

Table of Contents

Session 1

Thickness Effect on Fracture Toughness and Plastic Zone Size	1
Zhenhua Yi and Sheng Sun	
Modeling And Simulation of the Generator for Harvesting Human's Kinetic Energy	7
Longhan Xie and Ruxu Du	
A Fuzzy Logic Model For Improving Performance of Extended Vigilance In Auto- mation Supervisory Task	13
Cheng-Li Liu and Kuo-Wei Su	
Contract-Oriented Public Project Cost Compensation Mechanism	19
Haiyan Wang and Jun Guan	
Servo Feed Error Compensation Control of the NC Rotary Table	25
Chuan Li	
The Dynamic Response Analyze of Fuzzy-random Truss under Stationary Stochastic Excitation	31
Yong-Qin Chen and Juan Ma	
Optimal Design for Ultrasonic Weding Horn	41
Eun Mi Kim, Seon Ah Kim, Ho Su Jang, and Dong Sam Park	
Effects Of Component Commonalities And Various Uncertain Factors On Production System	47
Md. Abdul Wazed, Shamsuddin Ahmed, and Yusoff Nukman	
Gasoline Engine Knock Detection From Vibration Signals Using Statistical Characters	57
Wenhong Yang, Ke Wang, and Chengcai Liu	
Research on Roll Fast-Mapping System	63
Guo-chang Li and Xiao-ying Gu	

Session 2

Experimental Research on Flexural Tensile Properties of Layer Steel Fiber Rein- forced Rubber Concrete	69
Guangyue Ma and Xiaochun Fan	
Design And Analysis of a Double-Half-Revolution Mechanism Exploration	73
Yiao Liu Yu, Mei Ling Wang, Yong Ming Wang, and Li Fang Wang	
Examination Of Seasonal Energy Efficiency Ratio And Economical Analysis of Room Air Conditioner	79
Furen Zhang	

Influence of Four Wires Tandem Submerged Arc Welding Process on Heat Affected Zone Properties In High Strength Pipeline Steel	85
Sadeqh Moeinifar, Amir Hossein Kokabi, Hamid Reza Madaah Hosseini, Chengjia Shang, Gou Hui, and Liu Zhen Wei	
Systematic Study of Three-Dimensional Concurrent Engineering Based on an Extended Quality Functional Deployment	91
Florent Megan Tchidi, and Zhen He	
Modeling Technique of Product Master Model for Aero Engine Multidisciplinary Collaborative Design and Simulation	99
Jun Ji, Dinghua Zhang, Shan Li, Baohai Wu, and Bing Chen	
A Restricted Simulated Annealing For Hybrid Flow-Shop Scheduling With Multi-processor Tasks	105
Fuh-Der Chou, Hui-Mei Wang, and Ful-Chiang Wu	
Self-Adapting Envelope Analysis Research on Rolling Element Bearing	111
Yan Chun Ding, Yu Guo, Xian Guang Tang, Hua Wen Zheng, and Yan Gao	
Application of Independent Component Analysis in Rolling Element Bearing Vibration Signal Analysis	117
Xian Guang Tang, Yu Guo, Yan Chun Ding, Hua Wen Zheng, and Yan Gao	
Root Cause Analysis of Generator Rotor Endwinding Failure	123
Piao Jinghu, Park Sangho, and Park Hyunku	

Session 3

Based on the Reinforcement Learning Association Rules Recommendation Study	125
Jingqiao Wang and Qing Yang	
Based on Hybrid Recommendation Personalized of the E-Learning System Study	131
Jingqiao Wang and Qing Yang	
Vibration Analysis of Ultrasonic Metal Welding Horn for Optimal Design	137
Kim Seon Ah, Jang Ho Su, Kim Eun Mi, and Park Dong Sam	
Design of Assembly Robot Controller Based on Profi-Bus for Hubcap Gear-Box Pressure Assembling	143
Xiaodong Tan and Baoliang Li	
Probe Into the Bottom Measurement Property and Bottom Increment Testing Method of Vertical Tank	149
Shizhong Tong, Zhi Xie, and Weiwei Yin	
ECORE (Electromagnetic Compressed Air Rotary Engine)	155
Gaurav Kulkarni	
Ga Based Multi Objective Optimization of the Predicted Models of Cutting Temperature, Chip Thickness Ratio and Surface Roughness in Turning Aisi 4320 Steel by Uncoated Carbide Insert Under Hpc Condition	161
Ireen Sharmee and Nikhil Dhar	

A New Vertical Axis Wind-Driven Generator And Its Calculation of Wind Energy Utilization Efficiency and Revolving Control	169
Qian Zhang, Haifeng Chen, Shuangling Wang, and Qiuxiang Wang	
Research on the Marketing Countermeasures Theory and Empirical Based on the Perceived Value	175
Jingdong Chen and Wei Han	
The Theoretical and Empirical Research of Marketing Opportunities Based on the Perceived Value	181
Jingdong Chen and Long Cheng	

