Table of Contents

Proceedings of 2019 3rd International Conference on Medical and Health Informatics (ICMHI 2019)		
PrefaceVI		
Conference CommitteesVII		
• Session 1-Disease Diagnosis and Medical Imaging		
Formation of Thrombosis and Its Potential Diagnosis and Treatment with Optoacoustic Technology Muqun Yang, Tian Tan	1	
An Effective ROI Extracting Method for Color Brain Slice in Assisting the Diagnostic Analysis of Epilepsy Bin Liu, Mingzhe Wang, Song Zhang, Li Gao, Liang Yang	6	
Application of Real-time Elastic Ultrasound Technology in the Diagnosis of Breast Cancer Yang Bai, Guang-hong Han, Xia-dong Du	12	
Histogram Analysis of Photoacoustic Effect Changes on Different Liquid Samples Tsu Wang Shen, Ting Ku Ou, Chi-Chang Chang	17	
Aberrant Functional Connectivity Dynamics of Superior Temporal Sulcus and Its Associations with GABA Genes Expression in Autism	21	
Xiaonan Guo, Changchun He, Xujun Duan, Shaoqiang Han, Jinming Xiao, Huafu Chen Visualization Analysis of Cardiovascular Risk Factors Based on Knowledge Mapping Ling Yan, Zuojian Zhou, Yun Hu, Yihua Song, Weihong Zhou	26	
A Stroke Detection System Based on Cincinnati Prehospital Stroke Scale Ting-Ying Chien, Chong-Yi Chen, Guo-Lun Jin	32	
• Session 2- Artificial Intelligence and Medical Care		
Automatic Prediction of Depression in Older Age Hui Yang, Peter A. Bath	36	
Plantar Fasciitis Detection Based on Deep Learning Architecture Ting-Ying Chien, Yi-Ting Hsieh, Hou-Cheng Lee, Yun-Jui Hsieh	45	
Mixed Reality Patients Monitoring Application for Critical Care Nurses Chia-Chi Teng, Brady Redfearn, Craig Nuttall, Sabrina Jarvis, James Carr, Jarin Jensen, Sandy Kanuch, Jordon Peterson, David Taylor	49	
• Session 3- Medical Modeling and Analysis		
A Study of the Multi-Agent Benefit Distribution Model in the Transformation of Medical Science and Technology Achievements	54	

Ha Yang XU, Qiang FU, Yulan WU, Ming GAO, Xue JIANG	
Medical Modeling and Numerical Analysis of Thoracoabdominal Aortic Aneurysm	60
ZHANG Hongna, ZHANG Nandong, Song Yujie, PENG Hongmei	
Major Depressive Disorder Shows Frequency-specific Abnormal Functional Connectivity Patterns Associated with Anhedonia	65
Yajing Pang, Qian Cui, Yifeng Wang, Yuyan Chen, Qi Yang, Huafu Chen	
Session 4- Big Data and Medical Care	
The Development of an Aggregated Electronic Health Record in Compliance with Consolidated Clinical Document Architecture	71
Yujuan Shang, Huiqun Wu, Kui Jiang	
Using cTAKES to Build a Simple Speech Transcriber Plugin for an EMR	78
Stephen John Matthew C. Wenceslao, Maria Regina Justina E. Estuar	
Current Situation and Experience of EHR in Primary Medical Institutions Feng Tianyang	87
Evaluation of Upper Limb Joint's Range of Motion Data by Kinect Sensor for Rehabilitation Exercise Game	92
Peng Nan, Amnad Tongtib, Theeraphong Wongratanaphisan	,_
The Psychophysiological Effects of Cross-Cultural Transaction in Foreign Students in Russia: a Pilot Study	99
Iuliia Muzychenko, Irina Apollonova, David Evans, Li Zhang	
• Session 5- Medicinal Botany and Biomedicine	
Meta-analysis of Yam's Effects on Liver Injury Protection and Blood Lipid-lowering	106
Liu Rui, Chen Ziwen, Liu Chang	
Advances in the Prevention of Cardiovascular Diseases by Phytosterol Ningzhu Bai	110
Construction and Functional Analysis of Luciferase Reporter Plasmid Containing CAAP1 Gene Promoter	115
Hui-min Zhang, Jun Wang, Xing-hua Liao	
DGFE-VG: Dynamic Gene Feature Extraction via Visibility Graph	119
Jin-yin CHEN, Zhen WANG, Hai-bin ZHENG, Liang-ying Liu, Zi-ling Zhu, Shi-yan Ying, Yi-tao Wei	
• Session 6- Public Health Informatics	
The Emotional Situation of Netizens in Public Health Emergencies Based on Microblog and Its Comparative Analysis	125
Lian Yingjie, Zhang Yunqiu, Liu Mengyao, Zhao Chongyang, Jiang Xiaoming, Ren Shiyuan	
Cardiovascular Incidence, Mortality and Web-Based Data in China	130
Chenije Xu. Shu Li. Xinxi Cao, Yabing Hou, Yaogang Wang	

Mining User-Generated Content to Identify Social Support in Chinese Online Smoking Cessation Community	135
Yuxing Qian, Bingjia Li, Zhizhen Yao, Huakui Lv, Mengnan Che, Zhuo Cheng	
Influence of Online and Face-to-face Collaboration and Learning Style on Cognitive Load and Engagement in a Health Introductory Course	142
Cheng-Hsuan Lan, Meng-Huei Sheng, Yu-Chiung Hsu, Ya-Ming Shiue	
Physical Fitness and Happiness Research in Taiwanese Adults	149
Ming-Chih Chen, Tian-Shyug Lee, Chi-Jie Lu, Chien-Chang Ho, Ming Gu	
• Session 7- Mobile Medical and Information Security	
Evaluating mHealth Interventions in an Underserved Context Using Service Design Strategy: A Case of Kenya	153
Danny Ronald Nyatuka, Retha de la Harpe	
Skin Lesion Boundary Detection with Neural Networks on iOS Devices	161
Bianca Schnalzer, Baptiste Alcalde	
Computation-Efficient Three-Party Encrypted Key Exchange for Telecare Medicine Information Systems	167
Chwei-Shyong Tsai, Qi-Xian Huang, Tsung-Hung Lin, Tian-Fu Lee	
An Efficient Date-constraint Hierarchical Key Management Scheme with Fast Key Validation Checking for Mobile Agents in E-Medicine System	172
Tian-Fu Lee, Chuan-Ming Liu	
Medical Information Digital Right Management on the Information-Centric Networking	178
Yu-Jie (Jessica) Kuo, Jiann-Cherng Shieh	
Session 8- Medical Data Analysis	
Association Analysis Among Treatment Modalities and Comorbidity for Prostate Cancer	182
Yi-Ting Lin, Mingchih Chen, Yen-Chun Huang	
Extracting PICO Elements From RCT Abstracts Using 1-2gram Analysis And Multitask Classification	194
Xia Yuan, Liao Xiaoli, Li Shilei, Shi Qinwen, Li Ke	
Author Index	200