

APPLIED MATHEMATICS AND MECHANICS

Vol.41 2020

INDEX

WANG Jincheng, QI Jin and WU Chuijie Analysis and Modelling of Optimal Dynamical Systems of Incompressible Navier-Stokes Equations	1(1)
LUO Wanqing, LI Haiyan and LIANG Jianhan Simulation of 2-Phase Flow in the Nozzle of the Arc-Heated Wind Tunnel Based on the Eulerian-Lagrangian Model	1(16)
LI Xiaoyang, LIN Zhiyang, LÜ Yupei and ZHANG Peng A 2D Continuous Dynamic Traffic Assignment Model and Traffic-Related Emission Estimation Considering Housing Distribution	1(27)
ZHENG Supei, WANG Ling and WANG Miaomiao Solution of 2D Shallow Water Wave Equations With the Moving-Grid Rotating-Invariance Method	1(42)
LI Hongpeng, LING Song, QI Zhenbiao, JIANG Keru and CHEN Lei Accuracy of the Mathematical Homogenization Method for Thermomechanical Problems	1(54)
LIU Hang, DU Guojun and FENG Yan Study on Equivalent Stiffnesses of Orthotropic Hemi-Spherical Convex Plates	1(70)
YIN Yihui, LI Qisheng, HAO Yu, LI Yifei, FAN Zhigeng and LUO Zhaoyu Research on Transient Temperature in the Work Room of a Rotary Arm Type Centrifuge	1(81)
CHEN Liguo and YANG Liangui A Nonlinear Boussinesq Equation With External Source and Dissipation Forcing Under Generalized β Plane Approximation and Its Solitary Wave Solutions	1(98)
XU Jianzhong and MO Jiaqi Asymptotic Solutions to a Class of Catalytic Reaction Robin Problems	1(107)
LI Ying A Splitting Iterative Algorithm for Solving Continuous Sylvester Matrix Equations	1(115)
NING Lizhong, ZHANG Di, NING Bibo, LI Kaiji, TIAN Weili and TENG Sufen Periodicity of Convection Under Lateral Local Heating	2(125)
JIANG Hailong, ZHU Peiwang and XU Donghua Derivation and Application of Productivity Equations for High-Pressure Gas Reservoirs With Gas Acceleration Effects	2(134)
PANG Mingjun, NIU Ruipeng and LU Minjie Wall Effects on Floating Characteristics of Bubbles in Shear-Thinning Fluids	2(143)
CHEN Mingfei, LIU Kunpeng, JIN Guoyong, ZHANG Yantao, YE Tianguai and LIU Zhigang Isogeometric in-Plane Vibration Analysis of Functionally Graded Triangular Plates	2(156)

HUANG Yaoying, YIN Xiaohui and LI Chunguang Theoretical Study on Multi-Parameter Inversion Non-Uniqueness Based on Elastic Displacements of Concrete Gravity Dams	2(171)
CHEN Qingqing, ZHANG Yuhang, ZHANG Jie, WANG Zhiyong and WANG Zhihua Study on a 2D Mesoscopic Modeling Method for Concrete With Voids	2(182)
SU Xiaohu and JIANG Jinping Existence of Time-Dependent Global Attractors for Beam Equations	2(195)
LIU Song, SHAO Yiming and PENG Yong Optimization of Multimodal Transport Paths for Refrigerated Containers Under Carbon Emission Restriction	2(204)
YANG Jingbao and MO Jiaqi Existence and Uniqueness of Solutions to Boundary Value Problems of a Class of Nonlinear 3rd-Order Differential Equations	2(216)
XUE Xue Front-Like Entire Solutions to Lattice Periodic Dynamic Systems With Delays and Global Interaction	2(223)
WANG Jincheng, QI Jin and WU Chuijie Modelling and Dynamics Analysis of Optimal Dynamical Systems of Fluctuation Velocity Equations for Incompressible Navier-Stokes Equations	3(235)
NING Lizhong, ZHANG Ke, NING Bibo, WU Hao and TIAN Weili Multi-Roll Type Convection Patterns in Cavities Heated Laterally	3(250)
PENG Yanglin, MA Aijun, LIU Hongying, DONG Rui, SHI Meng, LIU Lei, ZHANG Lei and LU Laijie An Integer Nonlinear Programming Method for Underwater Training Spacesuit Buoyancy Balancing	3(260)
YIN Qiang, QI Xiaoni and LIANG Wei Numerical Simulation of Head-on Binary Collision Between Seawater Droplets	3(268)
PIAO Siyang, ZHU Chunyan, CHU Fuyun and ZHANG Yahui Dynamic Characteristics Prediction of Launch Vehicles Based on the Equivalent Beam Model	3(280)
DU Jingfeng and WU Qiangjie Fracture Strength Analysis of the Plane-Stress State by the Ellipse Criterion	3(292)
BU Wankui, XU Hui and ZHAO Yucheng Analysis on Deformation and Stress of Bending Stratum Based on the Elastic Theory for Curved Beams	3(302)
TANG Hongmei, SHU Qingjiang and WANG Linfeng Reliability Analysis of Perilous Toppling Rock Considering Seismic Force Directions	3(319)
LI Fei A New Nonlinear Scalarization Function and Its Applications in Vector Optimization With Variable Ordering Structures	3(329)

