



中文核心期刊
中国计算机用户协会会刊

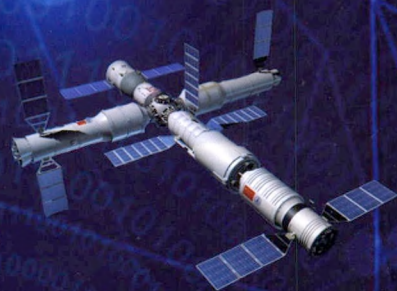
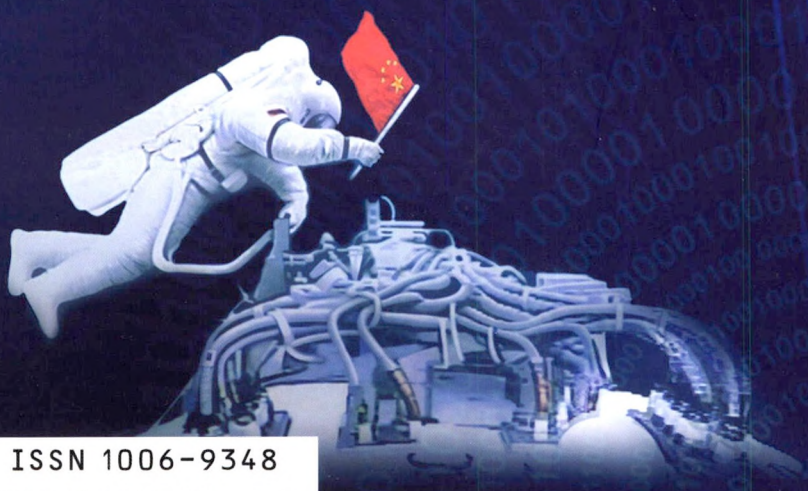


QK1900811

ISSN 1006-9348

计算机仿真

Computer Simulation



ISSN 1006-9348



9 771006 934033

万方数据

1
2019

目次

新年献词 吴连伟

综 述

区块链+虚拟技术:仿真技术的新动向 孙柏林(1)

军事领域仿真

大口径火炮自动装填机构设计研究 袁志华,廖 岩,贾翼哲,徐嘉拓(7)

火炮内弹道出口速度优化控制仿真研究 张亮亮,李海元(14)

潜艇水下发射装置减能降噪优化仿真研究 周 杰,秦 楠,尹岳昆(19)

航空航天领域仿真

面向航站楼环境二氧化碳浓度控制研究 陈静杰,顾泽龙,陆道溢(23)

基于大视场星敏感器惯性/星光组合导航与仿真 崔 航,邵会兵,张 康(29)

基于动态面内模法的四旋翼输出调节器设计 杜 梅,高 强,吉月辉(34)

四旋翼PID-ADRC控制器研究 胡文华,张海星,杨 阳(39)

机动区航空器速度异常检测研究 李 楠,刘 朋,靳辉辉(45)

电动飞机电推进系统可靠性建模与仿真 李玉峰,宁昭义(51)

航空弹药贮存环境温湿度远程智能监测仿真 李重阳,徐劲松(57)

关于直升机纵向姿态跟踪稳定性控制与仿真 马 钊,何 睿(61)

井式火箭发射场井口岩石颗粒运动规律研究 沈晖航,谢 建,李 良,权 辉(65)

四旋翼无人机姿态非线性控制研究 唐 堂,罗晓曙(71)

航空发动机气动热力系统模型求解方法研究 伍 谦,李秋红,单睿斌(76)

航天运载火箭伺服机构减速器动态特性仿真 杨槐峰,石万凯,邹梦杰,徐 浪(82)

基于反馈线性化的四旋翼无人机姿态控制研究 张文清,徐雪松,刘 瑞(87)

再入弹头外形防热优化设计仿真 周书培,王良明(92)

关于导弹战场突防目标航迹规划仿真 邹志龙,张 亮(97)

航空开关磁阻起动发电一体化系统控制器研究 范冰洁,李玉忍,刘勇智(102)

一种电动舵机直流电流需求分析方法 孙国伟,赵国清(108)

能源领域仿真

关于循环流化床锅炉燃烧温度系统的建模控制 胡林静,仝傲宇,刘鸿宾,林威钊(112)

光伏发电系统并网供电最大功率点跟踪控制 李欣月,许 军(117)

