

CONTENTS

Mechanical and Aeronautical Engineering, Thermodynamics

Examination of energy damping behavior of fiberglass reinforced sandwich structures with extruded polystyrene core material

Ibrahim Yavuz, Baris Senol, Ercan Simsir

On optimization of an adaptive pneumatic impact absorber – the innovative rescue cushion

Rami Faraj, Błażej Popławski, Dorian Gabryel, Grzegorz Mikułowski, Rafał Wiszowaty

Handling stability analysis of decoupling suspension for formula racing

Han Xu, Jiachuan Xu, Xuemin Cui, Yang Zhou, Xinyu Sun, Zongqi Wang

The effect of continuous furnace load organization on temperature distribution during controlled atmosphere brazing process

Sławomir Nadolny, Michał Rogalewicz, Adam Hamrol

Research on coordinated control of hydro-mechanical continuously variable transmission tractor mode switching based on model reference adaptation

Liyou Xu, Linkuan Zhang, Dongqing Wang, Mengnan Liu, Junjiang Zhang

Investigation of the temperature impact on the operation of a nonlinear electromagnetic vibration energy harvester

Marcin Kulik, Rafał Gabor

Evaluation of TAERO UGV structural collision resistance using FEM analysis

Marek Nowakowski, Krzysztof Kosiuczenko

Numerical analysis of seal force in contacting finger seal

Yuan Wei, Bowen Ma, Yi Li, Kai-Uwe Schröder

Thermal transfer performance of downhole electric heaters for in-situ pyrolysis in tar-rich coal

Ying Tang, Li Xiao, Fan Yang, Xiaodan Wu, Zhan Su, Yue Zhang, Shixin Jiang, Peng Yang

Artificial and Computational Intelligence

Few-shot medical image classification with simple shape and texture text descriptors using vision-language models

Michał Byra, Muhammad Febrian Rachmadi, Henrik Skibbe

DODGE: Congestion control in MANET via dragonfly optimized deep learning model

S Gladson, K Pandiarajan

Description and comparison of fault detection algorithms based on a selected building automation device

Sandra Włostowska, Bartłomiej Kawa, Piotr Borkowski

Comparison and optimization of machine learning methods for fault detection in district heating and cooling systems

Mehmet Çınar, Emrah Aslan, Yıldırım Özüpak

Improving testing of multi-agent systems: An innovative deep learning strategy for automatic, scalable, and dynamic error detection and optimisation

Nour El Houda Dehimi, Zakaria Tolba, Mehdi Medkour, Anis Hadjadj, Stéphane Galland

Control, Informatics and Robotics

Characteristics of solution to singular fractional differential equation with two Riemann-Stieltjes integral boundary value conditions

Nan Zhang, Lingling Zhang, Hongwei Liu, Tao Liu, Hui Wang, Huimin Tian

Digital PID controllers with fractional variable order techniques and two discrete-time operator variants

Dorota Mozyrska, Małgorzata Wyrwas, Piotr Oziabło

Strategic Optimal Control of Multi-Camera Trajectories for UAV Capture Using Entropy and Coverage Approaches

Khishigjargal Gonchigsumlaa, Young Il Kim, Kun Min Yeo, Seong Hee Park, Yong-Tae Lee

Civil Engineering

Multifunctional control system to enhance the operational capability of the unmanned multirotor platform dedicated to the diagnostics of building structures

Roman Czyba, Jarosław Domin, Marcin Górski

Bending behaviour of thin-walled perforated channel beams with modified cross-sectional shape – Part 1: experimental tests and FSM

Piotr Paczos, Aleksandra M. Pawlak, Paweł Jasion, Michał Plust

Three-factor assessment of rutting factor of modified asphalt binders and mastics in the ageing process

Marta Mielczarek, Karol Andrzejczak, Mieczysław Słowik

Biomedical Engineering and Biotechnology

Apparatus for exposure of cancer cell lines with extremely low frequency (ELF) alternating magnetic field

Remigiusz Mydlikowski, Krzysztof Maniak, Patrycja Grosman-Dziewiszek, Benita Wiatrak, Paweł Bieńkowski, Tomasz Gębarowski

Power Systems and Power Electronics

Discrete non-integer order model of synchronous generator for power hardware-in-the-loop implementation

Szymon Racewicz, Filip Kutt, Łukasz Sienkiewicz, Michał Michna, Roland Ryndzionek