

目 录

大会报告

水力机械空化特性及控制策略研究 Research on cavitation characteristics and control strategies of hydraulic machineries 袁寿其 YUAN Shou-qi	(1)
Unsteady cavitating flow around axisymmetric body at small angles of attack LIU Hua	(6)
Uncertainty quantification for turbulent flow simulations: state-of-the art, challenges and open issues XU Hui	(8)
高坝水力学细观成因分析方法研究进展 Progress in meso-scale causal analytic method of high dam hydraulics 许唯临, 罗晶, 卫望如, 李瑶, 张亚磊 XU Wei-lin, LUO Jing, WEI Wang-ru, LI Yao, ZHANG Ya-lei	(12)
PIV and its application in hydrodynamics of cylindrical structures WANG Xi-kun	(22)
船舶三维声弹性理论及应用方法 Three-dimensional sono-elasticity theory of ships with applications 邹明松 ZOU Ming-song	(40)

分会场主题报告

重力-毛细波的环形聚焦 Ring-focusing dynamics of capillary-gravity waves 王展 WANG Zhan.....	(44)
随机波在珊瑚礁地形上传播的 SPH 模拟 Numerical simulation of random wave transformation over reef using SPH method 温鸿杰, 张向, 任冰, 王国玉 WEN Hong-jie, ZHANG Xiang, REN Bing, WANG Guo-yu	(51)
圆管附属刚性与柔性分离盘结构系统的涡激振动及驰振风洞实验研究	

Wind tunnel experiment on vortex-induced vibration and galloping for circular pipes attached with rigid and flexible splitter plates 王嘉松, 梁盛平, 胡中明, 许博涵 WANG Jia-song, LIANG Sheng-ping, HU Zhong-ming, XU Bo-han.....(62)	(62)
水翼非定常空化大涡模拟的验证和确认分析 Verification and validation of large eddy simulations of the turbulent cavitating flow around he hydrofoil 龙云, 徐默涵, 程怀玉, 季斌, 龙新平 LONG Yun, XU Mo-han, CHENG Huai-yu, JI Bin, LONG Xin-ping.....(69)	(69)
多浮体结构的 cloaking 优化研究综述 A review of cloaking optimization for multiple floating bodies 何广华, 张志刚, 王正科 HE Guang-hua, ZHANG Zhi-gang, WANG Zheng-ke(75)	(75)
空化泡与复杂边界相互作用的实验研究 Experimental investigations on the interactions between complex boundaries and cavitation bubble 张宇宁 ZHANG Yu-ning(83)	(83)
Geometrical multi-scale modeling and computation of arterial hemodynamics: from basic theories to applications LIANG Fu-you(88)	(88)
复合材料边界附近空泡动力学特性研究 The experimental investigation of bubble dynamics near the composite plates 马潇健, 黄彪, 王国玉 MA Xiao-jian, HUANG Biao, WANG Guo-yu.....(99)	(99)
平直水翼梢隙涡的数值模拟研究 Numerical computations of the tip leakage vortex generated by a 2D hydrofoil 毕祯, 程新生, 邵雪明, 张凌新 BI Zhen, CHEN Xin-sheng , SHAO Xue-ming, ZHANG Ling-xin(106)	(106)
Numerical investigation and optimization of the fish mortality in an axial-flow pump based on a blade strike model PAN Qiang, ZHANG De-sheng, SHI Wei-dong, ZHAO Ru-jie, VAN ESCH B.P.M(113)	(113)
超疏水表面水下减阻研究 Research on the drag reduction of Superhydrophobic surface 文俊, 胡海豹, 杜鹏, 王德政, 宋东 WEN June, HU Hai-bao, DU Peng, WANG De-zheng, SONG Dong(128)	(128)
移动接触线动力学行为及表面非均匀性影响研究 Studies on contact line moving on heterogeneous flat surfaces 陈效鹏, 刘明, 杨冯超 CHEN Xiao-Peng, LIU Ming, YANG Feng-Chao(146)	(146)

基于 IB-LBM 的尾流与壁面湍流之间的涡旋相互作用
 Vortex interaction between the wake flow and wall turbulence based on IB-LBM
 李姜华, 李家骅, 夏玉显, 邱翔
 LI Jiang-hua, LI Jia-hua, XIA Yu-xian, QIU Xiang(152)

Population balance modeling for polydisperse fluid-particle flows: current status and future prospects
 YU Ming-zhou, LIN Jian-zhong(160)

水动力学基础

航行体带均压气体垂直发射空泡数值研究
 Numerical simulation on vertical launch of vehicle with pressure-equalizing
 康亚卓, 王畅畅, 吴钦, 黄彪, 孔德才
 KANG Ya-zhuo, WANG Chang-chang, WU Qin, HUANG Biao, KONG De-cai(162)

斜向波与矩形结构相互作用的精确解析
 Accurate analytical solutions to oblique water wave scattering by rectangular structures
 李爱军, 刘勇
 LI Ai-jun, LIU Yong(168)

连续孤立波的形成与对向碰撞特性研究
 Study on the generation and collision of successive solitary waves
 麻彩朋, 许国冬
 MA Cai-peng, XU Guo-dong(178)

基于自适应网格的二维孤立波生成
 2D solitary wave generation based on adaptive mesh refinement grid
 张运兴, 段文洋, 廖康平, 马山
 ZHANG Yun-xing, DUAN Wen-yang, LIAO Kang-ping, MA Shan (187)

扩展位移浅水方程的孤立波解
 Solitary wave solution of the extended displacement shallow water equation
 吴锋, 姚征, 钟万勰
 WU Feng, YAO Zheng, ZHONG Wan-xie(194)

外形对仿生波动翼水动力性能影响
 Effect of shape on the hydrodynamic performance of an undulatory foil
 张栋, 潘光, 朝黎明, 黄桥高, 施瑶
 ZHANG Dong, PAN Guang, CHAO Li-ming, HUANG Qiao-gao, SHI Yao(202)

气泡非线性动力学振荡特性研究
 An investigation on the nonlinear behavior of gas bubbles
 蒋子标, 张宇宁, 杜小泽
 JIANG Zi-biao, ZHANG Yu-ning, DU Xiao-ze(210)

