction for Opinion Mining 

Phuc Quang Tran (People's Police University, Vietnam & HCM City, Vietnam); LE Thi My Hanh (University of Science and Technology & The University of Da Nang, Vietnam); Hiep Xuan Huynh (Can Tho University, Vietnam)

Adaptive Weighted Energy Distance Model for Context-Aware Collaborative Filtering 

Linh Thi Thuy Nguyen (Viet Nam & Can Tho University, Vietnam); Lan Phan and Hiep Xuan Huynh (Can Tho University, Vietnam)

Temporal Micro-Doppler Spectrogram-based ViT Multiclass Target Classification 


Nghia Thinh Nguyen and Tri Nhu Do (Polytechnique Montréal, Canada)

Tutorial #1: Photonics-enabled terahertz signal processing and applications in 6G and beyond by Dr. Pham Tien Dat, Senior Researcher, National Institute of Information and Communications Technology (NICT), Tokyo, Japan

Room: J.05.04

Chair: Huy T. Nguyen (Van Lang University, Vietnam)

Thursday, December 18 15:00 - 15:30 (Asia/Saigon)

Coffee break 

Thursday, December 18 15:30 - 17:00 (Asia/Saigon)

AI3: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chairs: Huu Quan Do (Van Lang University, Vietnam), Truong Khang Nguyen (Van Lang University, Vietnam)

A Streaming Big Data Pipeline for Real-Time Vehicle Re-Identification in Chaotic Urban Traffic

Vinh-Ha X. Pham (Vietnam National University Ho Chi Minh City, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

EEG-Based Parkinson's Disease Classification Using XGBoost and Explainable AI

Thi-Nhu-Quynh Nguyen (University of Science, Vietnam); Hoang-Thuy-Tien Vo (University of Science, VNU-HCM, Vietnam); Tuan Van Huynh (VNUHCM - University of Science, Vietnam)

Sampling-Based Imbalance Handling for Ensemble Models in Electricity Payment Fraud Detection

Phung Do (University of Information Technology, Vietnam); Dinh Phat Nguyen and Van Hien Nguyen (UIT, Vietnam); Thang Cap (University of Information Technology, Vietnam); Tuong Le (HUTECH University, Vietnam)

Q-Forge: An Efficient Two-Stage Framework for Noise-Aware Quantum Model Training

Ngoc-Truong Nguyen and Huy-Tan Thai (University of Information Technology, Vietnam)

NeuFACO: Neural Focused Ant Colony Optimization for Traveling Salesman Problem

Dat Thanh Tran and Khai Quang Tran (VinUniversity, Vietnam); Khôi Anh Phạm (Ha Noi University of Science and Technology, Vietnam); Van Khu Vu (VinUniversity, Vietnam); Đông Đỗ Đức (Vietnam National University-Hanoi, Vietnam)

COM3: Communications, Networking, Internet of Things, Cloud Computing

Room: J.05.03

Chairs: Tuan-Duc Nguyen (University of Van Lang, Vietnam), Ngo Hoang Tu (Van Lang University, Vietnam)

A Lightweight Plug-and-Play Model for Sensor Integration in Resource-Constrained IoT Devices

Nghia Nguyen Dai (Cantho University Software Center, Vietnam); Viet Truong Xuan (Can Tho University, Vietnam & Can Tho City, Vietnam); Vinh Loc Cu, Hoang Thao Le and Hoang Viet Nguyen (Can Tho University, Vietnam); Thai Minh Truong (Cantho University, Vietnam)

Bit Error Rate of RIS-enabled MISO Systems with Discrete Phase Shift

Khac Tuan Nguyen (University of Ulsan, Korea (South)); Vu Thai Hoc (Thu Dau Mot University, Binh Duong, Vietnam); Sunghwan Kim (Kyonggi University, Korea (South))

RWIDS: An Innovative Feature Selection Approach for Network Intrusion Detection System Leveraging Graph-based Random Walk

Van Thinh Pham (Posts and Telecommunications Institute of Technology & Viettel Networks, Vietnam); Hung Xuan Ho (Viettel & Viettel Networks Research, Vietnam); Tung Duong Luong and Duy Anh Nguyen (Viettel Networks, Vietnam); Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)

Token Adaptive Allocation: An Enhanced Deep Learning Approach for Semantic Communication Systems

Huu Viet Cuong Nguyen (VNU - University of Engineering and Technology, Vietnam); Ngoc-Tan Nguyen (VNU-University of Engineering and Technology, Vietnam); Thi-Thu Hoang (Posts and Telecommunications Institute of Technology, Vietnam); Minh - Thu Dao (VNU - University of Engineering and Technology, Vietnam)

Codebook Design and Hybrid Reference Signaling for AI/ML-based Beam Management 

Taeje Park, Hyunseok Noh and Wonjin Sung (Sogang University, Korea (South))

CYB3: Cyber-Security, Cryptography, Blockchain & Applications

Room: J.05.05

Chair: Huy T. Nguyen (Van Lang University, Vietnam)

Investigating Deep Learning-based Binary Code Similarity Detection Using Graph Representation For Cross-dataset Analysis Context 

Vu Hoang Thach Thiet and Thinh Nguyen Hung (University of Information Technology, Vietnam); Khanh-Khoa Ngo and Hien Do Thi Thu (University of Information Technology, VNU-HCM, Vietnam); Hung Van Thai (University of Information Technology, Vietnam)

Robust Digital Watermarking for Securing Product Images in E-Commerce Platforms 

Khanh Nu Ngoc Ton (RMIT University Viet Nam, Vietnam); Son Vu Truong Dao, Dang Tran Tri, Huo-Chong Ling and Kiet Hoang Tuan Truong (RMIT University Vietnam, Vietnam); Anh Vu Quang Tran (RMIT University Viet Nam, Vietnam)

ASA-IDS: Attribution-Stealth Adversarial Attacks for Network Intrusion Detection Systems 

Ha Thanh Dung (Saigon University, Vietnam); Nguyen Hong Son (Posts and Telecommunications Institute of Technology, Vietnam)

Innovative AI Agent with LLM: A Breakthrough Personalized News Aggregation System for the Vietnam Crypto Financial Market 

Hao Phu Phan (HUTECH University, Vietnam); Khiem Vinh Tran (University of Information Technology, VNU-HCM, Vietnam)

EvoSIEM: Detecting and Generating SIEM Rule Evasion Behaviors in Network Systems 

Vy Tran Thi Thuy and Tuyen Le Thi Bich (University of Information Technology & UIT, Vietnam); Hao Truong Thi Hoang (University of Information Technology, Vietnam & UIT, Vietnam); Hung Van Thai (University of Information Technology, Vietnam); Hien Do Hoang and Phan The Duy (University of Information Technology, VNU-HCM, Vietnam)

IMA3: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Thanh Vo Xuan (Van Lang University, Vietnam)

ViMER-Tri: A Trimodal Vietnamese Emotion Recognition System with Adaptive Missing-Modality Fusion 

