

CONTENTS

Control, Informatics and Robotics

Importance of C/C++ compiler choice for performance and energy consumption of multithreaded WZ factorization

Beata Bylina, Monika Piekarz, Jarosław Bylina

Calibration by diffeomorphisms of robot manipulator kinematics: a novel approach

Roberto Orozco, Adam Ratajczak

Towards backward compatibility of ADRC: revisiting classical state-feedback control with integral compensator

Mikołaj Mrotek, Jacek Michalski, Rafał Madonski, Dariusz Pazderski, Marek Retinger

Nonholonomic motion planning with special restrictions on the end and via points of the control function

Joanna Ratajczak

GTC-DAN: A graph-temporal convolutional model with dynamic adjacency for vehicle trajectory prediction

Hao Chen, Xuncheng Wu, Ruoping Zhang, Wenfeng Guo, Yang Chen, Jiejie Xu, Weiwei Zhang, Wangpengfei Yu

Descriptor continuous- and discrete-time linear systems with zero transfer matrices

Tadeusz Kaczorek, Jerzy Klamka, Andrzej Dzieliński

Mechanical and Aeronautical Engineering, Thermodynamics

Quantitative risk assessment of hazardous chemical discharges and simulation of threat zones in hydrocarbon storage systems

Ahcène Akni, Manel Bidi

Radial force variation parameter as a factor of tire uniformity

Marcin Moskwa, Bartosz Gapiński, Michał Jakubowicz

Attempts to apply heuristic research methodology in mechanical engineering on the example of rotating machines

Jan Kiciński, Grzegorz Żywica

Design conversion, and performance estimation of BLDC motor in hybrid electric vehicle

Thenmozhi Ganesan, Chandra Vanaraj, Manoharan Subramanian, Radhika Alagesan

Equilibrated residual method for estimation of modelling and approximation errors in complex piezoelectric models

Magdalena Zielińska, Grzegorz Zboiński

Artificial and Computational Intelligence

A new model for anomaly detection in elbow and finger X-ray images: Proposed parallel DenseNet

Selahattin Güçlü, Durmuş Özdemir, Hamdi Melih Saraoğlu

Research on fire smoke traceability based on emotional intelligence Jaya algorithm

Xiaoxiao Liu, Wenhan Zhong, Tao Ding, Luyao Lin, Jinxia Mu, Jianghuan Shi, Zesong Li

Improvement of unmanned aerial vehicles model under surge of lightning electromagnetic pulse developed using artificial intelligence based on laboratory measurements in reference to classical regression methods

Tomasz Kossowski, Damian Mazur, Bogdan Kwiatkowski, Przemysław Hawro, Andrzej Imiełowski

Machine learning-based fault detection in transmission lines: A comparative study with random search optimization

Yıldırım Özüpak

Civil Engineering

A paradigm for building fire safety

Jadwiga Fangrat

Electronics, Telecommunication and Optoelectronics

Machine learning-based throughput enhancement in fifth-generation networks

Parameswaran Ramesh, P T V Bhuvaneswari, R S Ashok, S Veena

Material Science and Nanotechnology

New technique for sharpening ultra-thin wires for the drawing process: incremental furnace stretching

Piotr Kustra, Andrij Milenin

Material Science and Nanotechnology

Research on collaborative optimization of fuel cell tractor transmission system and control strategy parameters

Liyu Xu, Shixun Chen, Junjiang Zhang, Mengnan Liu, Yiwei Wu, Xianghai Yan