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| <b>Tunnel Ground Stress Test and Rock Burst Prediction Based on Hydraulic Fracturing Method</b><br>X.Z. Li, G.F. Wang and J.M. Li                                     | 1830 |
| <b>Ultimate Bearing Capacity Based on Unified Strength Theory</b><br>X. Zhou, G.J. Shao and F. Hu   | 1838 |
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| <b>The Research on 3D Building Model Based on Point Cloud Data</b><br>Z.W. Huang, S. He and L. Qiu   | 1864 |
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| <b>Passenger Route Choice Behavior with Congestion Consideration</b><br>Y. Zeng, J. Li and H. Zhu  | 1876 |
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| <b>Optimization Simulation on Blade Number of Grit Chambers with Rotational Flow</b><br>R.R. Sun, X.L. Wang, J.M. Tu and X.F. Ao   | 1894 |

## **Chapter 11: Project Management and Marketing, Assessment and Safety**

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| <b>Risk Assessment and Preliminary Study of Safety Management System on Construction Works</b><br>P. Gao, X. Liu and R.P. Tong  | 1917 |
| <b>Research on the Relational Governance of Construction Project Transaction</b><br>Z.S. Cheng  | 1922 |
| <b>Research on Construction Project Operation Mechanism of D-B Mode</b><br>J.W. Wang, J.Y. Li and J.W. Hu   | 1927 |
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| <b>Risk Evaluation Research and Model Building Based on ANP for BT Engineering Project</b><br>J.W. Zhang, G.F. Ren, Z.Q. Li and J. Li                                 | 1950 |
| <b>Rethinking of Supply and Demand of Residential Land in Taiwan's Most Popular Housing Markets</b><br>T.H. Ho and C.N. Li  | 1954 |
| <b>Construction Information Management Based on BIM Technology</b><br>Q.K. Wang, T.T. Mei and Z.L. Zu   | 1962 |
| <b>Informationize of College Infrastructure Project Management Base on BIM Technology</b><br>W.Q. Dang and J.Q. Niu   | 1967 |
| <b>Analysis of Weighing Values of Post-Assessment Indexes for Graded Crushed Stone Base Based on Analytic Hierarchy Procedure</b><br>B.Y. Yu, H.Y. Ding and J.Y. Tian | 1973 |
| <b>Improvement of Analytic Hierarchy Process and its Application for Coal Mine Safety Assessment</b><br>S.H. Dong, Y.K. Zhao and M. Li                                | 1979 |
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| <b>Research on Mobile Coal Mining Safety Monitoring System</b><br>J.X. Wang   | 1995 |
| <b>Research on System of Evaluating Efficiency of Safety Resources in Enterprises of Civil Engineering Based on Accounting Data</b><br>E.Z. Li, H.S. Xu and J.M. Liao | 2002 |
| <b>Study on Optimal Selection for Soft Soil Foundation Treatment Methods of Port Engineering</b><br>P. Tang and D.Y. Yu   | 2007 |
| <b>Study on Regularity of Coal Mine Blasting Accidents of China after 2000</b><br>J.Y. Dong, G. Fu, Z. Chen and S.D. Jia  | 2014 |
| <b>Study on Seismic Safety Analysis of Yi Minority Traditional Dwelling in Yunnan</b><br>X.L. Li and H.J. Dou   | 2021 |
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