

Paul David Rosero-Montalvo



PERSONAL INFORMATION

<i>Birth date</i>	August 12, 1990
<i>Telephone</i>	+45 50153225
<i>E-Mail</i>	paur@itu.dk roseropal@hotmail.com
<i>ORCID ID</i>	https://orcid.org/0000-0003-1995-400X
<i>Scopus ID</i>	57192274114
<i>Google Scholar</i>	https://n9.cl/y3v1s
<i>Website</i>	paulrosero-montalvo.com
<i>Last update:</i>	September 29, 2023

EDUCATION

2020	COMPUTER SCIENCE, Ph.D. University of Salamanca, Spain Grade: summa cum laude
2017	INFORMATION SYSTEMS MANAGEMENT, Master's degree Universidad de las Fuerzas Armadas-ESPE, Ecuador
2013	ELECTRONIC AND TELECOMMUNICATIONS, Engineering Technical University of the North, Ecuador

PROFILE

He is a [Post. Doc at IT University of Copenhagen \(ITU\)](#) in Denmark since June 2021. His research focuses on emerging microcontrollers to run machine learning models in decentralized networks. Earlier, he was an assistant professor in the Applied Science Department at the [Technical University of the North \(UTN\)](#), Ecuador. At the same time, he was a part-time lecturer in the TI Department at [Technological Institute 17th of July, Ecuador](#), Ecuador. He received his Ph.D. from the [University of Salamanca](#) in Spain in November 2020, where Prof. Vivian Lopez-Batista advised him. He has a master's degree in Data Management systems from [Universidad de las Fuerzas Armadas ESPE](#), Ecuador (2018), and an Engineering degree in Electronics and Telecommunications from UTN (2013).

Research Interests:

Internet of Things, edge computing, hardware-constrained machine learning, tinyML, Wireless sensor networks, smart sensors, robot planing, intelligent embedded systems, computer vision, object detection, data annotations, and hardware acceleration.

WORK EXPERIENCE

01/2023- Present	Post. Doc in the Computer Science Department , IT University of Copenhagen, Denmark. Prof. Dr. Pinar Tozun.
06/2021- 12/2022	Post. Doc in the Computer Science Department , IT University of Copenhagen, Denmark. Prof. Dr. Zsolt Itsván
03/2017- 03/2021	Assistant professor in the Applied Science Department , Technical University of the North, Ecuador.
03/2015- 03/2017	Teaching Assistant in the Applied Science Department , Technical University of the North, Ecuador.
06/2015- 06/2021	Part-time lecturer in the TI Department , Technological Institute 17th of July, Ecuador.
04/2013- 06/2015	Research Assistant in the Math Department , Technical University of the North, Ecuador.

SKILLS

Programming	Frameworks	Hardware	Qualifications
Python	TensorFlow / Keras	Microcontrollers	Linux
MicroPython	LABView	Edge devices	Embedded Linux
Cuda	PyTorch	Digital Signal processors	Wi-Fi Protocols
C++	CodeVision / Proteus	Sensors	PCB design
AVR Assembler	Fusion360	Robots	Cloud services (AWS)
Verilog	STM32CubeIDE	Embedded Cameras	

Edge devices: Arduino/NVIDIA/ESP32/STM32/CORAL/XILINX.

Wi-Fi Protocols: TCP/LORA/BLUETOOTH/RF.

INTERNATIONAL CERTIFICATIONS

CISCO NETWORK ACADEMY	NETWORK FUNDAMENTALS ROUTING AND SWITCHING FUNDAMENTALS ROUTING AND SWITCHING NETWORK SCALING ROUTING AND SWITCHING CONNECTING NETWORKS
LINUX PROFESSIONAL INSTITUTE	INSTRUCTOR: LINUX ESSENTIALS
NATIONAL INSTRUMENTS	LABVIEW CORE I - II EMBEDDED -FPGA-ELVIS

PROFESSIONAL ACTIVITIES

Guest Editor: | MPDI Electronics: Low-Power AI Embedded Systems

Reviewer: | Journals: IEEE Latin America, MDPI Sensors, MDPI Information, MDPI Applied Sciences, MDPI Electronics.