Ngoc Tram Huynh Thi (International University, Vietnam & Vietnam National University, Ho Chi Minh City, Vietnam); Duc Dat Pham and Nhan Le Thanh Pham (International University, Ho Chi Minh City, Vietnam & Vietnam National University, Ho Chi Minh City, Vietnam); Hoang Anh Thu Nguyen (University

of Science, Vietnam & Vietnam National University, Ho Chi Minh City, Vietnam); Tan Duy Le (International University - VNUHCM, Vietnam & Vietnam National University, Ho Chi Minh City, Vietnam); Kha Tu Huynh (International University - VNU-HCM, Vietnam)

An Asymmetric Dual Swin Transformer for High-Resolution Aerial Segmentation 

Ham-Thuat Vo and Thien Huynh-The (Ho Chi Minh City University of Technology and Education, Vietnam)

Convolutional Kolmogorov-Arnold Networks for Image Classification: Overview and Improvement 

Viet-Hang Duong (University of Information Technology, Ho Chi Minh City, Vietnam); Nhat Tang and Canh Nhat Le (University of Information Technology, Vietnam); Bui Duc Nhan and Jia-Ching Wang (National Central University, Taiwan); Ngoc Hoang Luong (University of Information Technology, Vietnam)


Improving the Performance of the Lightweight Detector through Effective Collaboration with Visibility Enhancement Technique 

Quoc-Viet Hoang (Hung Yen University of Technology and Education, Vietnam)

HySUP-V: Quality-Aware 3D Vietnamese Sign Language Reconstruction with Anchor-Guided Kinematic Fusion 

Quang Viet Nguyen and Diep Hoang Nguyen (VNU - University of Engineering and Technology, Hanoi, Vietnam); Bui Vu Hai Anh (Vietnam National University Hanoi, Vietnam); Thuong Cong Le (VNU - University of Engineering and Technology, Hanoi, Vietnam); Le Thanh Ha (VNU Ha Noi, Vietnam)

Thursday, December 18 18:00 - 21:00 (Asia/Saigon)

Banquet at Capella ParkView, 3 (Google maps: <https://maps.app.goo.gl/xcgFBhZaRPkcaJv57>) 

Friday, December 19

Friday, December 19 7:30 - 8:30 (Asia/Saigon)

Registration 

Friday, December 19 8:30 - 10:00 (Asia/Saigon)

AI4: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chair: Ngan Nguyen Le (Van Lang University, Vietnam)

A Two-Tiered Vietnamese Benchmark Dataset for TikTok Engagement Prediction in the Cosmetics Sector 

Ung Hoang Long (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

A Data Construction and Fine-Tuning Framework for LLM-Based Vietnamese Mental Health Assessment

Kim Trang Thị Võ (University of Information Technology, Vietnam & Vietnam National University, HoChiMinh City, Vietnam); Xuan Hieu Tran (FPT Software, Vietnam)

Prompt Manipulation for Targeted Adversarial Object Generation in Stable Diffusion

Hoang Van Le (University of Information Technology, Vietnam); Van Bich Nguyen (University of Information Technology, VNU-HCM, Vietnam); Tien-Dung Mai (University of Information Technology & Vietnam National University of Ho Chi Minh City (VNUHCM), Vietnam); Ngoc Hoang Luong (University of Information Technology, Vietnam)

Dynamic Heuristic in Ant Colony Optimization for the Set-Union Knapsack Problem

Hai-An Nguyen (VNU University of Engineering and Technology, Vietnam); Tu T Nguyen (VNU University of Engineering and Technology (VNU-UET), Vietnam); Đông Đỗ Đức (Vietnam National University-Hanoi, Vietnam)

Hybrid TCDF with Knowledge Graph Verification for Temporal Causal Graphs in Industrial Systems

Mui Nguyen (Gia dinh University, Vietnam); Anh Le (University of Information Technology, Vietnam); Tho Chau Huu Le (University of Science - VNUHCM, Vietnam)

COM4: Communications, Networking, Internet of Things, Cloud Computing

Room: J.05.03

Chair: Thai-Mai Dinh (VNU University of Engineering and Technology, Vietnam)

An Increased Superdirective Beamformer's Performance Based on Likelihood Estimation

Quan Trong The (Posts and Telecommunications Institute of Technology, Vietnam); Nguyen Thi Huyen Chau (Thang Long University, Vietnam)

Fuzzy-Based Dynamic Weight Optimization for Handover in SDN-VANET

Huy Binh Gia Do (University of Engineering and Technology, VNU Hanoi, Vietnam); Chu Dung (Vietnam National University, Hanoi, Vietnam); Thai-Mai Dinh (VNU University of Engineering and Technology, Vietnam)

Group-Aware DDQN with Markovian Reward Adjustment for Vehicular Spectrum Access Under Intermittent Jamming

Danh Le (Ho Chi Minh City University of Technology, Vietnam); Thanh-Dat Le (Dell Technologies, Canada); Tri-Hai Nguyen (Van Lang University, Vietnam)

A Development Approach to Real-Time IoT-Based Road Surface Quality Monitoring and Alert System

Viet-Hoan Bui and To-Hieu Dao (Phenikaa University, Vietnam); Thanh-Nghia Nguyen (Ho Chi Minh City University of Technology and Education, Vietnam); Quang-Trung Hoang (Phenikaa University, Vietnam); Thang Nguyen Van (VNU - University of Engineering and Technology, Vietnam); Ngoc Anh Dinh, Kien Vu Pham and Duc-Tan Tran (Phenikaa University, Vietnam)

Development of a Humanoid Robot Prototype for Multimodal Human-Robot Interaction

Thang Tran Viet (VNU University of Engineering and Technology, Vietnam); Nguyen Canh Thanh (VNU University of Engineering and Technology, Vietnam & Japan Advanced Institute of Science and Technology, Japan); Huy Uong Gia, Phuc Dinh Van and Son Tran Duc (VNU University of Engineering and Technology, Vietnam); Minh Ngoc Do (Vietnam National University, Vietnam); Hoàng Văn Xiêm (VNU University of Engineering and Technology, Vietnam)

IND1: Industrial Session

Room: J.05.05

Chair: Quoc Huy Vu (Van Lang University, Vietnam)

Dynamic optimization of production processes in the automotive industry for low-volume components of premium vehicles

Domen Kulovec (Slovenia); Tomaž Požrl and Primož Podržaj (University of Ljubljana, Slovenia); Lidija Rihar (University of Novo Mesto, Slovenia)

Robust Deep Learning System for High-Throughput Industrial Socket Packaging Defect Detection

Tuyen Duong Dao Nguyen (International University, Vietnam); Hieu Minh Tran (RMIT University, Australia & International University, VNU-HCMC, Vietnam); Hung Viet Pham (RMIT Vietnam, Vietnam); Tan Ngoc Dinh (Swinburne University of Technology, Australia); Jaideep Chandran (Swinburne University, Australia); Alex Stojcevski (Curtin University, Singapore); Stanley Luong (RMIT, Australia); Son Vu Truong Dao (RMIT University Vietnam, Vietnam)

Temporal Kolmogorov-Arnold Networks for River Water Salinity Forecasting

Gia Bao Nguyen, Nguyen Anh Pham and Viet-Hang Duong (UIT, VietNam National University HCMC, Vietnam)

