



力学进展

第 50 卷, 2020 年

目 次

202001	高雷诺数壁湍流的研究进展及挑战 郑晓静, 王国华	1
202002	斜爆轰的多波结构及其稳定性研究进展 滕宏辉, 姜宗林	50
202003	冰区航行中船舶结构冰载荷的现场测量与反演方法研究进展 王键伟, 段庆林, 季顺迎	93
202004	过载性损伤与防护生物力学 王丽珍, 樊瑜波	124
202005	The empirical potential of two-dimensional nanomaterials and their hetero- structures Tan Yawen, Jiang Jinwu	169
202006	软体智能机器人的系统设计与力学建模 尹顺禹, 许艺, 岑诺, 金飘飘, 李铁风	195
202007	周期性激励控制翼型流动分离研究综述 刘志勇, 罗振兵, 袁先旭, 涂国华	221
202008	气动光学效应研究进展 孙喜万, 刘伟	249
202009	有限单元法在超声导波检测技术中的应用 陈洪磊, 刘增华, 李子明, 吴斌, 何存富	310
202010	基于大偏差理论的随机动力学研究 朱金杰, 陈朕, 孔琛, 刘先斌	358
202011	力学研究中“大数据”的启示、应用与挑战 杨强, 孟松鹤, 仲政, 解维华, 郭早阳, 金华, 张幸红	406
202012	认知神经科学中蕴藏的力学思想与应用 王如彬, 王毅泓, 徐旭颖, 潘晓川	450



Advances in
Mechanics

Volume 50, 2020

Contents

202001	Progresses and challenges of high Reynolds number wall-bounded turbulence <i>ZHENG Xiaojing, WANG Guohua</i>	1
202002	Progress in multi-wave structure and stability of oblique detonations <i>TENG Honghui, JIANG Zonglin</i>	50
202003	Research progress of field measurements and inversion methods of ice loads on ship structure during ice navigation <i>WANG Jianwei, DUAN Qinglin, JI Shunying</i>	93
202004	The biomechanics of injury and prevention <i>WANG Lizhen, FAN Yubo</i>	124
202005	The empirical potential of two-dimensional nanomaterials and their hetero- structures <i>TAN Yawen, JIANG Jinwu</i>	169
202006	System design and mechanical modeling of soft smart robots <i>YIN Shunyu, XU Yi, CEN Nuo, JIN Piaopiao, LI Tiefeng</i>	195
202007	Review of controlling flow separation over airfoils with periodic excitation <i>LIU Zhiyong, LUO Zhenbing, YUAN Xianxu, TU Guohua</i>	221
202008	Research progress of aero-optical effect <i>SUN Xiwan, LIU Wei</i>	249
202009	Application of finite element method in ultrasonic guided waves testing technique <i>CHEN Honglei, LIU Zenghua, LI Ziming, WU Bin, HE Cunfu</i>	310
202010	The researches on the stochastic dynamics based on the large deviation theory <i>ZHU Jinjie, CHEN Zhen, KONG Chen, LIU Xianbin</i>	358
202011	Big Data in mechanical research: Potentials, applications and challenges <i>YANG Qiang, MENG Songhe, ZHONG Zheng, XIE Weihua, GUO Zaoyang, JIN Hua, ZHANG Xinghong</i>	406
202012	Mechanical thoughts and applications in cognitive neuroscience <i>WANG Rubin, WANG Yihong, XU Xuying, PAN Xiaochuan</i>	450