## **Table of Contents**

<b>Editorial, Review Panel Members</b>	
<b>Application of 'UREAD' for the Energy Dissipation in Engineering Structures</b> F.H. Osman and R. Lupoi	1
Investigation of Modified Bi-Layered Tube Hydroforming by Pulsating Pressure M. Loh-Mousavi, A.M. Mirhosseini and G. Amirian	5
Review of Design for Manufacturing and Assembly Aspects to Designing Modern Micro-Wave and Sheet Metal Products  M. Lehtender, H. Eskelings and L. Verig	9
M. Lohtander, H. Eskelinen and J. Varis  Using TRIZ Methods in Product Design and Improvement of a Presenter Mouse S.J. Hu, L.H. Su, K.L. Lee, J.C. Chen and A.C. Huang	13
Miniature Air Compressor Design Based on Cross-Slider Mechanism G.J. Lee, S.H. Chi, J. Kim and T.S. Lee	17
Development of a Life Test Platform for Bearings Lubricated by Solid Lubricant under the Vacuum and Temperature Cycling Environment B.Y. Song, Z.J. Xie, D.Z. Su, F. Zhang and Q. Zhao	21
<b>Travelling and Steering Path Adjustment of Blueberry Harvesters</b> Z.P. Li and D.S. Li	25
<b>Design and Implementation of BLDCM Driver Based on SOPC</b> D.W. Meng, Y.F. Lu, Y.M. Xu and X.F. Wang	29
Structural Research of a New Firing Mechanism for Pneumatic Cannon S.G. Liu, G. Liu, Q.M. Gu and Y. Zhang	33
The Evaluating Method for Module Partition Schemes of Complex Product Systems X.Y. Teng, F.K. Kong and J.T. Zhang	37
Mathematic Model Research on Panel Layout Y.Q. Xu and Z. Yang	41
Numerical Computation of Dynamic Character Coefficient of Journal Bearing D.Y. Shi, X.J. Shi and X.B. Shi	45
Study of the Dynamics Coupling of Three-Axis Motion Simulator Q. Li and K. Xue	49
Research on Dimensional Variable Groove Cutting Machine of CNC H-Beam Wedge Head K. Xue, Y.Q. Li and F. Liu	53
Kinematic Modeling of the Variable Vector Propeller in Type of Disk Connecting-Rods F.L. Li, X. Chang, F.K. Kong and Z.B. Zhao	57
Mobility Analysis of Power Flow through the Half Shaft System of the Turntable Q.H. Li, K. Xue, Y. Li and T. Qin	61
The Scenario and Development of Industrial Design Educational Program S.F. Zhu, Z. Shang and Q.H. Liu	65
Design and Control System Research on Mating Device of Underwater Vehicle Z.L. Zhang and L.Q. Wang  Measurement and Control Parises of Puells and Bell Severy Drive	69
Measurement and Control Device of Preloaded Ball Screw Drive X.F. Ma, C. Hao and F.Q. Li  Establishment of Remanufacturing Index for Lecelly Manufactured Automative	73
Establishment of Remanufacturing Index for Locally Manufactured Automotive Components F. Iberahim, D. Abd Wahab, Z. Mohd Nopiah and S. Abdullah	77
The Development of a Novel Control System of Solid Desiccant Dehumidifier for Air Conditioning in Low Carbon Emission Buildings W. L. Peng and D. Z. Su	81
W.J. Peng and D.Z. Su  Error Estimation for Machining Center Contouring and its Experimental Verification H. Qiu and C. Lin	87
The Investigation of Prediction Surface Roughness from Machining Forces in End Milling Processes	07
J. Abbas, A. Al-Habaibeh and D.Z. Su	91

The Experimental Research on the Sound Absorption Coefficient of Several Different Mytilaria Laosensis Veneering Boards	0.5
C.W. Su, Q.P. Yuan, J.D. Huang and K. Yang	95