An Improved Energy-Efficient Solution for a Compressed Air Network

Vo Nhi Anh Duong (Ho Chi Minh University of Technology, Vietnam); Chu Nguyen-Phu, Pham Phuong Tung and Quoc Chi Nguyen (Ho Chi Minh City University of Technology, Vietnam)

Development of an Enhanced Control Approach for Compressed Air Supply System

Valentin Vister (Slovenia); Tomaž Požrl and Primož Podržaj (University of Ljubljana, Slovenia)

IMA4: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Thanh Vo Xuan (Van Lang University, Vietnam)

Combining ELA and Frequency Analysis for Robust Classification of Authentic, Spliced and Diffusion Image

Phuong Nghi Tram (International University, VNU-HCM, Vietnam); Chi Tinh Nguyen (Ho Chi Minh Open University, Vietnam); Canh Toan Le (International University, VNU-HCM, Vietnam); Kha Tu Huynh (International University - VNU-HCM, Vietnam)

DEGA: Dynamic Entropy Guided Adaptation

Loi Duong (University of Science, VNU-HCM, Vietnam); Thai Son Tran (Ho Chi Minh City University of Science, Vietnam); Duc Minh Huynh (University of Science, Vietnam)

PyramidTabNet++: Table Detection with Pyramid Vision Transformer and Boundary Refinement 

Hien Thi Ha (Le Quy Don Technical University, Vietnam & Masaryk University, Czech Republic); Trung Thanh Cao and Hai-Hong Phan (Le Quy Don Technical University, Vietnam)

Enhancing Chest Radiograph Classification via a Dual-Model Ensemble 

Duc Minh Le (Ho Chi Minh University of Science & Homecredit Vietnam, Vietnam); Ngoc-Thao Nguyen (VNUHCM-University of Science, Vietnam)

Design of All Digital Spiking Neuron Network Based on Izhikevich Model for Handwritten Digit Recognition on 180nm CMOS Process 

The-Hung Pham, Van-Nam Cao, Duc-Hung Le and Minh-Anh Nguyen (University of Science, VNU-HCM, Vietnam)

Poster #3

Room: J.05.Hallway

Chair: Tra Huong Thi Le (FPT University, Vietnam)

Semantic-Augmented Collaborative Filtering for Movie Recommendation Using Large Language Models 

Tan Nghia Duong (Hanoi University of Science and Technology, Vietnam); Thi Thu Trang Pham (Hanoi Open University, Vietnam); Hieu Minh Tran (Hanoi University of Science and Technology, Vietnam); Kim Phuong Dinh Thi (Hanoi University of Industry, Vietnam)

Anomaly Detection in Digital Payment Transactions 

Tuyen Q K Nguyen (University of Science & Vietnam National University, Ho Chi Minh City, Vietnam); Huyen T Le and Tien Dinh (University of Science, Vietnam)

Machine Learning-based News Classification in Big Data Environments 

Thi-Hien-Hoa Le (FPT University, Vietnam); Thanh-Dao Duong, Thi-Ha Le, Viet-Anh Le and Van-Quyet Nguyen (Hung Yen University of Technology and Education, Vietnam)

DoraReviewer: Vietnamese Virtual Reviewer With GraphRAG And LLM 

Tin Trong Trinh, Anh Hoang Lan Ngo, Trinh Hoang Tu Nguyen and Khanh Doan Duy Ly (University of Information Technology, Vietnam)

Design Of An AIoT System For Non-Invasive Estimation Of Mean Arterial Pressure And Assessment Of Blood Pressure-Related Risks 

Manh Van Pham (VNU - University of Engineering and Technology, Vietnam); Hung K. Nguyen (VNU University of Engineering and Technology, Vietnam)

Deep Learning-Based Recognition and Classification of Technical Errors in Squat Movements 

Dang Le Mau Hai, Dang Do Hai, Hieu Luu Trong, Anh Nguyen Duc and Long Dang Hoang (Posts and Telecommunications Institute of Technology, Vietnam)

AttNetVLAD and AttNetVLAD++: Capturing Frame Feature Correlations with Self-Attention for Event Spotting in Football Videos 

Anh Hong Pham (University of Science, Vietnam & Vietnam National University, Vietnam); Hoang Pham (University of Science & Ho Chi Minh City, Vietnam); Khoan Duc Le (University of Science, Vietnam & Vietnam National University, Vietnam)

YOLOv5-Powered Smart Parking System with IoT-Based Real-Time Slot Monitoring 

Lam Nguyen Phuong (Ton Duc Thang University, Vietnam); Duc Tai Phan, Thanh Trung Nguyen and Nhut Minh Nguyen (FPT University, Vietnam); Duc Ngoc Minh Dang (FPT University, Ho Chi Minh, Vietnam)

Fruit Ripeness Detection: A Comparative Analysis of State-of-the-Art YOLO Models 

Minh Quang Pham, Tan Nhat Lang, Ngo Hoang Tu and Anh Thai Nguyen (Van Lang University, Vietnam)

Visual Inspection of CNC Milling Tool Defects: A Study with Few-shot Learning 

Thanh Huy Phung (Ho Chi Minh City University of Technology (HCMUT), Vietnam & Vietnam National University Ho Chi Minh City, Vietnam); Quang-Huy Nguyen and Due-Trung Ho (Ho Chi Minh City University of Technology, Vietnam); Thinh Nguyen Duc (Vietnamese-German University, Vietnam); Xuan Tran (Thu Dau Mot University, Vietnam); Quoc Chi Nguyen (Ho Chi Minh City University of Technology, Vietnam)

Optimizing AES Encryption Algorithm on Resource-Constrained Devices in IoT Systems 

Nguyễn Thị Khánh Trâm (Phenikaa University, Vietnam)

Post-Quantum Cryptography: Can Classical Algorithms Resist Quantum Attacks 

Phuong Doan Xuan Dinh (Le Quy Don Technical University, Vietnam); Truong Son Pham (Le Quy Don Technical University, Vietnam)

Robust Routing in Highly Dynamic FANETs via Predictive Multi-Metric Design 

Phuoc Van Dang (Vietnamese German University, Vietnam & CT UAV/CT Group, Vietnam); Chan Dai Truyen Thai, Nhu Tran Quang and Hien Bich Vo (Vietnamese-German University, Vietnam); Khoi Quang Tran (CT UAV/CT Group, Vietnam)

Resource Allocation for Semantic-Aware Satellite Network 

Tra Huong Thi Le (FPT University, Vietnam)


Earthquake Energy Prediction Using Liquid Neural Networks 

Kavitha B and Srinivas Mettu (NIT Warangal, India)

Friday, December 19 10:00 - 10:30 (Asia/Saigon)

Coffee break 

Friday, December 19 10:30 - 11:30 (Asia/Saigon)

Keynote speaker #2: Security Challenges in AI-Driven 6G Networks by Prof. Biplab Sikdar (IEEE Fellow), Provost's Chair Professor, National University of Singapore 

Chair: Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden)

Friday, December 19 11:30 - 13:30 (Asia/Saigon)

Lunch break ↕

Friday, December 19 13:30 - 15:00 (Asia/Saigon)