基于速度-涡量相关结构的开敞槽道流自由表面以下分层湍流研究
 Research on the multi-layered turbulent structure under the surface of ocean current using

velocity-vorticity coherent structure method 柏晓东, 方庆贺, 张伟 BAI Xiao-dong, FANG Qing-he, ZHANG Wei	(216)
正弦型侧边界对内孤立波演化特性影响的数值模拟 Numerical simulation of the influence of evolutionary characteristics of internal solitary waves on sinusoidal boundaries 徐峻楠, 魏岗, 王少东, 武军林 XU Jun-nan, WEI Gang, WANG Shao-dong, WU Jun-lin	(224)
非定常空化湍流结构演化过程及流动机制研究 Investigation of transient cavitation turbulence structures and the sheet to cloud transition mechanism 王畅畅, 王国玉, 黄彪 WANG Chang-chang, WANG Guo-yu, HUANG Biao	(233)
绕扭曲水翼云状空化流动中反向射流推进方式研究 Study on the re-entrant jet propulsion of cloud cavitating flow around a twisted hydrofoil 杨龙, 胡常莉, 曹友铨 YANG Long, HU Chang-li*, CAO You-quan	(240)
相空间重构理论在紊流研究中的应用 The application of phase-space reconstruction on nonlinear time series extracted from a turbulent flow 徐津, 王玲玲 XU Jin, WANG Ling-ling	(249)
基于高阶谱方法的有限水深下平衡态共振波系的数值验证 Numerical verification of steady-state resonant waves in water of finite depth based on high-order spectral method 严志勇, 刘曾, 李晔 YAN Zhi-yong, LIU Zeng, LI Ye	(255)
基于非线性空泡模型的云状空化动力特性 Dynamic properties of cloud cavitation based on a non-linear cavitation model 洪锋, 高振军, 袁建平 HONG Feng, GAO Zhen-jun, YUAN Jian-ping.....	(266)
水底隆起地形上的两层流内部水跃解 Steady-state internal jump solutions to two-layer flows over a submerged hump 陆杨, 冯卫兵 LU Yang, FENG Wei-bing	(275)
非线性长峰不规则波波高极值分布研究 Extreme wave crest distribution by direct numerical simulations of long-crest nonlinear wave fields 刘帅, 张新曙 LIU Shuai, ZHANG Xin-shu	(281)
流场中两个变形圆柱的动力学行为 Dynamical behaviors of two deformable circle cylinders in fluid	

- 陈顺行, 孙仁
 CHEN Shun-hang, SUN Ren(287)
 低比转速离心泵的不稳定性研究
 Investigation of flow instability in a low specific speed centrifugal pump
 叶维祥, 黄仁芳, 江志武, 李晓俊, 朱祖超, 罗先武
 YE Wei-xiang, HUANG Ren-fang, JIANG Zhi-wu, LI Xiao-jun, ZHU Zu-chao, LUO Xian-wu (293)

水动力学试验与测试技术

- Faraday 波若干新的试验观察与讨论
 Several new experimental observations and discussion for Faraday waves
 李遇春, 勾鸿量
 LI Yu-chun, GOU Hong-liang.....(302)
 晃动流体对斜底环形水箱顶板冲击效应的试验研究
 An experimental study of liquid sloshing impact load on the roof structure of annular tank with inclined bottom
 勾鸿量, 李遇春
 GOU Hong-liang, LI Yu-chun.....(312)
 随浪规则波中纯稳性丧失研究
 Study on pure loss of stability in following waves
 师超, 鲁江, 韩阳, 顾民, 姜婉菲
 SHI Chao, LU Jiang, HAN Yang, GU Min, JIANG Wan-fei.....(322)
 卷破波对小直径单桩波浪力的实验研究
 Experimental study on plunging wave forces on a slender pile
 台兵, 马玉祥, 董国海, 陈卓
 TAI Bing, MA Yu-xiang, DONG Guo-hai, CHEN Zhuo.....(328)
 表面润湿性对空化流动实验研究
 The experimental study about effect of surface wettability on cavitating flow
 常青, 张敏弟, 郝加封
 CHANG Qing, ZHANG Min-di, HAO Jia-feng(334)
 绕振荡水翼空化流动实验与数值研究
 Experimental and numerical investigation of unsteady cavitating flow patterns around a pitching hydrofoil
 张孟杰, 黄彪, 吴钦, 王国玉
 ZHANG Meng-jie, HUANG Biao, WU Qin, WANG Guo-yu.....(347)
 颗粒对空化泡动力学行为影响的实验研究
 Experimental investigation on the interactions between particles and cavitation bubble
 陈飞鹏, 张宇宁
 CHEN Fei-peng, ZHANG Yu-ning(356)
 基于造浪球的数值水池模拟
 Simulation of numerical wave tank based on wave ball
 邱强, 陈圣涛, 侯交叉

QIU Qiang, CHEN Sheng-tao, HOU Jiao-yi(362) 波浪水池圆弧斜坡式消波装置改型试验研究 Experimental study on modification of circular type wave absorber for wave basin 兰波, 周德才, 胡定健	
LAN Bo, ZHOU De-cai, HU Ding-jian(370) 文丘里管压力脉动与振动强度变化特性的实验研究 Experimental investigation on the pressure pulsation and vibration intensity of venturi tube 王炯, 许霜杰, 唐巾洁, 龙新平	
WANG Jiong , XU Shuang-jie, TANG Jin-jie , LONG Xin-ping(377) 离心泵叶轮内分离流动的 PIV 测量 PIV measurement on flow separation within centrifugal pump impeller 陈波, 李晓俊, 朱祖超	
CHEN Bo, LI Xiao-jun, ZHU Zu-chao(384) 近海海啸波的实验室模拟 The physical simulation of the tsunami waves in offshore area 王千, 房詠柳, 刘桦	
WANG Qian, FANG Yong-liu, LIU Hua.....(391) 不同叶顶间隙下轴流泵叶顶泄漏涡的大涡模拟及实验研究 Investigation of the tip leakage vortex with different tip-gap sizes in an axial-flow pump 沈熙, 张德胜, 金永鑫, 陈健	
SHEN Xi, ZHANG De-sheng, JIN Yong-xin, CHEN Jian(400) 一维重力波模型模拟溃坝洪水的实验验证 The experimental verification of one-dimensional gravity wave model to simulate dam-break flood 刘文军, 王 波, 陈云良, 伍超, 张建民, 宋家俊, 刘 鑫	
LIU Wen-jun, WANG Bo, CHEN Yun-liang, WU Chao, ZHANG Jian-min, SONG Jia-jun, LIUXin (414) 固液两相流及实验方法在离心泵中的应用现状与展望 Application status and prospect of solid-liquid two-phase flow and experimental Methods in centrifugal pumps 闫召旭, 张启华, 曹丽, 张为栋	
YAN Zhao-xu, ZHANG Qi-hua, CAO Li, ZHANG Wei-dong(420) 锚泊方式对开孔浮式防波堤消浪性能和锚链力影响的试验研究 Experimental study on the-wave dissipation performance and mooring force of opening floating breakwater 刘心媚, 郑艳娜, 姜云鹏, 张崇伟	
LIU Xin-mei, ZHENG Yan-na, JIANG Yun-peng, ZHANG Chong-wei(432) 扭曲水翼云空化流动结构动力特性试验研究 Experimental investigation on the dynamics of cloud cavitating flow around a twisted hydrofoil 曹彦涛, 彭晓星, 徐良浩, 宋明太	
CAO Yan-tao, PENG Xiao-xing, XU Liang-hao, SONG Ming-tai.....(438) 交叉粗糙裂隙中水流运动试验研究 Experimental study on flow motion in a cross rough fracture	

