

2020年第1—6期（总第9—14期）索引

第一期

反预置武器体系、装备与技术发展概述	余白石 赵治平 (1)
基于FPGA的自动门限线谱检测研究	肖大为 姬 庆 李立伟 马伯乐 (6)
深度学习在水声目标识别中的应用研究	王培兵 彭 圆 (11)
水下气体射流的涡扩散理论模型	陈玮琪 季锦梁 (18)
小型等离子体声源在水声领域的应用前景分析	孙庆鹏 张晓兵 颜 冰 程 颖 (24)
激光在小尺度湍流场中的透射功率模型	郭媛媛 王运鹰 李大伟 金方圆 (30)
基于态势时变的水下作战体系设计与优化	戚学文 赵绪明 王 亮 (35)
自旋前伸空化回转体高速斜入水稳定性仿真研究	张代国 潘菲菲 张晓乐 (40)
一种水下声学探测浮标的设计与实现	谌启伟 (46)
外军水下特种作战装备体系研究	周 超 王庆胜 李卓禹 (52)
爆炸荷载下钢筋混凝土结构数值分析	杜新权 李默阳 (58)
大深度潜航器水下空间运动建模与仿真	乔 冰 刘 鑫 袁 龙 (65)
美国海军应对未来水下战的装备发展分析	万 克 吴懿鸣 冯晓硕 (71)
一种基于锚系垂直阵列的水下移动目标警戒方法	邓秀华 刘 飞 梅新华 (76)
基于水下预置系统的深远海水下作战体系	姚芳华 (82)

第二期

国外鱼雷现状与启示	何心怡 卢 军 张思宇 程善政 陈 菁 (87)
封锁战役中攻势布雷任务优化分配模型	董世海 (94)
UUV操纵性设计及流体动力布局	李雨田 雷 敏 雷 阳 钱进军 (100)
一种火箭式防空水雷的设计	李居伟 韩 强 谢力波 暴洪波 (106)
“海鳐”波浪滑翔器研究进展及发展思路	田应元 吴小涛 王海军 熊童满 王华明 班 伟 吴文辉 (111)

电磁发射深水炸弹空中弹道性能仿真分析

.....戴文留 昌铁强 廖欢欢 李永锋 杨 剑 万小辉 (123)

波浪滑翔机海上试验研究王海军 (129)

Bellhop 模型在拖线阵声呐效能分析中的应用熊传梁 王 相 夏青峰 (135)

水下信息感知系统及其关键技术陈韶华 张 恒 (140)

基于高分辨率多波束声成像的核电站冷源海域水母探测研究张剑飞 (146)

细长圆柱体非均匀磁化研究张新邦 陈德祥 王东盛 韩杨杨 屈盼玲 张金巍 (152)

美国水雷作战能力现状与发展研究李晓东 余湖清 胡光兰 吴晓婧 (157)

自航式潜艇舰桥的设计构想及运用张博文 王晟洵 李 辉 (166)

基于 Notch 窄带波束形成的俯仰角估计仿真黄 鹏 梅新华 (171)

第三期

潜空跨介质无人航行器发展现状与展望孙祥仁 曹 建 姜言清 李岳明 李 晔 (178)

无轴轮缘推进器综述胡举喜 吴均云 陈文聘 (185)

水下微小无人机集群发展综述吴校生 (192)

美国无人潜航器反制措施研究现状李晓东 胡光兰 吴晓婧 (198)

超疏水表面水下减阻研究进展任刘珍 胡海豹 宋保维 潘 光 黄桥高 (204)

面向体系作战的水下无人攻防装备发展构想罗云虎 (212)

水下智能安防机器人的系统设计及应用谢心怡 黄豪彩 贺自力 王文斌 方 亮 冯仁栋 (219)

大深度水下滑翔机总体设计叶鹏程 黄桥高 (223)

水下发射超空泡射弹对 UUV 平台姿态影响分析魏 平 侯 健 鲁春佳 赵泽鹏 荣 里 (230)

基于波浪能的浮式装备随体供电技术研究郑雄波 荆丰梅 何邦琦 周双红 (236)

基于深度残差网络的水下通信调制信号分类王 岩 吕婷婷 杨 华 张 浩 (242)

基于多波束声呐的同时定位与地图构建张飞虎 称晨升 王 璨 (250)

基于 RRT 和 DWA 的欠驱动 UUV 路径规划严浙平 黄俊儒 吴 迪 (258)