AI5: AI, Data Science, Big Data Analytics, Smart Computing ↕

Room: J.05.01

Chairs: Huu Quan Do (Van Lang University, Vietnam), Ngan Nguyen Le (Van Lang University, Vietnam)

A Nonlinear Transformation-Based Defense Against Data Leakage in Federated Learning 

Hai Trung Ha and Thanh Chi Nguyen (Institute of Military Science and Technology, Hanoi, Vietnam); Hang Thi Thu Truong (AMST, Vietnam); Quang-Kien Trinh (Le Quy Don Technical University, Vietnam); Nga Thi Dao (Le Quy Don Technical University, Hanoi, Vietnam)

High-dimensional Trajectory Data Analysis of Molecular Dynamics Simulations: A Case Study in Domain-specific Stabilization of GLP-1R Agonists 

Minsung Ko, Soohwan Jeong, Jiyong Chung and Jaewoo Kim (Sungkyunkwan University, Korea (South)); David D. Mcpherson (The University of Texas Health Science Center at Houston, USA); Hyunggun Kim (Sungkyunkwan University, Korea (South))

Empirical Evaluation of Evolutionary NAS with Training-Free Metrics for Discovering Robust Networks under Adversarial Training 

Can Do, Ngoc Hoang Luong and Quan Minh Phan (University of Information Technology, Vietnam)

AuroraMem: Towards Eternal Memory in Conversational AI 

Thien Doanh Le and Thi Nguyen Van Ngoc (International University, Vietnam); Kha Tu Huynh (International University - VNU-HCM, Vietnam)

Evaluating Deep Learning Models for Negative Speech Emotion Recognition in Security Systems 

Tien Giang My, Trang Huynh Ngoc, Tri Nguyen, Ho Duy and Duy Tri Nguyen Ho (University of Information Technology, VNU-HCM, Vietnam)

COM5: Communications, Networking, Internet of Things, Cloud Computing ↕

Room: J.05.03

Chairs: Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam), Huu-Tien Vu (Posts and Telecommunications Institute of Technology, Vietnam)

Real-Time EEG Signal Denoising Using Discrete Wavelet Transform and Lightweight ICA on a Low-Power Nano 33 BLE Module 

Xuan Bach Duy Nguyen (University of Information Technology, Vietnam); Anh-Vu Dinh-Duc (Vietnam National University - Ho Chi Minh City, Vietnam)

Performance Analysis of Satellite-to-Ground Entanglement-based QKD under Realistic Atmospheric Turbulence 

Duc-Minh Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Khac Tuan Nguyen (University of Ulsan, Korea (South)); Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)

Introducing Multi-Level Modulation for Improving Spectral Efficiency in Modified Walsh-Hadamard Code Division Multiplexing 

Shinya Sotome and Toshiharu Kojima (The University of Electro-Communications, Japan)

Green Data Center Intelligence in Johor's Cloud Hub 

Wai Yie Leong (INTI International University, Malaysia)

Towards Safer Autonomous Cars: A Roadmap for Gaps in Quality of Service and Quality of Experience Standardization 

Oladayo Bello (New Mexico State University, USA); Sherali Zeadally (University of Kentucky, USA)

LAG1: Language and Speech Processing

Room: J.05.05

Chair: Wai Yie Leong (INTI International University, Malaysia)

Towards Explainable Educational QA: A Chain-of-Thought and Retrieval-Augmented Approach 

Van Tinh Tran, Duc Manh Nguyen Dang, Minh Quan Tran, Dang Khoa Huynh Tong, Nguyen Khang Nguyen, Hoan Dinh and Viet Hang Duong (University of Information Technology, VNU-HCM, Vietnam)

Multilingual NLP for Cross-Cultural Digital Communication 

Wai Yie Leong (INTI International University, Malaysia)

Developing a RAG-Based LLaMA Chatbot for Restaurant Customer Service 

Viet Thanh Huynh, Trung Thanh Ho, Nguyet Minh Nguyen, Nhan Hoai Dao, Nhi Yen Bui and Quyen To Nguyen (Ho Chi Minh City University of Transport, Vietnam); Hung Thanh Ngo (Ho Chi Minh University of Banking, Vietnam)

A Customized AI Chatbot for Educational Environments: Integrating Retrieval-Augmented Generation with Curriculum-Aligned Responses 

Thuan Anh Trang (RMIT University, Australia); Phat Tran (School of Computing Australian National University, Australia); Tuan Minh Le (RMIT, Vietnam); Ly Le, Greeni Maheshwari and Nhu Do (RMIT University, Australia); Son Vu Truong Dao (RMIT University Vietnam, Vietnam)

Atayal Speech Recognition Based on Transfer Learning 

Po-Cheng Chan (National Central University, Taiwan & Chunghwa Telecom Laboratories, Taiwan); Quan Manh Bui (HCMC University of Technology and Education, Vietnam); Hsin Ching-Ting and Di Tam Luu (National Tsing Hua University, Taiwan); Chi-Tao Chen and Jia-Ching Wang (National Central University, Taiwan)

IMA5: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Kha Tu Huynh (International University - VNU-HCM, Vietnam)

Multimodal Deep Learning for Cryptocurrency Trend Prediction via Candlestick Charts and Technical Indicators 

Tin Trung Truong (FPT School of Business and Technology, Vietnam); Van Hai Ho and Hai Ho (FPT University, Vietnam)

A Semi-Supervised Sino-Nom Text Recognition Dataset via Pseudo-Labeling 

Phát Kim Trần and Duy Khánh Hồ (University of Science, Vietnam); Long H. B. Nguyen (University of Science, VNU-HCM, Vietnam); Dinh Dien (University of Science, Vietnam)

Morph-RAG-SAM: Few-Shot Medical Image Segmentation via Hybrid Semantic-Morphological Re-Ranking and Prompt-Guided Refinement 

Lan-Phuong Nguyen Ngoc (Bosch Global Software Technologies Vietnam, Ho Chi Minh City, Vietnam); Danh Thanh Nguyen (University of Information Technology, Vietnam & Vietnam National University of Ho Chi Minh City, Vietnam); Vinh-Tiep Nguyen (University of Information Technology, Vietnam)

A Comparative Analysis of Modern CNN Architectures: EfficientNetV2 vs. ConvNeXt for Plant Disease Classification 

Anh Thi Kim Vo (Ton Duc Thang University, Vietnam); Vo Ngoc Chau (Not Available Dept, Vietnam); Nho Thi Vo (Dong Thap University, Vietnam)

SegFormer3D-BMA: Enhancing 3D Medical Image Segmentation with BiMatch Attention Mechanisms 

Nam Nhat Huynh and Binh Trong Tran (Ho Chi Minh City University of Technology and Education, Vietnam)

Poster #4

Room: J.05.Hallway

Chair: Thanh Huy Phung (Ho Chi Minh City University of Technology (HCMUT), Vietnam & Vietnam National University Ho Chi Minh City, Vietnam)

Multi-Stakeholder Fairness in Recommendation Systems Using Distance Correlation 

Gam Hong Thi Le (University of Economics Ho Chi Minh City, Vietnam); Nguyen Tan Khoi (Danang University of Technology, Vietnam); Hiep Xuan Huynh (Can Tho University, Vietnam)

