IEEE Latin America Transactions

JANUARY 2022, Volume 20 Issue 1 IEEEXplore, DOI, ISI, ISSN 1548-0992

Table of Contents 1
Editorial..... 3
Sentiment Analysis of Tweets Related to SUS Before and During COVID-19 Pandemic
H. Silva, D. Araújo, J. Dantas, and E. Andrade..... 6
GPU-BRKGA: A GPU Accelerated Library for Optimization using The Biased Random-Key Genetic Algorithm
D. Alves, D. R. C. Oliveira, E. Andrade and B. Nogueira..... 14
Pollen Grains Classification with a Deep Learning System GPU-Trained
J.M. Ruiz-Varela, S. Ortega-Cisneros, P. Moreno-Villalobos, J. Rivera and M. Rivera-Acosta..... 22
Economic Analysis of Offshore Wind Farms: A Brazilian Case Study
B. C. B. Livi, R. R. Wilczek, F. R. S. Batista and P.M. Maçaira…..... 32
Modified Harmony Search for a Truck Loading Problem Application
N. Anabalón, M. Barros and R. Medina..... 41
Internet of Things: State-of-the-art, Computing Paradigms and Reference Architectures
B. Mazon-Olivo and A. Pan..... 49
Intercontinental Bilateral-by-Phases Teleoperation of a Humanoid Robot
V. Moya, E. Slawiñski, V. Mut, and B. Wagner..... 64
An Investigation into Many-Objective Optimization Problems: A Case Study of the Dial-a-Ride Problem
R. J. S. Viana, F. V. Cruzerio, and E. F. Wanner..... 73
A Multi-Agent Approach to Monitor and Manage Container-Based Distributed Systems
V. Pfeifer, W. F. Passini, W. F. Dorante, I. R. Guilherme and F. J. Affonso..... 82
Analysis of Local Trajectory Planners for Mobile Robot with Robot Operating System
F. U. Pereira, P. M. De Assis, M. A. De Souza, A. R. Cukla, P. Drews Jr. and D. F. Tello..... 92
Topological Approach for Identifying Critical Measurements and Sets in State Estimation
R. C. Soares, M. B. Do Coutto, J. C. Stacchini and F. Protti……..... 100
A Test IC for Wafer-Level Characterization of an IntraCMOS-MEMS Fabrication Process
M. Linares, L. Hernández, and F. J. de la Hidalga…..…….. 108
Mobilscope: A Technological Solution for Early Mastitis Detection in Dairy Cattle
R. Medina-Rodriguez, E. L. Fuentes, C. Beltrán-Castañón, M. Nunez-del prado and H. Alatrista..... 117
Student's Attention Monitoring System in Learning Environments based on Artificial Intelligence
D. F. Terraza, M. Amaya, A. Piedrahita-Carvajal, P. A. Rodriguez-Marin, L. Duque-Muñoz and J. D. Martinez-Vargas…..... 126
Trajectory Tracking Flight Control of a Tethered Kite using a Passive Sliding Mode Approach
M. A. Zempoalteca-Jimenez, R. Castro-Linares and J. Alvarez……..…….. 133
A Methodology to Assist in Improvements of Low-Cost Electrical Impedance Tomography

B. Furtado, A. Machado, M. Ferreira, F. Sepulveda and R. Ramos..... 141
Bayesian Processors of Radar Signals for the Skyguard Radar System of the Ecuadorian Army
F. Lara, M. Ortiz, E. V. Carrera, A. F. Tinoco, H. Moya and R. León..... 153
A Simulation Scheduling Module to Improve User Experience in the Simugan Beef-Cattle Farm Simulator
M. Arroqui, F. Ferreira, M. Roselli, J. Rodriguez, C. Machado, C. Mateos and A. Zunino..... 162
Stochastic Preventive Security-Constrained Economic Dispatch
J. M. Paniagua-Contreras, G. Gutierrez, J. H. Tovar and V. Hinojosa……... 171
Ultra-Short-Term Heart Rate Variability Analysis: Comparison between Poincaré and Frequency Domain Methods
J. Gallardo, G. Bellone, R. Acevedo and M. Risk…… 180