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| The Fuzzy Fault Tree Analysis of Rotary Working Table for C5250 Vertical Lathe J.C. Wang, J.X. Zhang, Q.F. Liu and C.M. Jiang | 1718 |
| Development of Handheld Ultrasonic Spot Welding Machines W. Zhu, C. Jiang, J.M. Zhu, Y. Wang and J.M. Zhang | 1723 |
| Research on Reliability of CNC Grinding Machine Based on Function Structure Tree G.P. Wang, G.W. Zhou and Y.Z. Jia | 1729 |
| Research Developments on Improvement of Spray Cooling Performance Y.Q. Wang, N. Liu and X.J. Xu | 1735 |
| Static Stiffness Analysis and Modal Analysis of Horizontal Milling & Turning Machining Center W. Cai and Z. Miao | 1740 |
| Characterization of Cutting Temperature and Ignition Phenomena of Magnesium Chip Using Infrared Imaging S.R. Sulistiyanti, Y. Burhanudin and S. Harun | 1744 |
| Virtual Manufacturing Technology and Application over Tooling Machines Z.F. Li and J. Xu | 1748 |
| Droplet Transfer on Three Phase Relations at Four-Wire Welding Robot S.M. Xie, B.L. Zhong, K.Y. Wu and Y.M. Wen | 1751 |
| Prospects Analysis of Integrated-Wrapped Multi-Layer Vessels Used as High Pressure Gaseous Hydrogen Storage Vessels P.Y. Song, J. Gao and F.B. Ma | 1755 |
| Research and Practice on the Process Cost Estimation Based on Features and Intelligent Computation of Locomotive Axle L. Sun, P. Lu, Z.Q. Ma, X.L. Wang and G.W. Qi | 1760 |
| A Surgical Training Biomodel Manufacture Using Fused Deposition Modeling Y. Way, M.A. Hasanudin Hafis and M.A.H. Md. Shukri | 1764 |
| Mathematical Model Establishment of Prefabricated Hole Flange-Forming of Equal Diameter Tee Pipe W.S. Yuan, Z.L. Wang, Z.D. Li and G. Cheng | 1767 |

Chapter 11: Hydro- and Aerodynamics Engineering

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| The Structure and Fluid Analysis for the New Type of Rotary Tubular Liquid Mixer Q. Wu, Q.L. Li and B.A. Han | 1773 |
| Studies on Fluid-to-Fluid Modeling of Critical Heat Flux in a Helically-Coiled Tube L.Z. Tan, J.T. Han, C.N. Chen and P.C. Dou | 1777 |
| Study of Hydrodynamic Characteristics of the Sloping Breakwater of Circular Protective Facing L.P. Zhao, J.Q. Zhang, L. Chen, X. Xie and J.Q. Cheng | 1781 |
| Study on Flow Separation Control by Vortex Generator Jets with Different Parameters Y.H. Xie, Z.Y. Shen and T. Fan | 1786 |
| Effect of Unsteady Wake on Flow Control of the Low-Pressure High-Lift Cascade with Synthetic Jet Y.H. Xie, H.C. Qu and H.Y. He | 1790 |
| Optimization Analysis of Height and Distance for Shelter Wind Wall of High Speed Railway K. Ye and R.X. Li | 1794 |
| The Study on Supply Air Pressure of Surface Supplied Diving System Based on Bernoulli's Equation Y.H. Xue, Z.G. Wang, B. Shao and Y. Duan | 1801 |

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| An Experimental Study on the Current-Following Characteristics of a Surface Drifting Buoy | |
| Y.J. Dong, X. Zhang, J.F. Guo, M.Q. Xu and X.M. Zhang | 1805 |
| Experiment Research on Effect of Airflow in Web Cleaner on Carding Force | |
| Y.P. Zhao, F. Xiao, X.G. Han and P.Z. Sun | 1809 |
| Comparison of Critical Heat Flux for R-134a Flow Boiling in a Horizontal Straight Tube and a Helically-Coiled Tube | |
| L.Z. Tan, J.T. Han, C.N. Chen and P.C. Dou | 1813 |
| Absolute Nodal Coordinate Formulation for Aeroelastic Analysis of Panel | |
| L.K. Abbas, X.T. Rui and P. Marzocca | 1817 |
| Application of Improved TVD Scheme in Hypersonic Heat-Flux Simulation | |
| C. Wang, S.P. Wu and N. Cao | 1822 |