宋羿, 胡奥锋, 王沐, 钱家忠, 李福林, 黄继文
 SONG Yi, HU Ao-feng, WANG Mu, QIAN Jia-zhong, LI Fu-lin, HUANG Ji-wen(445)

计算流体力学

- SBFEM 方法在结构角点处速度场求解中的应用
 The application of SBFEM for velocity field at sharp corners
 钱弈心, 滕斌
 QIAN Yi-xin, TENG Bin(453)
- 二维扑动翼的尾流类型研究与 DMD 分析
 Wake map of 2-D flapping airfoil and DMD analysis
 郑鸿宇, 谢芳芳, 郑耀
 ZHENG Hong-yu, XIE Fang-fang, ZHENG Yao(462)
- 串列双波浪型圆柱涡激耦合振动数值模拟
 Numerical simulation of coupled vortex-induced vibration of a tandem wavy cylinders
 邹琳, 杨耀宗, 汪秒, 吕文浩, 徐汉斌
 ZOU Lin, YANG Yao-zong, WANG Miao, LYU Wen-hao, XU Han-bin(470)
- 间隙空化流动的 CFD 不确定度分析与非定常特性研究
 Numerical investigation of unsteady tip-leakage cavitating flow with verification and validation procedures
 程怀玉, 白晓蕊, 龙新平, 季斌
 CHENG Huai-yu, BAI Xiao-ru, LONG Xin-ping, JI Bin(476)
- 近岸行进孤立波与梯形防波堤相互作用的 CIP 模拟
 CIP based simulation on the interaction of a solitary wave and a trapezoid seawall
 油锐, 何广华
 YOU Rui, HE Guang-hua(482)
- 基于 δ -SPH 方法的半圆型潜堤反射和透射特性研究
 Analysis of wave reflection and transmission by submerged semi-circular breakwaters through δ -SPH method
 潘驰, 陈永焜, Domenico D. Meringolo, 刘勇
 PAN Chi, CHEN Yong-kun, DOMENICO D. MERINGOLO, LIU Yong (488)
- 轴流泵顶隙涡的数值模拟研究
 Numerical investigation of tip leakage vortex in axial-flow pump
 彭凯, 陈闰路, 邵雪明, 张凌新
 PENG Kai, CHEN Run-lu, SHAO Xue-ming, ZHANG Ling-xin(495)
- 基于双液相 VOF 方法的波浪内部流动研究
 Study on wave internal flow based on two-liquid VOF method
 李梦雨, 赵西增, 徐天宇, 童晨奕
 LI Meng-yu, ZHAO Xi-zeng, XU Tian-yu, TONG Chen-yi.....(500)
- 基于 CIP 方法的楔形体入水砰击数值模拟
 Numerical simulation of water slamming in the wedge based on CIP method
 郑凯源, 赵西增

ZHENG Kai-yuan, ZHAO Xi-zeng	(506)
一种基于 Nektar++ 的水动力学线性稳定性求解器	
A hydrodynamic instability solver base on Nektar++	
张伟, 陈建平	
ZHANG Wei, CHEN Jian-ping	(512)
两弹性支撑圆柱体之间流体耦合作用的数值模拟研究	
Flow-mediated interaction between two immersed cylinders	
林中路, 梁东方, 赵明	
LIN Zhong-lu, LIANG Dong-fang, ZHAO Ming	(518)
基于遗传算法的减摇附体水动力性能优化	
Hydrodynamics optimization of the anti-pitching appendage based on genetic algorithms	
孙树政, 李积德	
SUN Shu-zheng, LI Ji-de	(528)
拉格朗日追踪法在速凝浆液流动模拟中的应用	
Application of Lagrange tracing method in simulation of rapid-setting grout flow	
杨田, 冯春, 程鹏达	
YANG Tian, FENG Chun, CHENG Peng-da.....	(535)
二维时域格林函数实用数值计算	
A practical numerical method for 2D time-domain Green Function	
顾孟潇, 朱仁传, 周文俊	
GU Meng-xiao, ZHU Ren-chuan, ZHOU Wen-jun.....	(541)
离散面元上频域零航速自由面格林函数的数值积分	
Integration of pulsating source Green's function on panel	
黄山, 朱仁传	
HUANG Shan, ZHU Ren-chuan	(548)
基于 IGES 的船体 NURBS 曲面网格划分	
IGES-based hull NURBS surface mesh division	
查乐, 朱仁传	
ZHA Le, ZHU Ren-chuan	(556)
考虑壁面网格滑移的水泵水轮机导叶关闭瞬态数值模拟	
Transient simulation of closure of wicket gate in pump turbine at pump mode using the sliding moving mesh	
王文杰, 裴吉, 袁寿其	
WANG Wen-jie, PEI Ji, YUAN Shou-qi	(563)
STLP 平台水动力与运动性能 CFD 分析	
CFD numerical analysis of hydrodynamic and kinematic performances of a STLP	
安筱婷, 李奇, 万德成	
AN Xiao-ting, LI Qi, WAN De-cheng	(573)
不同质量比多柱式平台涡激运动特性的数值研究	
Numerical study on VIM of multi-column platform in different mass ratio	

