

Materials, Mechatronics and Automation IV

Selected, peer reviewed papers from the 2014 4th International Conference on Materials, Mechatronics and Automation (ICMMA 2014), April 10-11, 2014, Singapore

Bearbeitet von
Dehuai Zeng

1. Auflage 2014. Taschenbuch. 396 S. Paperback
ISBN 978 3 03835 117 7

[Weitere Fachgebiete > Technik > Technische Instrumentierung > Mess- und Automatisierungstechnik](#)

schnell und portofrei erhältlich bei

The logo for beck-shop.de features the text 'beck-shop.de' in a bold, red, sans-serif font. Above the 'i' in 'shop' are three red dots of varying sizes, arranged in a slight arc. Below the main text, the words 'DIE FACHBUCHHANDLUNG' are written in a smaller, red, all-caps, sans-serif font.

beck-shop.de
DIE FACHBUCHHANDLUNG

Die Online-Fachbuchhandlung beck-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Table of Contents

Preface and Committee

Chapter 1: Materials Science and Materials Processing Technology

Electrospun Porous ZnO Nanofibers for Glucose Biosensors J.Y. Huang, M.G. Zhao and Z.Z. Ye	3
Investigation of the Properties of Al Incorporated into Sb₂Te₃ Phase Change Material F.F. Wei, T. Kong, L. Shi, R. Huang, J. Zhang and G.S. Cheng	7
Hyaluronic Acid Production by Genetic Modified GRAS Strains X. Fang, R.S. Duan, H.Y. Yang and J.F. Liu	13
Improvement of Inflammability and Biodegradability of Bio-Composites Using Recycled Polypropylene with Kenaf Fiber Containing Mixture Fire Retardant N.S. Suharty, H. Ismail, K. Dihadjo, M. Nizam and M. Firdaus	18
Morphological Study of Bacterial Cellulose (BC)/Polyvinyl Alcohol (PVA) Nanocomposite as Bone Scaffold A.Z. Abidin and H.P.R. Graha	24
Extraction of Di-Methyl Phthalate Using Smarta Nanoscavengers N.H. Khdary	29
Preparation and Characterization of Al₂O₃/PVDF-HFP Based Polymer Electrolyte H. Shi and Q. Zhu	33
Investigation of Au Plated Connector Materials in Corrosion and Sliding Environment Z.G. Kong and Y.G. Kong	38
Preparation of Doped Graphene Quantum Dots with Bright and Excitation-Independent Blue Fluorescence H. Li, H.P. He and Z.Z. Ye	44
The X-Ray Powder Diffraction Patterns and Crystal Structure for Al₂M₃Y (M=Cu, Ni) D.G. Li, M. Qin, L.Q. Liang, Z. Lu, S.H. Liu, B. He, P.L. Qing and L.M. Zeng	48
X-Ray Powder Diffraction Data for the Al₇Cu₅Y Ternary Compound B. He, M. Qin, L.Q. Liang, Z. Lu, D.G. Li, C.S. Qin, C.B. Li and L.M. Zeng	53
Effects of Water on the Morphology of Wool Scales F.G. Ning, J. Wang and W.D. Yu	57

Chapter 2: Applied Mechanics

Digital Image Technology – Based Simulation for Internal Components and Mechanical Behavior of Asphalt Concrete B. Hu and X.N. Zhang	63
Design and Kinematic Analysis of a New 3-DOF Hybrid Mechanism Z.Y. Xue, B. Zhang and D.B. Zhang	69
Effects of Ozone Treatment on Wool Morphology and Mechanical Properties J. Wang, F.G. Ning and W.D. Yu	75
A Method for Static Interval Analysis of Uncertain Structures with Interval Parameters J.G. Zhang	79
Reconstruction of Bottom Surface of Shoe Last Based on Foot Pressure Distribution X.N. He and X.Y. Qi	86
Kinematics Analysis on the Throwing Skills of Elite Chinese Male Hammer Athletes S. Wang, J.H. Zhou and C. Jia	91
Kinematics Analysis of Basket with Full Turn to Handstand of Chenglong Zhang on Parallel Bars D.X. Xu, J.H. Zhou and J.P. Kang	93
An Investigated of Single Point Incremental Forming Formability K. Rattanachan and C. Chungchoo	96

Chapter 3: Design and Manufacturing

Design of Experiment for Incremental Forming of Artificial Skull on Titanium Grade 2 N. Sornsuwit and S. Sittisakuljaroen	103
Ergonomic Design and Evaluation of Laparoscopic Instrument Handle Based on Anthropometry C.Y. Sun, S.Y. Wang and B.C. Wang	109
Design of the Gas Flow Integrating Instrument F.G. Zhou, F.Z. Li and L.C. Dai	114
State and Input Observer Design for Nonlinear Impulsive Systems via LMI Approach T. Shao, K. Peng, Z.S. Chen and Y.J. Liu	119
A Design of WSN and EPON Applied in Online Monitoring for Transmission Line X. Chen, Z. Du, X.G. Yin, W. Pan and L.Q. Xu	125
Analysis and Realization of Critical Points on Hardware Design of FPGA C.F. Wu	133
A Novel Surface Reconstruction Method for Noisy Cloud Points Based on Support Vector Machine D.L. Yu	139
A Efficient Surface Reconstruction Method for Noisy Samples Based on Bilateral Filtering and down Sampling W.R. Wan	145
Study of Organic Solar Cells Conversion Efficiency C.L. Zhang	150
The Design and Implementation of Testing System for Network Equipment Configuration Status and Light Power M.B. Liu, G.S. Zhang, H.C. Gao and Q. Li	155
Design Method and Parameters Matching of Electric Motors for Hybrid Construction Equipment F.W. Meng and Y.B. Hu	160
Application of Numerical Simulation and New Fining Index in Operating Parameters Optimization of Float Glass-Melting Furnace Y. Yang, M. Liu and J.H. Hao	165

