

1. Record Nr.	UNINA9910878987203321
Autore	Huang De-Shuang
Titolo	Advanced Intelligent Computing Technology and Applications : 20th International Conference, ICIC 2024, Tianjin, China, August 5–8, 2024, Proceedings, Part II // edited by De-Shuang Huang, Xiankun Zhang, Yijie Pan
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9755-81-6
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (535 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 14863
Altri autori (Persone)	ZhangXiankun PanYijie
Disciplina	006.3
Soggetti	Computational intelligence Computer networks Machine learning Application software Computational Intelligence Computer Communication Networks Machine Learning Computer and Information Systems Applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents - Part II -- Machine Learning and Swarm Intelligence in Optimization and Industrial Applications -- Multi-server Cooperative Offloading Strategy for Dependent Tasks Based on Improved Genetic Algorithm -- 1 Introduction -- 2 System Model -- 2.1 Multi-user with Multi-server System Model -- 2.2 Task Scheduling Model with Dependencies -- 2.3 Problem Formulation -- 3 Task Offloading Strategy Based on Improved Genetic Algorithm -- 3.1 Coding and Population Initialization -- 3.2 Design of Chromosome Fitness Function -- 4 Evaluation -- 4.1 Experimental Settings -- 4.2 Experiment and Result Analysis -- 5 Conclusion -- References -- A 3D Liver Semantic Segmentation Method Based on U-shaped Feature Fusion Enhancement -- 1 Introduction -- 2 Methodology -- 2.1 Architecture Overview -- 2.2 Swin Transformer

Based Encoder -- 2.3 U-shaped Feature Fusion Module -- 2.4 Decoder -- 3 Experiments -- 3.1 Datasets and Implementation Details -- 3.2 Data Pre-processing -- 3.3 Evaluation Metrics -- 3.4 Ablation Experiments -- 3.5 Comparative Experiments -- 3.6 Model Robustness Validation -- 4 Conclusion -- References -- Dynamic Elite Individual Setting Based Heterogeneous Comprehensive Learning Particle Swarm Optimization -- 1 Introduction -- 2 Particle Swarm Optimization -- 3 Dynamic Elite Individual Setting Based Heterogeneous Comprehensive Learning Particle Swarm Optimization -- 4 Experimental Description -- 4.1 Test Functions and Compared Algorithms -- 4.2 Parameter Evaluation -- 4.3 Performance Evaluation -- 5 Conclusion -- References -- Fault Diagnosis Network for Rotating Machinery Based on Multiscale Feature Fusion -- 1 Introduction -- 2 Related Work -- 2.1 Time and Frequency Domain -- 2.2 Multimodal Feature Fusion -- 2.3 Attention Mechanisms -- 3 Proposed Method -- 3.1 Data Preprocessing -- 3.2 Network Architecture. 4 Experimental Study -- 4.1 Case One -- 4.2 Another Case -- 5 Conclusion -- References -- An Advanced Deep Learning-Based High-Resolution CT Images Construction Method for Cement Hydration Microstructure -- 1 Introduction -- 2 Related Work -- 2.1 Microstructure Images of Cement Hydration -- 2.2 Image Super-Resolution -- 3 Motivation -- 4 Methodology -- 4.1 Data Preparation -- 4.2 Refined Degradation Model -- 4.3 Networks and Training -- 5 Experiments -- 5.1 Method Effectiveness Verification -- 5.2 Assessment Against Alternative Approaches -- 5.3 Application on Aged 2CT Imaging Equipment -- 6 Conclusion -- References -- FD-DUNet: Frequency Domain Global Modeling Enhances Receptive Field Expansion UNet for Efficient Medical Image Segmentation -- 1 Introduction -- 2 Methodology -- 2.1 The Overall Architecture -- 2.2 Components of the Architecture -- 3 Experiments and Discussion -- 3.1 Datasets and Evaluation Metrics -- 3.2 Implementation Details -- 3.3 Comparison with State-of-The-Art Methods -- 3.4 Ablation Analysis -- 4 Conclusion -- References -- BayesTSF: Measuring Uncertainty Estimation in Industrial Time Series Forecasting from a Bayesian Perspective -- 1 Introduction -- 2 Preliminaries -- 2.1 Multivariate Time Series Forecasting -- 2.2 Deep Ensemble -- 2.3 Bayesian Framework. -- 3 Bayesian Time Series Forecasting Toolbox -- 3.1 Variational Inference -- 3.2 Monte Carlo Sampling Method -- 4 Experiments -- 4.1 Experimental Settings -- 4.2 Experimental Results -- 5 Conclusion -- References -- PESAM: Privacy-Enhanced Segment Anything Model for Medical Image Segmentation -- 1 Introduction -- 2 Related Work -- 2.1 Fine-Tuning on Medical Images -- 2.2 Federated Learning -- 3 Method -- 3.1 Preliminaries -- 3.2 Full Fine-Tuning in PESAM -- 3.3 Local Aggregation in PESAM -- 4 Experiment -- 4.1 Tasks and Datasets -- 4.2 Experimental Setup. 4.3 Experimental Result -- 4.4 Ablation Study for PESAM -- 5 Conclusion -- References -- Automatic Multi-label Classification of Interictal Epileptiform Discharges (IED) Detection Based on Scalp EEG and Transformer -- 1 Introduction -- 2 Methodology -- 2.1 Data Acquisition -- 2.2 Preprocessing -- 2.3 IED Conformer -- 2.4 Evaluation Metrics -- 3 Results and Discussion -- 3.1 Comparison with the State-Of-The-Art -- 3.2 Limitations and Future Work -- 4 Conclusion -- References -- Fast Path Planning Algorithm for 3D Indoor Scene Roaming Based on Path Table -- 1 Introduction -- 2 Mapping for 3D Indoor Scenes -- 2.1 Indoor Scene Description -- 2.2 Indoor Structural Characteristics -- 3 Indoor Path Planning Algorithm Based on the Path Table -- 4 Fast Path Planning Algorithm for Indoor Roaming Based on Path Table -- 5 Roam Path Smoothing -- 6