风光发电微网负载分段选择供电优化管理 王辉君,郑海涛,贾云辉,何科峰(122)

基于风光互补的孤岛型微网容量优化配置研究 吴国庆,霍 伟,茅靖峰,宋晨光(127)

边防哨所风光发电微电网存储建模仿真 武筱彬,程志江,柴万腾,王 萍(134)

基于灰色多变量模型锂离子电池荷电状态预测 于仲安,赵凯贤(138)

关于配电网供电负荷实时估计仿真 张如鹏,齐先军(141)

液压型风力发电机组最佳功率自动控制仿真 晁晓洁,李静毅,张涛然(146)

交通体系与工具仿真

铁路交流供电货运列车节能优化控制研究 刘强强,肖 壮,朱宇清,王青元(150)

生物柴油发动机燃烧排放性能优化仿真研究 束海波,韩东鑫,王 蓉(157)

上海迪士尼环形交叉口信号优化控制仿真 汪 珂,何红弟,王维莉(161)

基于动态数据驱动的交通在线决策 王 松,黄柯棣,杨 妹(167)

汽车盘式制动器制动噪声优化抑制仿真 王文竹,李 杰,刘 刚,程勉宏(171)

双轴驱动纯电动汽车制动能量回收策略研究 熊会元,刘中文,何 山(176)

盘式制动器温度场瞬态分析方法研究 张婷婷,王国权,王书文,陈 勇(181)

纯电动赛车动力系统匹配优化与仿真 赵晟超,朱利静,陈 浩,李蔚冉(187)

关于公路隧道内目标图像实时检测仿真 周立学,马成前(192)

信息仿真

关于多路传感器传输图像自动配准仿真 程 钢,李玮琳,李 丽(197)

城市生态修复景观布局特征智能提取方法仿真 刘斯荣,孙海耀(201)

大数据量红外图像非均匀性校正仿真研究 龙 虎,张泓筠(205)

基于位分解和超混沌映射的医学图像加密研究 王 倩(209)

天线罩系统结构一体化优化算法 王 威,王 丽(213)

数字多媒体网络通信延迟快速消除方法仿真 闫培靖(218)

移动云计算环境下动态数据隐私密码机制仿真 殷小虹,胡 丹,胡全连(222)

多媒体网络负面信息数据检测仿真研究 岳少博,谢利德,王清河,王晓春(226)

制造业仿真

涂塑复合管道内壁气动喷砂流速度控制仿真 黄文强,熊瑞平,罗 勇(230)

社会科学领域仿真

三元论下城镇土地利用空间优化模型仿真 丁志军(235)

仿真应用研究

隐私保护数据库中自适应重复数据删除仿真 高继梅(239)

喷雾干燥比能耗模型仿真与参数分析 金 熹,杨海东,李洪丞,朱成就(243)

化工系统蒸馏塔板气液并流流场优化设计 刘 琛,王晋刚,唐 猛,张少峰(250)

多阵列摄像图像颜色自动补偿方法仿真 卢 曦,潘 良(255)

单幅医疗图像增强最佳尺度选取精度控制仿真 罗梦迪(259)

内燃机径向滑动轴承润滑特性及影响因素研究 聂 涛,刘振明,刘 楠,安士杰(263)

基于混合模型的维吾尔文词性标注方法 帕丽旦·木合塔尔,吾守尔·斯拉木,买买提阿依甫(268)

基于面源法防沙堤流场结构优化设计仿真 张朋杨,吴永忠,刘华威(274)

建模与验模

基于多系统理论的晶圆测试平台误差建模 王英剑,苏 中,刘 洪(279)

仿真方法与算法

多新息理论改进优化粒子滤波研究 白晓波,邵景峰,和 征,田建刚(284)

CEL算法在土壤大变形仿真中的应用 何 健,马吉胜,吴大林,赵建新(291)

基于改进信息增益的ACO-WNB分类算法研究 邱宁佳,高 鹏,王 鹏,陶 跃(295)

仿真网络化

跨网络用户动态双向身份准确认证仿真 丁士杰,谢 军(300)

有向切换网络有害信息智能过滤方法仿真 李丽蓉(304)

软件定义网络用户动态访问控制模型仿真 刘治纲,肖庆汇,丁雪非,罗尉平(308)