LI Yuanfei	
Convergence Results on Heat Source for 2D Viscous Primitive Equations of Ocean Dynamics	3(339)
GUI Yifei and MA Jianmin	
Buckling Critical Load Calculation and Analysis of Axially Impacted Cylindrical Shells Embedded in Elastic Media	4(353)
YIN Xiaoli and LI Chunming	
On the Programmed Kinematics Computation of Crank Rocker Mechanism Based on the Kinematics Bifurcation Position Analysis	4(367)
FENG Guoyi, XIAO Junhua and SU Mengyu	
Fracture Mechanics Analysis of Mode-III Radial Multi Cracks on the Edge of a Hole With Surface Effects	4(376)
WEI Na, ZHANG Yuanhai and YAO Xiaodong	
Analysis on Restrained Torsional Shear Stresses of Box Girders With Corrugated Steel Webs	4(386)
WANG Shuang and JIAN Yongjun	
Magnetohydrodynamic Electroosmotic Flow in Zeta Potential Patterned Micro-Parallel Channels	4(396)
LI Yuanfei	
Phragmén-Lindelöf Type Results for Non-Standard Stokes Flow Equations Around Semi-Infinite Cylinder	4(406)
YU Kangning and GUO Lihui	
Limits of Riemann Solutions for Generalized Chaplygin Gas Magnetohydrodynamic Euler Equations With Source Terms	4(420)
QIN Wenjie, GUAN Haiyan, WANG Peipei and TANG Guangyao	
Dynamic Behaviors of Filippov Ecosystems Induced by Allee Effects	4(438)
YANG Pengfei, LI Ting, RU Hongwu and CHEN Haibin	
An Evaluation Method for Impacts of a New Satellite Hall on Boarding Gates	4(448)
LIU Shuang, MO Dingyong and ZHOU Zhiang	
Vector Variational-Like Inequalities and Vector Optimization Problems Involving ρ - (η, d) - B Invexity on Riemannian Manifolds	4(458)
LUO Gang, ZHANG Yulong, PAN Shaokang, JIA Hanghang and LIU Chang	
Response Parameter Analysis of Submerged Floating Tunnels Under Underwater Shock	5(467)
SUN Yunqing, WU Zhiqiang, ZHANG Guoqi and WANG Yuancen	
Bifurcation Analysis of Dual-Mode Dynamics for Marine Risers	5(480)
ZHONG Yin, LING Changming and XIE Gongnan	
Numerical Simulation Research of Effects of Pulsating Air Flow on Liquid Film Evaporation Over Vertical Plates	5(491)
LIU Jian, ZHANG Yixiong, FENG Zhipeng, YE Xianhui, CHEN Guo and QI Huanhuan	
Numerical Study of Fluidelastic Instability Fluid Force Model for Normal-Triangle Tube Arrays	5(499)
TONG Yao and YAO Yuzhe	
20-Node Hexahedron Symplectic Elements for Stress Analysis of Composite Laminates	5(509)

