

Contents

Part I Industrial Engineering Theory

Application on Product Information Storage of Expanded Linear List Based on Two-dimension Array	3
Neng-hao Cai	
Key Factors of K-Nearest Neighbours Nonparametric Regression in Short-time Traffic Flow Forecasting	9
Jing-ting Zhong and Shuai Ling	
The Distribution of Residual Control Rights Under Self-interest Behavior	13
Xing Bi and Jin Dong	
VPDs Operating System Modeling and Performance Analysis Based on Generalized Stochastic Petri Nets.	17
Shuo Cheng, Bi-xi Zhang, Guang-hui Zhou and Sheng-qiang Hu	
Research on Initiative Knowledge Spillovers of Supply Chain Entities Based on Service-Oriented Manufacturing	21
Dan-li Du, Qiu Jin and Hong-yan Zhao	
Study on the Relationship between the Government and Enterprises Based on Dynamic Game.	27
Yicheng Feng	
The Method of Time Synchronization between Telecommunication Base Stations with GPS Common View	31
Xu Du, Yu Hua, Xiao-zhen Jin and Hai-ni Jia	
Research on Random Mixed-model Two-sided Assembly Line Balancing Using Genetic Algorithm	35
Lei Wang, Kai-hu Hou, Wei-zhen Liao, Zheng-mei Jie, Cheng Chen and Ying-feng Zhang	
The Capacity Preparation in the Two-period Supply Chain with Remanufacturing Products and IOT	41
Fu-rong Tan, Han-jiang Zhang, Hong-xia Zhong and Jia-yu Zhang	
Utility-Cost Model for Discrete Event Logistics Systems Simulation	47
Yu-kun Liu and Meng-rui Shan	

Improved Computer Methods for Sequencing Operations for U-Shaped Assembly Lines	51
Li-yun Xu, Loïc Bélec, Wei Liu, Qi-fang Gu and Ai-ping Li	
The Reuse Method of Design Knowledge Based on Knowledge Component	57
Ming-ming Dong, Yan Yan, Guo-xin Wang, Jia Hao and Zhen-jun Ming	
Technology Satisfaction Measurement in Complex Product Development	61
Heng He	
Multiscale Analysis of Reconfiguration for Reconfigurable Manufacturing Systems	65
Yan-di Bao, Guo-xin Wang, Jing-jun Du and Yan Yan	
Benefiting from Supplier Supply Network Position: The Manufacturer Perspective	71
Sui-cheng Li and Na Li	
The Analysis of the Industry-University-Research Cooperation of China Based on ISM	75
Peng Shen, Lu Feng and Ying Shen	
Optimization of Supply Chain Network with Grey Uncertainty Demand by Improved Artificial Fish Swarm Algorithm	79
Jin-cheng Fang, Chang Ke and Hua Chen	
Generalized Retarded Bihari-like Inequalities and Applications	85
Qing-ling Gao	
Influence Factors Analysis of the 3D Printing Rapid Prototyping System Using Entropy Method and System Dynamics Model	89
Li-jie Feng, Ya-zhou Wang, Jin-feng Wang and Xue-qi Zhai	
Multi-objective Collaborative Optimization of Production Scheduling for Discrete Manufacturing	95
Xiao-ying Yang, Xi Wang and Hua-yue Sun	
Job Shop Scheduling Based on Improved Discrete Particle Swarm Optimization	99
Lvjiang Yin, Lijun Yang and Mingmao Hu	
Study on Decomposition of Things and the Corresponding Matrix Equation . . .	103
Kai-zhong Guo, Ran Li and Jin-xin Li	
Study on Service Station Layout for Field Maintenance Service of Agricultural Machinery	107
Xin Li, Jing-qian Wen, Yao-guang Hu and Xiao-feng Duan	
On a Dual Sourcing Policy in Two-sided Disruptive Supply Chain.	113
I-Chen Lin and Yu-Hsiang Hung	

