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326

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Yu-Dong Zhang · Shui-Hua Wang · Shuai Liu (Eds.)

# Multimedia Technology and Enhanced Learning

Second EAI International Conference, ICMTEL 2020 Leicester, UK, April 10–11, 2020 Proceedings, Part I



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#### **Preface**

We are delighted to introduce the proceedings of the second European Alliance for Innovation (EAI) International Conference on Multimedia Technology and Enhanced Learning (ICMTEL). This conference has brought together researchers, developers, engineers, scientists, and practitioners from around the world. Participants shared their knowledge in leveraging and developing multimedia technology with machine learning, especially enhanced learning. The theme of ICMTEL 2020 was "Deep learning driven multimedia technology in academy, industry and society."

The proceeding of ICMTEL 2020 consists of 83 full papers, all presented in YouTube Live due to the impact of coronavirus. Aside from the high-quality academic and technical paper presentations, the technical program also featured three keynote speeches and five workshops. The three keynote speeches were presented by Prof. Lu Liu, Head of School of Informatics from University of Leicester, UK; Dr. Shui-hua Wang, Research Fellow at University of Loughborough, UK, and Prof. Shuai Liu, Head of School of Artificial Intelligence from Hunan Normal University, China. The five workshops organized were (i) International Workshop on Data fusion filter and Machine Learning for Statistical Signal Processing (DFMLSSP 2020); (ii) International Workshop on Intelligent Technology and Design for Special Education/Rehabilitation (ITD 2020); (iii) International Workshop on Weather Radar and Antenna Design (WRAD 2020); and (iv) International Workshop on Digital Image Processing, Analysis and Application Based on Machine Learning (DIPAA 2020).

Support from the steering chair Prof. Imrich Chlamtac was essential for the success of the conference. We sincerely appreciate his constant support and guidance. It was also a great pleasure to work with such an excellent Organizing Committee, and we are grateful for their hard work in organizing and supporting the conference. In particular, the Technical Program Committee (TPC), led by our TPC chair: Prof. Zhengchao Dong, and TPC co-chairs: Prof. Vishnu Varthanan Govindaraj, Prof. Raymond F. Muzic, Jr., Prof. Gautam Srivastava, Dr. Preetha Phillips, Prof. Amin Taheri-Garavand, Prof. Vikrant Bhateja, Prof. Seifedine Kadry, Prof. Yuriy S. Shmaliy, Prof. Mohammad R. Khosravi, Dr. Muhammad Attique Khan, Dr. Suresh Chandra Satapathy, Dr. Deepak Ranjan Nayak, Dr. Mohammad Momeny, Prof. Juan Manuel Górriz, Dr. Yeliz Karaca, Dr. Miguel Martínez García, and other co-chairs who contributed to the peer-review process of technical papers. We are also grateful to our conference manager, Lukas Skolek, for his support and all the authors who submitted their papers to the ICMTEL 2020 conference and workshops.

We strongly believe that the ICMTEL 2020 conference provided a beneficial forum for all researchers, developers, engineers, scientists, and practitioners to discuss

#### vi Preface

scientific and technological aspects that are relevant to multimedia technology, machine learning, and artificial intelligence. We also expect that the future ICMTEL conferences will be more successful than the contributions presented in this volume.

May 2020 Yu-Dong Zhang Shuai Liu

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# **Contents – Part I**

Multimedia Technology and Enhanced Learning	
Identification of Tea Leaf Based on Histogram Equalization, Gray-Level Co-Occurrence Matrix and Support Vector Machine Algorithm	3
Research on Durability Test for Composite Pipe Fitting Materials of Automobile	17
Method for Extracting Information of Database of Smart Phone Terminal in Lock Screen Mode	28
Quality Detection Method of Phase Change Energy Storage and Thermal Insulation Building Materials Based on Neural Network	41
Automatic Monitoring System of Vehicle Pollutant Emission Based on Fusion Algorithm	54
Research on Multi-source Heterogeneous Sensor Information Fusion  Method Under Internet of Things Technology  Feng Jin and Li-li Xu	66
Analysis of Guangdong-Hong Kong-Macao Greater Bay Area's Economic Growth Trend Based on Big Data Mining	75
Analysis on the Development Path of Urban Agglomeration in Gulf Region of Guangdong, Hong Kong, Macao Under the Background of Big Data	85
Research on Intelligent Diagnosis of Fault Data of Large and Medium-Sized Pumping Stations Under Information Evaluation System	99
On-line Monitoring Method of Power Transformer Insulation Fault Based on Bayesian Network	112

Mining and Analyzing Behavior Patterns of Smart Home Users Based on Cloud Computing	124
Research on Behavior Recognition Method Based on Machine Learning and Fisher Vector Coding	136
Data Scheduling Method of Social Network Resources Based on Multi-Agent Technology	148
A Local Occlusion Face Image Recognition Algorithm Based on the Recurrent Neural Network	159
Analysis of the Training Method for the Time-of-Time of the Movement Based on the Wireless	171
Moving Target Location Method of Video Image Based on Computer Vision	182
Design of Anti-interference Control System for Vacuum Packaging Machine Based on Wireless Network	193
Design of Sealing Transformer for Vacuum Packaging Machine Based on Single Chip Microcomputer Control	204
Image Segmentation Technology of Marathon Motion Video Based on Machine Learning	214
Research on the Adaptive Tracking Method for the Tracking of the Track of the Long-Jump Athletes	225
Application of Big Data's Association Rules in the Analysis of Sports  Competition Tactics	236
Identification and Analysis of Limb Swing Image in Short Run Training Based on Visual Signal Processing	247