Experimental Results and Discussion -- 7 Conclusion -- References --  
An Optimization Method Based on Drift Data and Time Series  
Information -- 1 Introduction -- 2 Basic Concepts and Notations -- 3  
Proposed Method -- 3.1 Drift Separation and Supplement Algorithm --  
3.2 Data Weighting Algorithm Based on Time Series Information -- 3.3  
Extra Weighting Algorithm for Potential Drift Data -- 4 Experiment --  
4.1 Experiment on Synthetic Data -- 4.2 Experiment on Synthetic Data  
-- 5 Conclusions -- References -- IG-GRD: A Model Based  
on Disentangled Graph Representation Learning for Imaging Genetic  
Data Fusion -- 1 Introduction -- 2 Methods -- 2.1 Overall Framework  
-- 2.2 Datasets and Preprocessing -- 2.3 Construction of the Imaging  
Graph and Genetic Graph -- 2.4 Disentangled Graph Representation  
Learning -- 2.5 Multimodal Fusion -- 2.6 Loss Functions -- 2.7  
Feature Importance Evaluation -- 3 Experimental Results -- 3.1 Model  
Performance -- 3.2 Comparison with Other Methods -- 3.3 Feature  
Extraction of Imaging Genetic Data.  
4 Conclusion -- References -- Automatic Meibomian Gland  
Segmentation and Assessment Based on TransUnet with Data  
Augmentation -- 1 Introduction -- 2 Related Work -- 3 Methodology  
-- 3.1 Data Preparation -- 3.2 MG Segmentation -- 3.3 Data  
Augmentation -- 3.4 Evaluation -- 4 Experimental Results -- 4.1  
Traditional Algorithm Methods -- 4.2 Deep Learning Methods -- 4.3  
TransUnet with Data Augmentation -- 4.4 Automatic Assessment  
of MGD Grades -- 5 Conclusion -- References -- Graph Embedding-  
Based Deep Multi-view Clustering -- 1 Introduction -- 2 Proposed  
Method -- 2.1 The Loss Function of the G-DMC -- 2.2 Initialization  
of the Graph Affinity Matrix -- 2.3 Optimization of the G-DMC -- 3  
Experiments -- 3.1 Datasets, Methods in Comparison, and Evaluation  
Metrics -- 3.2 Implementation Details -- 3.3 Experimental Results --  
3.4 Ablation Experiment -- 4 Conclusion -- References -- Nature-  
Inspired Intelligent Computing, Optimization and Applications --  
A Multi-action Reinforcement Learning Framework via Pointer Graph  
Neural Network for Flexible Job-Shop Scheduling Problems  
with Resource Transfer -- 1 Introduction -- 2 Related Works -- 3  
Problem Description -- 3.1 Mathematical Model -- 3.2 Mathematical  
Model -- 4 Method -- 4.1 Markov Decision Process Formulation -- 4.2  
Feature Extraction Architecture: HGMM -- 4.3 Multi-action  
Collaborative Architecture: Multi-PGN -- 4.4 Multiple Actor-Critic  
Architecture: Multi-PPO -- 5 Experiments -- 5.1 Experimental  
Configurations -- 5.2 Experimental Configurations -- 5.3 Discussion  
-- 6 Conclusion -- References -- Surrogate-Assisted Evolutionary  
Neural Architecture Search with Isomorphic Training and Prediction --  
1 Introduction -- 2 Isomorphic Training and Prediction-Assisted  
Evolutionary-Based NAS -- 2.1 Encoding -- 2.2 Isomorphic Predictor  
-- 2.3 Evolutionary Framework -- 3 Experimental Results.  
3.1 Performance-Based Comparison -- 3.2 Comparison of Surrogate  
Model -- 4 Conclusion -- References -- Explainable Deep Learning  
with Human Feedback for Perioperative Complications Prediction -- 1  
Introduction -- 2 Related Work -- 3 Our Approach -- 3.1 Problem  
Definition -- 3.2 Incorporate Human Feedback into Modeling -- 3.3  
Align with Domain Knowledge Using Regularization -- 3.4 Learning  
and Prediction with Explanations -- 4 Experiments and Results -- 4.1  
Dataset Introduction -- 4.2 Metrics Description -- 4.3 Experimental  
Result -- 5 Conclusion -- References -- Large Language Model-Aided  
Evolutionary Search for Constrained Multiobjective Optimization -- 1  
Introduction -- 2 Related Work and Motivation -- 2.1 Constrained  
Multiobjective Optimization Problem -- 2.2 Large Language Models --  
2.3 Motivation -- 3 The Proposed Algorithm -- 3.1 The General