无线自组织网络信息流并行传输安全验证仿真 沈学利,赵 胤(312)

网络恶意入侵下破损数据及时存储方法仿真 王信堂,梁志锋(316)

仿真智能化

金属工件感应加热工艺参数优化设计研究 陈富豪,葛运旺,芦逸云(320)

无人水面艇目标路径跟踪优化控制研究 丛晓奕,王建华,李振义(325)

关于移动机器人运动路径规划仿真研究 杜 永,郑万群,刘增环(331)

改进型Colpitts宽带混沌电路设计 麻晓朋,张朝霞,杨珍珍,王娟芬(336)

基于栅格图拼接的多层次路口地图 屈盼让,薛建儒,於二军,孙少华(342)

磨矿工艺过程优化控制仿真研究 周 颖,岳 彬,贾巧娟,李兆娟(348)

仿真服务化

关于分布式数据库准确分类仿真研究 曹曼曼,汪 勉(354)

湿地景观区三维模型构建方法仿真研究 邓诗元,张明帆(358)

公路沿线高边坡稳定性评估方法仿真研究 冯佳佳,杨成业(362)

钢铁企业物流库存的车辆调度优化 雷兆明,赵 凡,廖文喆,王鹏程(366)

多用户数据库中访问信息跟踪准确识别仿真 李芳菊(373)

厌氧塘污水处理系统液压故障在线检测仿真 李 响,崔皓蒙(377)

基于改进LBP的手指静脉识别算法 刘 超,王容川,许晓伟,于海武(381)

基于RSSI定位的WSN虫洞攻击节点检测与仿真 潘琢金,赵明月,罗 振,杨 华(387)

微小尺寸精度图像角点特征在线搜索仿真研究 桑 园(392)

融合深度信息和稀疏自编码的手势识别算法 沈先耿(397)

关于机械滚动轴承故障信号诊断仿真 司加胜,唐 昊,李晓庆,承敏钢(403)

平移校正下印刷图像缺陷检测优化仿真 田 亮,张 任(409)

多空间数据库内存数据位置实时匹配仿真 王 健(413)

物联网下分布式在线学习资源个性化调度仿真 王文东,武海妮,侯 勉(417)

中央空调冷却塔排水量自动调节优化控制仿真 王雪梅(421)

物联网多层设备信息通信数据分类识别仿真 魏葆春,甘发旺(425)

关于卫星气象云图准确检测的仿真研究 翁理国,张 旭,夏 旻,施必成(429)

矿井中电力系统变压器故障诊断仿真 徐 辉,袁庆宽(437)

桥梁建筑质量运营监测数据处理仿真研究 颜 飞,张 兴,李万杰,李 帅(441)

关系型数据库信息资源检索结果分类方法仿真 姚丽华,于广州(445)

稳态网络海量可公开数据完整性高效检测仿真 吴治刚(449)

冶炼高炉烧结矿化学原料配比准确预测仿真 袁致强,王 斌,张良力,王 玲(453)

MVI分块标识颜色特征快速检索仿真 臧苏莹(458)

基于形态学和小波变换的瓷砖缺陷边缘检测 张 军,张海云,赵玉刚,司马中文(462)

混沌背景下无线网络微弱信号自动检测仿真 张志刚,张志勇(466)

关于移动网络数据流断点区优化检测仿真研究 吴振涛,闵 俊(470)

钝性胸部损伤病灶形态准确分类仿真研究 赵一凡,卞 良(475)

城市公共服务设施空间布局最优规划方法仿真 周振宏,章 敏(480)

