

# ***Engineering Letters***

Contents: Volume 33, Issue 6: June 2025

Online Version Available: 1 June 2025

## **JOURNAL PAPERS:**

**DRL-YOLO: A Small Target Detection Model in Fuzzy Scenes Combining Multi-Perspective Feature Fusion with a Lightweight Detection Head**

Kexin Zhang, and Ziwei Zhou, Engineering Letters, 33:6, pages 1735-1745.

**Hybrid Optimization for Photovoltaic Power Systems: Enhancing MPPT with Improved Whale and Particle Swarm Algorithms**

Tan Liu, Sisi Liu, Hexu Yu, Baijie Ma, Jiaqi Tong, Zhiyi Wu, and Qingyun Yuan, Engineering Letters, 33:6, pages 1746-1758.

**Physiological Patterns Classification of HRV Dynamics through Feature-Level Fusion and Machine Learning during Chi Meditation**

Raghuwansh Singh, Vivek Ranjan, Anindita Ganguly, and Suman Halder, Engineering Letters, 33:6, pages 1759-1769.

**Black-winged Kite Algorithm Based on Mathematical Distribution Driven Random Walking Strategies for Feature Selection Problems**

Zi-Rui Xu, Yu-Feng Sun, Jie-Sheng Wang, Yu-Wei Song, Shi Li, Yu-Liang Qi, and Si-Yu Jin, Engineering Letters, 33:6, pages 1770-1796.

**Prediction of Chloride Penetration in Concrete and Durability Assessment Using Bayesian Optimized Long Short-Term Memory Networks**

Lingjie Wu, Yufeng Xia, Fenfei Shi, and Xuping Ni, Engineering Letters, 33:6, pages 1797-1805.

**TDLPN: Transductive Dual Label Propagation Network for Few-shot Learning**

Ye Li, and Guangsheng Li, Engineering Letters, 33:6, pages 1806-1814.

**Optimization Framework for Allocation of Banking Funds Based on Business Risks: A Systematic Literature Review**

Moch Panji Agung Saputra, Diah Chaerani, Sukono, and Mazlynda Md Yusuf, Engineering Letters, 33:6, pages 1815-1823.

**Research on Energy Management Strategy of Fuel Cell Bus Considering Load Reconstruction**

Lei Cao, Chao Ma, Zhihao Sun, Haifeng Wang, and Kun Yang, Engineering Letters, 33:6, pages 1824-1838.

**YOLO-KD: Real time road Defect Detection Using Advanced YOLO Models**

Shengqiang Cong, Mingqiang Gao, Chunna Zhang, and Yang Yu, Engineering Letters, 33:6, pages 1839-1850.

**Effect Examining under Multiple Goal Processes**

Boontida Uapipatanakul, Jong-Chin Huang, Kelvin H.-C. Chen, and Yu-Hsien Liao, Engineering Letters, 33:6, pages 1851-1859.

**Research on Demand-oriented Train Stopping Plan Optimization of High-speed Railway**

Zhiqiang Tian, Xinni Jin, Juan Zeng, Wenguo Ma, Hongzhen Wang, and Yan Zhang, Engineering Letters, 33:6, pages 1860-1870.

---

**Dynamic Response and Vibration Control of Deep-water Bridge Piers under Ship Wave Excitation**

Changqing Wu, Minhui Li, Hua Luo, Tian Hu, Shiming Yi, and Guanghui Wang, *Engineering Letters*, 33:6, pages 1871-1878.

**Vehicle-pedestrian Instance Segmentation Algorithm Based on Improved YOLOv8n-seg**

Siwen Fang, Xinhe Zhang, Bochao Su, and Wenxuan Zhu, *Engineering Letters*, 33:6, pages 1879-1889.

**Signless Laplacian Energy of a Graph with Self-Loops**

Harshitha A, Sabitha D'Souza, Swati Nayak, and Gowtham H J, *Engineering Letters*, 33:6, pages 1890-1895.

**Enhanced Maximum Power Point Tracking Capability of Grid-connected Solar PV Based on Improved Bacterial Foraging Optimization**

Lixiong Li, Guanghao Zeng, and Bing Wen, *Engineering Letters*, 33:6, pages 1896-1902.