王秋雯, 赵伟文, 万德成 WANG Qiu-wen, ZHAO Wei-wen, WAN De-cheng	(586)
变张力作用下张紧式立管涡激振动的数值模拟 Vibration decomposition of vortex induced vibration of top tensioned riser under variable tension 王哲, 邓迪, 万德成 WANG Zhe, DENG Di, WAN De-cheng.....	(598)
阶梯流中不同来流方向对柔性双立管涡激振动影响 CFD 分析 Effect analysis of different directions of flow on vortex-induced vibrations of two flexible risers in step flow 武磊, 邓迪, 万德成 WU Lei, DENG Di, WAN De-cheng.....	(607)
基于 MPS-FEM 方法分析三维平板流固耦合响应问题 Influence of elasticity on the response of flat plate induced by solitary wave studied by the MPS-FEM method 张冠宇, 万德成 ZHANG Guan-yu, WAN De-cheng.....	(622)
PPTC 螺旋桨空化流动的数值模拟 Numerical simulations of cavitation flows of PPTC propeller 陈铠杰, 万德成 CHEN Kai-jie, WAN De-cheng	(632)
基于 LES 方法的 ROV 导管螺旋桨系泊状态梢隙流动数值模拟 Numerical simulation of the tip leakage flow in a ROV ducted propeller in moored condition based on the LES method 周彬, 赵敏, 万德成 ZHOU Bin, ZHAO Min, WAN De-cheng	(641)
基于 OpenFOAM 的 NACA0012 二维水翼空泡数值模拟 Numerical simulation of cavitation around NACA0012 hydrofoil based on OpenFOAM 赵旻晟, 李勇, 万德成 ZHAO Min-sheng, LI Yong, WAN De-cheng	(654)
桨-舵-毂帽鳍水动力性能 CFD 数值分析 Numerical investigation on the hydrodynamic mechanism of propeller-rudder-fins 许璐荣, 万德成 XU Lu-rong, WAN De-cheng.....	(663)
湍流入流对风机尾流影响的数值分析 Numerical simulation of influence of turbulent inflow on wind turbine wake 宁旭, 程萍, 万德成 NING Xu, CHENG Ping, WAN De-cheng.....	(671)
不同航速下 KCS 艏波破碎的数值模拟 Numerical simulation of bow wave breaking of KCS model under different speeds	

余安正, 任振, 万德成 YU An-zheng, REN Zhen, WAN De-cheng	(684)
错列式双风机尾流干扰的数值模拟分析 Numerical validation of wake interaction between two offset model wind turbines based on actuator line model	
段鑫泽, 程萍, 万德成 DUAN Xin-ze, CHENG Ping, WAN De-cheng	(695)
基于改进 Shnnerr-Sauer 模型绕二维 NACA66 水翼非定常空化数值研究 Numerical study on the unsteady cavitation of two-dimensional NACA66 hydrofoil based on modified shnnerr-sauer model	
刘莉莉, 郭鹏程, 郑小波, 孙龙刚 LIU Li-li, GUO Peng-cheng, ZHENG Xiao-bo, SUN Long-gang	(711)
垂直式静水池之三维数值流场分析 3D numerical modeling of flow over a vertical drop pool	
邱家麟, 范佳铭 CHIU Chia-lin; FAN Chia-ming	(719)
实尺度立管受迫振动流体力数值模拟研究 Numerical simulation of the fluid forces on a real size of oscillating drilling riser	
喻晨欣, 王嘉松, 郑瀚旭 YU Chen-xin, WANG Jia-song, ZHEN Han-xu	(725)
基于多分辨率SPH方法和PML无反射边界条件的结构入水数值研究 SPH modeling of water entry with multiple resolutions and PML boundary condition	
黄灿, 刘谋斌 HUANG Can, LIU Mou-bin	(731)
旋转阀鱼道设计及内部流动CFD分析 Rotary valve fishway design and internal flow CFD analysis	
刘杨, 梁家健, 杨立, 孙文愈 LIU Yang, LIANG Jia-jian, YANG Li, SUN Wen-yu	(737)
水-气两相流中同向旋转 Lamb-Oseen 涡对的数值模拟 Numerical solution of hydrodynamic stability equation of unbounded domain flow with coordinate transform Numerical simulations of the evolution of co-rotating Lamb-Oseen vortices in tip vortex flows	
王本龙, 李颢钰, 郭晓宇 WANG Ben-long, LI Hao-yu, GUO Xiao-yu	(746)
基于LES-DPM方法的竖直圆管泡状流流动模拟 Numerical study of gas-liquid bubbly flow using the Euler-Lagrange simulation and Large Eddy Simulation in a vertical cylinder channel	
熊正, 张法星, 陆欣 XIONG Zheng, ZHANG Fa-xing, LU Xin	(752)

罗伯逊-斯蒂夫流变模型水力计算新方法
 A new hydraulics calculation method for robertson-stiff rheological model
 周号博, 孟新, 樊洪海
 ZHOU Hao-bo, MENG Xin, FAN Hong-hai.....(764)

工业流体力学

束缚水条件下气体在裂缝性页岩多孔介质中的流动特征
 Study on Starting Pressure of Gas Flow in Fractured Shale under Bound Water Condition
 宋兴兴, 宋付权, 黄小荷, 朱维耀, 孙业恒
 SNG Xing-xing, SONG Fu-quan, HUANG Xiao-he, ZHU Wei-yao, SUN Ye-heng.....(773)

横向来流内单孔气泡形成的理论与实验研究
 Theoretical and experimental research on the single bubbles formation in transverse flow
 张珍, 叶秉晟, 黄荐, 徐畅, 王一伟, 黄晨光
 ZHANG Zhen, YE Bing-sheng, HUANG Jian, XU Chang, WANG Yi-wei, HUANG Chen-guang (780)

不同雷诺数条件下不运动管道车车身壁面切应力特性研究
 Research on wall shear stresses of stationary pipeline vehicle under different Reynolds number conditions
 贾晓萌, 孙西欢, 李永业
 JIA Xiao-meng, SUN Xi-huan, LI Yong-ye.....(787)