CONTENTS

Block Chain + Virtual Technology: New Trend of Simulation Technology	SUN Bo-lin (1)
Design of Automatic Loading Mechanism for Large and Medium Caliber Guns	YUAN Zhi-hua, LIAO Yan, et, al (7)
Simulation Research on Outlet Velocity Optimal Control of Gun Interior Ballistic	ZHANG Liang-liang, LI Hai-yuan (14)
Simulation Research on Optimization of Submarine Underwater Launcher Reducing Noise by Decreasing Power	ZHOU Jie, QIN Nan, et, al (19)
A Study on CO ₂ Density Control Approach of Terminal	CHEN Jing-jie, GU Ze-long, et, al (23)
INS /CNS Integrated Navigation System Based on Wide FOV Star Sensors and Simulation	CUI Hang, SHAO Hui-bing, et, al (29)
The Output Regulation Control of Quadrotor UAV based on Dynamic Surface Control and Internal Model	DU Mei, GAO Qiang, et, al (34)
Research on Quadrotor PID-ADRC Controller	HU Wen-hua, ZHANG Hai-xing, et, al (39)
Research on the Aircraft Abnormal Speed Detection of the Maneuvering Area	LI Nan, LIU Peng, et, al (45)
Reliability Modeling and Simulation of Electric Aircraft Electric Propulsion System	LI Yu-feng, NING Zhao-yi (51)
Airmunition Storage Environment Temperature and Humidity Remote Intelligent Monitoring Simulation	LI Chong-yang, XU Jin-song (57)
Helicopter Longitudinal Attitude Following Stability Control and Simulation	MA Zhao, HE Rui (61)
The Characteristic of Rock Particle Movement on Launching Site During Rocket Launching	SHEN Hui-hang, XIE Jian, et, al (65)
The Research on Nonlinear Control of Quadrotor UAV Attitude	TANG Tang, LUO Xiao-shu (71)
Research on Method for Solving Aero-Engine Thermodynamic System Model	WU Qian, LI Qiu-hong, et, al (76)
Dynamic Characteristics Simulation for Reducer of Servo Mechanism of Space Launch Vehicle	YANG Huai-feng, SHI Wan-kai, et, al (82)
Research On Attitude Control System of Quadrotor UAV Based On Feedback Linearization	ZHANG Wen-qing, XU Xue-song, et, al (87)
Simulation of Heat-Resistant Optimization Design for Re-Entry Warhead Shape	ZHOU Shu-pe, WANG Liang-ming (92)
Simulation of Target Track Planning for Missile Battlefield	ZOU Zhi-long, ZHANG Liang (97)
The study on the Controller of Aviation Switched Reluctance Starter/Generator Integrated System	FAN Bing-jie, LI Yu-ren, et, al (102)
A Method to Analyze DC Current of Electromechanical Actuator	SUN Guo-wei, ZHAO Guo-qing (108)
Modeling and Control of Combustion Temperature System of Circulating Fluidized Bed Boiler	HU Lin-jing, TONG Ao-yu, et, al (112)
Maximum Power Point Tracking Control of Grid Connected Photovoltaic Power Generation System	LI Xin-yue, XU Jun (117)
Optimization Management Based on Sectional Energy Supply of Loads in Microgrid with Wind /Photovoltaic Generation	WANG Hui-jun, ZHENG Hai-tao, et, al (122)
Optimization Allocation of Isolated Island Micro-Grids Basing on Wind-Solar Complementary	WU Guo-qing, HUO Wei, et, al (127)
Modeling and Simulating of Frontier Sentry Post's Wind-solar Micro-grid Including Battery Storage	WU Xiao-bin, CHENG Zhi-jiang, et, al (134)
Lithium-Ion Battery SOC Prediction Based on Gray Multivariate Model	YU Zhong-an, ZHAO Kai-xian (138)
Real-time Estimation Simulation of Power Load in Distribution Network	ZHANG Ru-peng, QI Xian-jun (141)
Simulation of Optimal Power Automatic Control of Hydraulic Wind Turbine	CHAO Xiao-jie, LI Jing-yi, et, al (146)
Study on Optimal Energy-Efficient Control of AC Freight Train	LIU Qiang-qiang, XIAO Zhuang, et, al (150)
Simulation Study on Optimization of Combustion and Emission Characteristics of Biodiesel Engine	SHU Hai-bo, HAN Dong-xin, et, al (157)
Simulation of Optimization Control for Signal in Shanghai Disney Roundabout	WANG Ke, HE Hong-di, et, al (161)
Traffic System On-Line Decision-Making Based on DDDAS	WANG Song, HUANG Ke-di, et, al (167)
Optimal Suppression Simulation on Automotive Disc Brake Noise	WANG Wen-zhu, LI Jie, et, al (171)
Research on the Braking Energy Recovery Strategy for a Biaxial Driving Electric Vehicle	XIONG Hui-yuan, LIU Zhong-wen, et, al (176)
Research on Transient Analysis Method of Temperature Field of Brake Disc	ZHANG Ting-ting, WANG Guo-quan, et, al (181)
Optimal Matching of Power System and Simulation for Electric Racing Car	ZHAO Sheng-chao, ZHU Li-jing, et, al (187)
Real Time Detection and Simulation of Urban Road Tunnel Object	ZHOU Li-xue, MA Cheng-qian (192)
Automatic Registration Simulation of Multichannel Sensor Transmission Image	CHENG Gang, Li Wei-lin, et, al (197)
Urban Ecological Restoration Landscape Layout Feature Intelligent Extraction Method Simulation	LIU Si-rong, SUN Hai-yao (201)
Research on Simulation of Heterogeneity Correction for Large Data Infrared Image	LONG Hu, ZHANG Hong-yun (205)
Research on Medical Image Encryption Algorithm Based on Bit-Plane Decomposition and Hyper Chaos	WANG Qian (209)
Integrated Optimization Algorithm of Radome System Structure	WANG Wei, WANG Li (213)
Digital Multimedia Network Communication Delay Fast Elimination Method Simulation	YAN Pei-jing (218)
Dynamic Data Privacy Password Mechanism Simulation in Mobile Cloud Computing Environment	YIN Xiao-hong, HU Dan, et, al (222)
Research on Simulation of Negative Information Data Detection in Multimedia Network	YUE Shao-bo, XIE Li-de, et, al (226)
Simulation of Flow Velocity Control of Pneumatic Sand Blasting in the Inner Wall of Plastic Composite Pipe	HUANG Wen-qiang, XIONG Rui-ping, et, al (230)