TEACHING

IT University of Copenhagen

Teaching assistant in Computer Science MSc course: Internet of Things (Spring 2022)

Technical University of the North

Instructor in Electronics and Telecommunications engineering course: Embedded systems (Fall 2017 - Fall 2021)

Instructor in Electronics and Telecommunications engineering course: Microprocessors (Fall 2017 - Fall 2021)

Instructor in Electronics and Telecommunications engineering course: Electronics circuits (Fall 2017 - Fall 2020)

Instructor in Electronics and Telecommunications engineering course: Digital signal processing (Spring 2020 - Fall 2021)

Teaching assistant in Electronics and Telecommunications engineering course: Embedded systems (Fall 2013 - Spring 2016)

Teaching assistant in Electronics and Telecommunications engineering course: Microprocessors (Fall 2013 - Spring 2016)

Teaching assistant in Electronics and Telecommunications engineering course: Electronics circuits (Fall 2013 - Spring 2016)

Teaching assistant in Electronics and Telecommunications engineering course: Digital signal processing (Spring 2013 - Spring 2016)

Technological Institute 17th of July

Instructor in Electricity bachelor course: Electronics (Fall 2015 - Fall 2021)

Instructor in Electricity bachelor course: Machine Learning introduction (Fall 2015 - Fall 2021)

PH.D THESIS SUPERVISION

Development and application of heuristic multi-objective optimization methodologies for the control and planning of trajectories of autonomous vehicles for monitoring environmental conditions in greenhouses. Ongoing

by Fernando Yépez

Advisor(s): José Vicente Salcedo Romero de Ávila and Paul D. Rosero

UPV Universitat Politècnica de València

Hardware acceleration for sensor data analysis from IoT devices in a cloud computing environment. Ongoing

by Vanessa Alvear

Advisor(s): Vivian López Batista and Paul D. Rosero

University of Salamanca

MASTER'S THESIS ADVISORY

- A Machine Learning Approach to Identifying Micro-Fractures in Solar Modules** 2023
by Booy Vitas Faassen
Advisor(s): Paul D. Rosero
IT University of Copenhagen.
- Smart Farming Robot for Detecting Environmental Conditions in a Greenhouse** 2023
by Alexander Palsson, Henrik Bellsund, and Emil Krogsgaard
Advisor(s): Paul D. Rosero
IT University of Copenhagen.
- DISCOSAT2: Using machine learning for image selection in constrained small satellite image processing pipelines** 2022
by Jacob Sogaard Bøgh
Advisor(s): Julian Charles Philip Priest and Paul D. Rosero
IT University of Copenhagen.
- Exploration of the application of automatic event detection for on-board satellite processing** 2022
by Maja Gréta Szász and Kristian Ullum Vind
Advisor(s): Sebastian Büttrich and Paul D. Rosero
IT University of Copenhagen.
- Urban Air Pollution Monitoring by Neural Networks and Wireless Sensor Networks based on LoRa** 2020
by Vanessa Alwear
Advisor(s): Paul D. Rosero and Jaime Michelena
Technical University of the North. Available from:
https://link.springer.com/chapter/10.1007/978-3-030-63089-8_59

BACHELOR THESIS ADVISORY

- Computer Vision for Ocean Exploration: A Study of Data Requirements and Model Adaptation** 2023
by Sabrina Fonseca
Advisor(s): Sebastian Büttrich and Paul D. Rosero
IT University of Copenhagen.
- Tiny embedded machine vision for metering** 2023
by Wei-Jie Wang
Advisor(s): Paul D. Rosero
IT University of Copenhagen.
- Efficient ML for CubeSat Environmental Observations** 2323
by Victor Popp
Advisor(s): Paul D. Rosero
IT University of Copenhagen.

