

中国医学物理学杂志

CHINESE JOURNAL OF MEDICAL PHYSICS

月刊 1984年创刊 2024年1月25日第41卷第1期(总第246期)



主 管

南方医科大学

主 办

南方医科大学
中国医学物理学会

编 辑

《中国医学物理学杂志》编委会

主 编

胡逸民

编辑部主任

黄开颜

出 版

《中国医学物理学杂志》编辑部

通讯地址

广州市同和南方医科大学
生物医学工程学院
电话:020-61648280
传真:020-61360581
邮编:510515
网址:www.cjomp.com
E-mail:YXWL@263.net.cn
微信号:cjomp001

印 刷

佛山市金华彩印刷有限公司

国内订阅

全国各地邮政局
邮发代号: 46-259

国外订阅

中国出版对外贸易总公司
(北京782信箱)

国外发行代号

DK44009

邮 购

《中国医学物理学杂志》编辑部

定 价

每册15.00元;全年180.00元

中国标准连续出版物号

ISSN 1005-202X
CN 44-1351/R

目 次

医学影像物理

基于视频的动作智能识别在医学中的应用

..... 黄新瑞,黄河颂,黄渝川,陈美凝,范馨月,伊鸣(1)

多模态弱监督学习在肝癌图像生成与分割中的应用

..... 潘依乐,高永彬(8)

CT影像组学联合形态学特征模型评估非小细胞肺癌患者预后生存期的价值

..... 周洁,郑燕婷,江舒琪,安杰,邱士军,SUWAL Sushant,
黄绥丹,陈淮,李翠,方嘉琪(18)

3D MERGE与3D SPACE STIR序列在腰椎间盘突出症检查中的应用比较

..... 李兰,殷小丹,李旭雪,吴海燕,张滔(27)

融合改进Transformer和卷积通道注意力模块的U-Net用于双心室分割

..... 陈沐萱,袁金丽,郭志涛,卢成钢(32)

LRAE-Unet:轻量级MRI脑肿瘤全自动分割网络

..... 林嘉豪,王瑜,肖洪兵,孙梅(43)

SWI结合ASL对急性期缺血性脑卒中血流动力学评估及诊断价值

..... 丁昭军,刘文罡,黄俊昊,曹瑞,黎枝鑫(50)

医学放射物理

基于标定和计算的电子射野影像系统剂量重建

..... 睦建锋,孙佳伟,谢凯,高留刚,林涛,倪昕晔(54)

医学信号处理与医学仪器

耳机式物联网血氧监护系统的设计..... 薛俊伟,吴凯,周静(60)

基于Bi-UNet的无创动脉血压波形重建算法

..... 潘嘉婷,梁丽诗,陈真诚(66)

基于中枢模式发生器的机器人足端轨迹规划

..... 张峰,曹乐,徐浩洋,张思河(72)

基于毫米波雷达的心房颤动检测

..... 周恒骥,杨亦含,胡元会,褚瑜光,寿鑫甜,
尤雅萍,薛文静,范少玮,王勇,沈会良(81)

医学生物物理

电磁场暴露中实验动物的热剂量学研究林加金,李静,丁桂荣(88)

Ca²⁺在电磁场调控成骨细胞增殖与分化中的作用张广伟,梁卓文,杨治(95)

大鼠磁感应热疗的线圈设计与仿真分析郭思玮,逯迈(101)

生物力学与材料

下肢静脉泵压力传递功能的双向流固耦合分析瞿梓俊,李静(109)

医学生物信息

基于机器学习的胃癌关键基因筛选及预测模型构建.....王泽朋,李坤鹏,周玉,李四海(115)

医学人工智能

基于BioBERT与BiLSTM的临床试验纳排标准命名实体识别李盛青,苏前敏,黄继汉(125)

责任编辑:薛泽玲
责任校对:黄开颜 陈丽霞 谭斯允
英语校对:谭斯允
编 务:廖艳玲

期刊基本参数:CN44-1351/R * 1984 * M * A4 * 136 * zh * P * ¥ 15.0 * 800 * 18 * 2024-01

Responsible Institution

Southern Medical University

Sponsored bySouthern Medical University
Chinese Society of Medical Physics**Edited by**Editorial Board of Chinese
Journal of Medical Physics**Editor-in-Chief**