MA Chi, LIU Shizhong, LI Aijun and JIN Xuejun Shear Lag Effects of Continuous Corrugated Steel Web-Steel Bottom-Concrete Top Composite Box Girders	5(517)
ZHOU Fenglin, XIE Guizhong, ZHANG Jianming and LI Luoxing Near-Singularity Cancellation With the Angle-Distance Transformation Method for Boundary Integral Equations	5(530)
SHI Gaoping, ZHU Jianghong and YANG Jianhui Analytical Stress Solutions Around Tunnels With Arbitrary-Excavation Cross Sections Based on Conformal Mapping From a Unit Circle to the Tunnel Exterior	5(541)
ZHOU Feng, ZHU Guanghu and TANG Tian Effects of Age Structure, Contact Patterns and Vaccination on Transmission of the Hand-Foot-Mouth Disease	5(557)
LI Changtong Analysis of the Predator-Prey Model With Nonlinear Impulsive Control	5(568)
MAN Shumin, GAO Qiang and ZHONG Wanxie A Structure-Preserving Algorithm for Hamiltonian Systems With Nonholonomic Constraints	6(581)
LIU Simin, ZHANG Huihua, HAN Shangyu and LIU Qiang Solutions of Continuous and Discontinuous Anisotropic Heat Conduction Problems With the Numerical Manifold Method	6(591)
LÜ Shuaishuai, WANG Binwen and YANG Yu Optimal Design of Flexible Skin on the Leading Edge of a 3D Variable-Camber Wing	6(604)
HU Lijun, WU Shifeng and ZHAI Jian A 2D Flux Splitting Scheme Based on the AUSM Splitting	6(615)
XIE Yiding, WANG Zhengping and LIU Shuai Networked Non-Clustering Phase Synchronization in Coupled Neuron Systems	6(627)
LI Xiaohu, ZHANG Dingyi and SONG Zigen Multistage Coexistence of Different Chaotic Routes in a Delayed Neural System	6(636)
LIU Jian, ZHANG Zhixin and JIANG Wei Asymptotic Stability Analysis of Fractional Neural Networks With Discrete Delays and Distributed Delays	6(646)
GU Yumeng and HUANG Mingdi Existence of Periodic Traveling Waves for Time-Periodic Lotka-Volterra Competition Systems With Delay	6(658)
TONG Yinghao, TONG Dongbing, CHEN Qiaoyu and ZHOU Wuneng Design of a Finite-Time State Estimator for Nonlinear Systems Under Event-Triggered Control	6(669)
XU Jianzhong and MO Jiaqi Asymptotic Solution for Fractional-Order 2-Parameter High-Order Nonlinear Perturbed Models	6(679)
HUANG Zhenggang First-Order Sufficient Conditions for Existence of Local Extremums of Multivariate Functions	6(687)

- BA Zhenning, WU Mengtao, LIANG Jianwen and YU Zhiying**
Scattering and Diffraction by the Hill-Canyon Composite Topography for Incident Plane P- and SV-Waves 7(695)
- LIU Xingwei, LI Xing and WANG Wenshuai**
The Anti-Plane Problem of Regular n -Polygon Holes With Radial Edge Cracks in 1D Hexagonal Piezoelectric Quasicrystals 7(713)
- JI Wei, ZHANG Jingwei and LUO Kui**
Dynamic Characteristics Analysis of Composite Box Girders With Corrugated Steel Webs Based on the Equivalent Principle 7(725)
- HUANG Qiang, LIU Ganbin, LÜ Qing, HUANG Hongwei and ZHENG Rongyue**
Comparative Analysis of Dynamic Responses of Timoshenko Beams on Visco-Elastic Foundations Under Moving Loads 7(735)
- ZHANG Jin and ZHU He**
Fluid-Structure Coupling Wind-Induced Vibration Analysis of Transmission Lines Across 2 Close Hills 7(747)
- HUANG Zhitao, YANG Yu, SHAO Jiaru and ZHANG Yueyue**
Numerical Simulation of Sloshing-Mitigating Structures in Tank Trucks With the SPH Method 7(760)
- ZHANG Guangsheng, WANG Yufeng, JI Anzhao, LIU Xuefen and CHEN Zhanjun**
Mapping Calculation of Meandering River Well Locations Based on the Schwarz-Christoffel Transform 7(771)
- SHI Lanfang, WANG Mingcan and QIAN Zhengya**
Solution of Generalized Nonlinear Schrödinger Equations and $(2+1)$ -Dimensional Nonlinear Ginzburg-Landau Equations With a Riccati-Bernoulli Auxiliary Equation Method 7(786)
- LU Kun, LI Jianquan and TAN Hongwu**
Analysis of a Rotavirus Transmission Model With Temporary Immunity and Protection From Maternal Antibody 7(796)
- BAO Liping, HU Yubo and WU Liquan**
Singularly Perturbed Solutions of Burgers Equations With Initial Value Discontinuities 7(807)
- WANG Jincheng, QI Jin and WU Chuijie**
Modelling and Analysis of Optimal Dynamical Systems of Incompressible Navier-Stokes Equations With Pressure Base Functions 8(817)
- PANG Naihong and LI Hong**
Error Estimates of Mixed Space-Time Finite Element Solutions to Sobolev Equations 8(834)
- CHEN Yafei and ZHENG Yunying**
A Discontinuous Galerkin FEM for 2D Navier-Stokes Equations of Incompressible Viscous Fluids 8(844)
- ZHOU Qiang, ZHANG Zhichun, LONG Zhilin, WU Jingxiang, HUANG Bin and JIN Hua**
Vibration of Piezoelectric Nanobeams With Surface Effects 8(853)
- ZHANG Yong, ZHAO Yan and OUYANG Huaqiang**
Model Updating for Bolted Structures Based on the Bayesian FFT Method 8(866)