ENGINEERING THESIS ADVISORY

Development of supervised classification algorithms with a low computational cost for embedded systems oriented to the optimization of logical resources 2021

by Israel Gudiño

Advisor(s): Paul D. Rosero and Ana Umaquina

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/11173>

Intelligent embedded biomedical data representation system for apnea analysis

by Jhonny Ipiales

Advisor(s): Paul D. Rosero and Ana Umaquina

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/11762>

Computer vision for weed recognition in greenhouse tomato crops using neural networks 2021

by Karla Moncayo

Advisor(s): Paul D. Rosero and Luis Suárez

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/11567>

Wireless sensor network under LoRa protocol and process management for data analysis through meta operating system for environmental monitoring in greenhouses 2021

by Carlos Gordillo

Advisor(s): Paul D. Rosero and Carlos Vásquez

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/11567>

Dimensionality reduction methods Comparison to supervised classification algorithms applied to sensor data 2020

by Mayra Valencia

Advisor(s): Paul D. Rosero, Luis Suárez and Ana Umaquina

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/9652>

Intelligent route detection vehicle by GPS to irrigation by the environment at laboratory scale 2019

by Christian Quespaz

Advisor(s): Paul D. Rosero, Carlos Andrade and Mauricio Dominguez

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/91967>

Electronic system for detecting tread problems using machine learning algorithms 2019

by Edison Fuentes

Advisor(s): Paul D. Rosero, Edgar Maya and Mauricio Dominguez

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/9030>

Mobile embedded air quality for pattern recognition system in Ibarra-city 2019

by Yadira Burbano

Advisor(s): Paul D. Rosero, Carlos Vásquez and Ana Umaquina

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/9155>

Pattern recognition of WSN data focused on irrigation by controlled environments of roses at laboratory scale 2019

by *Wilmer Champutiz*

Advisor(s): Paul D. Rosero, Edgar Maya and Mauricio Domínguez

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/9197>

Prototype G: T: S: B-1 (basic sign translator glove), for people with hearing and language disabilities 2017

by *Jairo Navarrete*

Advisor(s): Paul D. Rosero,

Technical University of the North. Available from:

<http://repositorio.utn.edu.ec/handle/123456789/4464>

Exploration of the application of automatic event detection for on-board satellite processing 2022

by *Maja Gréta Szász and Kristian Ullum Vind*

Advisor(s): Sebastian Büttrich and Paul D. Rosero

IT University of Copenhagen.

Urban Air Pollution Monitoring by Neural Networks and Wireless Sensor Networks based on LoRa 2020

by *Vanessa Alvear*

Advisor(s): Paul D. Rosero and Jaime Michelena

Technical University of the North. Available from:

https://link.springer.com/chapter/10.1007/978-3-030-63089-8_59

RESEARCH EXPERIENCE

- Project: Resource-Aware Data Science** 2023
IT University of Copenhagen, Post. Doc.
Duration: 1 year
- Project: Privacy through Co-Design for Real-World Data Analytics in the Cloud** 2021-2022
IT University of Copenhagen, Post. Doc.
Duration: 1.5 years
- Project: Intelligent hybrid systems for crops environmental monitoring in greenhouses** 2020
Technical University of the North, Researcher.
Duration: 1 year
- Project: Autonomous System for Pattern Recognition in Greenhouses** 2019
University of Salamanca PLAN TCUE 2018-2020. Researcher.
Duration: 2 years
- Project: Pattern recognition in electronic systems in social environments using machine learning techniques** 2019
Technical University of the North, Researcher.
Duration: 1 year
- Project: Smart Monitoring of Atmospheric Conditions in Ibarra city by Machine Learning Techniques** 2018
Technical University of the North, Researcher.
Duration: 1 year
- Project: Intelligent Systems Applied on Teaching and Sports activities** 2018
Technical University of the North, Researcher.
Duration: 1 year
- Project: Multipurpose Methodology of Human-Machine Communication interfaces Design Using Electroencephalographic Signals** 2017
Technical University of the North, Researcher.
Duration: 1 year
- Project: Methodology of visual analysis of information in Big Data** 2016
Technical University of the North, Researcher.
Duration: 1 year
- Project: Development of Electronics IoT systems technologies** 2015
Technical University of the North, Researcher.
Duration: 1 year

PUBLICATIONS (SELECTED PAPERS)

Find the whole list of publications at: <https://paulrosero-montalvo.com/Publications/>

Journal Papers

*** Time Series Forecasting to Fill Missing Data in IoT Sensor Data**

IEEE Sensors Letters, (Q3 JCR: 1.12 (2023)) .

Paul D Rosero-Montalvo, Pinar Tozun, and Wilmar Hernandez

Available at: <https://ieeexplore.ieee.org/document/10225693>

*** Smart Farming Robot for Detecting Environmental Conditions in a Greenhouse**

IEEE Access, (Q1 JCR: 4.12 (2023)) .