**Quaternary Classification Algorithm for Brain-Computer Interface System Based on Multi-layer Convolutional Neural Network and Axial Attention Mechanism**

Xin-Tong Ye, Tian-Wei Shi, Chi Zhang, Wen-Yu Zhang, Ling Ren, and Wen-Hua Cui, *Engineering Letters*, 33:6, pages 1903-1912.

**Linear Fractional Differential Equations for Modeling Nonlinear Hydro Environmental Phenomena**

Rania Saadeh, Koichi Unami, Ahmad Qazza, Iqbal M. Batiha, and Osama Mohawesh, *Engineering Letters*, 33:6, pages 1913-1918.

**Path Optimization for Mixed Use of Electric and Fuel Trucks under Multiple Distribution Centers**

Xirong Fang, Jian Liu, and Lifan Wang, *Engineering Letters*, 33:6, pages 1919-1936.

**Light-YOLOv8-Flame: A Lightweight High-Performance Flame Detection Algorithm**

Jiawei Lan, Ye Tao, Zhibiao Wang, Haoyang Yu, and Wenhua Cui, *Engineering Letters*, 33:6, pages 1937-1948.

**Image Classification for Pancreatic Ductal Adenocarcinoma Using Deep Multi-Instance Learning**

Ao Wang, Xiaoxia Zhang, and Tong Zhou, *Engineering Letters*, 33:6, pages 1949-1960.

**Numerical Study of Steady Diffusion-Convection in Anisotropic Medium**

Priska Sari Dewi, Imam Solekhuudin, and Zenith Purisha, *Engineering Letters*, 33:6, pages 1961-1970.

**Spatiotemporal Collaborative Dynamic Optimization Algorithm**

Er-Chao Li, and Chen-Miao Liu, *Engineering Letters*, 33:6, pages 1971-1982.

**Armor Damage Point Segmentation Based on Improved SegNet**

Zhaoyang Zuo, Xiaohe Wang, Yujiang Wang, Bo Wang, Shicheng Wei, and Shijie Dai, *Engineering Letters*, 33:6, pages 1983-1991.

**Research on Air Compressor Fault Detection Algorithm Based on Ensemble Learning**

Cheng Long, Tianming Yu, Guoliang Feng, and Tongyue Wang, *Engineering Letters*, 33:6, pages 1992-2002.

**Deep Learning for Lung Cancer Classification: An Investigation Using AMC-CNNs on LC105K Dataset**

Suresh Rasappan, S. Ahamed Nishath, and Francis Saviour Devaraj, *Engineering Letters*, 33:6, pages 2003-2018.

---

**Integral Sliding Mode Control of Mobile Robots Based on Disturbance Observer under Saturation Conditions**

Wenhui Zhang, Xiaochen Huang, Zheng Fang, Yi Zhao, and Zhangping You, *Engineering Letters*, 33:6, pages 2019-2026.

**Harnessing Liquid Crystals-based Techniques for Unleashing 6G Network Security Paradigms**

Jinfeng Li, and Haorong Li, *Engineering Letters*, 33:6, pages 2027-2036.

**Relational Context Modeling for Improved Knowledge Graph Completion**

Guoqi Lin, and Qi Li, *Engineering Letters*, 33:6, pages 2037-2043.

**Dysarthric Speech Detection and Severity Classification using Audio Spectrogram Transformer**

Komal Bharti, Sandeep Agri, and Pradip K. Das, *Engineering Letters*, 33:6, pages 2044-2054.

**Multi-Feature Fusion Based Few-Shot Specific Emitter Identification**

Dian Lv, Zhiyong Yu, and Jiajun Wen, *Engineering Letters*, 33:6, pages 2055-2065.

**Research on Structure and Vulnerability of Regional Comprehensive Transportation Network Based on Supernetwork Theory**

Wei Liu, Ruhu Gao, Jiarui He, Jiaping Xi, and Yunben Bai, *Engineering Letters*, 33:6, pages 2066-2077.