低渗透碳酸盐岩不同结构类型水驱渗流数学模型
 The mathematical model of water flooding in different structure types of low permeability carbonate rocks
 纪凯, 宋付权, 薄利文
 JI Kai, SONG Fu-quan, BO Li-wen.....(793)

微尺度多孔介质盲端涡旋动态的CFD模拟
 CFD simulation on performance of a dead-end vortex in microscale porous media
 赵传峰, 李松琦, 王冰飞, 马君君
 ZHAO Chuan-feng, LI Song-qi, WANG Bing-fei, MA Jun-jun..... (800)

水下气液两相推进技术研究现状及发展趋势
 NR research status and development trend of the two-phase underwater propulsion technology
 张家瑞, 夏智勋, 黄利亚, 马立坤
 ZHANG Jia-rui, XIA Zhi-xun, HUNAG Li-ya, MA Li-kun..... (806)

基于三级井控的深水钻井井身结构设计方法
 An approach of casing program design for deepwater drilling based on tertiary well control
 张帅, 孙宝江, 王志远, 张振楠, 王金堂, 廖友强
 ZHANG Shuai, SUN Bao-jiang, WANG Zhi-yuan, ZHANG Zhen-nan, WANG Jin-tang, LIAO You-qiang..... (816)

气升泵中连续气泡上升的数值模拟
 Numerical simulation of continuous rising bubble in airlift pump
 张泽楠, 陈圣涛, 弓永军

ZHANG Ze-nan, CHEN Sheng-tao, GONG Yong-jun	(825)
过冷度对含不凝气体蒸汽射流直接接触冷凝影响的数值模拟研究	
CFD simulation of the effect of subcooling on steam-air jet condensation	
李海波, 田茂诚, 屈晓航	
LI Hai-bo, TIAN Mao-cheng, QU Xiao-hang.....	(832)
基于 Aspen EDR 软件的板翅式换热器入口流量分配不均的研究	
Research on maldistribution of inlet flow rate of plate fin heat exchanger based on Aspen EDR software	
孙文昌, 冷学礼, 张冠敏	
SUN Wen-chang, LENG Xue-li, ZHANG Guan-min	(840)
管形对含不凝气体蒸汽换热与流动特性的研究	
Study on the heat transfer and flow characteristics about the condensation of vapor containing non-condensable gas in different tube type	
贾文华, 田茂诚, 张冠敏, 张井志, 冷学礼	
JIA Wen-hua, TIAN Mao-cheng, ZHANG Guan-min, ZHANG Jing-zhi, LENG Xue-li ...	(846)
含不凝气体蒸汽凝结换热与流动特性研究	
Study of the condensation heat transfer and flow characteristics about the vapor containing non-condensable gas	
贾文华, 田茂诚, 张冠敏, 邱燕, 周林林	
JIA Wen-hua, TIAN Mao-cheng, ZHANG Guan-min, QIU Yan, ZHOU Lin-lin	(854)
圆弧变形扑翼的获能特性研究	
Research on the power extraction characteristics of arc-deformed flapping wing	
朱兵, 黄辉	
ZHU Bing, HUANG Yun.....	(860)
平底幂律形实用经济断面设计与计算	
Flat-bottomed power-law channel practical economic section design and calculation	
张颖, 赵明登, 陈甜甜	
ZHANG Ying , ZHAO Ming-deng, CHEN Tian-tian.....	(868)
CWC 高速自由液面循环水槽工作段流场数值仿真与测量	
The CFD and measurement of the test section of CWC high speed free surface circle tunnel	
陈建平, 李宁, 王宗龙, 夏丁良, 俞瑜	
CHEN Jian-ping, LI Ning, WANG Zong-long, XIA Ding-liang, YU Yu	(874)
潮流水轮机阵列性能的影响要素分析	
Analysis of factors that affect performance of turbines in a tidal array	
宫贤亮, 李晔, 林志良, 沈椿	
GONG Xian-liang, LI Ye, LIN Zhi-liang, SHEN Chun.....	(883)
缝洞型碳酸盐岩径向复合油藏产能分析	
Analysis of productivity for radial compound model in fractured vuggy carbonate reservoirs	
邢翠巧, 尹洪军, 李兴科, 刘岗鑫, 付春权	
XING Cui-qiao, YIN Hong-jun, LI Xing-ke, LIU Ke-xin, FU Chun-Quan	(894)

气体/高黏液体两相间歇流动时液相含率的变化特性研究 Studies on characteristics of liquid holdup during gas/high viscosity liquid intermittent flow 侯林彤, 许晶禹 HOU LIN-TONG, XU JING-YU	(902)
井下气液混合输送技术研究 Study on down-hole gas-liquid conveying technology 王信鹏, 王威尧, 许晶禹 WANG Xin-peng, WANG Wei-yao, XU Jing-yu.....	(908)
雾状流掺混下稠油流动的数值研究 Numerical study on the flow of heavy oil blended with light oil mist 徐文凯, 顾成曦, 许晶禹 XU Wen-kai, GU Cheng-xi, XU Jing-yu	(914)
气液柱型旋流器内分离特性研究 An investigation on separation characteristics in gas-liquid cylindrical cyclone 杨乐乐, 张健, 张栋, 许晶禹 YANG Le-le, ZHANG Jian, ZHANG Dong, XU Jing-yu.....	(920)
油滴在旋流场中的破碎与聚并研究 Investigation on the oil droplet breakup and coalescence in the vane-type swirling flow field 陈三君, 吴奇霖, 刘硕, 许晶禹 CHEN Shan-jun, WU Qi-lin, LIU Shuo, XU Jing-yu.....	(928)
管道内含蜡原油停输再启动的流动特征 Investigation on the yield stress of heavy crude oils to improve the pipeline flow 张健, 杨乐乐, 张栋, 许晶禹 ZHANG Jian, YANG Le-le, ZHANG Dong, XU Jing-yu	(933)
波流作用下潮流能水轮机尾流场特性研究 On the wake characteristic of tidal stream turbine under wave-current interaction 张玉全, 张继生, 吴浩伟, 郑源, 臧伟, 王树齐 ZHANG Yu-quan, ZHANG Ji-sheng, WU Hao-wei, ZHENG Yuan, ZANG Wei, WANG Shu-qi	(939)
新型海上风电浮式平台水动力性能研究 Study on hydrodynamic performance of novel offshore wind turbine floating platform 邹丽, 曲世达, 姜宜辰, 金国庆 ZOU Li, QU Shi-da, JIANG Yi-chen, JIN Guo-qing.....	(945)
熔盐物性对熔盐泵内部流动及圆盘损失特性影响 Effect of medium properties on internal flow and disk friction loss characteristics of molten salt pump 金永鑫, 张德胜, 石磊, 施卫东, 王道红 JIN Yong-xin, ZHANG De-sheng, SHI Lei, SHI Wei-dong, WANG Dao-hong.....	(953)
侧风作用下会车过程的气动特性研究 Research on the aerodynamic characteristics of vehicles during the crossing process affected by crosswind	

