

SCIENTIA SINICA Informationis

中国科学 信息科学

第51卷 第6期 2021年6月

■ www.scichina.com ■ infocn.scichina.com



Q K 2 1 2 4 6 3 8

中国科学院 主办
国家自然科学基金委员会



目 次

评述

- 非易失主存的系统软件研究进展 869
舒继武, 陈游旻, 胡庆达, 陆游游

论文

- 联邦学习下对抗训练样本表示的研究 900
冯霖, 蔡其志, 姜远
- EL-Picker: 基于集成学习的余震 P 波初动实时拾取方法 912
申大忠, 张琦, 徐童, 祝恒书, 赵雯佳, 殷子凯, 周培伦, 房立华, 陈恩红, 熊辉
- 基于多数据融合的 circRNA—疾病关联关系预测 927
雷秀娟, 张文祥, 刘恋
- 基于互样本熵网络的脊髓电刺激下微意识状态患者脑功能评估 940
梁振虎, 任娜, 王勇, 李佳妮, 白洋, 李小龙, 何江弘
- 基于自注意力机制生成对抗网络的超分辨率磁共振图像重建 959
蒋明峰, 支明豪, 李杨, 李铁强, 张鞠成
- 基于 TOA 和 TDOA 的增广状态脉冲星组合导航误差抑制方法 971
宁晓琳, 桂明臻, 黄月清, 房建成, 吴伟仁
- 基于高维多目标优化的多无人机协同航迹规划 985
蔡星娟, 胡钊鸣, 张志霞, 王茜, 崔志华, 张文生
- 基于改进 LSTM 的高速列车牵引系统微小渐变故障诊断 997
冒泽慧, 顾或行, 姜斌, 许德智, 孙秀文, 刘文静
- CCA 安全的抗泄露 IBE 机制的新型构造 1013
周彦伟, 杨波, 夏喆, 张明武
- In-cell 触控屏用两级预充电栅极驱动电路 1030
沈帅, 廖聪维, 杨激文, 张盛东
- 刊讯
- 近存/存内计算专题简介 1041
黄如, Yiran CHEN, 蔡一茂

Main Contents

REVIEW

Development of system software on non-volatile main memory	869
--	-----

Jiwu SHU, Youmin CHEN, Qingda HU & Youyou LU

RESEARCH PAPER

Towards training time attacks for federated machine learning systems	900
--	-----

Ji FENG, Qi-Zhi CAI & Yuan JIANG

EL-Picker: a machine learning-enhanced robust P-phase picker for real-time seismic monitoring	912
---	-----

Dazhong SHEN, Qi ZHANG, Tong XU, Hengshu ZHU, Wenjia ZHAO, Zikai YIN, Peilun ZHOU,
Lihua FANG, Enhong CHEN & Hui XIONG

Prediction of circRNA-disease associations based on multiple biological data	927
--	-----

Xiujuan LEI, Wenxiang ZHANG & Lian LIU

Brain function evaluation in the minimally conscious state using cross-sample entropy based on brain network measure under the spinal cord stimulation	940
---	-----

Zhenhu LIANG, Na REN, Yong WANG, Jiani LI, Yang BAI, Xiaoli LI & Jianghong HE

Super-resolution reconstruction of MR image with self-attention based generate adversarial network algorithm	959
---	-----

Mingfeng JIANG, Minghao ZHI, Yang LI, Tieqiang LI & Jucheng ZHANG

TOA and TDOA-based augmented state pulsar integrated navigation error suppression method	971
--	-----

Xiaolin NING, Mingzhen GUI, Yueqing HUANG, Jiancheng FANG & Weiren WU

Multi-UAV coordinated path planning based on many-objective optimization	985
--	-----

Xingjuan CAI, Zhaoming HU, Zhixia ZHANG, Qian WANG, Zhihua CUI & Wensheng ZHANG

Incipient fault diagnosis for high-speed train traction systems via improved LSTM	997
---	-----