Chapter 12: Heat Transfer, Thermal Analysis and Thermodynamics

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| Utilization of Waste Heat of Circulating Cooling Water in Hot-Stamping Power System | |
| P.P. Qin, H. Chen, L.L. Chen, Z. Qu, L.N. Yu and S.K. Liu | 1829 |
| Study on the Freeze-Drying Dual-Evaporator Refrigeration System | |
| P. Xia, M.L. Zhang and H.N. Sha | 1833 |
| Research on Cylinder Drop Stamping Part of Heat Recovery Regularity Based on Pro/Mechanica | |
| L.L. Chen, H. Chen, X.X. Liu, P.P. Qin, Z. Qu and L.N. Yu | 1837 |
| Experimental Study of the Temperature Field Equation in the Leeward Tunnel during Mine Fire Period | |
| W.C. Wang, Y.H. Jiang, T. Hou, W. Liu, Y. Lu and B. Zhang | 1842 |
| Thermal Analysis Study on Packaging Materials of Power-LED | |
| Y.B. Liu | 1849 |
| Shape and Size Optimization Design of Finned Brass Tube on the Central Air Conditioning | |
| S. Chen, B.Y. Zhang and J.H. Zhong | 1854 |
| A Perturbation Analysis of the Fully Developed Convective Heat Transfer inside a Longitudinal Corrugation Channel | |
| J.S. Shi and Q.Z. Zhang | 1858 |
| Analysis of Temperature Field of Nuclear Canned Pump and Thermal Deformation Calculation of the Shielded Can | |
| Y.J. An, C.Y. Guo, G.M. Liu and L.P. Xue | 1862 |
| Film Cooling Adiabatic Effectiveness for Cylindrical Holes Embedded in Multi Trench Configuration | |
| A.M.M. Abdala, F.N.M. Elwekeel and Q. Zheng | 1866 |
| Research of Absorption Refrigeration and Air Conditioning Equipment Using Waste Heat from Marine Incinerator | |
| X.H. Kong, X.J. Liu and X.F. Song | 1870 |

Chapter 13: Geotechnical Engineering and Vibration

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| Experimental Study on Ultrasonic Vibration Drilling of Titanium Alloy Micro-Hole | |
| Z.F. Liu and H.C. Zhang | 1877 |
| Test of Reliability of Micro-Accelerometer in Vibration Environment | |
| X.H. Ma and C.L. Li | 1881 |
| Slender Pipe Vibration Cracking Analysis and Vibration Reduction Measures | |
| Y.Q. Ding and J.B. Liu | 1885 |
| Improvement of Laminar Shear Container for Shaking Table Test | |
| H.F. Sun, L.P. Jing, Q.H. Wei and X.C. Meng | 1889 |
| Fractal Features of Cracked Backfill Particle Size Distribution | |
| Y.J. Zhu, D.Q. Deng and P. Wang | 1894 |
| Study on Abnormal High Intensity of Hanyuan during Wenchuan Earthquake Based on Resonance Effect | |
| W.H. Qi, J.S. Bo and P. Li | 1899 |