Session 4

The Theory Research of Differentiated Benefits Positioning Based on Product Value	187
Jingdong Chen and Qisong Zhu	
Optimization of the Slider-Crank Mechanism in Vertical Slicer Based on Adams	193
Xin Zhang, Jianwu Zhang, Lirong Wan and Zhangxi Yu	
5 Point Checklist Method for Quality Implementation.	199
Akhil Teja, Boddu Vidya Sagar, and K Raghupathy	
Influences of Substrate Preheating on the Laser Rapid Manufacturing Process	203
Kai Zhang and Risheng Long	
Effectiveness of Minimum Quantity Lubrication(MQL) for Different Work Materials When Turning by Uncoated Carbide (SNMM and SNMG) Inserts	209
Prianka Zaman and Nikhil Dhar	
Rubber Nanocomposites for a Representative Volume Element with Hyperelastic and Elastic Matrix	217
Mohsen Motamedi, Mohamad Azadeh, and Mahmoud Mosavi	
Three Dimensional Vibration Analysis of Functionally Graded Super-Elliptical Plates	223
Mohamad Amini and Mohamad Azadeh	
Automated Robotic Polishing Using a Direct Teaching and Playback Method	229
Chengjie Li, Seunghoon Lee, Donghyung Kim, and Changsoo Han	
Static Stiffness Analysis on Spatial Rotation 4-Sps-S Parallel Robot Mechanism with a Passive Constraining Spherical Joint	235
Guohua Cui and Yanwei Zhang	
Singularity Analysis for 5-5R Parallel Manipulator Based on Screw Theory ...	247
Hongwei Liu	

Session 5

- Study of Selecting and Arranging Coal Mine Safety Personnel Based on Psychological Measurement Technology 257
Jizu Li and Jinlong Sun
- Forming Limit Diagram (FLD) for Low Carbon Steel (DIN1623-St 13) 263
Mr. Badr Ibrahim .M. AL Tarhuni, Dr: - Neffati M.Werfalli
- Improved Multiple Minimum Supports Association Rules and Its Applications on Fault Diagnosis 269
Liu Jing and Ji Hang Peng
- An Enhanced Collaborative Optimization Methodology for Multidisciplinary Design Optimization 275
Xiao Mi, Qiu Haobo, Gao Liang, Shao Xinyu, and Chu Xuezheng
- Influence of Aethylether on Combustion and Emission Characteristics of Diesel-biodiesel Mixture Fuel 281
Chen Hao, Geng Li-min, QI Dong-hui, and Ren Xue-cheng
- Study of welding variables on fracture modes of resistance spot weld dual-phase steels 287
Zhang Xiaoyun, and Lu Bingning
- The Design of LQR and Fuzzy Logic Controller for a Thermal System with Large Time Delay 293
Seiyed Hamid Zareh, Ali Fellah Jahromi, Atabak Sarafan and Amir Ali Khayyat
- Improved Partial Least Squares regression with Rough Set and its applications in the Modeling of the LCC 299
Xiao-hai Zhang, Jia-shan Jin, Jun-bao Geng, Jun-tao Zhang, and Lin-kai Sun
- A Design Guide for Turbocharger Compressor and Turbine Seals 307
Zhao Xiao-fen and Steve Arnold
- Analysis on Influence of the Tool Orthogonal Rake on Cutting Force, Temperature and Deformation 319
Weifei Li and Bing Xu

Session 6

- Structure Sustainment Engineering of Aging Aircraft in Served Environment . 325
Youhong Zhang and Shiyang Zhang
- Fuzzy and Dynamic Flexible Job-shop Scheduling with Multi-object and Multi-constraints 331
Aijun Liu, Yu Yang, Xuedong Liang, and Hao Yao
- Svm-Based Prognosis Of Machine Health Condition 337
Jian qu and Ming J. Zuo

Effects of Smooth Interface Assumption on the Accuracy of Simulation of Annular Two-phase Flows	343
Z. Baniamerian and C. Aghanajafi	
Simulation and Optimization of Injection Process for LCD Cover	349
Liu Bai, Liu Mingjun, Liu Guangcao, and Du Yingbin	
Experimental Study and Numerical Simulation on The Compressive Strength Size Effect of Jointed Rock Mass	355
LI Dong-ping, Wei Jin-long, Wang Qian-yuan, and Li Jun	
Design of Continuous Radiation Paint Cure Ovens Using the Equivalent Isentropic Temperature/Time	361
Ramin Mehdipour and Cyrus Aghanajafi	
Free-Form Surface Generation With Fourth Order Partial Differential Equations	369
Shahrul Nizam Ishak and Jamaludin md. Ali	
Research on Autobody Panels Developmental Technology Based on Reverse Engineering	377
Tan Xiao-dong and Zhang Kun	
A Study on Gas Protection Control System ff Magnesium Alloy Melt	383
Chun Zheng, Congcong Wang, and Baorong Qin	