The Analysis of Special Equipment Accident Factor Based on Rough Set.	119
Jian Zhang, Hua-jie Li and Xue-dong Liang	
Feature Recognition for Virtual Machining.	123
Shixin Xú, Nabil Anwer and Lihong Qiao	
Application of Cell Automaton in the Production Quality Inspection	129
Qing-hui Dai and Lin-lin Xing	
Study on Evaluation System of Product Quality Oriented Supply Chain	133
Xing-yu Jiang, Dong-be Hu, Chao Gao, Xin-min Zhang and Li Li	
Robustness to Measurement Errors and Diversity in Resource Sharing in Time-driven Activity-based Costing	139
Xiao-dan Wu, Xiang-jun Zuo, Dian-min Yue and Dan Liu	
Applied Research on Virtual Ergonomics For Vehicle Based on SolidWorks . . .	145
Liang Zhang, Ding-dan Wen, Pei-zhou Sun and Ping Zhang	
Intelligent Manufacturing Enterprises' Efficiency Evaluation of Technological Innovation: Research Based on DEA.	149
Feng Liu and Jian Ning	
Evaluation Research on the Intensive Development of Regional Higher Education Based on Complex System Theory	155
Yun-ke Sun and Da-cheng Guo	
A Study of Coal Collection and Distribution System Based on Critical Path Method	159
Li-jing Zhang, Yan-rong Pang and Shuang Liu	
Research on Service Mode of Auto Parts Technology Innovation Based on the Industrial Chain	163
You-yuan Wang, Xue-qin Xiao and Yu Zhou	
Arterial Velocity Planning Algorithm based on Traffic Signal Information	167
Song Wen, Zhang Xin, Tian Yi, Zhang Xinn and Song Jianfeng	
A Centralized Scheduling Approach to Multi-Agent Coordination	171
Wei Niu, Ying-qiu Xu, Jie Wu and Ying-zi Tan	
A Pilot Study on the Application of Cloud CRM in Industrial Automation. . . .	177
You-cheng Shan, Chao Lv and Wen-bo Cui	
Research on Quality and Efficiency of the Medical Decision-Making System Based on Robustness Theory	181
Jiang Shen, Yanhong Lin and Man Xu	
Comprehensive Evaluation Method for the Extended Indicators of Maintenance Management Based on the Standard Deviation of Weights	185
Hui Zheng and Xin-lu Bai	

Research on Key Technologies of 3D Geology Spatial DB Engine	189
Pei-gang Liu, Fei Hou and Mao Pan	
Dependency Evaluation of Disaster Prevention and Mitigation for Factors of Network Information Service Quality	193
Yang-xu Li, Zhuo-ning Zhao, Yuan He and Jing Liang	
An Ontology-based Semantic Retrieval Model for Fault Case	199
Qian-yun Ke, Qing Li and Jin-liang Chen	
A Convergent Nonlinear Smooth Support Vector Regression Model	205
Li-ru Tian and Xiao-dan Zhang	
Game Analysis of Knowledge Resources Transactions	209
Jiawei Yan, Yaoguang Hu and Jingqian Wen	
Three-Dimensional Decoration UCD Cross-Platform Interactive Software Design Methods Base on UCD in Consumption Patterns of Information.	213
Zhendong Wu, Weiming Guo and Xiaoqun Ai	
 Part II Industrial Engineering Practice	
Evaluation of Wastewater Treatment Quality in the West Bank-Palestine Based on Fuzzy Comprehensive Evaluation Method	219
Xing Bi, Rabah A.M. Isaili and Qibin Zheng	
Simulation-Based Environmental Analysis for Production Lot-Size Determination in Terms of Material Flow Cost Accounting	223
Run Zhao, S. Takakuwa and H. Ichimura	
Fault Tree Analysis on Boiler Water Shortage Accidents Based on Safety Ergonomic Theories	229
Yu-bin Ai, Xue-dong Liang and Zhao-xia Guo	
The Discussion on the Production Quality Management about Inner Tube Improvement of Plastic Company “S	235
Rui-yuan Xu, Hai-wei Gao and Qing-na Meng	
ADAMS Modeling and Dynamics Simulation of Mosaic Particle’s Motion State.	239
Jian-jun Bu and Xing-bo Wang	
Design of White LED Lighting and Digital Communication System	245
Bo-hao Chen and Kai-ru Lei	
Research on Data Analysis Model of Risk Assessment in Oil and Gas Drilling	249
Jiadi Li, Tingke Li, Wei Li and Lin Jiang	
Research on Improvement of Plant Layout Based on Process Analysis.	253
Da-wei Zhou, Li-tao Wang, Li-ying Feng, Dao-zhi Zhao and Tian-song Guan	