Paul D Rosero-Montalvo, Carlos A. Gordillo-Gordillo, Wilmar Hernandez

Available at: <https://ieeexplore.ieee.org/document/10146280/>

*** A Survey of Trusted Computing Solutions Using FPGAs**

IEEE Access, (Q1 JCR: 4.12 (2023)) .

Paul D Rosero-Montalvo, Zsolt István, Wilmar Hernandez

Available at: <https://ieeexplore.ieee.org/abstract/document/10080920>

*** Hybrid Anomaly Detection Model on Trusted IoT Devices**

IEEE IoT, (Q1 JCR: 5.01 (2023)) .

Paul D Rosero-Montalvo, Zsolt István, Pinar Tözün, Wilmar Hernandez

Available at: <https://ieeexplore.ieee.org/abstract/document/10039052>

*** Statistical Analysis of the Impact of COVID-19 on PM2.5 Concentrations in Downtown Quito during the Lockdowns in 2020**

MDPI Sensors, (Q1 JCR: 3.27 (2022)) .

Wilmar Hernandez, Francisco José Arqués-Orobón, Vicente González-Posadas, José Luis Jiménez-Martín, Paul D Rosero-Montalvo

Available at: <https://www.mdpi.com/1424-8220/22/22/8985>

*** Smart and Portable Air-Quality Monitoring IoT Low-Cost Devices in Ibarra City, Ecuador**

MDPI Sensors, (Q1 JCR: 3.27 (2022)) .

Vanessa E Alvear-Puertas, Yadira A Burbano-Prado, Paul D Rosero-Montalvo, Pinar Tözün, Fabricio Marcillo, Wilmar Hernandez

Available at: <https://www.mdpi.com/1424-8220/22/18/7015>

*** A New Data-Preprocessing-Related Taxonomy of Sensors for IoT Applications**

MDPI Information, (Q3 JCR: 0.52 (2022)) .

Paul D Rosero-Montalvo, Vivian López-Batista, and Diego H. Peluffo-Ordóñez

Available at: <https://www.mdpi.com/2078-2489/13/5/241>

*** Addressing the Data Acquisition Paradigm in the Early Detection of Pediatric Foot Deformities**

MDPI Sensors, (Q1 JCR: 3.27 (2021)) .

Paul D Rosero-Montalvo, Edison A Fuentes-Hernández, Manuel E. Morocho-Cayamcela, Luz M. Sierra-Martínez, Diego H. Peluffo-Ordóñez

Available at: <https://www.mdpi.com/1424-8220/21/13/4422>

*** Air Pollution Monitoring Using WSN nodes with Machine Learning Techniques: A case study.**

Logic Journal of the IGLP, (Q1 JCR: 0.27 (2021)) .

Paul D. Rosero-Montalvo, Vivian F. López-Batista, Ricardo Arciniega-Rocha and Diego H. Peluffo-Ordóñez

Available at: <https://academic.oup.com/jigpal/advance-article-abstract/doi/10.1093/jigpal/jzab005/6133990>

*** Environment Monitoring of Rose Crops Greenhouse Based on Autonomous Vehicles with a WSN and Data Analysis**

MDPI Sensors, (Q1 JCR: 3.27 (2020)) .

Paul D Rosero-Montalvo, Vanessa C Erazo-Chamorro, Vivian F López-Batista, María N Moreno-García, Diego H Peluffo-Ordóñez

Available at: <https://www.mdpi.com/1424-8220/20/20/5905>

*** Hybrid Embedded-Systems-based Approach to in-Driver Drunk Status Detection using Image Processing and Sensor Networks**

IEEE Sensors, (Q2 JCR: 3.073 (2019)).

Paul D. Rosero-Montalvo, Vivian F. López-Batista, Diego H. Peluffo-Ordóñez

Available at: <https://ieeexplore.ieee.org/document/9258992>

*** Intelligent WSN System for Water Quality Analysis Using Machine Learning Algorithms: A Case Study (Tahuando River from Ecuador)**

Remote Sensing, (Q2 JCR: 4.509 (2019))

Paul D Rosero-Montalvo, Vivian F López-Batista, Jaime A Riascos, Diego H Peluffo-Ordóñez

Available at: <https://www.mdpi.com/2072-4292/12/12/1988>

*** Intelligent system for identification of wheelchair user's posture using machine learning techniques**

IEEE Sensors, (Q2 JCR: 3.073 (2019)).