The Simulation of Urban Land Use Spatial Optimization Model Based on Ternary Theory	DING Zhi-jun (235)
Adaptive Deduplication Simulation in Privacy Protection Database	GAO Ji-mei (239)
Simulation of SEC Model for Spray Drying and Parameter Analysis	JIN Xi, YANG Hai-dong, et, al (243)
Optimization Design of Gas-Liquid Flow in Chemical System Distillation Tray	LIU Chen, WANG Jin-gang, et, al (250)
Multi-Array Image Color Automatic Compensation Method Simulation	LU Xi, PAN Liang (255)
Single Medical Image Enhancement Optimal Scale Selection Accuracy Control Simulation	LUO Meng-di (259)
Research on the Lubrication Characteristics and Influencing Factors of the Journal Bearing in Internal Combustion Engine	NIE Tao, LIU Zhen-ming, et, al (263)
Uyghur Part of Speech Tagging Method Based on Hybrid Model	MUHETAER Palidan, SILAMU Wushouer, et, al (268)
Simulation of Structure Optimization Design of Sand Control Dam Flow Field Based on Surface Source Method	ZHANG Peng-yang, WU Yong-zhong, et, al (274)
Error Modeling of Wafer Test Platform Based on Multi-body System Theory	WANG Ying-jian, SU Zhong, et, al (279)
Research on Improving and Optimization Particle Filter by Multi Innovation Theory	BAI Xiao-bo, SHAO Jing-feng, et, al (284)
Applications of CEL Algorithm in Soil Large Deformation Simulation	HE Jian, MA Ji-sheng, et, al (291)
Research on ACO-WNB Classification Algorithm Based on Improved Information Gain	QIU Ning-jia, GAO Peng, et, al (295)
Cross-Network User Dynamic Bi-Directional Identity Accurate Authentication Simulation	DING Shi-jie, XIE Jun (300)
Simulation of Intelligent Filtering Method for Harmful Information in Directed Switching Networks	LI Li-rong (304)
Software Defined Network User Dynamic Access Control Model Simulation	LIU Zhi-gang, XIAO Qing-hui, et, al (308)
Simulation of Information Flow Parallel Transmission Security Verification in Wireless Ad Hoc Networks	SHEN Xue-li, ZHAO Yin (312)
Simulation of Damaged Data And Timely Storage under Malicious Network Intrusion	WANG Xin-tang, LIANG Zhi-feng (316)
Research on the Optimal Design of Process Parameters in Induction Heating of Metal Workpiece	CHEN Fu-hao, GE Yun-wang, et, al (320)
Research of Target Path Tracking Optimization Control of Unmanned Surface Vehicle	CONG Xiao-yi, WANG Jian-hua, et, al (325)
Simulation on Path Planning for Mobile Robot	DU Yong, ZHENG Wan-qun, et, al (331)
Design of Improved Colpitts Broadband Chaotic Circuit	MA Xiao-peng, ZHANG Zhao-xia, et, al (336)
Grids Based Multi-Layer Intersection Map for Autonomous Vehicles	QU Pan-rang, XUE Jian-ru, et, al (342)
Simulation Study on Optimum Control of Grinding Process	ZHOU Ying, YUE Bin, et, al (348)
Research on Accurate Classification and Simulation of Distributed Databases	CAO Man-man, WANG Mian (354)
Simulation Research on Constructing Method of Three-dimensional Model of Wetland Landscape Area	DENG Shi-yuan, ZHANG Ming-fan (358)
Simulation Research on Stability Evaluation Method of High Slope Along Highway	FENG Jia-jia, YANG Cheng-ye (362)