Distance Correlation-Enhanced Collaborative Filtering for Tag Recommendation 

Dao Xuan Thi Nguyen (University of Economics Ho Chi Minh City, Vietnam); Nguyen Tan Khoi (Danang University of Technology, Vietnam); Hiep Xuan Huynh (Can Tho University, Vietnam)

Real-Time Multi-Behavior Driver Monitoring with a Single-Stage Detector 

Van Nang Hung Nguyen, Phan Van Tai, Tran Dinh Manh and Truc Thi Kim Nguyen (Da Nang University of Science and Technology, Vietnam)

Subscriber-Level Churn Prediction from CDR/OCS Data: A Comprehensive Machine Learning Approach with Feature Engineering Analysis for Telecommunications Marketing 

Tru Trung Huynh (Post and Telecommunication Institute of Technology, Vietnam); Toan Phuc Nguyen (Viettel Cambodia, Vietnam); Ho Hung (Thu Dau Mot University, Vietnam)

Design of a Spiking Neural Network Circuit Using the Izhikevich Model for Epilepsy Detection on 180nm CMOS Process 

Mai-Minh-Kha Nguyen, Thi-Thuy-Quynh Nguyen, Thi-Tra-Chi Nguyen and Chau-Thang-Loi Vu (University of Science, VNUHCM, Vietnam); Duc-Hung Le (University of Science, VNU-HCM, Vietnam)

ViTrend: A Real-Time System for Topic-Based Social Media Trend Analysis on Vietnamese Facebook 

Hoi Vinh-Dang, Hiep Hoang Nguyen and Hoang Duc-Huy Pham (University of Information Technology, Vietnam); Anh Thi-Hoang Nguyen (University of Information Technology, Vietnam & Vietnam National University, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

Beyond Time-Series: Aligning Modalities and Architectures for Student Dropout Prediction 

Khoa Tho Anh Nguyen (Vietnamese-Germany University, Binh Duong, Vietnam); Vy Nguyen Mai and Linh Khanh Vuong (Vietnamese-German University, Vietnam); Ngoc Hong Tran (Vietnamese German University, Vietnam)

Artificial Intelligence (AI) Applications in Construction Industry: A Big Data-driven Bibliometric Analysis 

Ngan Nguyen Le (Van Lang University, Vietnam); Thanh Huy Phung (Ho Chi Minh City University of Technology (HCMUT), Vietnam & Vietnam National University Ho Chi Minh City, Vietnam); Hien Phuoc Phan (Van Lang University, Vietnam); Chuong Duy Nguyen (Telecommunications University, Vietnam); Buu Quoc Mai (Van Lang University, Vietnam)

Using quantization aware training technique to enhance performance of deep learning model for ADAS system 

Phan Duy (University of Information Technology & UIT, Vietnam); Thi-Thanh-Dung Tran (University of Information Technology, VNUHCM, Vietnam); Vu Duc-Lung (University of Information Technology, VNU-HCM & Vietnam National University Ho Chi Minh City, Vietnam); Hoai Van Tran (Ho Chi Minh City University of Technology, Vietnam)

Disease Identification Model for Pomelo Leaves Using Deep Learning 

Robert Gallena De Luna (Polytechnic University of the Philippines, Philippines & University of Sto. Tomas, Philippines); Rey Andrew C. Argañoso, Renz F Famsan, Patricia Anne A. Mangubat, Shenielle Kaye T Mancenon and Heavenly C. Villanueva (Polytechnic University of the Philippines, Philippines)

AI-Open-RAN for Non-Terrestrial Networks 

Tri Nhu Do (Polytechnique Montréal, Canada)

Friday, December 19 15:00 - 15:30 (Asia/Saigon)

Coffee break 

Friday, December 19 15:30 - 17:00 (Asia/Saigon)

AI6: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chairs: Huu Quan Do (Van Lang University, Vietnam), Ly-Huynh Phan (Posts and Telecommunications Institute of Technology (PTIT), Vietnam)

Spatio-Temporal Graph Neural Networks for Real-Time Traffic Flow Forecasting in New Zealand 

Khoi Anh Do (University of Information Technology, VNU-HCM, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

A contextual approach to modeling activity-related electricity consumption in instrumented dwellings 

Ly-Huynh Phan (Posts and Telecommunications Institute of Technology (PTIT), Vietnam); Hong Anh Tan Nguyen (Posts and Telecommunications Institute of Technology, Vietnam)

Robust Abnormal Heart Sound Detection via Soft Voting Ensemble on Augmented MFCC Representations 

Tan Nhat Phan Le, Khanh Duy Tran, Minh Nhat Doan, Uyen Nguyen and Ly Thi Khanh Vu (International University, Vietnam); Quoc T. Huynh (International University - VNU HCMC, Vietnam)

Improving the DF-Louvain Algorithm through Random Walk-Based Refinement 

Do Duy Hieu (Vietnam Institute of Mathematics, Vietnam); Phan Thi Ha Duong (Institute of Mathematics, VAST, Vietnam); Dung Nguyen (Vietnam Joint Stock Commercial Bank for Industry and Trade, Vietnam)

ViTIED: A Vietnamese TikTok Influencer Engagement Dataset and Big Data-Driven Predictive Framework 

Mai Ngoc Ho, Nhung Thi-Hong Duong and Phuc Ngoc-Thien Le (University of Information Technology, Vietnam); Anh Thi-Hoang Nguyen (University of Information Technology, Vietnam & Vietnam National University, Vietnam); Trong-Hop Do (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam)

COM6: Communications, Networking, Internet of Things, Cloud Computing

Room: J.05.03

Chair: Ngo Hoang Tu (Van Lang University, Vietnam)

Graph Attention Network-Based AP Selection for Cell-Free Massive MIMO Systems 

Nguyen Thi Xuan Uyen, Huynh Thanh Phong and Ngo Minh Nghia (University of Science, Vietnam)

On UAV Network Performance Considering the Clustering Dispersion of K-Means Algorithms 

Rohith Racharla, Tejaswi Ananya Talagani and Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden)

WAVENET-MV: Wavelet-based Neural Image Compression for Machine Vision Tasks 

Minh Ngoc Do (Vietnam National University, Vietnam); Dinh Trieu Duong (Vietnam National University in Hanoi, Vietnam); Hoàng Văn Xiêm (VNU University of Engineering and Technology, Vietnam)

Digital TwinEnhanced Communication Architectures for Malaysia's Smart Manufacturing Sector 

Wai Yie Leong (INTI International University, Malaysia)

Spectrum Sharing and Cognitive Radio Applications for Urban Congestion in Klang Valley 

Wai Yie Leong (INTI International University, Malaysia)

SOF1: Software Engineering, Information System, Computational Modelling

Room: J.05.05

Chair: Tri-Hai Nguyen (Van Lang University, Vietnam)

An Experimental Study of Walrus Optimization-Based Deep Learning Models for Software Effort Estimation 

