



COMOSA-2026 PROGRAM

Hanoi, Vietnam, August 07-08, 2026

Conference Day 1 – August 07, 2026 (Friday)	
08:00 – 16:30	Registration Location: 3rd floor, VJCC Building
08:30 – 08:45	Opening Ceremony Location: 3rd floor, VJCC Building, FTU
	Welcome speech by FTU President - Assoc. Prof. Dr. Pham Thu Huong
	Program Chair remarks
08:45 – 10:00	Keynote Talk 1: Supermodularity and Structure in Data-Driven Optimization under Uncertainty Speaker: Professor Daniel Zhuoyu Long Chair: Viet Anh Nguyen and Hoang Nam Vu Location: 3rd floor, VJCC Building, FTU
10:00 – 10:15	<i>Coffee Break</i>

10:15–11:35	Session Fri-1A Optimization Chairs: Tien Mai and Van Hoang Dinh Location: 3rd floor, VJCC Building, FTU	Session Fri-1B Modeling and Simulation Chairs: Hung Tran and Quang Hung Doan Location: 3rd floor, VJCC Building, FTU
10:15 – 10:35	<i>Cost Optimization in Facility Location Problem under Cross-Nested Logit Demand: From Piecewise Linear Approximation to Exact Solutions</i> Ba Luat Le, Thuy Anh Ta, Ngoc Anh Vu, Tien Mai	<i>A Blockchain-based Framework for Medical Record Management Integrated with Quantum-Safe Encryption</i> Van Tinh Nguyen, Trung Duong Le Vu
10:35 – 10:55	<i>Improved Bounds for the Energy-Constrained Parallel Machine Scheduling Problem to Minimize Total Completion Time</i> Viet Nguyen Huu, Tien Thanh Mai, Quy Ta Dinh, Minh Hoang Ha, Binh Huynh Thi Thanh	<i>Facial Recognition Ticket Gates in Railway Stations: A Queueing Model for Exceptions and Passenger Congestion</i> Quang Huy Nguyen, Quoc Hung Nguyen, Tuan Phung-Duc
10:55 – 11:15	<i>Portfolio Optimization: A Minimax Absolute Deviation Approach with a Quadratic Variance Constraint</i> Thi Kim Huyen Duong, Vinh Quan Hoang	<i>Formal Verification of Secrecy and Strong Unforgeability in Post-quantum OpenPGP</i> Trong Binh Hoang, Van Linh Dinh
11:15 – 11:35	<i>On the Drone-Locker Location Scheduling Problem</i> Thi Nhung Tran, Thu Trang Hoa, Hai Dang Le, Minh Hoang Ha	<i>Behavioral Prior Elicitation via LLM for Heterogeneous-Agent Bitcoin Flash-Crash Simulation</i> Tran Phuong Linh Pham, Phuong Thao Nguyen, Thi Minh Phuong Ngo, Quang Minh Nguyen, Trong-Nghia Nguyen, Thai Hoa Ngo
11:35 – 13:45	Lunch	
13:45 –15:05	Session Fri-2A Optimization Chairs: Thi Thanh Binh Huynh and Quang Hung Doan Location: 3rd floor, VJCC Building, FTU	Session Fri-2B Analytics Chairs: Thanh Binh Nguyen and Thi Kim Ngan Nguyen Location: 3rd floor, VJCC Building, FTU
13:45 – 14:05	<i>A hybrid machine learning and metaheuristic framework for cold chain routing problem: a case study of ministop Vietnam</i> Tien Phan, Anh Duong	<i>Confidence-Aware Dual-Student Learning with Prototype Guidance for Bearing Fault Diagnosis</i> Viet-Anh Ngo, Hong-Anh Dang, Van-Chinh Nguyen, Van-Truong Pham

