



Springer

The Sixth International Conference on Smart Vehicular Technology, Transportation, Communication and Applications (VTCA 2024)

April 16-18, 2024, Kaohsiung, Taiwan
(Kaohsiung Software Technology Park)

Conference Program (Onsite/Online Hybrid)

Time Zone for the Conference Program: GMT +08:00
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VTCA 2024 Official Website: <http://bit.nkust.edu.tw/~vtca24>

Conference Program

Time	April 16, 2024 (Tuesday)
09:00-09:50	Registration Conference saloon, 1F
09:50-10:00	Opening Conference saloon, 1F VooV Meeting ID: 963-845-863 https://meeting.tencent.com/dm/NP7t6NOnJWDS
10:00-11:00	Keynote Speech (I) <i>Prof. Yao Zhao</i> Conference saloon, 1F VooV Meeting ID: 963-845-863 https://meeting.tencent.com/dm/NP7t6NOnJWDS
11:00-11:20	Break
11:20-12:00	Session 01 Conference saloon, 1F VooV Meeting ID: 963-845-863 https://meeting.tencent.com/dm/NP7t6NOnJWDS
12:00-14:00	Lunch
14:00-17:00	Session 02 VooV Meeting ID: 378-355-729 https://meeting.tencent.com/dm/1BurYRingB4z
17:30-20:00	Welcome Reception

Time	April 17, 2024 (Wednesday)
09:00-10:00	Keynote Speech (II) <i>Prof. Lyuchao Liao</i> Conference Room 301, 3F VooV Meeting ID: 823-713-738 https://meeting.tencent.com/dm/CEGgfKJuoINu
10:00-10:30	Break
10:30-11:30	Keynote Speech (III) <i>Prof. SK Hafizul Islam</i> Conference Room 301, 3F VooV Meeting ID: 823-713-738 https://meeting.tencent.com/dm/CEGgfKJuoINu
12:00-14:00	Lunch
14:00-17:00	Session 03 VooV Meeting ID: 687-574-130 https://meeting.tencent.com/dm/xxncYw8Du4R1
17:30-20:00	Banquet

Time	April 18, 2024 (Thursday)
09:00-12:00	Session 04 VooV Meeting ID: 102-779-526 https://meeting.tencent.com/dm/Lfm9KSqTscAx
12:00-14:00	Lunch
14:00-15:00	Keynote Speech (VI) <i>Prof. Jingchun Geng</i> VooV Meeting ID: 603-492-870 https://meeting.tencent.com/dm/JL0RkF2Lo5cZ
15:00-15:30	Break
15:30-16:30	Keynote Speech (V) <i>Prof. Liyuan Zhao</i> VooV Meeting ID: 603-492-870 https://meeting.tencent.com/dm/JL0RkF2Lo5cZ
16:30-16:40	Ending

Keynote Speech

Keynote Speech (I): Weakly Supervised & Interactive Image Segmentation

Speaker: Prof. Yao Zhao, Beijing Jiaotong University, China

Keynote Speech (II): The Next Horizon: Telematics to Autonomous Vehicles in the Connected Age

Speaker: Prof. Lyuchao Liao, Fujian University of Technology, China

Keynote Speech (III): Identity-based Deniable Authentication for Mobile Ad Hoc Networks

Speaker: Dr. SK Hafizul Islam, Indian Institute of Information Technology Kalyani, India

Keynote Speech (IV): Theory and Practice of the Train Headway and Design of Block Section for High-speed Railway

Speaker: Dr. Jingchun Geng, CHINA RAILWAY ECONOMIC AND PLANING RESEARCH INSTITUTE

Keynote Speech (V): Modeling urban land use transportation using big data and machine learning methods

Speaker: Dr. Liyuan Zhao, Huazhong University of Science and Technology

Paper Presentation

Session 01

1. VTCA-2024-136
Identification of Multi-class Attacks in IoT with LSTM
Yu-Xian Lee, Chin-Shiuh Shieh, Mong-Fong Horng, Thanh-Lam Nguyen,
Ying-Chieh Chao
2. VTCA-2024-142
A GPT-based chatbot for Security Log Parsing
Xian-Fu Zhou, Chun-Chih Lo, Chin-Shiuh Shieh, Yuh-Ming Cheng,
Mong-Fong Horng
3. VTCA-2024-144
A Study of Handover Quality Prediction in 5G Networks with Deep Learning
Tang-Chi Lo, Chun-Chih Lo, Chin-Shiuh Shieh, Mong-Fong Horng