Comparison Study on Algorithms for Vehicle Routing Problem with Time Windows.	257
Can Yang, Zhao-xia Guo and Ling-yuan Liu	
Research on Order Allocation Problem with Multi-demand in Steel Processing and Distribution Centers.	261
Fang-ping Xu and Wen-ying Ding	
Study on the Performance of Chinese Manufacturing Low-carbon Technology Innovation in the Global Value Chain	265
Ke-xin Bi and Xiang-xiang Wang	
Personnel Behavior and Modeling Simulation in the Emergency Evacuation . . .	271
Xi-meng Wu, Jie Wang and Xiao-hong Guo	
Research on Subway Traffic Dispatcher Team Error Issues in Accident Management	277
Feng Lin, Jie Wang and Lian-feng Xu	
Modeling and Analysis of Conceptual Design-Oriented Product Technology Network	281
Jian Xie, Lin Gong and Zi-jian Zhang	
An Advanced Multi-objective Genetic Algorithm for Mixed-model Two-sided Assembly Line Balancing.	287
Zheng-mei Jie, Kai-hu Hou, Yu-jie Zheng, Lei Wang, Cheng Chen and Ying-feng Zhang	
Study on the Application of the Operator CWGA for Selecting a Supplier in Supply Chain Management	293
Shen Hang and Liu An-Min	
Modeling and Machining End Mill via Object ARX	297
Qi-rong Luo and Xing-bo Wang	
Optimization of Urban Traffic Lights System Based on Human Factors Engineering.	303
Ya-fang Zheng, Ling Song, Yan Xu, Yu-ping Zhang and Li-zhen Zhang	
Bus Scheduling Optimization Based on Improved Strength Pareto.	307
Xiao-yue Yang, Xin-yu Li, Jun Liang and Cheng Peng	
Simulation of an Astronaut's Connecting Bolt Action in Orbit.	313
Ai-ping Yang, Xin Zhang, Guang Cheng, Hui-min Hu and Chau-Kuang Chen	
Research on the Coal Mine Production Logistics Security Status Based on Key Resources Recognition	319
Jin-feng Wang, Yun-fei An, Li-jie Feng and Xue-qi Zhai	
Universal Simulation Model of Autonomous Vehicle Storage & Retrieval System	325
Sai-peng Zhang, Ning Zhao and Yin-fan Zhao	

Research on Cylinder Buffer Control Based on AMESim	331
Chao Song and Ming He	
Design of the Integrity Inspection System for the Resistor Color Code	335
Lin-wei Mao, Yao-guang Hu, Jing-qian Wen and Jia-wei Ke	
Differences in Episodic Memory between Patients with Alzheimer's Disease and Normally Aging Individuals.	339
Min-Sheng Chen and Wei-Ru Chen	
Optimal Capacity Allocation in an Assembly Job-shop using a Gradient-based Heuristic.	345
Liang Huang and Xin Shi	
Process Optimization for Wiring Technology of Aircraft Harness Based on ECRS Principle	349
Pei Gao and Jing-qian Wen	
A Multi Objective Stochastic Optimization Case of Heavy Cargo Transport Scheme.	355
Shi-qi Tong, Jian-ru Zhang and Yue Lu	
Study on Simulation-based Green Evaluation Methodology of Discrete Manufacturing System.	359
Zheng-ping Luo and Qian-wang Deng	
The Monitoring Path Forecasting Method in Digital Main Control Room of Nuclear Power Plant and its Verification	365
Hong Hu, Li Zhang, Kebing Liao and Cannan Yi	
Modeling Technology on Aircraft Cable Harness in Virtual Assembly Environment	371
Jing Yan, Wei Hong, Lu Ju, Bi Lan and Xu-hui Li	
Implementing Low Carbon Improvement Practices in Supply Network	377
Yongjiang Shi and Jialun Hu	
The Application of Standard Hour in Commercial Aircraft Manufacturing Industry.	387
Shunlong Jiang	
Comfort Analysis of Automobile Seats Based on 3D Human Models in SolidWorks	393
Ping Zhang, Ya Wen, Quan Yuan and Gen-wei Zhang	
A New Optimization Procedure to Design Campus Bus System	397
Guo-yi Fu	
EWMA Control Chart of NO_x Atmospheric Environmental Monitoring System	403
Hu-sheng Lu and Jian-jing Zhen	