LI Ruoyu and WANG Tianhong	
Thermo-Mechanical Buckling Analysis of Thin Plates	8(877)
DU Yuwei, LI Bing and SONG Qiankun	
Event-Based State Estimation for Neural Network With Time-Varying Delay and Infinite-Distributed Delay	8(887)
SUN Fengqi	
Stability Analysis of Uncertain Singularly Perturbed Filter Error Dynamic Systems With Time Delays	8(899)
SHAO Chongyang, PENG Zaiyun, LIU Fuping and WANG Jingjing	
Berge Lower Semi-Continuity of Parametric Generalized Vector Quasi-Equilibrium Problems Under Improvement Set Mappings	8(912)
TIAN Hongqiao, ZHANG Zhixin and JIANG Wei	
Finite-Time Stability of Fractional-Order Linear Differential Systems With Delays	8(921)
LIU Xiaofei, YOU Shihui and XIE Chunkai	
Study on Instability of Clay Granular Slope Piles Based on Complex Network	9(931)
ZHAO Junhai, SUN Shanshan, DANG Huixue and LI Xinzong	
Numerical Simulation and Test Validation for Concreted Filled Steel Tube Columns Under Blast Loading	9(943)
FAN Zhengjie and LIU Zhanfang	
Numerical Analysis on Debonding of Crystal-Binder Interface in TATB-Based Polymer-Bonded Explosive Caused by Heating and Cooling Processes	9(956)
HAN Feng, SHEN Chen and XU Junwei	
Identification of Dynamic Forces on Aircraft Engine Mounts With the Least Squares Method	9(974)
BAO Siyuan, ZHOU Jing and LU Jianwei	
Free Vibration of Multi-Segment Beams With Arbitrary Boundary Conditions	9(985)
DANG Xinghai, ZHOU Peng, CHAO Xin, GUO Qiming and WU Runlin	
Elastoplastic Analysis of Ellipsoidal Hole Expansion in Unsaturated Loess	9(994)
BAI Yuchuan, XIN Weiyan and XU Haijue	
Similarity Solution of Jet Boundary Layer for the Initial Segment of a Delta	9(1011)
DOU Yilin and LUO Zhiqiang	
Numerical Simulation of Free Surface Wave Elevations of Point Sources With the Same Source Intensity and Immersion Depth in Uniform Flow	9(1026)
GUO Lianhong and LI Yuanfei	
Continuous Dependence on Boundary Parameters of the Original Equations for Large-Scale Wet Atmosphere	9(1036)
LIU Nengsheng and CAO Hengming	
Solution and Application of the Transient Phreatic Flow Motion Model Under General Function Boundary	9(1048)
ZHANG Chao and LIU Zhanfang	
Inhibition of Low Pressure on Interfacial Damage in Polymer Bonded Explosive Under Temperature Fluctuation	10(1057)