Chapter 4: Algorithms and Methodology of Research

Does Trade Liberalization Improve the Environment in China? Evidence Form the Dynamic Panel Data of Chinese Prefecture City L.M. Hong	175
A Hierarchical Scheme for Open System Environments Review F.X. Zhang	181
An Energy-Aware Dynamic Algorithm Based on Variable Interval DVFS Technology C. Xu, J. Xiao, L.N. Zeng, Y. Liu and M.M. Peng	185
The Improvement of Passive Location Algorithm Based on Time Sequence Estimation H.W. Bai, Y.W. Wang and Y. Jiang	196
Deducing Stream Function N-S Equation from Classic N-S Equation and its Verification G.X. Yan, W. Wu and S.J. Zhu	201
Applying Upwind Difference and Central Difference to Discrete N-S Equation Described by Stream Function F.H. Wang, G.X. Yan and S.J. Zhu	205
A Mixed Scheduling Algorithm about Hard Periodic and Soft Aperiodic Real-Time Tasks on Heterogeneous Multiprocessor H. Wang, C. Xu, L.N. Zeng and Y. Liu	209
A New Long-Term Forecast Method of Wind Power Y. Lin	214
Matching Pursuit Optimization Based on Quantum Genetic Algorithm L. Chen, L.B. Zheng and S.P. Qin	221

Blind Detection of Frequency Hopping Signal Using Numeral Characteristics of Compressive Samplings C.L. Zhang and L.C. Li	227
A Method of Recognition of Human Hand and Body Gestures for Task-Level Learning from Demonstration V. Popov	233

Chapter 5: Mechanical Engineering and Controls

Study on the Control of Anti-Lock Braking System Simulation Based on Fuzzy PID Control B.Y. Dang	239
Control of 2D Minimally Persistent Formations with the Fault Tolerance of Three Co-Leaders in Cycle H. Cao, Q. Qu, X.K. Ying, Y. Liu, Z. Su, T. Ma, H. Li, B.Q. Xu, R.Y. Zhao, Y.L. Liu, Y.J. Zhang and Y. Xing	245
Virtual Experiment Platform of Automatic Control Principle Based on MATLAB/SimScope W.J. Yuan	253
Application of Fuzzy Immune PID Controller Based on Particle Swarm Optimization in Power Plant Steam Temperature Control System F. Hu and W.N. Zhou	257
Smart Control of DC Servo Motor Based on Fussy-PID X.J. Wang, W.M. Xu, Y.Q. Wu and H.Y. Gao	263
Vortex Generators Contribution to the Enhancement of the Aerodynamic Performances H. Tebbiche and M.S. Boutoudj	268
Heavy-Duty Car Multi-Body Dynamics Simulation and Optimization Research M. Cai and L. Gu	275

Chapter 6: Information Technology

Multimedia Technology Used to Reduce Costs and Time L.T. Kawamoto Júnior and W.O. Kawamoto	283
Validation in a Real Situation of a Virtual Multimedia Training Environment to Improve Performance and Behavior L.T. Kawamoto Júnior and W. Orchulhak Kawamoto	288
Virtual Multimedia Environment to Teach Safety Procedures in Laboratories A. Candiago and L.T. Kawamoto Júnior	293
Recognition of Lanes on Complex Roads Based on Video Image R.B. Chen, W. Hou, Y. Li, X.E. Ye and W.Y. Ma	298
Ultrasonic Tomographic Velocity Field Imaging Based on Interlaced Chord Network J.N. Liu, B.X. Wang, Y.Y. Cui and H.Y. Wang	306
The Study of Chopper in the LVRT of Direct-Drive Wind Energy Generation System J. Jia, X.X. Hu, P.P. Han and Y.P. Hu	314
Manipulator of a Platform Type Robot SHOLKOR K.S. Sholanov	321
Flow Measurement and Control System in the Campus Network Q.X. Zhang and C. Song	327
DCGF in Ji'Nan: Construction and Issues L.Q. Chang, J.H. Li, L.Z. Tian, P. Lin, Y. Wu and W.Z. Zhong	333
The Impact of Music on Learning Brainwaves F.C. Kao, S.P.R. Wang, C.H. Huang, Y.K. Lin and C.C. Chen	339
The Brainwave Concentration Analysis of Direction Recognition F.C. Kao, S.P.R. Wang, C.C. Chen, Y.K. Lin and C.H. Huang	345

Chapter 7: Management Application

The Research of Loyalty Card Schemes Management in Chinese Food Retail Enterprises- Based on the Experiences of British Retailers W.Y. Du	353
Research on the Value Orientation of Supply Chain Partners' Adverse Selection L. Nie and Z. Qiao	356
Brand Classification Using Distributed Representation T. He and J. Liu	361
Empirical Research on Building Shenzhen into a Regional Logistics Economy Center G. Li	365