仿蝠鲼柔性潜水器翼型流场性能分析邢 城 潘 光 黄桥高 (265)

潜射航行体齐射非定常流场特性研究高 山 潘 光 (271)

第四期

下一代深海装备用高强度陶瓷材料及结构分析	龚 文 吴超峰 赵治平 邵 成 (281)
AUV 矢量推进水动力计算及水平回转操纵性试验	李雨田 雷 敏 冯 朝 韩用波 (288)
三分量磁传感器定位模型建立及可观测性分析	戴忠华 周穗华 单 珊 (295)
基于声呐图像的水雷目标检测技术简述	胡红波 梅新华 (303)
一种无人艇自适应无线通信系统的设计应用	卢筑飞 陈天利 王 超 (309)
基于谱分析原理和频率响应法的舰船纵摇运动分析	张 钰 (314)
扫雷航海转向方法及绘算问题研究	吴俊杰 (323)
建制式反水雷装备发展特点分析及建议	胡光兰 王久法 李晓东 (328)
AUV 远距离快速布放方法研究	孙庆鹏 黄宏友 田 彬 (333)
基于 RT-Thread 的波浪滑翔器控制系统设计与实现	熊斯年 王海军 吴小涛 (339)
UUV 锌银动力蓄电池的使用技术研究	黄 波 常金达 丁 浩 (345)
无人水下航行器故障预测与健康管理体系研究	曹 飞 叶枫桦 于宪龙 (350)
可视化水下航行体控制系统数学仿真软件设计	黄 凡 (355)
一种矢量水听器浮标补偿角挑选方法	李韦华 李玲燕 谭 鑫 (363)

第五期

民用直升机在反水雷中的应用探讨	张 炜 张修志 王久法 (367)
水下导航定位技术研究进展	王英志 范文涛 (372)
国外无人反水雷特点及关键技术分析	王久法 吴 乔 高 频 仝志永 (382)
一种基于方位估计的双站被动声呐航迹关联方法	黄 凡 (387)
基于排队论的水下预置反舰导弹部署优化	孙 凡 邹 强 彭英武 (393)
无人潜航器作战保障适用性评估方法	赵振宇 李 飞 (397)
基于水池试验的毛发缆减阻性能研究	江兴隆 王 盟 艾艳辉 李 超 (402)

基于最小二乘法的超短基线水声定位系统校准方法·····	余白石	王占勇	(408)
反水雷体系建设探讨·····	衡 辉	黄 波	王新华 曹晓明 (416)
光纤惯导国内外发展现状及其关键技术分析·····	吕志刚	吴 爽	白 龙 (420)
袖珍水翼突防潜艇的设计构想及运用研究·····	张博文	王晟洵	杨理华 谢亚轩 (425)
空投航行体入水弹道建模与控制策略研究·····			李澄琚 (431)
海面漂浮二十面角反射器电磁散射特性研究·····	孟 凯		马武举 (437)
美国反水雷能力现状与发展研究·····	胡光兰		李晓东 (443)

第六期

水下无人平台在“马赛克战”中运用构想与分析·····	赵志允	陈建华	彭 涛	于化鹏 (451)
多无人艇协同目标分配算法研究·····				曹 璐 (457)
基于可靠性分析的军械装备维修策略优化研究·····	董 理	周奇郑	颜 冰	钟强晖 (462)
强干扰背景下水中微弱信号的垂直阵波束形成研究·····	陈韶华	张 恒	秦 银	(468)
基于频域特征相似的仿真模型置信度分析·····				张 起 (472)
基于海洋物联网的快速机动组网观测技术研究·····	任 翀	李 楠		张立杰 (477)
反蛙人武器系统发展综述·····	王金成	郭星香	孙玉臣	房俊伟 姜 斌 (486)
一种潜艇装备作战能力比较研究方法·····	罗 浩	宁云晖	陶 伟	尤 岳 (494)
海底光缆检测技术综述·····	汤 钟	邵 浩		张 斌 (499)
基于方位/多径时延的水下目标运动参数估计·····	姚海涛			陈韶华 (504)
多 AUV 集群控制技术综述·····	孟中祥	刘时圆		吕珍斌 (509)
超短基线水声定位系统动态定位误差测试研究·····	胡圣航			闵小龙 (516)
应力应变电测技术在水下耐压壳体中的应用·····	彭月婷	李晓峰	吴 琪	牛 锴 (522)
水下预警探测声呐基阵与反潜兵力的融合运用初探·····	李居伟	汪晓雨		王汉昌 (529)