范鹏飞, 杜广生, 刘立宁
 FAN Peng-fei, DU Guang-sheng, LIU Li-ning (964)

船舶与海洋工程水动力学

基于敞水桨数据的船模自航数值仿真预报
 Numerical simulation for ship self-propulsion based on open water propeller data
 贾力平, 隋俊友
 JIA Li-ping, SUI Jun-you(970)

不同湍流模型对船舶阻力预报的影响
 Effect of different turbulence models on Ship Resistance Prediction
 许炆培, 刘玉珺, 沈林维, 魏艳
 XU Yang-kai, LIU Yu-jun, SHEN Lin-wei, WEI Yan (977)

基于 SWAN 嵌套网格的台风浪数值模拟
 Simulating typhoon waves by nested SWAN wavemodel
 于游, 邹丽, 姜胜超, 董进, 王爱民, 赵建
 YU You, ZOU Li, JIANG Sheng-chao, DONG Jin, WANG Ai-min, ZHAO Jian (983)

非对称正弦运动俯仰振荡翼水动力性能及流场结构数值分析
 Numerical studies on the pitching foil with asymmetrical sinusoidal locomotion
 朝黎明, 潘光, 张栋, 黄桥高, 施瑶
 CHAO Li-ming, PAN Guang, ZHANG Dong, HUANG Qiao-gao, SHI Yao.....(989)

基于 AWQA 的船舶横摇特性分析
 Analysis of ship rolling characteristics based on AWQA
 何昊阳
 HE Hao-yang(995)

毗邻多浮体群遮效应的数值模拟
 Numerical simulation of cloaking effect among multi-floating bodies
 王正科, 何广华, 张志刚
 WANG Zheng-ke, HE Guang-hua, ZHANG Zhi-gang(1002)

水下航行体兴波分析的快速常面元法
 A fast constant panel method for analysis of wave making by advancing submarine
 王正科, 何广华, 田乃文
 WANG Zheng-ke, HE Guang-hua, TIAN Nai-wen(1009)

基于 CFD 的双桨船定常回转运动螺旋桨负荷数值预报
 CFD-based numerical prediction of the propeller loads for a twin-screw vessel in steady turning motion
 袁帅, 邹早建
 YUAN Shuai, ZOU Zao-jian(1016)

箱船风场数值分析
 Numerical analysis of wind flow around a container ship
 杨春蕾, 于晨芳, 樊涛, 吕烈彪

- YANG Chun-lei, YU Chen-fang, FAN Tao, LYU Lie-biao (1022)
 浮式防波堤兼作波浪能发电装置的防波特性和波能转换特性研究
 Study on anti-wave performance and wave energy conversion performance of WEC-type floating breakwaters
 张恒铭, 周斌珍, 陈中飞, 丁鑫成, 张亮
- ZHANG Heng-ming, ZHOU Bin-zhen, CHEN Zhong-fei, DING Xin-cheng, ZHANG Liang (1028)
 高速水下航行体对转桨实效伴流分布的数值预报
 Numerical prediction of the effective wake profiles for a high-speed underwater vehicle propelled by contra-rotating propellers
 黄永生, 杨晨俊
- HUANG Yong-sheng, YANG Chen-jun(1034)
 规则波作用下深水半潜平台波浪砰击载荷数值模拟研究
 Numerical study of wave impacting load on a deep water semi-submersible platform under regular waves
 谷家扬, 谢玉林
- GU Jia-yang, XIE Yu-lin(1046)
 阶梯型月池附加阻力特性研究
 Numerical solution of hydrodynamic stability equation of unbounded domain flow with coordinate transform
 谷家扬, 吕鸿冠, 何进辉, 李志雨
- GU Jia-yang, LYU Hong-guan, HE Jin-hui, LI Zhi-yu (1053)
 敞水均匀来流条件下螺旋桨空化水动力性能的数值分析
 Numerical analysis of hydrodynamic performance and cavitation performance for a marine propeller
 韩承灶, 梁蕴致, 龙云, 季斌, 龙新平
- HAN Cheng-zao, LIANG Yun-zhi, LONG Yun, JI Bin, LONG Xin-ping (1063)
 NACA0020 剖面舵水动力性能研究
 Investigation of hydrodynamics of a NACA0020 section rudder
 张晨亮, 刘小健, 夏召丹, 万德成, 王金宝
- ZHANG Chen-liang, LIU Xiao-jian, XIA Zhao-dan, WAN De-cheng, WANG Jin-bao ... (1069)
 起重船作业过程水动力响应时域分析
 Hydrodynamic response analysis for the operation of crane vessel in time domain
 方田, 匡晓峰
- FANG Tian, KUANG Xiao-feng(1076)
 基于 CFD 的双体船型阻力优化研究
 The study on optimization of catamaran resistance based on CFD
 付丽宁, 孙树政, 顾楠
- FU Li-ning, SUN Shu-zheng, GU Nan..... (1084)
 均匀来流并列排布柔性圆柱升力特性研究
 Lift coefficients of multiple side-by-side cylinders in uniform flow
 徐万海, 张书海, 马烨璇, 高喜峰