Initial Intension Analysis of Astromesh Structure of the Astromesh Deployable Antenna A. Luo, H.P. Liu, T.M. Zhang and Y. Li	99
Numerical Study of Active Control of Interior Noise in a Structural-Acoustic Enclosure M.G. Zhu, G.Y. Jin and N. Feng	103
Free Vibration of a Thin Shell Structure of Rectangular Cross-Section Y.H. Chen, G.Y. Jin and Z.G. Liu	107
Research on Modeling and Realization of Processing Action for Cloud Manufacturing Mode L.L. Li, Z. Gang, H.F. Gu and Y. Zhao	111
Mechanical Properties Identification of Viscoelastic/Hyperplastic Materials Using Haptic Device Based Experimental Setup A. Tabakci and E.I. Konukseven	115
Simulation Modeling and Analysis of TFT-LCD Color Filter Fabrication Plants J.C. Chen, P.T.B. Huang, H.Y. Peng, M.C. Hung, C.C. Chen, T.W. Peng, S.W. Li and S.M. Huang	119
Design of Nanoemulsions through Combination of Fixed-Volatile Oils S. Pengon, C. Limmatvapirat and S. Limmatvapirat	123
Molecular Dynamics Simulation of Aluminium Thin Film Surface Activated Bonding C.C. Chang	127
Polarity Dependence of the Electrochemical Discharge (ECD) M. Karnik, A. Ghosh and R. Shekhar	131
Determination of Heavy Metals in Fruits of Capsicum Annuum L. by Inductively Coupled Plasma Mass Spectrometry	
C. Limmatvapirat, T. Phaechamud and J. Charoenteeraboon	135
A Study on Warm Micro Backward Extrusion of SUS 304 Stainless Steel C.C. Chang, D.H. Nguyen and H.S. Hsiao	139
Determination of Heavy Metals in Rhizomes of <i>Alpinia galanga</i> by Inductively Coupled Plasma Mass Spectrometry C. Limmatvapirat, T. Phaechamud and J. Charoenteeraboon	143
Development of the Sliding Frication Tester under Vacuum and Cryogenic Environment F. Zhang, L.Q. Wang, B.Y. Song, Q. Zhao and Q. Shang	147
Stress Development in the Process for a Hybrid Fiber Wrapping Cylinder M.F. Ren, Q.Z. Huang and H.R. Chen	151
Atomistic Investigation of Thermal Effect on the Shear Deformation of Single Crystal	
Copper X.C. Ma and J.H. Yin	155
Influences of Nano-Calcium Carbonate on Friction Properties of Titanium Complex Grease J.H. Yin, J.J. Qu, B.Y. Song and D.Z. Su	159
Study on the Growth of Crystalline Er <sub>2</sub> O <sub>3</sub> Films on Si Substrates by RHEED Patterns Y.Y. Zhu, R. Xu and Z.B. Fang	163
Preparation of Ferrofluid Sealing Ship Stern Shaft and Design of its Seal Structure E.X. Yang, H.P. Liu and T. Qin	167
Environmental Impact Assessment of Lighting Products J.L. Casamayor and D.Z. Su	171
Sustainable Operation of a Transport System in Cities N. Chamier Gliszczyński	175
Solving Large-Scale Multipoint Lighting Design Problem Using Multi-Agent Environment A. Sędziwy and L. Kotulski	179
Dynamic Response on Stiffened Plate Subjected to Air Explosive Loading J. He, B.Y. Wang, M.W. Zhu and H.Z. Sun	183
Defining and Describing Human-Powered Products: Exploring Diverse Applications of	
Future Technology P. Johnson, H. Shin and L. Harmer	187
The Design and Optimization of the Diversion-Type Tidal Current Turbine F.K. Kong, G.L. Sun, Z.B. Zhao, M. Zhang and D.Y. Zheng	193

Ecological Impact Assessment and Eco-Design of Industrial Gearboxes D.Z. Su and Z.M. Ren	197