Khanh Duy Nguyen, Duy Khanh Dao and Ngan Thi Kim Dang (Vietnam - Korea University of Information and Communication Technology, Vietnam);
Phuong Thi Minh Ha (Vietnam - Korea University of Information and Communication Technology, Vietnam & Home, Vietnam); Ngoc Tho Huynh (Vietnam
- Korea University of Information and Communication Technology & The University of Danang, Vietnam)

Accurate Latency Predictor for Triton-based GPU Kernels with PTX Features and XGBoost 

Quan Hong Tran, Sang Pham, Tien Son Pham and Duc Tuan Chu (Efficient Computing Research Group, Vietnam); Tuan Anh Mai (FPT Software AI Center,
Vietnam); Xuan Truong Nguyen (Seoul National University, Korea (South)); Tuan Thanh Dao (Moreh Vietnam, Vietnam)

The Influence of Large Language Model-Based Decision-Making on Predator-Prey System Dynamics in Heterogeneous Niche Environment 

Doanh Nguyen-Ngoc (VinUniversity, Vietnam & UMMISCO SEA, Vietnam); Nghi Huynh-Quang (Can Tho University, Vietnam); Linh Do Bui Khanh
(VinUniversity, Vietnam)

On Specifying and Verifying OCL Temporal Properties 

Duc-Hanh Dang (VNU University of Engineering and Technology, Ha Noi, Vietnam); Lan Hoang Le, Quyen Duc Nguyen and Hai Dinh Minh (VNU University
of Engineering and Technology, Vietnam)

A Parallel UE/gNB Emulator for Large-Scale Validation of 5G Core Networks 

Dung Vu Luong and Kieu-Ha Phung (Hanoi University of Science and Technology, Vietnam)

IMA6: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Huu-Tien Vu (Posts and Telecommunications Institute of Technology, Vietnam)

MaxMpox-Det: A Dual-Input Transformer-Based Model for Mpox Skin Lesion Detection 

Tram-Tran Nguyen-Quynh (Ho Chi Minh City University of Foreign Language-Information Technology, Vietnam); The Vinh Hoang (Vietnamese German
University VGU, Vietnam); Binh Thanh Nguyen (Ho Chi Minh City University of Foreign Languages Information Technology, Vietnam & 828 Su Van Hanh,
Hoa Hung Ward, Ho Chi Minh City., Vietnam)

Energy-Based Pattern-Inspired Sampling for Motion Analysis

Dung Ngoc Le Ha (Can Tho University of Technology, Vietnam); Nghia Trung Duong (IU International University of Applied Sciences, Germany); Hiep Xuan Huynh (Can Tho University, Vietnam)

AnoResLSTM: A Hybrid Deep Learning Framework for Real-Time Cheating Detection in Online Exams

Huy Bui Quoc and Thach Van Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Minh Ngoc Do (Vietnam National University, Vietnam); Hai-Chau Le, Thao Nguyen Thi Huong and Huu-Tien Vu (Posts and Telecommunications Institute of Technology, Vietnam)

Transformers based 3D Image Reconstruction using 2D low resolution image Data

Srinivas Mettu, Prapti Maheshwari, Sanyukta Patil and Kavitha B (NIT Warangal, India)

Transformer-based Segmentation of Pituitary-related Structures in T1CE MRI Using Swin-Unet

Woojae Hong, Seong-Min Kim and Joongyeon Choi (Sungkyunkwan University, Korea (South)); So Won Oh (Seoul National University Boramae Medical Center, Korea (South)); Hyunggun Kim (Sungkyunkwan University, Korea (South)); Yong Hwy Kim (Seoul National University Hospital, Korea (South))

Saturday, December 20

Saturday, December 20 7:30 - 8:30 (Asia/Saigon)

Registration

Saturday, December 20 8:30 - 10:00 (Asia/Saigon)

AI7: AI, Data Science, Big Data Analytics, Smart Computing

Room: J.05.01

Chair: Huu Quan Do (Van Lang University, Vietnam)

Lightweight Statistical Model for Bash Command Recommendation

Cuong Tran Manh and Duy Ngo Hoang (VNU University of Engineering and Technology, Vietnam); Hieu Vo (University of Engineering and Technology, VNU, Vietnam)

Can LLMs Construct Valid Syllabi? Vietnamese High School Math Case Study

Ngoc-Bich Nguyen Thi (University of Social Sciences and Humanities, VNU-HCM, Vietnam); Tam Vo Minh and Anh-Khoa Nguyen Vu (University of Information Technology, VNU-HCM, Vietnam); Vinh-Tiep Nguyen (University of Information Technology, Vietnam)

Predicting Urbanization Trend in Vietnam Based on Machine Learning Models with Geographic Information Features

Nam Hai Le (VNUHCM-UIT, Vietnam); Son T. Luu (University of Information Technology & Vietnam National University, Ho Chi Minh City, Vietnam); Tuan Anh Nguyen Gia (UIT, Vietnam)

User-based recommendation with Latent Variable Energy-Based Model 

Kim-Yen T. Nguyen, An Cong Tran and Hiep Xuan Huynh (Can Tho University, Vietnam)

Where You Cite Matters: Section-Aware Embeddings for Citation Intent Classification 

Seohyun Nam, Tuan Anh Phan, Gwanpil Kim and Jason J. Jung (Chung-Ang University, Korea (South)); Khac-Hoai Nam Bui (Korea Institute of Science and Technology Information, Korea (South))

SS3.1: Reconfigurable Antennas and Intelligent Surfaces for Beyond 5/6G Wireless Communication Systems and Networks

Room: J.05.03

Chair: Huy T. Nguyen (Van Lang University, Vietnam)

STAR-RIS-Assisted Sum Rate Maximization for Underlaid D2D Communications 

Huy T. Nguyen (Van Lang University, Vietnam); Duc Cuong Nguyen and Nguyen Tien Hoa (Hanoi University of Science and Technology, Vietnam)

Array Pattern Synthesis Using Adaptive Gradient Method for RIS-aided Wireless Networks 

Nguyen Minh Tran (VNU - University of Engineering and Technology, Vietnam); Toan Thi Nguyen (University of Hai Duong, Vietnam); Giang Truong (Vietnam National University, Hanoi, Vietnam); Cong Minh Nguyen (VNU University of Engineering and Technology, Vietnam)

Circularly Polarized Printed Dipole Antenna Array Using Sequentially Rotated Technique 

Cuong Ngoc Ho (Hanoi University of Science and Technology, Vietnam); Thuy Minh Le (School of Electrical & Electronic Engineering, Vietnam & Hanoi University of Science and Technology, Vietnam); Quoc Cuong Nguyen (Hanoi University of Science and Technology, Vietnam); Igor Borisovich Shirokov (Sevastopol State University, Russia)

Design of Multi-Beam Intelligent Reflecting Surface For 6G Wireless Communications 

Ngoc Tung Phung, Thanh Nam Le, Phuong Linh Nguyen, Quang Tuan Le, Nguyen Khac Kiem and Son Xuat Ta (Hanoi University of Science and Technology, Vietnam)

Energy Efficiency Maximization for RIS-aided Integrated Sensing and Communication 

