



# IEEE Latin America Transactions

**APRIL 2025, Volume 23 Issue 4      IEEEXplore, DOI, ISI, ISSN 1548-0992**

## **REGULAR ISSUE: Electronics, Energy and Computing**

Table of Contents .....	265
FreeRTOS Application in a Real-Time Air Quality Monitoring Architecture for Smart Campus N. Silva, E. Alves, W. Júnior, A. Moares, N. Silva, and A. Balieiroo .....	266
Spectral Coherence as a Method for Evaluating Adaptive Filtering Techniques in Photoplethysmography M. Vázquez, J. G. Avalos, J. C. Sánchez, and B. Becerra .....	274
Improved Parallel Algorithm for Finding Minimum Cuts in Stochastic Flow Networks M. Joshan, J. Saito, and E. Pedrino .....	285
COVID-19 Impact in the Brazilian Multiplex Air Transportation Network F. S. Toledo, N. F. F. Ebecken .....	294
Artificial Neural Network Applied to Virtual Commissioning and Control of a Robotic Cell G. B. D. Miranda, and F. Lima .....	301
Dense-PMSFNet: DenseNet Pyramidal Multi-Scale Fusion Network for Retinal Vasculature and FAZ Segmentation in OCTA Images N. P. Raja, S. Sarvesan, A. Thomas, and V. P. Gopi .....	312
A New Solution based on Multi-objective Algorithm for Multi-application Mappings for Many-Core Systems M. A. Almeida, I. F. Gallon, and E. C. Pedrino .....	323
Short-Circuit Performance of a Synchronverter-based Microgrid C. Hernández-García, J. Segundo-Ramírez, N. Visairo-Cruz, and J. Camarillo-Montero .....	329
Design and Analysis of an Improved Gain Single Inductor Dual Switch DC-DC Converter with Reduced Duty Ratio and Minimal Voltage Stress V. Srimaheswaran, N. Niveditha, and M. M. Rajan Singaravel .....	339
Dynamic Phasor Modeling of the Single-Phase MMC under Modulation PSC-PWM G. A. Catzin-Contreras, G. Escobar, A. A. Valdez-Fernandez, and M. J. Lopez-Sanchez .....	353