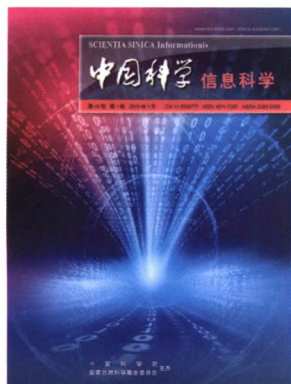
Zehui MAO, Yuxing GU, Bin JIANG, Dezhi XU, Xiuwen SUN & Wenjing LIU

A new construction of leakage-resilient CCA secure IBE scheme	1013
---	------

Yanwei ZHOU, Bo YANG, Zhe XIA & Mingwu ZHANG

A gate driver circuit with the two-stage pre-charge structure for in-cell touch panels	1030
--	------

Shuai SHEN, Congwei LIAO, Jiwen YANG & Shengdong ZHANG



CN: 11-5846/TP

- 主管单位: 中国科学院
- 主办单位: 中国科学院, 国家自然科学基金委员会
- 收录语种: 中文
- 主编: 梅宏

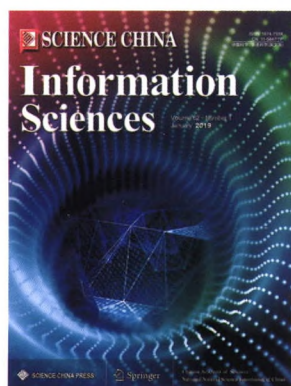
中国科学: 信息科学 (月刊)

SCIENTIA SINICA Informationis

简介: 力求刊载信息科学领域最高学术水平的中文文章, 及时报道计算机科学与技术、控制科学与控制工程、通信与信息系统、微电子与固体电子学等领域基础与应用研究方面的原创性成果. 推动信息科学技术发展, 搭建理论与技术应用的桥梁, 促进与各学科、各行业的交叉融合. 月刊, 每月20日出版. 中、英文版是相对独立的两个刊物.

栏目: 评述、论文、观点与争鸣、快报、学术介绍等

检索: 被《中文核心期刊要目总览》、《中国科学引文数据库》、《中国期刊全文数据库》、《中国科技论文与引文数据库》、《中国数字化期刊群》、SCOPUS等收录.



CN: 11-5847/TP

- Supervised by: CAS
- Sponsored by: CAS, NSFC
- Language: English
- Editor-in-Chief: MEI Hong

SCIENCE CHINA Information Sciences (Monthly)

SCIENCE CHINA Information Sciences (Sci China Inf Sci), cosponsored by the Chinese Academy of Sciences and the National Natural Science Foundation of China, and published by Science China Press, is committed to publishing high-quality, original results of both basic and applied research in all areas of information sciences, including computer science and technology; control science and engineering; information and communication engineering; microelectronics and solid state electronics, etc. Sci China Inf Sci is published monthly in both print and electronic forms.

Papers published in Sci China Inf Sci include: Review, Research Paper, Perspective, MOOP, Letter, etc.

It is indexed by Science Citation Index Expanded (SCIE), Engineering Index (EI), Journal Citation Reports/Science Edition (JCR), Academic OneFile, Astrophysics Data System (ADS), CSA, Cabells, Current Contents/Engineering, Computing and Technology, DBLP, Digital Mathematics Registry, Earthquake Engineering Abstracts, Engineered Materials Abstracts, Gale, Google, INSPEC, Mathematical Reviews, OCLC, ProQuest, SCOPUS, Summon by Serial Solutions, VINITI.



《中国科学: 信息科学》编辑部
地址: 北京东黄城根北街16号 (100717)
电话: 010-64015683 传真: 010-64016350
E-mail: informatics@scichina.org

万方数据



《中国科学》杂志社
SCIENCE CHINA PRESS

ISSN 1674-7267



9 771674 726213

06