## xiv Contents - Part I

Research on Scale Space Fusion Method of Medical Big Data	•
Video Image	394
Data Mining Method of Malicious Attack Based on Characteristic Frequency	403
Research on Image Recognition Algorithm Based on Depth Level Feature  Chan Zhang and Jia Luo	415
Research on Shadow Detection Method of Infrared Remote Sensing Image Based on Artificial Intelligence	426
Research on Fault Intelligent Detection Technology of Dynamic Knowledge Network Learning System	437
Design of Buoy Positioning System for Ocean Monitoring Based on Visual Feature Recognition	449
Application of Iridium Data Communication System in Information Transmission of Ocean Monitoring Buoy	461
Virtual Force Coverage Control System of Wireless Sensor Network in the Background of Big Data	472
Author Index	489

# **Contents - Part II**

Multimedia Technology and Enhanced Learning	
Heuristic Network Similarity Measurement Model Based	
on Cloud Computing	3
Study on the Preparation of the Precursor of the Li-ion Screen Based on Big Data Analysis	17
Big Data Fast Extraction Method of Lithium Ion Screen Exchange Feature in Cloud Computing	27
Research on the Algorithm of Text Data Classification Based on Artificial Intelligence	38
Security and Privacy Data Protection Methods for Online Social Networks in the Era of Big Data	53
Research on Security Enhancement Algorithm of Data Dynamic Migration in Optical Fiber Network	67
Anti-interference Algorithm of Broadband Wireless Communication Based on Embedded Single Chip Microcomputer	<b>7</b> 9
Research on Task Driven Basketball Teaching Mode Based on ITbegin Cloud Platform	92
Method of Sports Assistant Teaching Based on Multimedia Network	105
Improving Accuracy of Mobile Robot Localization by Tightly Fusing LiDAR and DR data	116

Yuan Xu, Yuriy S. Shmaliy, Tao Shen, Shuhui Bi, and Hang Guo

xvi

Design of Human-Computer Interactive Fire Extinguishing Training  System Based on Virtual Reality Technology	124
Virtual Interactive Planning Model of Landscape Architecture in Settlement Area Based on Situational Awareness	137
Time Series Data Reconstruction Method Based on Probability Statistics and Machine Learning	149
Research on Intelligent Scheduling Optimization of Non-Full-Load Logistics Vehicle Based on the Monitor Image	160
Research on Short-Term Load Forecasting Based on PCA-GM	169
Research on Preprocessing Algorithm of Two-Camera Face Recognition Attendance Image Based on Artificial Intelligence  Lin-lin Tian, Wan-li Teng, and Hai-hong Bian	178
Research on Military Intelligence Value Evaluation Method Based on Big Data Analysis	192
Design and Simulation of Power Grid Energy Saving Control Model	201
Design and Improvement of Optimal Control Model for Wireless Sensor Network Nodes	215
A Decision Model for Substation Equipment Maintenance Based on Correlation Set Decomposition	228
Research on Information Security Monitoring and Early Warning Mechanism of Internet Application Network Based on Particle Swarm Optimization	241
A Multiple Sclerosis Recognition via Hu Moment Invariant and Artificial Neural Network Trained by Particle Swarm Optimization	254

Digital Image Processing, Analysis and Application Based on Machine Learning	
Teeth Category Classification by Fractional Fourier Entropy and Improved Hybrid Genetic Algorithm	267
Hearing Loss Identification via Fractional Fourier Entropy and Direct Acyclic Graph Support Vector Machine	277
Gingivitis Classification via Wavelet Entropy and Support Vector Machine	290
Data Fusion Filter and Machine Learning for Statistical Signal Processing	
LiDAR/DR-Integrated Mobile Robot Localization Employing IMM-EKF/PF Filtering	303
Review on Flocking Control	313
Detection of High Voltage Transmission Lines: A Survey and Perspective Xiaoyuan Wang, Cheng Jin, and Weijie Huang	320
Image Processing-Based Electronic Fence: A Review	327
Tightly INS/UWB Combined Indoor AGV Positioning in LOS/NLOS Environment	337
Prediction Analysis of Soluble Solids Content in Apples Based on Wavelet Packet Analysis and BP Neural Network	345
Research on Positioning Accuracy of Indoor and Outdoor Pedestrian Seamless Navigation	355

Intelligent	<b>Technology</b>	and	<b>Design</b>	for	<b>Special</b>	<b>Education/</b>
Rehabilitat	tion					

Sign Language Video Classification Based on Image Recognition	271
of Specified Key Frames	371
Chinese Fingerspelling Recognition via Hu Moment Invariant and RBF Support Vector Machine	382
Ya Gao, Ran Wang, Chen Xue, Yalan Gao, Yifei Qiao, Chengchong Jia, and Xianwei Jiang	
Multi-touch Gesture Recognition of Braille Input Based on RBF Net Zhang Juxiao, Zeng Xiaoqin, and Zhu Zhaosong	393
Transfer Learning Methods Used in Medical Imaging and Health Informatics	
Research on Early Warning Monitoring Model of Serious Mental Disorder Based on Multi-source Heterogeneous Data Sources	403
mDixon-Based Synthetic CT Generation via Patch Learning	411
Embedded 3D Printing Based on High Elastomeric Strain Wireless Sensor Hongwei Wang, Yue Wu, Xiaogang Ren, and Zhiying Cao	422
Fruit Image Recognition Based on Census Transform and Deep Belief Network	438
Weather Radar and Antenna Design	
Wind Turbine Clutter Suppression for Weather Radar Using Improved Ridge Regression Approach	449
Wind Turbine Clutter Mitigation for Weather Radar by Extreme Learning Machine (ELM) Method	456
Author Index	463