14:05 – 14:25	<i>A Markdown Money-Based Risk-Sharing Contract for Coordinating Joint Pricing and Ordering Decisions in a Perishable Product Supply Chain under Uncertain Demand</i> Thanh Danh Nguyen, Thi Thu Hoa Ho, Ho Thanh Ngan Nguyen	<i>An Explainable Hybrid Fraud Detection Framework Combining Logistic Regression and Isolation Forest</i> Thi-Lich Nghiem, Thi Ha Dinh, Pierre Marechal
14:25 – 14:45	<i>A Machine-Learning-Guided ALNS Framework for Improving Search Efficiency in Home Healthcare Routing with Time Windows</i> Thi Xuan Chi Ha, Vuong Quyen Cao, Nguyen Minh Thu Luu	<i>Comparative FPGA Optimization of Memory-Based and MDC Unified NTT/INTT Architectures for Energy-Efficient Edge ML-DSA Security in Urban Data Processing</i> Hoang Dat Nguyen, Gia Bao Ngo, Van Truong Vo, Ngoc Thanh Binh Bui, Tuan Hai Vu, Van Tinh Nguyen, Vu Trung Duong Le
14:45– 15:05	<i>A Hybrid Genetic Algorithm with Variable Neighborhood Search for Flexible Job-Shop Scheduling with Job-Splitting: Case Study of a Manufacturing Plant</i> Thu Luu Nguyen Minh, Truc Ngo Thanh, Uyen Vo Le Phuong, Phuc Phan Nguyen Ky	<i>RVNTT: A Custom-Instruction RISC-V SoC with an Autonomous NTT Pipeline for Secure Edge Acceleration in Privacy-Preserving Urban Data Processing</i> Duc Hoang Nguyen, Anh Kiet Pham, Ngoc Thanh Binh Bui, Tuan Hai Vu, Van Tinh Nguyen, Hoai Luan Pham, Vu Trung Duong Le
15:05 – 15:30	<i>Coffee Break</i>	
15:30 – 16:30	Session Fri-3A Optimization Chairs: Thanh Nguyen and Trung Thanh Nguyen Location: 3rd floor, VJCC Building, FTU	Session Fri-3B Analytics Chairs: Thanh Binh Nguyen and Thi Kim Ngan Nguyen Location: 3rd floor, VJCC Building, FTU
15:30 - 15:50	<i>Accelerating Column Generation for the RMSA Problem in Elastic Optical Networks</i> An Minh	<i>Semi-Supervised Approach for Medical Image Segmentation with Fused Dual Decoder</i> Quang Huy Pham, Quang-Huy Ho, Ha-Vy Trinh, Thi-Thao Tran,, Van-Truong Pham
15:50 - 16:10	<i>A PPO-Based Approach for Online VNF Placement and Traffic Routing in Dynamic NFV Systems</i> Si Nguyen Duc, Tam Nguyen Thi, Tuan Tran Ba	<i>Stealthy Backdoor Attacks on LLM-based Text-to-SQL Models: A Comparative Study of Trigger Mechanisms and Model Scales</i> Anh-Tuan Nguyen, Hoang-Dieu Vu
16:10 - 16:30	<i>A Simulation-Optimization Approach for Integrated Surgery Scheduling and Surgical Team Assignment under Urgent Patient Arrivals</i>	<i>A Leakage-Aware Multimodal Evaluation Framework for Early Intraoperative Acute Kidney Injury Prediction</i>

	Thi Xuan Chi Ha, Nguyen Kim Ngan Huynh, Nguyen Minh Thu Luu	Quang Minh Nguyen, Thuy Quynh Nguyen, Ho Nhat Minh Nguyen, Duc Minh Le, Trong-Nghia Nguyen
18:00 – 20:30	Banquet Location: Rooftop, 13th floor, A Building, FTU	

Conference Day 2 – August 8, 2026 (Saturday)		
08:00 – 16:30	Registration Location: 3rd floor, VJCC Building, FTU	
08:30 – 09:45	Keynote Talk 2: The Current Trend of LLM Repurposing: Robust Optimization with Uncertainty Resampling Speaker: Professor Yenming J. Chen Chair: Thi Thanh Binh Huynh and Tien Mai Location: 3rd floor, VJCC Building, FTU	
09:45 – 10:00	Coffee Break	
10:00 – 12:05	Session Sat-1A Optimization Chairs: Duc Minh Vu and Nho Minh Dinh Location: 3rd floor, VJCC Building, FTU	Session Sat-1B Analytics Chairs: Thanh Binh Nguyen and Trong Nghia Nguyen Location: 3rd floor, VJCC Building, FTU
10:00 – 10:20	<i>Drone Tourism Routing Under Energy, Time-Window and Communication-Coverage Constraints</i> Cao Nguyet Anh, Vu Duc Minh, Le Thi Bich Hanh, Pham Thanh Binh	<i>Predict-then-Equilibrate: Decision-Focused Learning for Shared-Capacity Service Networks</i> Trang Le, Ngan Duong, Trang Pham, Quyen Duong, Do Tuan, Uyen Nguyen
10:20 – 10:40	<i>SRS: Submodularity-aided Reinforcement Learning for Product Slate Recommendation</i> Chuan B. Nguyen, Dung T.K. Ha	<i>A Correlation-Driven Machine Learning Workflow for Mining Workforce Forecasting</i> Hien Thanh Duong, Thi-Kim-Lien Vu, Hanh-Trang Bui, Ngoc-Khanh Nguyen