Huy T. Nguyen, Tri-Hai Nguyen and Vo Nguyen Quoc Bao (Van Lang University, Vietnam); Van-Dinh Nguyen (Trinity College Dublin, Ireland); Nhan Nguyen (University of Oulu, Finland)

SOF2: Software Engineering, Information System, Computational Modelling

Room: J.05.05

Chair: Kieu-Ha Phung (Hanoi University of Science and Technology, Vietnam)

RBFNN4HP: An Integrated Radial Basis and Recurrent Neural Network Framework for Long-Term Hydrological Time-Series Prediction 

Tham Vo (Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam); Cao Thanh Xuan (Thu Dau Mot University, Ho Chi Minh City, Vietnam)

Prediction of Longitudinal Stability Derivatives of a Projectile using Unsteady Computational Fluid Dynamics 

Quoc Huy Vu (Van Lang University, Vietnam); Trung Huy Nguyen (Hanoi University of Science and Technology, Vietnam)

Revolutionizing C++ Programming Education: A Gamified Interactive Educational Game 

Dung L. H. Nguyen (University of Science, VNUHCM, Ho Chi Minh City, Vietnam)

A Taxonomy of CPU Scheduling Problems 

Binh Nguyen Thanh (Hanoi University of Science and Technology, Vietnam)

Development for an AI Agent-Powered System for Intelligent Quality Management Documentation 

Hieu Ngoc Le (Van Hien University, Vietnam & FPT Software, Vietnam)

IMA7: Image, Computer Vision, Pattern Recognition

Room: J.05.02

Chair: Robert Gallena De Luna (Polytechnic University of the Philippines, Philippines & University of Sto. Tomas, Philippines)

YOLO-TrOCR: A Proposed Model for Automated Ballot Counting 

Thuan Duc Le, Nghia Manh Do and Ngan Thi Hong Nguyen (Academy of Cryptography Techniques, Vietnam)

A Survey of Deep Learning Approaches in UAV-Based Forest Monitoring 

Quân Thất Minh Tôn and Tung Thanh Pham (University of Science, Vietnam); Ngoc Quoc Ly (VNUHCM-University of Science, Vietnam)

Development of YOLO-Based Fall Detection With Real-Time Monitoring System on Raspberry Pi 5 

Phan Duy (University of Information Technology & UIT, Vietnam); Anh Tran Ngoc, Hoang Phuc Nguyen and Hoang-Loc Tran (University of Information Technology, Vietnam)

Efficient Diagnosis of Chronic Obstructive Pulmonary Disease Using a Lightweight Deep Learning Model 

Minh-Nhat Nguyen (University of Information Technology, Vietnam); Thinh Bao Nguyen-Tat (Lanh Binh Thang Hospital, Vietnam); Thien Bao Nguyen-Tat (University of Information Technology, Vietnam)

Coconut Maturity Level Classification Using Image Preprocessing and Deep Transfer Learning 

Robert Gallena De Luna (Polytechnic University of the Philippines, Philippines & University of Sto. Tomas, Philippines); Jhea Camille M. Alegre, Rhose Anne P. Martinez, Monica Rose N. Ramos, Hannah Micah A. Sadian and Oswald Godwin G Villanueva (Polytechnic University of the Philippines, Philippines)

Poster #5

Room: J.05.Hallway

Chair: Hieu Ngoc Le (Van Hien University, Vietnam & FPT Software, Vietnam)

Data Augmentation Pipeline for Text Recognition of Laser-Etched Serial Number images 

Theerapat Niamhom, Worarat Krathu and Pornchai Mongkolnam (King Mongkut's University of Technology Thonburi, Thailand)

From Keywords to Context: An AI Agent for Natural Language Document Lookup in the Enterprise 

Hieu Ngoc Le (Van Hien University, Vietnam & FPT Software, Vietnam)

Design of Reconfigurable Beam Scanning Array Antenna with CNN-Based Machine Learning for mmWave 5G/6G Applications 

Truong Khang Nguyen and Huu Quan Do (Van Lang University, Vietnam); Kieu Thi Thanh Nguyen (Binh Thuan College, Vietnam)

Agentic AI Framework for Adaptive Clinical Workflow Orchestration 

Quy Minh Le and Duc-Trong Le (VNU University of Engineering and Technology, Vietnam); Hoang D. Nguyen (UCC, Ireland)

Application Of OCR And NLP Technology In Text Summary And Vietnamese Handwriting Recognition 

Chau Thi Huyen Ly, Thanh Cong Tran, Duc Vo Chi and Tran Van Kha (Van Lang University, Vietnam)

Advancing Time Series Anomaly Detection using Transformer-based Models 

Phuoc Tan Lien (Nguyen Tat Thanh University, Vietnam); Nam Thoai (Ho Chi Minh City University of Technology, Vietnam); Phan Cong-Vinh (NTT University, Vietnam)

An Edge-Oriented Approach to PCB Defect Detection with YOLOv11n 

Phuoc Nguyen Duy Vo (Da Nang University of Science and Technology, Vietnam); Thanh Ngo (Danang University of Science and Technology, Vietnam); Mai Nguyen Hoang (The University of Da Nang - University of Science and Education, Vietnam); Truc Thi Kim Nguyen (Da Nang University of Science and Technology, Vietnam)

High-Gain Dual-CP Antenna Using High-Order Mode 

Khanh-Dieu Thi Nguyen (Phenikaa University, Vietnam); Duc-Nguyen Tran-Viet (Le Quy Don Technical University, Vietnam); Hung Tran-Huy (Phenikaa University, Vietnam)

An Optimized Machine Learning Approach to Robust and Scalable Face Recognition 

Minh N. T. Nguyen (International University & Vietnam National University Ho Chi Minh City, Vietnam); Duong T. T. Tran (International University, Vietnam)


Cross-lingual Transfer for Low-Resource Translation: Fine-tuning mBART50 on Indonesian to Aid Atayal-Chinese Tasks 

Po-Cheng Chan (National Central University, Taiwan & Chunghwa Telecom Laboratories, Taiwan); Quan Manh Bui (HCMC University of Technology and Education, Vietnam); Di Tam Luu and Hsin Ching-Ting (National Tsing Hua University, Taiwan); Jia-Ching Wang (National Central University, Taiwan)

A Dual-Band Circularly Polarized Slot Antenna With EBG Structure For Wi-Fi Applications 

Hien Thi Ngoc Doan (Hanoi University of Science and Technology, Vietnam); Hoai Vu Ngoc (Hanoi University of Science and, Vietnam)

Saturday, December 20 10:00 - 10:30 (Asia/Saigon)

Coffee break 

Saturday, December 20 10:30 - 12:00 (Asia/Saigon)

AI8: AI, Data Science, Big Data Analytics, Smart Computing 

Room: J.05.01

Chair: Hiep Xuan Huynh (Can Tho University, Vietnam)

Development of a System for Predicting Continuous Integration Build Failures Using Deep Learning and MLOps 

Thien Luu-Minh, Phuong Quach-Thi-Hoai and Tuan Le-Anh (University of Information Technology, VNU-HCM, Vietnam); Bao Nguyen-Van and Quan Le-Trung (University of Information Technology - VNUHCM, Vietnam)