**Development of a Vision-Based Mobile Robot with Artificial Neural Networks (ANN) for Classification of Tomato Ripeness**

Lintang Patria, Mokhairi Makhtar, Aceng Sambas, Rizki Multajam, Ahmad Faisal Mohamad Ayob, Shahrizan Jamaludin, W S Mada Sanjaya, and Ong Yew Chuan, *Engineering Letters*, 33:6, pages 2078-2088.

---

**Multi-Feature Engineering and Machine Learning for Equivalence Ratio Prediction in Methane Premixed Flames**

Yan Zhang, Peitao Zhao, Xuanqi Liu, Wei Xiong, Yufeng Lai, Matthew Davies, Jon R. Willmott, and Jiansheng Yang, *Engineering Letters*, 33:6, pages 2089-2099.

**Cost Optimization of Queueing Systems with Flexible Priorities and Heterogeneous Servers**

Ruiling Tian, Xiaojuan Chen, Tao Song, and Teng Wang, *Engineering Letters*, 33:6, pages 2100-2107.

**Research on Internet of Things Intrusion Detection Model Based on Graph Neural Network Fusion of Temporal Features**

Baiping Sun, Hong Dai, Jiwang Sun, and Xi Wei, *Engineering Letters*, 33:6, pages 2108-2116.

**Smart Reflector-assisted Alamouti-coded FBMCOQAM System in LTE Channel Environment**

Radhashyam Patra, and Arunanshu Mahapatro, *Engineering Letters*, 33:6, pages 2117-2127.

**Saturated RISE Control of Hydraulic Servo System with Modeling Uncertainties**

Dongjie Bai, Zhenle Dong, Pengxiang Zhang, Zhigang Zhou, and Siyuan Pan, *Engineering Letters*, 33:6, pages 2128-2133.

**Numerical Simulation Analysis of Fluent-based Jet Ladle Baker**

Yi Zhao, Lipeng Wang, Changxin Li, and Xuebo Chen, *Engineering Letters*, 33:6, pages 2134-2145.

**One-dimensional Numerical Simulations of Oil Spill in a Coastal Bay with Delayed Removal Mechanisms**

Teerat Kasamwan, and Nopparat Pochai, *Engineering Letters*, 33:6, pages 2146-2153.

**Impulsive Control of Periodic and Almost Periodic Motions on Time Scales with Applications on Cellular Neural Networks**

Meng Hu, Pingli Xie, and Lili Wang, *Engineering Letters*, 33:6, pages 2154-2161.

**Simulation Analysis of the Collision of Lithium Battery Packages under Railway Shunting Conditions**

Yuzhao ZHANG, Yulu DENG, Qianwei YIN, and Jianqiang WANG, *Engineering Letters*, 33:6, pages 2162-2172.

**Classification of Viable and Compromised Flaps with Convolutional Neural Networks: A Preliminary Study**

Dite Geovani, Siti Nurmaini, Anita Desiani, and Mufida Muzakkie, *Engineering Letters*, 33:6, pages 2173-2185.

**DIM-UNet: Enhancing Medical Image Segmentation with Dual-Input Hybrid Attention and State Space Modeling**

Yunyun Chai, and Yujun Zhang, *Engineering Letters*, 33:6, pages 2186-2194.

**Fusion Feature Enhanced Rgb-d Salient Object Detection Network**

Bin Li, Wenhua Cui, Ye Tao, and Dongxiang Gao, *Engineering Letters*, 33:6, pages 2195-2203.

**Stress Centrality of Some Classes of Graphs**

B ALAKA, and K ARATHI BHAT, *Engineering Letters*, 33:6, pages 2204-2210.

**Nonlinear Attenuation Factor Based Rat Swarm Optimization Algorithm on Off-grid Renewable Energy System**

Xun Liu, Jie-Sheng Wang, Song-Bo Zhang, Yuan-Zheng Gao, and Jia-Hui Zhao, *Engineering Letters*, 33:6, pages 2211-2227.

**Rank Minimization Method for Speckle Noise Removal in Ultrasound Images**

Hui-Yin Yan, Yu-Peng Liu, He-Xian Wang, and Hao Chen, *Engineering Letters*, 33:6, pages 2228-2242.

***Information for Authors***