Sum Contents (2020)

No. 1

Development Overview of Anti-preset Weapon System, Equipment and Technology	YU Baishi, ZHAO Zhiping (1)
Line-spectrum Detection of Automatic Threshold Based on FPGA	XIAO Dawei, JI Qing, LI Liwei, MA Bol (6)
Research on Application of Deep Learning in Underwater Acoustic Target Recognition	WANG Peibing, PENG Yuan (11)
Vortex Diffusion Theoretical Model of Underwater Gas Jet	CHEN Weiqi, JI Jingliang (18)
Application Prospect Analysis on Plasma Source in Field of Underwater Acoustics	SUN Qingpeng, ZHANG Xiaobing, YAN Bing, CHENG Ying (24)
Transmission Power Model of Laser in Small Scale Turbulent Field	GUO Yuanyuan, WANG Yunying, LI Dawei, JIN Fangyuan (30)
Research on Design and Optimization of Underwater Operational System Based on Situational Time-varying	QI Xuewen, ZHAO Xuming, WANG Liang (35)
Stability Simulation on High-speed Water Entry with Certain Angle of Self-spin Forward-extended Cavitating Body	ZHANG Daiguo, PAN Feifei, ZHANG Xiaole (40)
Design and Implementation of an Underwater Acoustic Detection Buoy	CHEN Qiwei (46)
Research on Foreign Army Underwater Special Warfare Equipment System	ZHOU Chao, WANG Qingsheng, LI Zhuoyu (52)
Numerical Analysis of Reinforced Concrete Structure under Blast Load	DU Xinquan, LI Moyang (58)
Modeling and Simulation for Underwater Space Motion of Large-depth Vehicle	QIAO Bing, LIU Xin, YUAN Long (65)
Analysis of Equipment Development for U.S. Navy in Response to Future Underwater Warfare	WAN Ke, WU Yimin, FENG Xiaoshuo (71)
An Alert Method for Underwater Mobile Target Based on Moored Vertical Array	DENG Xiuhua, LIU Fei, MEI Xinhua (76)
Research on Deep-sea Underwater Combat System Based on Underwater Preset System	YAO Fanghua (82)

No. 2

Research Status and Enlightenment of Foreign Torpedoes

.....HE Xinyi, LU Jun, ZHANG Siyu, CHENG Shanzheng, CHEN Jing (87)

Optimal Allocation Model of Offensive Mine-laying Operation in Blockade Campaign

.....DONG Shihai (94)

Maneuverability Design and Hydrodynamic Layout for UUV

.....LI Yutian, LEI Min, LEI Yang, QIAN Jinjun (100)

One New Design of Air Defense Mine LI Juwei, HAN Qiang, XIE Libo, BAO Hongbo (106)

Research Progress and Development Thinking of “Sea Ray” Wave Glider TIAN Yingyuan,

WU Xiaotao, WANG Haijun, XIONG Tongman, WANG Huaming, BAN Wei, WU Wenhui (111)

Simulation and Analysis on Air Ballistic Performance of Electromagnetic Launching Depth Charge

.....DAI Wenliu, CHANG Tieqiang, LIAO Huanhuan, LI Yongfeng, YANG Jian, WAN Xiaohui (123)

Research on Sea Trial for Wave Glider WANG Haijun (129)

Bellhop Model’s Application on Efficiency Analysis of Towed Line Array Sonar

.....XIONG Chuanliang, WANG Xiang, XIA Qingfeng (135)

Underwater Information Perception System and Key Technologies CHEN Shaohua, ZHANG Heng (140)

Research on Jellyfish Detection in Cold Source Sea Area of Nuclear Power Plant Based on High

Resolution Multi-beam Acoustic Imaging ZHANG Jianfei (146)

Study on Heterogeneous Magnetization of Slender Cylinders ZHANG Xinbang,

CHEN Dexiang, WANG Dongsheng, HAN Yangyang, QU Panling, ZHANG Jinwei (152)

Study on Status Quo and Development of U.S. Naval Mining Capability

.....LI Xiaodong, SHE Huqing, HU Guanglan, WU Xiaojing (157)