Framework of CMOEA-LLM -- 3.2 Reproduction with LLM-Aided Search -- 3.3 Prompt Engineering for the LLM -- 4 Experiments and Results -- 4.1 Experiment Settings -- 4.2 Results on the DASC MOP Test Suite -- 4.3 Results on the Real-World CMOPs -- 5 Conclusion -- References -- An Indicator-Based Firefly Algorithm for Many-Objective Optimization -- 1 Introduction -- 2 Firefly Algorithm -- 3 Proposed Approach -- 3.1 Fitness Evaluation Based on Convergence Indicator -- 3.2 Convergence Guided Search Strategy -- 3.3 Random Search Model -- 3.4 Environmental Selection -- 3.5 Framework of Proposed Approach -- 4 Experimental Study -- 4.1 Benchmark Problems and Parameter Settings -- 4.2 Computational Results -- 5 Conclusion -- References -- Knowledge Distillation with Classmate -- 1 Introduction -- 2 Related Work -- 3 Our Method -- 3.1 KDC Mechanism -- 3.2 Formulation -- 3.3 Algorithm Overview -- 4 Experiments -- 4.1 Datasets and Settings -- 4.2 Main Results -- 4.3 Combination with Curriculum Learning. 4.4 Justification on Effectiveness of KDC.

---

## Sommario/riassunto

This 13-volume set LNCS 14862-14874 constitutes - in conjunction with the 6-volume set LNAI 14875-14880 and the two-volume set LNBI 14881-14882 - the refereed proceedings of the 20th International Conference on Intelligent Computing, ICIC 2024, held in Tianjin, China, during August 5-8, 2024. The total of 863 regular papers were carefully reviewed and selected from 2189 submissions. This year, the conference concentrated mainly on the theories and methodologies as well as the emerging applications of intelligent computing. Its aim was to unify the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in advanced computational intelligence and bridges theoretical research with applications. Therefore, the theme for this conference was "Advanced Intelligent Computing Technology and Applications". Papers that focused on this theme were solicited, addressing theories, methodologies, and applications in science and technology.

---