



# IEEE Latin America Transactions

SEPTEMBER 2021, Volume 19 Issue 9

IEEEExplore, DOI, ISI, ISSN 1548-0992

## REGULAR ISSUE: Electronics, Energy and Computing

Table of Contents .....	1433
Linear Algebra Based Control: Application to a Second Order Chained Form System L. P. Rodriguez, M. C. Fernández, M. C. Sánchez and G. J. Scaglia.....	1435
A Low-Cost and Highly Compact FPGA-Based Encryption/Decryption Architecture for AES Algorithm C. Equihua, E. Anides, L. García, E. Vázquez, G. Sánchez, J. G. Avalos and G. Sánchez.....	1443
A Competitive Analysis of BitTorrent-like Algorithms for Interactive Video-on-Demand Streaming over MANETs C. Rodrigues and V. Rocha.....	1451
Efficiency of Class III Surge Protection Devices Against Lightning Surges G. O. Cavalcanti, M. A. F. Feitosa, K. F. H. Pereira, M. H. N. Marinho, A.S. Neto, L. C. Sobral, P. M. R. Gonçalves, D. T. M. Lara, T. F. Gomes, R. J. Teixeira and W. A. Barbosa.....	1459
Usability Questionnaires to Evaluate Voice User Interfaces A. L. Iñiguez, L.S. Gaytán, M.A. García-Ruiz and R. Maciel.....	1468
DELFOS: A Model for Multitemporal Analysis Based on Context Histories M. G. Martins, L. C. Nesi, P. R. S. Pereira and J. L. V. Barbosa.....	1478
An Experimental Approach to the Consensus Routing Algorithm Applied to Temporal Networks M. Arellano-Vázquez and H. Benítez-Pérez.....	1486
A Technical and Economic Criteria Comparison on Demand Side Management with Multi-Level Optimization Model S. N. Bragagnolo, J. C. Vaschetti and F. Magnago.....	1494
A VNS Algorithm for PID Controller: Hardware-In-The-Loop Approach G. Silva, P. Silva, V. Santos, A. K. Rêgo-Segundo, E. Luz and G. Moreira.....	1502
Multi-Agent Systems for the Management of Resources and Activities in a Smart Classroom A. Gomez, L. Chamba and J. Aguilar.....	1511
Output Feedback T-S Fuzzy RMPC Applied to 3SSC Boost Converter T. B. S. Moreira, M. V. S. Costa and F. G. Nogueira.....	1520
Multi-Period Service Scheduling Problems: A New Model and Heuristic Approaches of Relax- and-Fix and Fix-and-Optimize J. Oliveira and C. Scarpin .....	1528
Urban Dual Mode Video Detection System Based on Fisheye and PTZ Cameras S. Arroyo, L. García, F. Safar and D. Oliva.....	1537

Integration of ROS and Tecnomatix for the Development of Digital Twins Based Decision-Making Systems for Smart Factories	1546
C. Saavedra-Sueldo, S. A. Villar, M. de Paula and G. G. Acosta.....	1546
Multi-Agent Communication Models for Cooperative Navigation in Complex Environments	1556
J. Rodríguez, J. Godoy and F. Gutierrez .....	1556
Multicriteria Decision-Making System for Supplier Selection Considering Risk: A Computational Fuzzy AHP-Based Approach	1564
M. V. C Fagundes, Á. C. Keler, E. O. Teles, S. A. B. Vieira de Melo and F. G. M. Freires.....	1564
Quasi-Y Source Network: A Design and Analysis Approach for a DC-DC Application	1573
R. Santos and F. A. S. Gonçalves.....	1573
Vortex Search Algorithm Applied to the Parametric Estimation in PV Cells Considering Manufacturer Datasheet Information	1581
C. L. Izidoro, M. A. O. Rocha, J. D. Spacek, J. M. Neto, A. D. Spacek and O. H. Ando-Junior.....	1581
Proposal of a Practice to Conceive a Minimum Viable Multimedia System	1590
C.A Peláez, A. Solano and T. Granollers.....	1590
Capacitor Allocation in Unbalanced Systems using a Three-Level Optimization Framework	1599
A. S. C. Martins, F. R. M. S. Costa, L. R. Araujo and D. R. R. Penido.....	1599