

Regular Paper

A Containerized IoT Simulation Environment for Network Warfare Training

Ruihao Chen, Chengcheng Lyu, Wenzhao Wang and Hui Lin (Fujian Normal University, China); qingxin lin (Fuzhou University & Department of Computer Engineering, China)

A Framework for BMC Firmware Vulnerability Analysis and Exploitation

Jiapeng Wang, Zhihan Zheng, Kefan Qiu and Yuan Tan (Beijing Institute of Technology, China); Chen Liang (Beijing Information Science & Technology University, China); Wenjuan Li (The Education University of Hong Kong, Hong Kong)

A Novel Diversified API Recommendation for Power System Sensors

Minhao Zhu (Nari Group Corporation, China); Huanhuan Gu, Xun Che and Jingfei Chen (Nanjing University of Science and Technology, China); Qian Zhao (Guodian Nanjing Automation Co., Ltd., China); Fan Liu and Yu Zheng (Nanjing University of Science and Technology, China)

A Secure Ethernet Passive Optical Network Protocol for Industrial Internet of Things

Huanhuan Gu (Nanjing University of Science and Technology, China)

A Trusted and Decentralized Federated Learning Framework for IoT Devices in Smart City

Wang, Sheng (Nanjing Construction Market Supervision Station, China); Chun Chen (Jiangsu Public Works Co. Ltd, China); Jun Zhu (City University of Hong Kong, Hong Kong); Bing Han (Nanjing University of Aeronautics and Astronautics, China)

A Walk-Through Type Authentication System Using Real-Time Gaze & Motion Detection

Yanmei Jiao, Kiminori Sato and Bo Wu (Tokyo University of Technology, Japan)

Bridging IoT Protocols With the Web of Things: A Path to Enhanced Interoperability

Zakaria Benomar (INRIA, France); Marco Garofalo (Università Degli Studi di Messina, Italy); Nikolaos Georgantas (INRIA, France); Francesco Longo, Giovanni Merlino and Antonio Puliafito (University of Messina, Italy)

Civil Engineering Design in IoT: Leveraging Improved Swarm Intelligence Optimization

Weiheng Fu (Fuzhou University, China); Rongzhong Chen (Xiamen Meteorological Bureau, China); Kaiwen Chen (Florida Transportation Engineering, USA); Xiaojun Xie (Fuzhou University, China)

Cubic-DUCAG: A New Modeling and Probabilistic Computing Approach for Cyclic Network Attacks

Chunling Dong and yu feng (Communication University of China, China)

Deep Reinforcement Learning for Energy-Efficient Selection of Embedded Services at the Edge

Hugo Hadjur and Doreid Ammar (Aivancity School for Technology, Business & Society ; Inria, Univ Lyon, EnsL, UCBL, CNRS, LIP, France); Laurent Lefevre (Inria, Univ Lyon, EnsL, UCBL, CNRS, LIP)

Deep Reinforcement Learning-Based AoI Minimization in UAV-Assisted Multi-Platoon Vehicular Networks

Bochun Du and Long Qu (Ningbo University, China)

Digital Microfluidic Biochips Test Path Planning Based on Swarm Intelligence Optimization and Internet of Things Technology

Zhongliao Yang, Zhengye Xie and Chen Dong (Fuzhou University, China); Xinmin Fan (Fujian Normal University, China); Zhenyi Chen (University of South Florida, USA)

Elevating Smart Contract Defenses: A Coordinated NLP-Based Strategy for Vulnerability Detection

Chengyu Lin, Xiaoding Wang and Hui Lin (Fujian Normal University, China)

Energy Efficient and Low Latency Computation Offloading via Truly PPO in Mobile Edge Computing Networks With Multi-UAV

Shuang Fu, Xiangping Bryce Zhai and Changyan Yi (Nanjing University of Aeronautics and Astronautics, China); Lei Pang (Zugo Intelligent Technology Company, China); Chee Wei Tan (Nanyang Technological University, Singapore)

Enhancing Sales Forecasting Accuracy in the Presence of Missing Data

Jun Tang and Bing Guo (Sichuan University, China); Yan Shen (Chengdu University of Information Technology, China); Shengxin Dai (Sichuan University, China)

Enhancing Visual Inertial Odometry Performance Using Deep Learning-Based Sensor Fusion

