2023 International Conference on Intelligent Supercomputing and BioPharma (ISBP 2023)

Zhuhai, China 6-8 January 2023



IEEE Catalog Number: ISBN: CFP23DK3-POD 979-8-3503-9779-6

Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP23DK3-POD
ISBN (Print-On-Demand):	979-8-3503-9779-6
ISBN (Online):	979-8-3503-9778-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400 Fax: (845) 758-2633 E-mail: curran@proceedings.com Web: www.proceedings.com



Table of Contents

Drug Resistance Testing Using Electrical Impedance Counting Method	
Jindai Huang, Dianchen Zhang	1
Application of virtual reality technology in post-traumatic stress disorder	1
Jinxiu Zhang, Xunbing Shen	6
ConvE-Bio: Knowledge Graph Embedding for Biomedical Relation Prediction	-
Xiaohan Qu, Yongming Cai	10
Box-Behnken Designs for the Optimization of the Ethanol Extraction Process for Chuilian Jianpi Granules	-
Yingying Wang, Guangjiao Zhou, Xiaowei Li	14
Improving Genome Compression Performance by Extending Reference Sequences	
Xiangdong Ma, Jianhua Chen	20
Building Semantic Segmentation of High-resolution Remote Sensing Image Buildings Based on U-net Network Model Based on Pytorch Framework	
Xiaolong Wu	24
Deep Learning-based Identification of DNA-N4 Methylcytosine Modification Sites	
Xiaolong Wu	29
A Deep Learning Method with Self-Attention Mechanism for Cross-Subject Sleep Stage Classification Based on EEG and EOG	
Jianjun Huang, Jun Qu	33
EEG Motion Classification Combining Graph Convolutional Network and Self-attentiion	
Lingyun Chen, Yi Niu	38
Artificial Intelligence Algorithms in Biomedical Application	
Yuehua Song	42
Intelligent Compound Selection of Anti-cancer Drugs Based on Multi-Objective Optimization	
Xiaoyan Liu, Zhiwei Xu, Guangwen Liu, Limin Liu	48
AI Technology for Anti-Aging: an Overview	
Aiquan Huang, Yingyu Huo, Yong Zhong, Wenyin Yang	54
10-Hz Repetitive Transcranial Magnetic Stimulation over the Frontal Eye Field Modulates Feature-Based Attention	
Ningna Li, Fuwu Yan, Lirong Yan, Yibo Wu, Biao Xiang	63
Research on the Application of Artificial Intelligence in the Development of Biomedicine and Oncology	
Huaru Wang, Yanhua Jing	68
Classification and Processing of MIT-BIH Arrhythmia-Based on BP Algorithm	
Fumin Mi, Baixuan Li, Xiaojie Cheng, Yunjie Zhao, Minyi Li, Jin Jing	72
Glucose Prediction Based on the Recurrent Neural Network Model	
Yilin Zhang	77
U-Net multi-modality glioma MRIs segmentation combined with attention	
Yixing Wang, Xiufen Ye	82

Pacellation method based on brain cortical morphological aging trajectory in normal	
cohorts	
Jing Xia	86
Hybrid Multistage Feature Selection Method and its Application in Chinese Medicine	
Ming Liu, Jianqiang Du, Zhiqin Li, Jigen Luo, Bin Nie, Mengting Zhang	90
Adaptive Noise-Reduction Algorithm for Diaphragm Electromyography Based on Linear	
Prediction	
Lingxi Chen, Yuanda Xu, Bin Li, Hongqiang Mo	99
ECG arrhythmias Classification with a Graph Bispectrum method	
Shiyilin Yang, Jie Shao, Xin Yang, Xin Chen, Xingxing Wang	104
Fused Residual Attention Dense Double-U Network Retinal Vessel Segmentation	
Algorithm	
Chunhui Zhu, Xiaowei Niu, Lu Zuo, Ziwei Liu	109
High-efficiency drug design research based on virtual high-throughput screening	
Haonan Zhou	116
Depth-First Uncertain Frequent Itemsets Mining based on Ensembled Conditional Item-	110
Wise Supports	
Wanyong Tian, Fuqiang Li, Yibo Liu, Zichen Wang, Tao Zhang	121
Semi-supervised Medical Image Segmentation with Low-Confidence Consistency and Class	
Separation	
Zhimin Gao, Tianyou Yu	129
Author Index	135