Research of Electricity Enterprise Credit Assessment Combining Fuzzy Multiple Attribute Decision Making with Improved Analytic Hierarchy Process—Taking Baoding Electricity Supply Company as Example . . .	407
Xin-Bo Dai and Yuan-sheng Huang	
SMT Optimization Based on the Cellular Genetic Algorithm	411
Xuan Du, Deng-qiao Li and Li-li Sun	
Automatic Detection System of Surface Defects on Metal Film Resistors Based on Machine Vision	415
Jia-wei Ke, Yao-guang Hu, Jing-qian Wen and Lin-wei Mao	
Ontology Model for Assembly Process Planning Knowledge	419
Zhicheng Huang, Lihong Qiao, Nabil Anwer and Yihua Mo	
Energy Consumption Forecast Model of Urban Residential Buildings in Hainan	425
Li-ping Fu, Xiao-gang Li and Yuan Liu	
Research on CBR-RBR Fusion Reasoning Model and Its Application in Medical Treatment	431
Jiang Shen, Jin Xing and Man Xu	
A Selection Algorithm of Survey Lines and the Interactive Mode of the Sounding Curve	435
Lin-peng Lyu, Juan Li, Jin-sheng Zhang, Zhi-peng Tian and Hong-tao Bai	
The Study of Long-term Electricity Load Forecasting Based on Improved Grey Prediction	441
Hong Wang, Kun Yang, Lin-yan Xue and Shuang Liu	
Research and Application of an Intelligent Decision Support System	445
Xiaoqing Zhou, Jiaxiu Sun and Shubin Wang	
Design and Development of Parametrical Modeling Module for Warheads	449
Zhi-fang Wei, Hui Zuo, Fang Wang and Xiao-guang Li	
Study on Measure of Matching Degree between Management Platform and Information Platform in the Context of IS Success Based on Kullback-Leibler Divergence	455
Qian Wang, Jin Shi and Feng Liang	
 Part III Engineering Management	
A New Algorithm for the Risk of Project Time Based on Monte Carlo Simulation	463
Xing Bi, Zhiyuan Chen and Lei Li	

Investment Risk Analysis of Gas and Pipeline Construction Project Based on the Gray Analytic Hierarchy Process	467
Lin-lin Mu and Xing Bi	
Risk Analysis for Chinese CDM Projects Seller Enterprises Based on Multi-step Fuzzy Comprehensive Evaluation	473
Xing Bi and Chi Wang	
Research on the Risk Identification for the International Engineering Contracting EPC Projects	477
Tang Tang	
The Relationship between Top Management Team and Firm Performance—Data from China GEM Listing Corporation	483
Peng Yang, Su-ying Gao, Long Xu and Chun-ying Song	
The Correlation of Urban Cluster and Cultural Industry Cluster	487
Guo-jun Chai	
Effect of New CEO Power on Managerial Compensation Gap: A Conceptual Model	491
Shuo Wang and Chang-zheng Zhang	
Social Capital of Private Businessman Class in China	497
Jia-di Fu and Guan-jian Qiu	
Risk Management of International DCS Projects Based on Multilevel Fuzzy Comprehensive Evaluation Model.	501
Jia-sheng Xiao, Rui Miao and Yu-dong Si	
Claim Practice for the Drainage of Foundation Pit of Huangjinping Hydroelectric Station.	505
Li Tu and Li-min Jia	
Investigation on Work Stress and Effective Coping Style Among Post-80s Generation	509
Ya-rong Wang, Jing-ya An and Zi Yang	
Board Independence and Performance of Listed SMEs in China: Based on the Perspective of Concentrated Ownership	515
Qing-mei Tan, Pan Liu, Meng-ying Jing and Xiao-fang Dong	
Study on Prediction of Urbanization Level Based on GA-BP Neural Network	521
Gang Hao	
Research on the Effect of the Grain Financial Direct Subsidies Based on Grey Incidence Analysis	525
Xiao-zhuo Wei, Li-fu Jin and Jun-min Wu	