Raouf Doorshi, Mr (Malmö University, Sweden); Hajira Saleem (Malmo University, Sweden); Reza Malekian (Malmö University & University of Pretoria, Pretoria, Sweden)

IoT Meets Computer Vision: An Improved Detection of Tomato Pests and Diseases

Junling Wang (Nanjing University of Science and Technology, China); Dongyang Wu (Nanjing Forestry University, China); Yupeng Wang (Nanjing University of Science and Technology, China)

Local-GAN: An Anomaly Detection Method Based on Local Key Features and GAN for IoT

Huixia Lai and Fan Zhou (Fujian Normal University, China); Bo Wang (China Meteorological Administration, China); Hongrui Chen and Shi Zhang (Fujian Normal University, China)

malDetect: Malware Classification Using API Sequence and Comparison With Transformer Encoder

Jingjing Lin, Jingsong Lin and Chenxi Lyu (Fuzhou University, China); Xinmin Fan (Fujian Normal University, China); Chen Dong (Fuzhou University, China)

Minimizing Data Transmission Delay in Vehicular Networks Through Network Coding-Based Broadcasting

Jiali Hu, Long Qu and Qinglin Song (Ningbo University, China); Ran Zhu (Zhejiang Faraday Laser Technology Co. LTD, China)

Multi-Domain and Multi-View Oriented Deep Neural Network for Sentiment Analysis in Large Language Models

Keito Inoshita (Shiga University, Japan); Xiaokang Zhou (Kansai University, Japan); Shohei Shimizu (Shiga University, Japan)

Prediction of Social Influence in Social Networks

Shiyu Chen and Qianmu Li (Nanjing University of Science and Technology, China)

Priority-Considered Channel Access for Registration-Backoff-Time (RBT) -Based IEEE 802.11ah IOT Network

Chung-Ming Huang and Chia-Hsiang Chen (National Cheng Kung University, Taiwan); Jianhua Ma (Hosei University, Japan)

RADIO: Reinforcement Learning-Aided Deployment of Wi-Fi Routers in 5G Networks for Indoor Drone Orchestrating

Alireza Famili (Virginia Tech, USA); Amin Tabrizian (George Washington University, USA); Tolga O Atalay (Virginia Tech, USA); Angelos Stavrou (Virginia Tech & Kryptowire, USA); Peng Wei (George Washington University, USA)

Recommendation Algorithm Based on Social Influence Diffusion

Xin Jin and Shiyu Chen (Nanjing University of Science and Technology, China)

Semantic Segmentation Algorithm Based on Transformer in Mobile Edge Computing

Fu Li and Xibei Jia (Nanjing University of Science and Technology, China)

TGIEN: An Interpretable Image Editing Method for IoT Applications Based on Text Guidance
Wang Yifei, Pan Mengzhu and Qianmu Li (Nanjing University of Science and Technology, China)

The Pipeline of VAE Base Network Traffic Anomaly Detection Algorithm
Honglei Fu and Pan Wang (Nanjing University of Posts and Telecommunications, China)

TinyML on Mobile Devices for Hybrid Energy Management Systems
Olha Boiko (Malmö University, Sweden); Reza Malekian (Malmö University & University of Pretoria, Pretoria, Sweden); Paul Davidsson (Malmö University, Sweden); Vira Shendryk and Anton Komin (Sumy State University, Ukraine)

Unsupervised Real-Time Flow Data Drift Detection Based on Model Logits for Internet of Things Network Traffic Classification
Pan Wang and Minyao Liu (Nanjing University of Posts and Telecommunications, China)

#Short Paper

A Comparative Analysis of Query Generation Methods for IoT Middleware Evaluation
Ravindi Iroshinee De Silva, Arkady Zaslavsky and Seng W Loke (Deakin University, Australia); Prem Prakash Jayaraman (Swinburne University of Technology, Australia)

A Domain-Adaptive Large Language Model With Refinement Framework for IoT Cybersecurity
Xun Che and Yu Zheng (Nanjing University of Science and Technology, China); Minhao Zhu (Nari Group Corporation, China); Qianmu Li and Xu Dong (Nanjing University of Science and Technology, China)

The Integrated Monitoring System for Rail Transit and the Switching Method for the Main and Backup Control Centers
Jing Song and Changkai Zhang (NR Electric Co. Ltd, China); Xun Che (Nanjing University of Science and Technology, China)