10:40 – 11:00	<i>Development of a Fuzzy Absolute Reference Method with Fuzzy Consistency Ratios in Pairwise Comparisons</i> Thuy-Trang Nguyen, Van-Hop Nguyen	<i>A Neuro-Adaptive Learning Framework for Optimizing Cognitive Load and Sustainable Learning Experiences in Digital Education</i> Thi Minh Ngoc Luu, Duy Hung Tran, Van Tien Do, Xuan Hai Le, Thi Thanh Thuy Ha
11:00 – 11:20		<i>A novel subspace hybrid feature selection method for high-dimensional data</i> Thanh Nguyen Le Trung, Thanh Trinh
11:20 – 13:45	Lunch	
13:45 – 15:05	Session Sat-2A Optimization Chairs: Van Canh Pham and Duc Minh Vu Location: 3rd floor, VJCC Building, FTU	Session Sat-2B Analytics Chairs: Thanh Binh Nguyen and Trong Nghia Nguyen Location: 3rd floor, VJCC Building, FTU
13:45 – 14:05	<i>State-Dependent Graph Portfolio Optimization using Selective State Space Models and Regime-Adaptive Graph Learning</i> Ngo Phu Thanh, Nguyen Bao	<i>Reinforcement Learning in the Lifecycle of Large Language Models: A Systematic Survey of Algorithms, Applications, and Challenges</i> Bao-Long Nguyen, Hoang-Dieu Vu
14:05 – 14:25	<i>Global Estimation of Parametric Mixed-logit Demand Models</i> Hoang Son Vu Pham, Cong Thanh Hoang, Hoang Giang Pham, Thuy Anh Ta, Tien Mai	<i>Stochastic Demand Forecasting for Manufacturing Supply Chains: A Monte Carlo Augmentation and Multi-Architecture Ensemble Framework</i> Lai Bao Minh Phong, Duy Minh Hoang Nguyen, Don Duc Nguyen, Thi Khanh Chi Huynh, My Huong Le, Van Hop Nguyen
14:25 – 14:45	<i>The Price of Decentralized Recovery in Multi-Layer Supply Networks: A Topology-Controlled Study</i> Trang Pham, Trang Le, Ngan Duong, Tuan Do, Uyen Nguyen	<i>Transportation Mode Choice under Low Emission Zone policies: Evidence from Hanoi university Students</i> Phuong Thao Vu, Minh Hoang Ha, Thi Bach Tuyet Nguyen, Hai Chau Le, Anh Tien Mai
14:45 - 15:05	<i>The Price of Selfish Inference: A Queueing Congestion Game and Pigovian Token-Second Pricing for Memory-Constrained LLM Serving</i>	<i>Credit Scoring versus Profit Scoring in Digital Lending: A Deployment-Oriented Machine Learning Framework</i> Ngoc Hung Nguyen, Nguyen Thi Mai Trang

	Quyen Duong, Trang Pham, Ngan Duong, Luong Doan, Tuan Do	
15:05 – 15:30	<i>Coffee Break</i>	
15:30 – 16:30	Session Sat-3A Optimization Chairs: Duc Minh Vu and Nho Minh Dinh Location: 3rd floor, VJCC Building, FTU	Session Sat-3B Analytics Chairs: Van Hoang Dinh and Trong Nghia Nguyen Location: 3rd floor, VJCC Building, FTU
15:30 – 15:50	<i>Indirect Normalization for Aggregated Ranking in Multiple Criteria Decision-Making</i> Van-Hop Nguyen	<i>Edge-AI Analytics for Motor Predictive Maintenance Using Multi-Sensor Anomaly Detection, Drift Monitoring, and OTA Model Updating</i> Ngoc Trung Nguyen, Dinh Thai Kim
15:50 – 16:10	<i>Market-Clearing Access Pricing for Shared Gig-Courier Capacity in Competitive Quick Commerce</i> Trang Le, Ngan Duong, Trang Pham, Quyen Duong, Tuan Do, Uyen Nguyen	<i>Exploring how Digital Content Marketing shapes visit intention in cultural tourism</i> Dieu Thuy Vu, Thi Mai Le, Thu Huong Pham
16:10 – 16:30		<i>Forecasting at-risk students in online education using clickstream behavioral analysis and machine learning</i> Duc Minh Tran, Phan Dang Vu, To Hien Hai Dang