Session 7

Transverse Free Vibration Analysis of Hybrid SPR Steel Joints	389
Xiacong He, Xunzhi Zhu, and Biao Dong	
Performance Analysis of Rear Rubber Bushing Stiffness of Lower Control Arm on McPherson Suspension	395
Xin-Tian Liu, Huang Hu, Yi Yang, Li-Hui Zhao, Chang-Hong Liu, Hui Guo, and Yan-Song Wang	
Effect of Nickel on Tensile Strength of Ductile Iron	401
M. Ashraf Sheikh	
Lean Production and its Application Appraisal	409
Zhang Hong-liang, and Qi Er-shi	
Vertical Handoff System Based on Virtual Device in Vehicle Gateway	419
Liangdong Qu, Yanheng Liu, Da Wei, and Xuegang Yu	
Optimizing Simulation for Improvements in Hard Disk Drive Productivity	425
Teerapun Saeheaw and Nivit Charoenchai	
Temperature Control Machine of Toluene Container in Laminate Coating Process	431
Teerapun Saeheaw	
Improving Hard Disk Drive Productivity via Max-Min Ant System	437
Teerapun Saeheaw and Nivit Charoenchai	

Finite Element Modeling Method of chip Formaton Based on ALE approach	443
L.-J. Xie, L. Li, y. Ding, and X.-B. Wang	
Physical Properties in the Persian Gulf	449
Mohsen Ganj and Seyed Majid Musaddad	

Session 8

Experimental Study on Meso-Scale Milling Process Using Nanofluid Minimum Quantity Lubrication And Compressed Chilly Air	457
Pil-ho Lee, Taek-soo Nam, Chengiu Li, and Sang Won Lee	
A Study of Precision Spindle Assembly Process	463
Bai Haiqing, Zhang Changming, Peng Yuhai and Sun Xiaoyi	
Study on the Piping System Inherent Characteristics Affected by the Flow Veloc- ity and Pressure	467
Wu Lanying, Wang Yanlin, and Wang Zidong	
Frictional Stir Welding Solid State Joining Process	475
S.V.Manojkumar and D.Vijay	
Finite Element Analysis on Castor Capsule Hulling	481
Cao Yuhua	
PI-like Fuzzy Controller with Variable Membership Function's slope	487
Il Kyun Jung, Sun LIM	
Research on an Integrated Architecture of Automtc Process Planning Based on Automatic Reasoning Rule	493
Meng Tang and Wolfgang H. Koch	
Augmentation of Turbulence and Mixing in Gas Turbune Combustors by Introduc- ing Unsteady Effets	499
Yehia Eldrainy, Hossam Aly, Khalid Saqr, and Nazri Jaafar	
Numerical Simulation of Turbulent Dispersion and Atomization within Sprays	505
Hossam S. Aly, Yehia A. Eldrainy, Khalid M. Saqr, and Mohammad Nazri Mohd Jaafar	
Physical Activation of Saudi Arabia Date Palm Tree'S Foliar, Frond and Thorn	511
Abdul Rahim Yacob, Norasyikin Mohd Mustapha, Mohd Asyraf Ahmad Mustajab, and Hassan M Al Swaidan	

Session 9

Torsional Frequency Analysis of Multi-Cylinder Inline Diesel Engine Generator System	519
Mr. S.h.gawande, Dr. L.g. Navale, Dr. M.r. Nandgaonkar, and Mr. Dinesh Butala	

The Growth Behavior of a Particle in an Ambient Flow Field	525
Chen Mingwen, Wang Yanlin, Wang Zidon, and Xie Jianxin	
Research on a New Kind of Antenna Used in the Through-the-earth Communication System	533
Zhang Qinghui and Li Wei	
Cutting Performance and Wear Mechanism of Cutting Tool in Milling of High Strength Steel 34CrNiMo6	537
LIU Zhibing, Wang Xibin, and Liu Jia	
Global-local Mutisalce Modelling of Sandwich Structures by Using Arlequin Method	545
Heng Hu, Potier-Ferry Michel, and Belouettar Salim	
Heat Transfer Enhancement By Using Nanofluids In Laminar Forced Convection Flows Considering Variable Properties	551
Amir Hossein Nikseresht, and Javad Bayat	
Low Velocity Impact Analysis of Anisotropic Composite Laminates with Elastically Restrained Edges	559
AliReza Setoodeh and Parviz Malekzadeh	
Design of Rotor Time Constant Estimator and Sliding Mode Position Controller for Induction Machines	565
Jenn-Yih Chen	
Research and Implementation of Collaborative Development Platform for Complex System	571
Wang Cheng Long, Zeng Qing Liang, Han Rujun, and Chen Jian	