

International Journal of Mechanical Engineering and Robotics Research

CONTENTS

Volume 6, Number 6, November 2017

Engineering System Design and Modeling

Modelling and Analysis of a Type of Capacitance Based Accelerometer.....434

Dan Zhang and Bin Wei

Aeroelastic Stability Analysis of a Wind Tunnel Wing Model Equipped with a True Scale Morphing Aileron
.....440

*Francesco Rea, Rosario Pecora, Francesco Amoroso, Maurizio Arena, Maria Chiara Noviello, and
Gianluca Amendola*

The Impact of Housing Features Relative Location on a Turbocharger Compressor Flow451

Sidharath Sharma, Martyn L. Jupp, Simon M. Barrans, and Ambrose K. Nickson

Application of Special Mechanical Devices to Adapt the Descent from the Conditions of Mars to the
Conditions of the Earth.....458

Vsevolod V. Koryanov and Victor P. Kazakovtsev

Analysis and Modeling of Tap-Water/Pneumatic Drive McKibben Type Artificial Muscles463

Wataru Kobayashi, Shujiro Dohta, Tetsuya Akagi, and Kazuhisa Ito

Development and Application of Robot

FPGA Based Massively Parallel Hybrid Architecture for Parallelizing RRTs467

Gurshaant Singh Malik, Krishna Gupta, Raunak Dharani, and K. Madhava Krishna

Dexterity Robot Manipulator Gripper Using Auto Tuning of PID Control476

W. Widhiada, G. P. A. Suryawan, and C. G. I. Partha

Minimal Time Dynamic Task Allocation for a Swarm of Robots481

Maha A. Alshawi and Mohamed B. Shalan

Development of Shape-Variable Hand Unit for Quadruped Tracked Mobile Robot488

Toyomi Fujita and Fumiya Sato

Mechanical Electronics and Control System

Intelligent Controller Design for Multifunctional Prosthetics Hand495

*Rozaimi Ghazali, Mohammad Zyzerull Saad, Sharifah Yuslinda Syed Hussien, Mohd Hafiz Jali, Fauzal
Naim Zohedi, and Tarmizi Ahmad Izzuddin*

Fault Diagnosis for Composite Asynchronous Sequential Machines with Cascade Composition.....502

Jung–Min Yang

Escaping Local Minima Using Repulsive Particles in FastSLAM for Space Rover.....506

Daiki Koike, Kenji Uchiyama

Design and Evaluation of Engineering Materials

- The Use of Cyclic Polarization Method for Corrosion Resistance Evaluation of Austenitic Stainless Steel 304L and 316L in Aqueous Sodium Chloride Solution.....512
Andi Rustandi, Nuradityatama, M. Faisal Rendi, and Suganta Setiawan
- Investigation of Residual Stresses on Post Weld Heat Treated A106-GRB Steel Pipe by Hole-Drilling and FEM519
Mehran Moradi and Behnoud Salehebrahimnejad
- Fabrication of Biomorphic Silicon Carbide from Agriculture Waste Powders524
Koay Mei Hyie, Salina Budin, Husna Elias, Anizah Kalam, and Rozlin Nik Mohd. Masdek
- Long-term Stability of Graphene Based Nanofluids529
Hugo Navas, Alexandre Desforges, Jaafar Ghanbaja, Brigitte Vigolo, and Patrice Estellé