XU Wan-hai, ZHANG Shu-hai, MA Ye-xuan, GAO Xi-feng	(1090)
不同措施对倾斜柔性圆柱结构涡激振动抑制研究	
Comparative study of different VIV suppression devices on inclined flexible cylinder	
徐万海, 覃雯琪, 栾英森, 许晶禹	
XU Wan-hai, QIN Wen-qi, LUAN Ying-sen, XU Jing-yu.....	(1097)
半潜平台涡激运动位移与力迟滞现象数值分析	
The hysteresis phenomenon between force and motion in vortex-induced motion of semi-submersible platform	
李思明, 赵伟文, 万德成	
LI Si-ming, ZHAO Wei-wen, WAN De-cheng.....	(1104)
基于兴波阻力最小的集装箱船船型优化	
Ship hull optimization of a container ship based on minimum wave making resistance	
王晋楷, 缪爱琴, 万德成	
WANG Jin-kai, MIAO Ai-qin, WAN De-cheng	(1114)
船型参数对参数横摇薄弱性衡准的敏感性分析	
Sensitivity analysis of ship parameters to the vulnerability criteria of parametric roll	
卜淑霞, 顾民, 郝寨柳, 鲁江	
BU Shu-xia, GU Min, HAO Zhai-liu, LU Jiang	(1125)
吊舱推进器回转动态水动力载荷数值预报研究	
The numerical prediction of hydrodynamics performance of dynamic azimuthing podded propulsor	
翟树成, 刘登成, 周剑	
ZHAI Shu-cheng, LIU Deng-cheng, ZHOU Jian.....	(1133)
超大型集装箱尾流场数值模拟研究与验证	
Numerical simulation and validation of wake field of super container vessel	
魏锦芳, 苏甲, 陈京普	
WEI Jin-fang, SU Jia, CHEN Jing-pu	(1140)
螺旋桨敞水性能数值计算置信度分析	
Credibility evaluation of numerical simulation on the open-water performance of the propeller	
洪方文, 张志荣, 刘登成, 郑巢生	
HONG Fang-wen, ZHANG Zhi-rong, LIU Deng-Chen, ZHENG Chao-sheng	(1146)
基于改进的螺旋桨体积力模型的船舶自航性能黏势耦合预报方法	
A coupling potential and RANS approach for ship self-propulsion prediction with improved propeller body force method	
孙文愈, 杨立, 陈京普	
SUN Wen-yu, YANG Li, CHEN Jing-pu.....	(1155)
规则波下圆柱波浪爬升特性的数值研究	
Numerical simulation of regular wave run-up on a circular cylinder	
刘正浩, 万德成	
LIU Zheng-hao, WAN De-cheng	(1163)
小水线面双体型深远海科学调查作业船稳定鳍的研究与设计	
Research and design of stabilizing fins for a SWATH deep sea science survey vehicle	

苗飞, 邬婷, 程红蓉, 葛伟帧 MIAO Fei, WU Ting, CHENG Hong-rong, GE Wei-zhen	(1175)
基于 CFD 的某成品油船的优化设计 4500DWT Oil Tank lines optimization based on CFD 梁家健, 王艳霞, 苏甲 LIANG Jia-jian, WANG Yan-xia, SU Jia.....	(1184)
基于非线性三维边界元方法的波浪中运动响应预报研究 Research of nonlinear three-dimensional boundary element method for ship motions calculation inwaves 王杉, 陈京普, 魏锦芳 WANG Shan, CHEN Jing-pu, WEI Jin-fang.....	(1190)
基于修正函数方法的船体线型变形技术研究 Study on hull form deformation technology based on modified function method 冯君, 胡世良, 魏锦芳 FENG Jun, HU Shi-liang, WEI Jin-fang.....	(1197)

海岸环境与水利水电和河流动力学

基于波浪增量分析的海上栈桥极限承载力及破坏模式研究 Study on ultimate capacity and failure mode of offshore trestle based on incremental wave analysis 刘强, 魏凯 LIU Qiang, WEI Kai	(1205)
聚焦波作用下直立圆柱高频荷载及 Ringing 现象研究 Higher-harmonic wave forces and ringing responses of vertical cylinders 张益, 滕斌 ZHANG Yi, TENG Bin	(1211)
水深对超空泡及波浪影响的三维数值模拟 Three-dimensional numerical simulation of the water-depth effects on supercavity and waves 施红辉, 张亚涛, 温俊生, 鲁林旺, 刘晨, 王天雨 SHI Hong-hui, ZHANG Ya-tao, WEN Jun-sheng, LU Lin-wang, LIU Chen, WANG Tian-yu	(1220)
燕尾坎水舌纵向扩散特性及其对消能的影响 Jet scatter of swallow-tail-bucket and its effect on energy dissipation 马飞, 吴建华, 骆超 MA Fei, WU Jian-hua, LUO Chao.....	(1226)
基于数值模拟的畸形波统计特性研究 Research on statistical properties of freak wave based on numerical simulation 毛青, 马玉祥, 袁长富 MAO Qing, MA Yu-xiang, YUAN Chang-fu.....	(1233)
长波波列传播特性的模拟研究 Numerical study of the propagation characteristics of long wave 李翔, 宁德志 LI Xiang, NING De-zhi	(1244)

双向波列共振作用影响的数值模拟研究 Numerical modelling studies of the wave steepness effects on the resonance interactions of two oblique wave trains 谢健健, 马玉祥, 董国海, 艾丛芳 XIE Jian-jian, MA Yu-xiang, DONG Guo-hai, AI Cong-fang	(1252)
海流对极值波浪非线性特性影响模拟研究 Numerical investigation on the influence of sea current on nonlinear extreme wave characteristics 宁德志, 邱诗惠, 滕 斌 NING De-zhi, QIU Shi-hui, TENG Bin	(1259)
基于 MIKE21 BW 模型的近岛礁波浪模拟研究 Numerical simulation of wave propagation near a reef island using MIKE21 BW model 邹丽, 董进, 姜胜超, 于宗冰, 于游, 裴玉国 ZOU Li, DONG Jin, JIANG Sheng-chao, YU Zong-bing, YU You, PEI Yu-guo.....	(1265)
水平细长圆柱潜体侧面遭遇内孤立波时的运动响应 Motion response of a horizontal slender submerged cylinder induced by lateral interfacial solitary waves 王若愚, 勾莹 WANG Ruo-yu, GOU Ying.....	(1271)
斜坡堤上的孤立波传播演变数值模拟 Numerical simulation of solitary wave propagation over a seawall 杭滔, 房克照, 孙家文, 刘忠波 HANG Tao, FANG Ke-zhao, SUN Jia-wen, LIU Zhong-bo.....	(1279)
基于 δ -SPH 方法的双层水平板防波堤水动力特性研究 Analysis on hydrodynamic performance of horizontal twin-plate breakwater based on δ -SPH 陈永焜, 潘驰, MERINGOLO Domenico D., 刘勇 CHEN Yong-kun, PAN Chi, MERINGOLO Domenico D., LIU Yong	(1289)
淮河蚌埠-洪泽湖段水文水动力模型的建立与验证 Establishment and verification of hydrological-hydrodynamic model for Huaihe River from Bengbu to Hongze Lake 张明, 王玲玲, 张凤山, 唐洪武 ZHANG Ming, WANG Ling-ling, ZHANG Feng-shan, TANG Hong-wu.....	(1297)
管道端部泥沙冲刷的三维数值模拟 Three-dimensional modeling of the scour near the pipe end 史舒婧, 黄杰, 梁东方, 张景新 SHI Shu-jing, HUANG Jie, LIANG Dong-fang, ZHANG Jing-xin	(1303)
寒区水电站库区冰情数值模拟研究 Study on numerical simulation of reservoir ice process for hydropower station in cold regions 陈胖胖, 程铁杰, 赵海镜, 张凯, 王军 CHEN Pang-pang, CHENG Tie-jie, ZHAO Hai-jing, ZHANG Kai, WANG Jun.....	(1312)
陡波作用下圆柱前后波浪爬高的数值研究	