Workshop Paper

A Dynamic Risk-Aware Routing Recommendation Using Deep Reinforcement Learning
Difeng Zhu (Zhejiang University City College, China); Hang Zhou (Zhejiang University, China); Binbin Zhou (Hangzhou City University, China)

A Framework for Privacy-Preserving Efficient Collaborative Learning
Jianxiang Cao, Shang Wenqian and Xing Song (Communication University of China, China)

A Machine Learning Model for Prediction of Malaria From Microscopic Blood Cell Images
Samson Otieno Ooko (Adventist University of Africa, Kenya); Charles Kagwi (UEAB, Kenya)

Ambient Intelligence Ecosystem for Elderly Pattern Detection and Care Using Social Robots
Raúl Gómez-Ramos (CARTIF Technological Center, Spain); Jaime Duque-Domingo (ITAP-DISA, University of Valladolid, Spain); Eduardo Zalama (Universidad de Valladolid, Spain); Jaime Gómez-García-Bermejo (ITAP-DISA, University of Valladolid, Spain)

An Architectural Reference Model for IoT Device Management
Domīnik Grūidl and Thomas Wieland (Coburg University of Applied Sciences and Arts, Germany); Daniela Nicklas (University of Bamberg & Faculty Information Systems and Applied Computer Science, Germany)

Analyzing and Predicting the Power Consumption of a Publish/Subscribe IoT-Broker
Franc Pouhela (German Research Center for Artificial Intelligence, Germany); Maryam Arabshahi (German Research Center for Artificial Intelligence (DFKI), Germany); Hans D.

Schotten (University of Kaiserslautern, Germany)

Building a First Prototype of a Multi-Scale Modular Distributed Display

Lassabe Frédéric (UTBM, CNRS, FEMTO-ST Institute, France); Dominique Dhoutaut (FEMTO-ST Institute, Université de Franche-Comté, CNRS, France); Benoit Piranda (University of Franche-Comté & Femto-ST Institute, France); Olga Kouchnarenko (University of Franche-Comté, CNRS, FEMTO-ST Institute, France); Julien Bourgeois (UFC, FEMTO-ST Institute, CNRS, France)

Combatting the TrickBot Threat: Analysis, Impact, and Defensive Strategies in Cybersecurity

Suman Bhunia (Miami University, Ohio, USA); Mohammed Salman (Miami University, USA)

Development of a User-Friendly and Efficient Control System for Smart Home

Puttipatt Ingkasit and Pushpendu Kar (University of Nottingham Ningbo China, China)

DEVS-RPL: Design Formal Discrete Event Model of Routing Protocol Over LLN

Hussah Albinali (King Fahd University for Petroleum and Minerals, Saudi Arabia); Farag Azzedin (King Fahd University of Petroleum & Minerals, Saudi Arabia); Muhammad Riaz (King Fahd University of Petroleum and Minerals, Saudi Arabia)

Integrating Synthetic Data Modelling Into an Adaptive Sampling Framework for IoT Devices

Faiga Alawad (Norwegian University of Science and Technology, Norway & SimulaMet, Norway); Peter Herrmann (Norwegian University of Science and Technology, Norway); Vajira Thambawita (Simula Research, Norway)

Inverse-PID: A Mathematical Approach Towards Detecting Real-World Wear-And-Tear in Industrial Machines

Severin Pang, Justas Katkus and Stefan Hild (Ei3, Switzerland)

MMQP: A Lightweight, Secure and Scalable IoT Communication Protocol

Franc Pouhela and Sogo Pierre Sanon (German Research Center for Artificial Intelligence, Germany); Dennis Krummacker (German Research Center for Artificial Intelligence (DFKI GmbH), Germany); Hans D. Schotten (University of Kaiserslautern, Germany)

Monitoring of In-Field Risk of Infection Events by Foliar Pathogens Using Smart IoT Nodes

Hassan Hammoud (INRIA, France); Frédéric Weis (IRISA / University Rennes, France); Christophe Langrume and Melen Leclerc (INRAE, France); Jean-Marie Bonnin (Institut Mines Telecom / IMT Atlantique & IRISA - Inria, France)

Privacy Threats and Countermeasures in Federated Learning for Internet of Things: A Systematic Review

Adel ElZemity and Budi Arief (University of Kent, United Kingdom (Great Britain))