Design Concept and Application of Self-Propelled Submarine Bridge

.....ZHANG Bowen, WANG Shengxun, LI Hui (166)

Estimation Resolution Simulation of Pitch Angle Based on Notch Narrow-band Beam Forming

.....HUANG Peng, MEI Xinhua (171)

No. 3

Development Status of Unmanned Underwater-aerial Cross-domain Vehicles

..... SUN Xiangren, CAO Jian, JIANG Yanqing, LI Yueming, LI Ye (178)

Research of Shaftless Rim-driven Propeller

HU Juxi, WU Junyun, CHEN Wenpin (185)

Review of Small-size Underwater Drones Swarm Development

WU Xiaosheng (192)

Status Quo of U.S. Counter-UUV Studies.....

LI Xiaodong, HU Guanglan, WU Xiaojing (198)

Research on Underwater Drag Reduction of Superhydrophobic Surface

..... REN Liuzhen, HU Haibao, SONG Baowei, PAN Guang, HUANG Qiaogao (204)

Development Conception of Underwater Unmanned Attack and Defense Equipment for Systematic Operation

..... LUO Yunhu (212)

System Design and Practical Research of Underwater Intelligent Security Robot

..... XIE Xinyi, HUANG Haocai, HE Zili, WANG Wenbin, FANG Liang, FENG Rendong (219)

System Design of an Large-depth Autonomous Underwater Glider

..... YE Pengcheng, HUANG Qiaogao (223)

Analysis on Impact of Underwater-launched Supercavitation Projectile on Platform Attitude

..... WEI Ping, HOU Jian, LU Chunjia, ZHAO Zeping, RONG Li (230)

Research on Built-in Power Supply Technology of Floating Equipment Based on Wave Energy

..... ZHENG Xiongbo, JING Fengmei, HE Bangqi, ZHOU Shuanghong (236)

Classification of Underwater Communication Modulated Signals Based on Deep Residual Network

..... WANG Yan, LV Tingting, YANG Hua, ZHANG Hao (242)

Simultaneous Localization and Map Construction Based on Multi-beam Sonar

..... ZHANG Feihu, CHENG Chensheng, WANG Can (250)

Underactuated UUV Path Planning Based on RRT and DWA

..... YAN Zheping, HUANG Junru, WU Di (258)

Performance Analysis of Airfoil Flow Field of a Mannequin-like Flexible Submersible

..... XING Cheng, PAN Guang, HUANG Qiaogao (265)

Characteristics Research on Unsteady Flow Field during Salvo of Submarine-Launched Vehicles

..... GAO Shan, PAN Guang (271)

No. 4

Next-generation High-strength Ceramic Materials for Deep-sea Equipment and Structural Analysis	GONG Wen, WU Chaofeng, ZHAO Zhiping, SHAO Cheng (281)
Study on Hydrodynamic Calculation and Maneuverability in Horizontal Turning Circle of AUV with Vectored Thruster.....	LI Yutian, LEI Min, FENG Zhao, HAN Yongbo (288)
Three-component Magnetic Sensor Positioning Model Establishment and System Observability Analysis	DAI Zhonghua, ZHOU Suihua, SHAN Shan (295)
Overview of the Mine Target Detection and Identification Technology Based on Sonar Image	HU Hongbo, MEI Xinhua (303)
Design and Application of an Adaptive Wireless Communication System for USV	LU Zhufei, CHEN Tianli, WANG Chao (309)
Analysis of Ship Pitching Motion Based on Spectrum Analysis Principle and Frequency Response Method.....	ZHANG Yu (314)
Research on Mine-sweeping Navigational Turning Method and Calculation	WU Junjie (323)
Analysis and Recommendation on the Development of Organic MCM Equipment	HU Guanglan, WANG Jiufa, LI Xiaodong (328)
Research on Fast Deploying Method of AUV from Long Distance	SUN Qingpeng, HUANG Hongyou, TIAN Bin (333)
Design and Implementation of Wave Glider Control System Based on RT-Thread	XIONG Sinian, WANG Haijun, WU Xiaotao (339)
Research on Application Technology of Ag-Zn Battery for UUV Propulsion	HUANG Bo, CHANG Jinda, DING Hao (345)
Research on Prognostics and Health Management Framework of Unmanned Underwater Vehicle	CAO Fei, YE Fenghua, YU Xianlong (350)
Design of Visual Mathematical Simulation Software for Underwater Vehicle Control System	HUANG Fan (355)
A Method of Selecting Compensation Angle of Vector Hydrophone Buoy	LI Weihua , LI Lingyan, TAN Xin (363)