Numerical investigation of the run-up of a cylinder induced by steep regular wave 樊翔, 张景新, 刘桦 FAN Xiang, ZHANG Jing-xin, LIU-Hua	(1319)
海啸波在南海北部大陆架上的波形演化 Evolution of tsunami wave over the continental shelves of the northern South China Sea 李志松, 赵曦, 安超, 刘桦 LI Zhi-song, ZHAO Xi, AN Chao, LIU Hua	(1327)
基于 CJK3D 的闸前河道洪水演进数值模拟研究 Numerical simulation of flood routing for rivers before sluices based on CJK3D model 戴文鸿, 丁伟 DAI Wen-hong, DING Wei	(1336)
二级斜坡进口式浅水垫消力池模型试验及数值研究 Experiment and numerical study on the performance of a new type of the stilling basin with shallow-water cushion with two-slope inlet 魏晶晶, 李连侠, 张法星, 廖华胜, 李秋林, 唐玉川, 易文敏, 吴文涛 WEI Jing-jing, LI Lian-xia, ZHANG Fa-xing, LIAO Hua-sheng, LI Qiu-lin, TANG Yu-chuan, YI Wen-min, WU Wen-tao.....	(1344)
基于 Mike21 的涪江唐家渡电航工程通航流量下闸门启闭方式优选试验研究 Experimental study on optimum selection of gate opening methods for Fu River Tangjiadu power transmission project based on Mike21 丁祖寒, 彭清娥 DING Zu-han, PENG Qing-e	(1355)
纵向拉伸型挑流挑距水力计算 The hydraulic calculation of longitudinal stretched ski-jump distance 张力方, 张建民 ZHANG Li-fang, ZHANG Jian-min	(1364)
某非常洞塞泄洪洞改建常规泄洪东模型试验研究 Model test analysis of the wall pressure in impacting zone 韩浩冉, 田忠, 刘文, 杨欣伟 HAN Hao-ran, TIAN Zhong, LIU Wen, YANG Xin-wei	(1371)
不同堰长比的 L 型溢流堰泄流能力试验及数值模拟研究 Experimental study on discharge capacity of side channel spillway of L style weir 李映瑾, 田忠, 韩浩冉, 杨欣伟 LI Ying-jin, TIAN Zhong, HAN Hao-ran, YANG Xin-wei.....	(1381)
突扩型进口浅水垫消力池底板附加挑流结构水力特性研究 Hydraulic characteristics of trajectory bucket dissipater in the stilling basin with shallow-water cushion with sudden enlargement inlet 唐玉川, 李连侠, 廖华胜, 张法星, 李秋林, 魏晶晶, 易文敏, 沈焕荣 TANG Yu-chuan, LI Lian-xia, LIAO Hua-sheng, ZHANG Fa-xing, LI Qiu-lin, WEI Jing-jing, YI Wen-min, SHEN Huan-rong	(1391)

尾坎对底流流态影响的数值模拟
Numerical simulation of influence of tail-weir on underflow condition
汪凯迪, 张建民
WANG Kai-di, ZHANG Jian-min.....(1400)

楔形体掺气设施的空腔特性研究
Study on cavity characteristics of wedge aerator facility
赵林洪, 王晶, 邓军
ZHAO Lin-hong, WANG Jing, DENG Jun.....(1410)

高坝升鱼机系统利用电站尾水集鱼的可行性研究
Experimental study on the feasibility of using tail water flow from power station to gather fish for a high dam
冯冰洋, 张法星, 杨宜文, 邓良军, 刘善均
FENG Bing-yang, ZHANG fa-xing, YANG Yi-wen, DENG Liang -jun, LIU Shan-jun... (1417)

基于 Sobol 算法的排水管网优化调控模型系统开发与应用
Development and application of optimal control model system for drainage network based on Sobol algorithm
尹海龙, 廉勃, 赵志超, 徐祖信
YIN Hai-long, LIAN Qing, ZHAO Zhi-chao, XU Zu-xin(1427)

湿地流动中污染物弥散过程的解析研究
Analytical study of the pollutant transport in wetland flows
王平, 伍梓, 曾利, 江伟权
WANG Ping, WU Zi, ZENG Li, JIANG Wei-quan.....(1434)

有压接无压泄洪洞闸室段水面线变化规律研究
Water surface profile in lock chamber of spill-tunnel
杨欣伟, 王伟, 田忠, 李映瑾, 韩浩冉
YANG Xin-wei, WANG Wei, TIAN Zhong, LI Ying-jin, HAN Hao-ran.....(1442)

二维浅水动力模型中过堰水流耦合模拟方法研究
Research on coupling simulation method of weir flow in Two-Dimensional shallow hydrodynamic model
马利平, 侯精明, 李丙尧, 张兆安, 张阳维
MA Li-ping, HOU Jing-ming, LI Bing-yao, ZHANG Zhao-an, ZHANG Yang-wei (1450)