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| Investigation of Coal Failure under Triaxial Compression by CT Scanning R.D. Peng, L.L. Shao, J.B. Lu, P. Wang and L.T. Mao | 1903 |
| A New Soil Classification Method Using Normalized CPT/CPTU Parameters Based on Modified Bayesian Model Y.H. Miao and J. Yin | 1910 |
| Stability Analysis of Grouting Strengthening in the Goaf Underlying a Canal W.Y. Lu, X.X. Zhang, W.Q. Li, D.W. Tong and X.L. Wang | 1914 |
| Analysis on Rock Mass Around an Underground Crude Oil Storage Caverns in Containment of Groundwater Considering Fluid Solid Coupling S.Y. Yang and L.Y. Zhang | 1918 |
| The Application of Grouting Technology for Governance of Mined-Out Area under Large Channel Q. Yan and P.Y. Jia | 1922 |
| Analysis of Multi-Crack Growth in Asphalt Pavement Based on Extended Finite Element Method Y.Z. Sima and F.Z. Wang | 1926 |
| CT Image Analysis on the Meso-Damage of Construction Waste Recycled Brick G.S. Han, H.Y. Yang and X.P. Jiang | 1930 |
| Geohazard Risk Assessment Method Based on Logistic Regression Model S. Cheng, Y.S. Wang and F.Y. Chen | 1934 |
| Establishment of Index Factors in Geohazard Early Warning System S. Cheng, B.Q. Qu and Y.S. Wang | 1938 |
| Elastic-Plastic Static Analysis of BRBF Steel Frame Structure Y. Xie and E.H. Bao | 1942 |
| Research on the Seismic Performance of Construction Waste Recycled Brick Masonry Structure H. Su, G.S. Han and X.P. Jiang | 1950 |
| Application of Crosswell Seismic Technology in the Fine Reservoir Description G.H. Li, J.G. Feng, S.H. Zhao, G.L. Li and W.B. Zhang | 1955 |
| Dynamic Characteristics of a New Space Beam String Structure with Outer Truss Torus Y.L. Yao, G.Y. Ma and S.L. Dong | 1960 |
| Generation of Internal Tides by Tide-Topography Resonance over Weak Topography: Analytical Calculation L.D. Wu and C.B. Miao | 1964 |
| The Mechanism of Internal Tide Generation over Weak Topography L.D. Wu and C.B. Miao | 1972 |
| Resist Liquefaction of Subsoil of Metro and Improvement of Segments of Shield Tunneling W.H. Chen, Q. Song and M. Li | 1979 |
| Soil Stress of Shield Tunnel Face in Sands under High Hydraulic Pressure M.Q. Chen, J.K. Liu and J.H. Xiao | 1983 |
| The Earthquake's Relative Location Algorithms Effected by Data Recorded at Nearby Station B.T. Wu and E.G. Gao | 1988 |
| Consequences of Land Use in an Intensive Region in North China Plain J.X. Yan and J.F. Zhang | 1999 |
| Improvement on Xi'an Digital Seismic Telemetry Network C.X. Zhong and M.H. Huang | 2003 |
| Application of a Geohazard Early Warning System in Huaying Mountain Region, Sichuan Province S. Cheng, Y.S. Wang and M. Liang | 2009 |
| Blasting Vibration Signals Time-Frequency Analysis Based on S-Transform D.T. Li, J.L. Yan and L. Zhang | 2013 |