The Role of External Knowledge Search in Firms' Innovation Performance: Evidence from China	529
Hang Wu	
Analysis of High-Tech Industry's Development in Shandong Province Based on PLS	535
Xu Yang and Xing-yuan Wang	
Game Analysis of Engineering Quality Control Base on Owner and Superintendent	539
Hui Gao, Zhao-yi Ye and Hai-rong Feng	
Study on Marketing Strategy for Aviation Manufacturing Enterprise Based on Domestic Military Market	543
Hui Gao, Zhao-yi Ye and Hai-rong Feng	
Analysis on Key Influence Factors of Chinese Special Equipment Safety Supervision Capacity	547
Zhu Zeng, Yun Luo, Jie Feng, Yu-qian Sun and Yan-peng Yang	
An Empirical Study of Environmental Kuznets Curve in China	551
Yang Zhoumu, Wang Wenping, Yang Yibo and Fang Fen	
Based on Credibility Measure the Force of Mortality in Life Insurance Actuarial	555
Minying Yuan, Wenwen Han and Da-jun Sun	
The Strategic Management of Creative Products Based on Bertrand Competition Model	559
Jianrong Hou and Xiaofeng Zhao	
The Collaborative Management Analysis of Organization Coordination Network in Major Scientific and Technological Engineering	563
Xin-wen He, Yan Wang, Ji-xun Xin and Guang-ming Hou	
Research on the Relationship between Reduction of State-owned Shares and Enterprise Value—the Empirical Data from a-Share Listed Companies of China	567
Yang Xiang and Rong Fu	
Research on Health Service Cost Accounting Based on the Application of TDABC	573
Li Luo, Feng-Jiao Wang, Wei Cheng, Fang Qing and Ting Zhu	
Analysis of Operation Mode of Automobile Implantation Marketing	579
Shao-ling Wu, Jiang-hua Wang and Jing-wen Zhou	
Pricing of Chinese Defaultable Bonds Based on Stochastic Recovery Rate	583
Ping Li, Jing Song and Bojie Chen	
A Lightweight Workflow Model for Performance Evaluation System of Customer Managers in the Bank	589
Ji-cheng Liu	

On the Influencing Factors of Equity Incentives of Listed Logistics Companies in China	593
Sha Lv and Qin-xian Dong	
Origins and Trends of the Multinational's R&D Internationalisation Research- a Systematic Literature Review	597
Xingkun Liang, Zhutian Xing and Yongjiang Shi	
Research on Investment Capacity Model for Power Grid Enterprises.	607
Lie-xiang Hu, Qian Xu, Xiao-fen Lu, Qiong Wang, Ming Fu and Hong-hao Qin	
Research on Correlation Measurement of Combined Inventory Financing Price Risk	611
Yun-ke Sun and Da-cheng Guo	
Research on FDI and China's Investment Promotion Policies in the Post Financial Crisis Era.	615
Yun-ke Sun and Da-cheng Guo	
Study on Enterprise Comprehensive Budget Management System Dynamic Framework Design Based on TRIZ and BSC	619
Haicao Song and Shuping Yi	
Research on the Model of People Being Led Satisfaction Based on Cadre Assessment.	623
Quan-qing Li and Xiao-shu Li	
Correlation Analysis and Dynamic Evaluation on City Aquatorium Ecological Service Value—Taking Xianning City of Hubei Province as an Example.	627
Ping-fan Liao, Xiao-yang Yang, Zhi Chen and Jin Zhang	
Macro Management Innovation, Institution Environment and Enterprise's Internal Capacity—A Case Study on Cultural Enterprises in Tianjin.	633
Li-ping Fu, Jun-sheng Song and Tian-pin Shao	
The Demonstration on Influence Factors of Engineering College Students' Innovation Ability	637
Xiang-sheng Meng, Zi-biao Li and Cun Song	
The Operational Risk Management Information System in Commercial Banks of China: Issues and Analysis	643
Shaoqiang Qu and Yongping Ma	
The Complementary Effect of Knowledge Management Strategies on Firm Performance	649
Yi Li, Xue Zhou, Nan Zhou and Jun You	
Analysis on Methods to Applying TRIZ to Solve Management Innovation Problems	655
Ya-qiang Zhang and Hong-mei Li	

Analysis of Hot-Topics and Prospect for Study on Theory of Financial Management in China	659
Yu-di Zhou and Rong Fu	
Challenges Associated with Automation of NPO: Requirement Engineering Phase	665
Misha P. Mathai, Sunny Raikwar, Rahul Sagore and Shaligram Prajapat	
A Reinforcement Learning Method of Obstacle Avoidance for Industrial Mobile Vehicles in Unknown Environments Using Neural Network	671
Chen Xia and A. El Kamel	

Proceedings of the 21st International Conference on
Industrial Engineering and Engineering Management
2014

Qi, E.; Shen, J.; Dou, R. (Eds.)

2015, XXIII, 675 p. 405 illus., 100 illus. in color.,

Hardcover

ISBN: 978-94-6239-101-7

A product of Atlantis Press