HU Yimin

Editorial Director

HUANG Kaiyan

Published byEditorial Department of Chinese
Journal of Medical Physics**Address**School of Biomedical Engineering,
Southern Medical University,
Tonghe, Guangzhou
Postal code: 510515
Tel: 86-20-61648280
Fax: 020-61360581
Http://www.cjomp.com
E-mail: YXWL@263.net.cn
Wechat: cjomp001**Printed by**Printed by Foshan Jinhuacai
Printing Co., Ltd**Domestic Subscription**Post offices all over China
Post office subscription code:
46-259**Overseas Subscription**China National Publishing
Industry Trading Corporation
(P.O.Box. 782, Beijing, China)**Mail Order**Editorial Department of Chinese
Journal of Medical Physics**China Standard Serial Numbering**ISSN 1005-202X
CN 44-1351/R**CONTENTS****Medical imaging physics**Medical application of video-based intelligent action recognition(1)
HUANG Xinrui, HUANG Hesong, HUANG Yuchuan, CHEN Meining, FAN Xinyue,
YI MingApplication of multimodal weakly-supervised learning in image synthesis and segmentation of liver
cancer(8)
PAN Yile, GAO YongbinValue of CT radiomics combined with morphological features in predicting the prognosis of patients
with non-small cell lung cancer(18)
ZHOU Jie, ZHENG Yanting, JIANG Shuqi, AN Jie, QIU Shijun, SUWAL Sushant,
HUANG Suidan, CHEN Huai, LI Cui, FANG JiaqiApplication of 3D MERGE sequence *versus* 3D SPACE STIR sequence in the examination of
lumbar disc herniation(27)
LI Lan, YIN Xiaodan, LI Xuxue, WU Haiyan, ZHANG TaoBiventricular segmentation using U-Net incorporating improved Transformer and convolutional
channel attention module(32)
CHEN Muxuan, YUAN Jinli, GUO Zhitao, LU ChenggangLRAE-Unet: a lightweight network for fully automatic segmentation of brain tumor from MRI
.....(43)
LIN Jiahao, WANG Yu, XIAO Hongbing, SUN MeiHemodynamic evaluation and diagnostic value of SWI combined with ASL in acute ischemic stroke
.....(50)
DING Zhaojun, LIU Wengang, HUANG Junhao, CAO Rui, LI Zhixin**Medical radiation physics**Dose reconstruction of electronic portal imaging device based on calibration and calculation
.....(54)
SUI Jianfeng, SUN Jiawei, XIE Kai, GAO Liugang, LIN Tao, NI Xinye**Medical signal processing and medical devices**Design of in-ear blood oxygen saturation monitoring system based on internet of things(60)
XUE Junwei, WU Kai, ZHOU JingNon-invasive arterial blood pressure waveform reconstruction algorithm based on Bi-UNet
.....(66)
PAN Jiating, LIANG Lishi, CHEN ZhenchengRobot foot trajectory planning based on central pattern generator(72)
ZHANG Feng, CAO Le, XU Haoyang, ZHANG SiheAtrial fibrillation detection using millimeter-wave radar(81)
ZHOU Hengji, YANG Yihan, HU Yuanhui, CHU Yuguang, SHOU Xintian, YOU Yaping,
XUE Wenjing, FAN Shaowei, WANG Yong, SHEN Huiliang

Medical biophysics

- Thermal dose of experimental animals exposed in electromagnetic field(88)
LIN Jiajin, LI Jing, DING Guirong
- Role of Ca^{2+} in electromagnetic field regulation on osteoblast proliferation and differentiation(95)
ZHANG Guangwei, LIANG Zhuowen, YANG Zhi
- Coil design and simulation analysis of magnetic induction hyperthermia in rats(101)
GUO Siwei, LU Mai

Biomechanics and materials

- Bidirectional fluid-structure interaction analysis on pressure transmission of the venaflow(109)
QU Zijun, LI Jing

Biomedical informatics

- Key gene screening and prediction model construction of gastric cancer based on machine learning(115)
WANG Zepeng, LI Kunpeng, ZHOU Yu, LI Sihai

Medical artificial intelligence

- Named entity recognition of eligibility criteria for clinical trials based on BioBERT and BiLSTM(125)
LI Shengqing, SU Qianmin, HUANG Jihan

Executive Editor: XUE Zeling

Executive Proofreaders: HUANG Kaiyan CHEN Lixia TAN Siyun

English Editor: TAN Siyun

Editorial Assistant: LIAO Yanling