WANG Le and LI DongA Design Method of Impact Failure Criteria for Timoshenko Beams Under Support Excitations **10**(1072)**LI Ya, YI Zhijian, WANG Min and SU Kang**The Stress Intensity Factor of a Finite-Width Plate With a Mode- I Center Crack Subjected to Uniform Stress on the Crack Surface Near the Crack Tip **10**(1083)**SHI Jincheng and XIAO Shengzhong**Continuous Dependence of Solutions to a Class of Double Diffusion Perturbation Models for Porous Media **10**(1092)**LI Guoqing, LUO Shuai and ZHANG Li**Minimum Rank Correction Damage Identification Based on Modal Reduction **10**(1103)**HU Lijun and ZHAO Kunlei**A Modified Roe Scheme and Stability Analysis **10**(1110)**HUANG Yifan and LOU Qin**Power-Law Fluid Droplet Dynamic Behaviors in T-Junction Micro-Channels With the Lattice Boltzmann Method **10**(1125)**NING Lizhong, NING Bibo, HU Biao and TIAN Weili**Growth and Dynamics of Convection Patterns With Horizontal Flow **10**(1146)**SUN Tao, PANG Mingjun and FEI Yang**Effects of Bubble Spacings on Interface Properties and Wake Flow for 2 Contaminated Spherical Bubbles **10**(1157)**KONG Wei and LI Jia**Intermittent Turbulence Characteristics in the Stokes Layer for a Transitional Reynolds Number **10**(1171)**HAN Jiang, WANG Peng, DONG Fangfang, XIA Lian, CHEN Shan and LU Lei**Modeling and Control of Planar Redundant Parallel Robots Based on the Udwadia-Kalaba Method **11**(1183)**XIAO Yougang, ZHU Chengzhen, LU Hao and HAN Kun**CADRC for a Class of Underactuated MIMO Systems **11**(1197)**HAO Yunli, CHENG Xiangyang and WANG Maohua**Type-2 Direct T-S Fuzzy Control of Niche Equality Indexes **11**(1210)**LIU Xu and YAO Linquan**Vibration Analysis of Rotating Functionally Gradient Nano Annular Plates in Thermal Environment **11**(1224)**LIU Xiaofei and YOU Shihui**Analysis on Persistent Homology Characteristics of Failure Processes of Shallow Buried Tunnels Under Multi-Time Explosions **11**(1237)**XU Guangcan and SONG Qiankun**Joint Distribution and Profit Allocation in Urban Transportation Energy Systems **11**(1250)**GU Fengjiao, GAO Yan, REN Lijia, MA Jianwu and CHEN Lingqi**Adaptive Synchronization of Neutral Neural Networks With Mixed Delays and Lévy Noises **11**(1259)

HUANG Jun and CHEN Yuming	
Codimension-2 Bifurcation Dynamics and Infinity Analysis of a Class of Lorenz Chaos Systems With Memristors	11(1275)
XU Jianzhong, WANG Weigang and MO Jiaqi	
On a Class of High-Order Nonlinear Singular Perturbed Nonlocal Systems' Steady State Robin Problem	11(1284)
ZHU Hongbao and CHEN Songlin	
A Class of 2nd-Order Singularly Perturbed Time Delay Nonlinear Problems With 2 Parameters	11(1292)
XU Wentao, ZHANG Yanhui, TANG Guangwu and PAN Genji	
Variable Damping Characteristics and a Dynamic Analysis Method for Magnesium Alloy	12(1297)
LI Haitao, DING Hu, CHEN Liqun and QIN Weiyang	
Homoclinic Bifurcations and Chaos Thresholds of Tristable Piezoelectric Vibration Energy Harvesting Systems	12(1311)
WANG Zhen and DING Jieyu	
A Multibody System Dynamics Vector Model and the Multistep Block Numerical Method	12(1323)
WANG Jialin, WANG Chengyan and CAO Kerui	
A Mixed Integer Optimization Model Based on Inelastic Contraction for Cable Adjustment of Cable-Stayed Bridges	12(1336)
SHI Feng, MA Hongying, SUN Yizhen, XIANG Song, WANG Yanbing and LUAN Tingting	
Buckling Analysis of Composite Laminate Plates Based on the n th-Order Shear Deformation Theory	12(1346)
XIAO Yong, YU Jie, ZHANG Xinsen, QIAN Bin, WANG Yan and ZHANG Tongtong	
Research on P2P Optimal Scheduling of User Side Distributed Generation Under Ubiquitous Power Internet of Things	12(1358)
WANG Xiaoe, LIN Xiaolin and LI Jianquan	
State Feedback Control of Predator-Prey Systems With Holling IV Functional Responses	12(1369)
ZHANG Zhishu and GAO Yan	
Adaptive Synchronization of Neutral-Type Coupled Neural Networks With Stochastic Perturbations and Markovian Jumpings	12(1381)
XU Changjin and DUAN Zhenhua	
A Delayed Feedback Control Method for Fractional-Order Chaotic Financial Models	12(1392)
ZHANG Yamei, HAO Tao, YIN Sabei, ZHANG Meng and ZHANG Meng	
Finite-Time Function Projective Synchronization of Unknown Cohen-Grossberg Neural Networks With Time Delays and Stochastic Disturbances and Its Application in Secure Communication	12(1405)