Enhancing WiFi Fingerprinting-based Indoor Positioning Using SAE and MLP-Mixer 

Nga Phan (DaLat University, Vietnam); Nhan Thi Cao (University of Information Technology, Vietnam); Luong Nguyen Thi (Dalat University, Vietnam); Ninh Duong-Bao (Ho Chi Minh City University of Industry and Trade, Vietnam); Trung Vu-Thanh (Hunan University, China & School of Interdisciplinary Sciences and Arts, Vietnam National University, Hanoi, Vietnam); Khanh Nguyen-Huu (Dalat University, Vietnam)

An AI-Enhanced Adaptive Test Generation System for Data Structures and Algorithms Assessment Using Reinforcement Learning 

Long Ngoc Hoang (HongBang International University, Vietnam); Nhon V Do (Hong Bang International University, Vietnam)

Classifying Pulmonary Diseases Using Small Multimodal Model on X-Ray Images and Reports 

Minh Kien Thai (Vietnamese German University, Vietnam); Khanh Tran (Vietnamese-German University, Vietnam)

EEG-Based Brain-Computer Interface for Directional Control Using Machine Learning on Overt Spatial Attention 

Minh Nhat Doan, Khanh Duy Tran and Tan Nhat Phan Le (International University, Vietnam); Hai Son Dang (Ho Chi Minh City University of Technology, Vietnam); Uyen Nguyen and Ly Thi Khanh Vu (International University, Vietnam); Quoc T. Huynh (International University - VNU HCMC, Vietnam)

SS3.2: Reconfigurable Antennas and Intelligent Surfaces for Beyond 5/6G Wireless Communication Systems and Networks 

Room: J.05.03

Chair: Ngo Hoang Tu (Van Lang University, Vietnam)

A 1-bit Reconfigurable Intelligent Surface: Design, Theory and Beam Steering in S and C band 

Jaganbharathi K R (Vellore Institute of Technology, India); Boopalan G (VIT University, India); Truong Khang Nguyen (Van Lang University, Vietnam); Senthilnathan K (VIT University, India)

Active STAR-RIS-Empowered RSMA Systems: Outage Probability and Ergodic Capacity 

Ngo Hoang Tu (Van Lang University, Vietnam); Thien Thanh Tran (Ho Chi Minh City University of Transport, Vietnam); Vo Nguyen Quoc Bao (Van Lang University, Vietnam)

Enhancing Reliability and Energy Efficiency in NOMA-CDRT Systems via Reconfigurable Intelligent Surfaces and UAV-based Relays 

Thu Anh Pham, Nguyen Thi Thu-Hang and Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)

Optimization of User Distance in STAR-RIS-Assisted NOMA Random Networks Using Supervised Deep Learning Techniques 

Nguyen Thi Yen Linh (PTITHCM, Vietnam); Ngoc Son Pham (Ho Chi Minh City University of Technology and Education, Vietnam); Vo Nguyen Quoc Bao (Van Lang University, Vietnam)

A Transmissive Frequency Selective Surfaces with Polarization Conversion 

Khiem D. Nguyen (International University, VNU HCM, Vietnam); Truong Khang Nguyen (Van Lang University, Vietnam); Trung Kien Pham (International University, VNUHCM, Vietnam & IETR, France)

SS1: AI-Powered Health Ecosystems: Intelligent Systems for Adaptive, Equitable, and Preventive Care

Room: J.05.05

Chair: Truong Khang Nguyen (Van Lang University, Vietnam)

Advanced Gene Selection Methods for Machine Learning-based Amyotrophic Lateral Sclerosis Diagnosis 

Hai-Long Nguyen (Posts and Telecommunications Institute of Technology, Vietnam); Quan Dang Dinh (Hanoi University, Vietnam); Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)

Synthetic Swarm Mosquito Dataset for Acoustic Classification: A Proof of Concept 

Thai-Duy Dinh (Vietnamese German University, Vietnam); Minh Luan Vo, Tuan Cuong Nguyen and Hien Bich Vo (Vietnamese-German University, Vietnam)

Aegis Agent Framework: Proactive Fall Detection and Response Using a Multi-Agent System 

Nam Tran Dang (FPT School of Business and Technology, Vietnam); Vinh Truong Hoang and Viet-Tuan Le (Ho Chi Minh City Open University, Vietnam)

Reduced-Complexity Transfer Learning Based BiLSTM Network for Multi-Amplifier Behavioral Modelling 

Marwan Emira, Majid Ahmed and Oualid Hammi (American University of Sharjah, United Arab Emirates)

WeakSegFormer: A Transformer-Based Weakly Supervised Framework for Brain Tumor MRI Segmentation 

Luan Thanh Truong (UIT, VietNam National University HCMC, Vietnam); Quan Manh Bui (HCMC University of Technology and Education, Vietnam); Viet-Hang Duong (UIT, VietNam National University HCMC, Vietnam)

SS2: New Technologies in Automotive Engineering: Driving Innovation through Integration and Intelligence

Room: J.05.02

Chair: Luu Phu Thuong Nguyen (School of Technology Van Lang University, Vietnam)

Green Manufacturing of EV Batteries: A Novel Non-Contact Roll-to-Roll Approach for Double-Side Electrode Coating

Luu Phu Thuong Nguyen (School of Technology Van Lang University, Vietnam); Ho Anh Duc Nguyen (Binh Duong Economics and Technology University, Vietnam)

A Long-Endurance VTOL UAV for Aerial Monitoring with Fire Detection Capabilities

Teng Huang, Trung Nguyen Huynh Tran, Long Bao Do and Nguyen Hai Nguyen (RMIT University, Australia); Tuan Minh Le (RMIT, Vietnam); Son Vu Truong Dao (RMIT University Vietnam, Vietnam)

Transformer-based Traffic Flow Forecasting: A Survey and Experimental Comparison of Time-Series Analysis

San Van Tran (Ho Chi Minh City Industry and Trade College, Vietnam); Viet-Hang Duong (UIT, VietNam National University HCMC, Vietnam)

Lightweight Autonomous Exploration on Embedded Robots: A Benchmark with Nav2 and Explore-Lite

Phu Hoai Tran (University of Information Technology, VNU-HCM & Bosch Global Software Technologies (Vietnam), Vietnam); Dai Phuoc Tran (University of Information Technology, Vietnam); Chuong Dang-Le-Bao (University of Information and Technology, Vietnam); Quan Le-Trung (University of Information Technology - VNUHCM, Vietnam)

Remote Sensing-Based Human Detection Using a Custom-built Coaxial UAV System

Viet Quoc Phan and Kien Dinh Vu (International University, VNUHCMC, Vietnam); Tuan Minh Le (RMIT, Vietnam); Hieu Minh Tran (RMIT University, Australia & International University, VNU-HCMC, Vietnam); Quoc Bao Vuong (International University, VNUHCMC, Vietnam); Minh N. T. Nguyen (International University & Vietnam National University Ho Chi Minh City, Vietnam); Son Vu Truong Dao (RMIT University Vietnam, Vietnam)

Saturday, December 20 12:00 - 12:30 (Asia/Saigon)

Closing session 

Room: J.05.03