Chapter 14: Miscellaneous Researches for Tecnical Sciences

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| A Case Study of RFID-Enabled Payment Device M. Zhou | 2021 |
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| Design of Photonic Crystal Fibers Based Polarization Splitter with Hollow Ring Defects J.H. Li, J.Y. Wang, B.F. Zhang, Z.Y. Xu and H. Zhou | 2026 |
| Analysis to the Whiplash Effect in the Engineering Structure J. Liu | 2030 |
| Stability Analysis of Cd Contaminated Soil in Dabizhuang J.Y. Huang, H. Xu, Z.R. Liu, Y. Zhang and X.D. Bai | 2034 |
| Frequent Pattern Mining Based on Pattern Space Division in Map/Reduce Cluster Q. Liu and M. Chen | 2038 |
| Research on the Relationship among Technological Progress, Rebound Effect and Energy Efficiency P.P. Liu and C.S. Jiang | 2042 |
| Construction of Regulatory Boolean Networks Based on Expression Profiles Data Noise L.Q. Wang, G.Q. Chen and H.H. Zhao | 2046 |
| The Global Attractor of the 3D Complex GL Equation and the Estimate of its Dimensionality B.T. Li and Z.C. Yuan | 2051 |
| A Hybrid Treatment System Combining Enforced Diatomite Process Followed by Biological Aerated Filters for Wastewater Treatment W.L. Wang, X.J. Bi and B. Zhang | 2055 |
| Residues and Spatial Distribution of Organochlorine Pesticides in Arable Land from Liaocheng Y. Wang, B.H. Zhang and X. Zhang | 2060 |
| A Customer-Focused Electricity Bill Pay Points Siting Model K. Li, N. Zhou, L. Wang, Q. He, H.Q. Zou and W. Huang | 2064 |
| Numerical Simulation of Building Strength when Foundation Subsides Unevenly J. Ma, J. Zhao and Y.L. Zhao | 2069 |
| Research and Application of Collaborative Modeling for Prefecture-County Integrated System Based on Workflow Engine M.L. Wu, C.H. Liang and L. Wang | 2074 |
| Shading Effect and Optimal Tilt-Angle of Collectors in a Collector Array R.S. Tang and N.Y. Liu | 2078 |
| Predicting Urban Runoff under Different Surface Conditions in Xi'an, China with DRAINMOD Q. Quan, W. Luo, B. Shen, G.F. Zhang and L.Y. Dong | 2083 |
| Research on Energy Efficiency of Embedded Systems: A Systematic Mapping Study E. Ahmad, Y.W. Dong and B. Gu | 2088 |
| Attitude Change on the along Track Interference Baseline and Moving Target Velocimetry in the Distributed Satellite SAR System B. Huang | 2093 |
| Study on the Blanket Effective Area Model of Active Jammer Fixed in the Missile Aimed to Shipborne Radar J.Z. Men, Q. E and H.J. Wang | 2097 |
| Predicting Duct Height in Atmospheric Duct by Neural Network X.L. Zhao | 2101 |
| Personal Future Transport Development F. Zhang and J.G. Wan | 2105 |
| Segmentation of Adhering Cell Images Based on Two-Dimensional Histogram S.P. Dai, T. Jin and Q. Liang | 2108 |
| Research of Lighting Technology Based on the OpenGL J. Xu and Z.J. Shen | 2113 |
| Evaluation of Traffic Safety of Curved Section with Gray Theory Based on the Driving Track J.F. Xi, Z.H. Gao, B. Qi and H.Z. Liu | 2117 |
| Thin Cloud Removal Approach for Yellow River Remote Sensing Onitoring L. Chen, Y.F. Zhou and H.L. Jia | 2121 |
| Dealing with the Bottom Intersection Problem in Isopycnic-Coordinate Models Using the Flooding Algorithm C.B. Miao and X.Q. Lv | 2125 |

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| The Behaviors of Internal Solitary Waves near the Continental Shelf of South China Sea Inferred from Satellite Images X.D. Huang, J.W. Tian and W. Zhao | 2131 |
| The Deposit Features and Comprehensive Information Prospecting Model of Mengyejing Potash Deposits in Yunnan Province W.H. Yue and J.G. Gao | 2136 |
| On Asymptotically Non-Expansive Self-Maps in Metric Spaces and Related Stability of Dynamic Systems M. de La Sen, A. Ibeas and A.J. Garrido | 2140 |
| Design and Energy Analysis for Eco-Community Based on Constructed Marine Wetland J.D. Zhao, L.Z. Zhang and Y.B. Zhu | 2151 |
| Service Based E-Learning System Model Using IRT H.G. Choi and H.Y. Jeong | 2155 |
| A Study of Crime Predictive Modeling Using a Variable Y.S. Chung, H.G. Choi, J.M. Kim and K.R. Park | 2159 |
| A Novel Method for Jaccobian Matrix of 6PUS Parallel Mechanism X.Q. Tan, Z.J. Xie and G.Y. Li | 2162 |
| Development of CEM in Relation to Subsurface Electromagnetic Scattering A. Amna, J.D. Xu and A. Mueed | 2166 |