CAD/CAM for Five-Axis Printing Machine D. Shaw and C.W. Lai	201
Kinematic Calibration of PHANTOM Premium 1.5/6DOF Haptic Device O. Baser and E.I. Konukseven	205
Formal Verification of Embedded Systems Using the Alvis Approach L. Kotulski and M. Szpyrka	209
Prediction of Wrinkling and Bursting in Hydroforming of Tubes in Box-Shaped Die Using FEM	
A.M. Mirhosseini, M. Loh Mousavi and G. Amirian	213
Multi-Agent System for Distributed Adaptive Design L. Kotulski and B. Strug	217
Modal Parameters Identification Accuracy with a Short Time Parametric Algorithm L.H. Li, C. Schenck and B. Kuhfuss	221
Analysis of Feature and Welding Consideration for Metal Bellows H.J. Wen, Y.L. Lo, K.H. Chang and F.L. Wen	225
Modeling and Simulation of Vehicle Ride Comfort Based on MATLAB C.Q. Sun, R. Yang and Z.J. Ma	229
Trees Transplanting Machine Mechanical Model Establishment and Shovel Blade Finite	
Element Analysis J. Zhou, Z.P. Li and Q. Huo	234
Mature Blueberries Detection Technology Based on Color Information and Neural	
Networks Z.P. Li, D.S. Li and F. Han	238
The Research on the Torque-Tension Relationship for Bolted Joints J. Huang and L.S. Guo	242
Research of Mini Car Handling Stability Based on ADAMS Z.J. Ma, L. Chen and N. Xu	246
Multidomain Topology Optimization for Crashworthiness Based on Hybrid Cellular	
Automata L.S. Guo, J. Huang, A. Tavor and J.E. Renaud	250
Greenhouse Control System Based on WSN	
Y. Qiu and D.Z. Tan	254
Reliability Method for Strain-Based Fatigue Life Design under Random Loading Y.L. Ma, X.Q. Qu and H.B. Cui	258
Fuzzy Modeling to Simulate Surface Roughness in CNC Turning of AISI 1045 Steel A. Kohli, M. Sood and A.S. Chawla	262
Study on the Crash Energy Absorption Structure of a Vehicle Simulator Crash Testing	
<b>Equipment</b> X. Zhang, Q. Jiang, L.W. Li, W.W. Cui, J.J. Cui, Y. Cao and H.R. Zhao	266
Computer Aided Valve Design of Shock Absorbers Used in Vehicles I. Gerdemeli, A.E. Cotur, E. Kayaoglu and A. Candas	270
Development and Test of a Crash Experimental System of the Level Ejection Type	_, •
Automobile Bumper R. Yang and J.Q. Li	274
A General Modification Theory for Double-Enveloping Hourglass Worm Drives Y.P. Zhao and T.C. Wu	279
The Research on Oil-Air Lubrication and Oil Lubrication Used in the Sliding Friction	
Element L.Q. Li, S.G. Liu, J.L. Wang and L. Cai	283
Operational Behavior of Chloroprene Belts at their Performance Limit F.H. Schaefer	287
<b>Design of Large Deployable Networks Constructed by Myard Linkages</b> X.Z. Qi, Z.Q. Deng, B.Y. Ma, B. Li and R.Q. Liu	291
Application of RFID to Warehouse Management J.C. Chen, C.H. Cheng, K.J. Wang, P.T.B. Huang, C.C. Chang, C.J. Huang and T.C. Ting	297

Coordination and Incentive Mechanisms on Collaborative Investment in the Supply Chain P. Zhao, Z.K. Xiong and Y. Xiong	301
Automated Scheduling and Dispatching for TFT-LCD Color Filter Fabrication Plants J.C. Chen, J.G. Wu, C.C. Chen, T.W. Peng and H.C. Chien	305
Supply Chain Competition with Information Sharing R.Y. He, Z.K. Xiong and Y. Xiong	309
The Relationship between the Network Externalities of Complementary Modularity Z.Y. Huang and X. Liu	313