No. 5

Discussion on Application of Civil Helicopter in MCM

..... ZHANG Wei, ZHANG Xiuzhi, WANG Jiufa (367)

Research Progress of Underwater Navigation and Positioning Technology

..... WANG Yingzhi, FAN Wentao (372)

Analysis on Characteristics and Key Technology of Foreign Unmanned MCM

..... WANG Jiufa, WU Qiao, GAO Pin, TONG Zhiyong (382)

A Track Correlation Method for Bistatic Passive Sonar Based on DOA Estimation..... HUANG Fan (387)

Deployment Optimization of Underwater Preset Anti-Ship Missiles Based on Queuing Theory

.....SUN Fan, ZOU Qiang, PENG Yingwu (393)

Evaluation Method on Operational Support Applicability of Unmanned Underwater Vehicle

..... ZHAO Zhenyu, LI Fei (397)

Study on Drag Reduction Performance of Hair Cable Based on Tank Test

..... JIANG Xinglong, WANG Meng, AI Yanhui, LI Chao (402)

A Calibration Method of USBL Acoustic Positioning System Based on Least Square Method

..... YU Baishi, WANG Zhanyong (408)

Discussion on Construction of MCM System

..... HENG Hui, HUANG Bo, WANG Xinhua, CAO Xiaoming (416)

Research Status of Fiber-optic Inertial Navigation at Home and Abroad and Key Technology Analysis

..... LYU Zhigang, WU Shuang, BAI Long (420)

Research on Design Concept and Application of a Midget Hydrofoil Penetration Submarine

..... ZHANG Bowen, WANG Shengxun, Yang Lihua, XIE Yaxuan (425)

Research on Modeling and Control Strategy of Water-entry Trajectory of Air-dropped Vehicle

..... LI Dengjun (431)

Research on Electromagnetic Scattering Characteristic of Sea Floating Icosahedrons Triangular Trihedral

Corner Reflectors..... MENG Kai, MA Wuju (437)

Study on Status Quo and Development of U.S. Naval MCM Capability·· HU Guanglan, LI Xiaodong (443)

No. 6

Analysis of Application of Unmanned Underwater Platform in Mosaic Warfare

..... ZHAO Zhiyun, CHEN Jianhua, PENG Tao, YU Huapeng (451)

Research on Cooperative Target Assignment Algorithm for Multiple USVs CAO Lu (457)

Research on Optimization of Equipment Maintenance Strategy Based on Reliability Analysis

..... DONG Li, ZHOU Qizheng, YAN Bing, ZHONG Qianghui (462)

Underwater Weak Signal Beamforming with Vertical Array under Strong Interference

..... CHEN Shaohua, ZHANG Heng, QIN Yin (468)

Analysis of Simulation Model Confidence Based on Frequency Domain Feature Similarity

..... ZHANG Qi (472)

Research on Rapid Networking Mobile Observing Technology Based on Ocean of Things

..... REN Chong, LI Nan, ZHANG Lijie (477)

Review of Anti-Frogman Weapon System

..... WANG Jincheng, GUO Xingxiang, SUN Yuchen, FANG Junwei, JIANG Bin (486)

A Comparative Method for Submarine Operation Capability

..... LUO Hao, NING Yunhui, TAO Wei, YOU Yue (494)

Overview of Inspection Technology for Submarine Optical Cable

..... TANG Zhong, SHAO Hao, ZHANG Bin (499)

Estimation of Underwater Target Motion Parameters Based on Bearing/Multipath Time Delay

..... YAO Haitao, CHEN Shaohua (504)

Overview of Multi-AUV Cluster Control Technology MENG Zhongxiang, LIU Shiyuan, LV Zhenbin (509)

Research on Dynamic Positioning Deviation of Ultra Short Baseline Hydroacoustic Positioning System

..... HU Shenghang, MIN Xiaolong (516)

Research on Application of Stress and Strain Electrical Measurement Technique in Underwater Pressure Shell

..... PENG Yueting, LI Xiaofeng, WU Qi, NIU Kai (522)

Research on Application of Underwater Early Warning Detection Sonar Array and Anti-submarine Force

..... LI Juwei, WANG Xiaoyu, WANG Hanchang (529)