Session 02

1. VTCA-2024-040
A Novel Hybrid DE-GOA Algorithm for Global Optimization Problems
Yu Li, Qing-Yong Yang, Jia Zhao, Tien-Szu Pan, Jeng-Shyang Pan
2. VTCA-2024-072
Genetic Algorithm: Unleashing Power of Evolutionary Computing in Problem Solving and Optimization
Jeng-Shyang Pan, Trong-The Nguyen, Thi-Kien Dao, Thi-Minh-Phuong Ha
3. VTCA-2024-076
Jira's Collaboration: Survey Insights on Optimizing Team Planning, Tracking, and Release Management
Jeng-Shyang Pan, Thi-Kien Dao, Trong-The Nguyen, Trinh-Dong Nguyen,
Thi-Xuan-Huong Nguyen
4. VTCA-2024-098
Optimal Placement of Pressure Sensors in Water Supply Network with Gaining-Sharing-Knowledge Based Algorithm
Li-Fa Liu, Shu-Chuan Chu, Tien-Szu Pan, Jeng-Shyang Pan
5. VTCA-2024-102
Rafflesia Optimization Algorithm for Wireless Sensor Networks
Jeng-Shyang Pan, Xin-Yi Zhang, Shu-Chuan Chu, Junzo Watada
6. VTCA-2024-118
A Novel Gannet Optimization Algorithm with QUasi-Affine TRansformation

Evolutionary

Ji-kang Tao, Shu-Chuan Chu, Qingyong Yang, Jeng-Shyang Pan

7. VTCA-2024-120
An adaptive image fusion method based on Rafflesia Optimization Algorithm
Jeng-Shyang Pan, Huai-Jian Xu, Shu-Chuan Chu, Shi-Huang Chen
8. VTCA-2024-135
Research on Improvement of Harris Hawks Algorithm Based on Multi Strategy Optimization
Lin-yuan Lei, Shu-Chuan Chu, Jian-po Li, Vaclav snasel, and Jeng-Shyang Pan
9. VTCA-2024-140
Food digestion algorithm for engineering optimization problems
Shu-Chuan Chu, Xiao-Qi Liu, Ling-ping Kong, Jeng-Shyang Pan, Václav Snášel
10. VTCA-2024-016
Multi-objective Firefly Algorithm with Dynamic Reflection Guidance and Bi-dimensional Variants
Zhi-Yang Zeng, Shui-Ping Kang, Jia-Zhen Hou, Xiu-Mei Tian
11. VTCA-2024-031
Hybrid Kernel Function Fuzzy Least Squares Projection Twin Support Vector Machine by Wolf Pack Algorithm
Hai-peng Zhu, Jia Zhao, Si-wei Peng, Yuan-min Li, Jia-cheng Li, Bao-hong Liu
12. VTCA-2024-082
An Binary Particle Swarm Optimization with Learning from Neighbors for Multi-objective Feature Selection
Xiaofeng Wang, Jianhua Liu, Yuxiang Chen, Jian Zhu, Zhichun Xie
13. VTCA-2024-148
Enhancing Gannet optimization algorithm with Archive-based Covariance Matrix and Shifted Mean
Jeng-Shyang Pan, Xing Wang, Shu-Chuan Chu*, Wei Li, Chin-Shiuh Shieh

Session 03

1. VTCA-2024-052
Machine Vision Defect Detection System Designed with Halcon
Mir Mehraj Ahmad, Lyuchao Liao, Jishi Zheng, Ali Shan, Jindun Zeng
2. VTCA-2024-068
GPF-YOLO: A real-time vehicle object detection algorithm based on improved YOLOv8
Yu-Xin Guo, Fu-Quan Zhang
3. VTCA-2024-132
Optimizing Deep Kernel Mapping Network for Remote Sensing Hyperspectral Image Classification
Jing Liu and Kechao Wang
4. VTCA-2024-IS-01-01
Using computer vision to evaluate physical rehabilitation training in Internet of Things environments
Lingfeng Huang, Lunan Liu, Shengwen Huang, Yeh-Cheng Chen
5. VTCA-2024-096
Whispers of the Fan: An Interactive Installation Artwork Based on Arduino Sensors Integrated with Touch Designer
Linling Xu, Chengfeng Zheng, Shutang Liu, Yue Wang, Chang Xu, Xu Wang, Fuquan Zhang
6. VTCA-2024-088
Integration Teaching Research of Advanced Mathematics and Computational Mathematics Courses under the Framework of Applied Research Projects
Chao-Fan Xie, Fuquan Zhang
7. VTCA-2024-130
The Study of Organizational Commitment and Organizational Culture on Employee Satisfaction: on Vocational High School of Dongguan City
Fang Luo, Sheng-Lun Shen and Rong Ye
8. VTCA-2024-058
Research on Style Transfer Algorithm of JinCang Embroidery Based on CNN
Miao-miao Kang, Ke-ke Sun, Tian-tian Xu
9. VTCA-2024-104
Deciphering the Educational Process: An SVM Approach to Business English Teaching Analytics
Rui Cong, Wei Sun