Optimization of Vehicle Scheduling for Logistics Enterprises in Iron and Steel Enterprises	LEI Zhao-ming, ZHAO Fan, et, al (366)
Accurate Identification and Simulation of Access Information Tracking in Multi-User Database	LI Fang-ju (373)
On-Line Detection and Simulation of Hydraulic Fault in Anaerobic Pond Sewage Treatment System	LI Xiang, CUI Hao-meng (377)
Finger Vein Recognition Algorithm Based on Improved LBP	LIU Chao, WANG Rong-chuan, et, al (381)
Detection and Simulation of WSN Wormhole Attack Node Based on RSSI Localization	PAN Zhuo-jin, ZHAO Ming-yue, et, al (387)
Online Search Simulation of Corner Features of Tiny-size Accuracy Images	SANG Yuan (392)
The Gestures Recognition Algorithm Fusing Depth Information and Sparse AutoEncoder	SHEN Xian-geng (397)
Simulation Diagnosis for Mechanical Rolling Bearing Fault Signal	SI Jia-sheng, TANG Hao, et, al (403)
Print Image Defect Detection Optimization Simulation under Panning Correction	TIAN Liang, ZHANG Ren (409)
Multi-space Database Memory Data Location Real-time Matching Simulation	WANG Jian (413)
Personalized Dispatch Simulation of Distributed Online Learning Resources under the Internet of Things	WANG Wen-dong, WU Hai-ni, et, al (417)
Simulation of Optimization Control and Automatic Regulation for Displacement of Central Air Conditioning Cooling Tower	WANG Xue-mei (421)
Data Classification and Recognition Simulation of IOT Multilayer Equipment Information Communication	WEI Bao-chun, GAN Fa-wang (425)
Simulation Study on Accurate Detection of Satellite Meteorological Cloud Image	WENG Li-guo, ZHANG Xv, et, al (429)
Fault Diagnosis of Power Transformer in Mine	XU Hui, YUAN Qing-ni (437)
Monitoring Data Processing Simulation for Bridge Construction Operations Quality	YAN Fei, ZHANG Xing, et, al (441)
Relational Database Information Resource Retrieval Result Classification Method Simulation	YAO Li-hua, YU Guang-zhou (445)
Steady-State Network Massively Open Data Integrity and Efficient Detection Simulation	Wu Zhi-gang (449)
Simulation of Accuracy Prediction for Chemical Raw Material Ratio for Smelt Blast Furnace Sinter Ore	YUAN Zhi-qiang, WANG Bin, et, al (453)
Multimedia Visual Image Segmentation Mark Color Feature Fast Retrieval Simulation	ZANG Su-ying (458)
Tile Defects Detection Based on Morphology and Wavelet Transformation	ZHANG Jun, ZHANG Hai-yun, et, al (462)
Wireless Network Weak Signal Automatic Detection Simulation in Chaotic Background	ZHANG Zhi-gang, ZHANG Zhi-yong (466)
A Simulation Study on the Data Flow Breakpoint of Mobile Network Is Presented	WU Zhen-tao, MIN Jun (470)
Simulation Study on Accurate Classification of Lesions in Blunt Chest Injury	ZHAO Yi-fan, BIAN Liang (475)
The Optimal Planning Method of Spatial Distribution of Urban Public Service Facilities	ZHOU Zhen-hong, ZHANG Min (480)

热烈庆祝中华人民共和国成立七十周年

WARMLY CELEBRATE THE SEVENTY ANNIVERSARY OF THE ESTABLISHMENT OF PEOPLE'S REPUBLIC OF CHINA

1949-2019