10. VTCA-2024-125
Applying Emotion Recognition on Classroom Interaction
Shih-Pang Tseng, Yaxin Wang, Chun-Cheng Wei, Yi-Chang Chen
11. VTCA-2024-112
Research on the Coupling and Coordinated Development of Digital Economy and
Dongguan Advanced Manufacturing Industry
Jingjing Zhan
12. VTCA-2024-055
Prediction Study of Mine Water Inflow Based on Chaos Theory
Longqing Shi, XinHang Zhu, Jin Han
13. VTCA-2024-062
Lightweight Semi-Supervised Semantic Segmentation Using Pixel-level
Contrastive Learning
Qingqing Su, AnHong Wang, Jing Zhang, Lijun Zhao, Yan Fang
14. VTCA-2024-116
Prior Mask-Based Deep Neural Network For Silicon Wafer Defect Detection
Chang Wang, AnHong Wang*, AnAn Ren, Hao Jing, Kai Hu

Session 04

1. VTCA-2024-007
Research on the connection of through trains based on the deadline of goods transportation
Shengdong Li, Qiangfeng Zhang, Xia Zhou, Chuijiang Guo, Li Shi
2. VTCA-2024-011
Improved column generation algorithm for passenger service-like railway container transportation optimization
Song Pu
3. VTCA-2024-036
A Train Rescheduling Approach under Disruptions in Urban Rail Transit Systems
Peng Qiu, Xuze Ye, Yongxin Li, Miaomiao Lv
4. VTCA-2024-048
Vulnerability Assessment of Subway Station Operation Based on AHP-Matter Element Model
Li Lu, Xiuze Zheng
5. VTCA-2024-080
Research on Compiling Method of The Old and New Alternate Passenger Train Diagram
Lv Miao-miao, Li Ke, Pan Jin-shan, Sun Yan-fei
6. VTCA-2024-086
Research on Dynamic Compilation and Optimization of Train Operation Diagram Based on Multi-system Regional Rail Transit
Mingqi Weng, Xinyue Li, Hongxia Lv
7. VTCA-2024-090
The Influence of Using Artificial Intelligence Multimedia Devices in Vehicles on Driving Safety
Shutang Liu, Jiadong Wang, Minggui Li, Ruoting Xie, Linling Xu, Chengdong Chen, Jiayan Huang
8. VTCA-2024-100
Study on the dynamic preparation and optimization of multi-standard rail transit train operation scheme
Zhanbao QI, Yanhao WANG, Jinshan PAN
9. VTCA-2024-106
Remaining Charging Time Estimation for Lithium-Ion Batteries Based on CNN-GRU
Si-Rui Lin, Fu-min Zou, Xiang Yu, Feng Guo

10. VTCA-2024-108
Coordinated Optimization Research of Multi-Standard Rail Transit Train Operation Plans Based on Capacity Matching
Wang Zhewei, Liu Zhen, Guo Xiuyun
11. VTCA-2024-110
Research on Adjustment of High-Speed Railway Train Operation Plan Based on Passenger Flow Demands
SHEN Zexi, WANG Jiajun, PAN Jinshan, LI Xueting
12. VTCA-2024-114
Study of Instrumental Standard Curve Fitting with Relative Error Constraints
Zhenhua Gan, Dongyu He, Fumin Zou*, Feng Guo, Jinyang Li, Yuankun Bai, Bangda Chen, Shuting Chen
13. VTCA-2024-127
Research on Comprehensive Evaluation of New and Old Alternate Train Diagrams
Lv Miao-miao, Sun Yan-fei
14. VTCA-2024-128
Traffic Sign Detection and Recognition in Complex Scenes
Ming Zhang, Dequ Chen, Rong Hu, Weilong Dai
15. VTCA-2024-138
The application and practice of computer operating systems in communication security in the transportation industry
Cui Zhan
16. VTCA-2024-146
Research on the benefit and efficiency evaluation of the high-speed railway operation plan oriented to the railway network
MEI Tianci, LAI Jun, ZHANG Zhenchen, PAN Jinshan*, ZHAN Cui
17. VTCA-2024-023
Secure Big Data Analytics using Cloud Storage for Internet of Vehicles
Prakash Tekchandani, Saurabh Agrawal, and Ashok Kumar Das