Paul D Rosero-Montalvo, Diego Hernn Peluffo-Ordóñez, Vivian Félix López Batista, Jorge Serrano, Edwin A Rosero

Available at: <https://ieeexplore.ieee.org/abstract/document/8565996/>

*** A data set for electric power consumption forecasting based on socio-demographic features: Data from an area of southern Colombia**

Data in brief, (Q3 SJR: 0.11 (2019)) .

Jorge Parraga-Alava, Jorge Dario Moncayo-Nacaza, Javier Revelo-Fuelagán, Paul D Rosero-Montalvo, Andrés Anaya-Isaza, Diego Hernán Peluffo-Ordóñez

Available at: <https://www.sciencedirect.com/science/article/pii/S2352340920301402>

Conference Papers

*** Always-trusted IoT—Making IoT Devices Trusted with Minimal Overhead**

SysTEX '22 Workshop, Proceedings of the 5th Workshop on System Software for Trusted Execution. Zsolt Itván, Paul D Rosero-Montalvo and Philippe Bonnet

Available at: <https://zistvan.github.io/doc/adms22-faghih.pdf>

*** Efficient Lightweight Cryptography Algorithm in IoT Devices with Real-Time Criteria**

7th International Conference on Internet of Things, Big Data and Security (IoTbds 2022).

Paul D Rosero-Montalvo and Vanessa Alvear

Available at: <https://pure.itu.dk/portal/en/publications/efficient-lightweight-cryptography>

*** A Survey on Security Concerns and Their Actual Solutions for using FPGAs in Cloud Computing**

Latin American Conference on Computational Intelligence (7th IEEE LA-CCI).

Paul D Rosero-Montalvo

Available at: <https://ieeexplore.ieee.org/document/9769794>

*** A New Approach to Supervised Data Analysis in Embedded Systems Environments: A Case Study**

Science and Information Conference (SAI 2020).

Pamela E Godoy-Trujillo, Paul D Rosero-Montalvo, Luis E Suárez-Zambrano, Diego H Peluffo-Ordóñez, EJ Revelo-Fuelagán

Available at: https://link.springer.com/chapter/10.1007/978-3-030-52249-0_29

*** Urban Air Pollution Monitoring by Neural Networks and Wireless Sensor Networks Based on LoRa**

Proceedings of the Future Technologies Conference (FTC 2020).

Vanessa Alvear-Puertas, Paul D Rosero-Montalvo, Jaime R Michilena-Calderón, Ricardo P Arciniega-Rocha, Vanessa C Erazo-Chamorro

Available at: https://link.springer.com/chapter/10.1007/978-3-030-63089-8_59

*** Design and Tests to Implement Hyperconvergence into a DataCenter: Preliminary Results**

The International Conference on Advances in Emerging Trends and Technologies, ICAETT 2019.
 Edgar Maya-Olalla, Mauricio Dominguez-Limaico, Santiago Meneses-Narvaez, Paul D Rosero-Montalvo, Sandra Narvaez-Pupiales, Marcelo Zambrano Vizuetete, Diego H Peluffo-Ordóñez
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-32022-5_6

*** Cardiac Murmur Effects on Automatic Segmentation of ECG Signals for Biometric Identification: Preliminary Study**

Asian Conference on Intelligent Information and Database Systems, ACIIDS 2019.
 C Duque-Mejía, Miguel A Becerra, C Zapata-Hernández, Cristian Mejia-Arboleda, Andrés Eduardo Castro-Ospina, Edilson Delgado-Trejos, Diego H Peluffo-Ordóñez, P Rosero-Montalvo, Javier Revelo-Fuelagán
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-14799-0_23

*** Multivariate Approach to Alcohol Detection in Drivers by Sensors and Artificial Vision**

International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2019.
 Paul D Rosero-Montalvo, Vivian F López-Batista, Diego H Peluffo-Ordóñez, Vanessa C Erazo-Chamorro, Ricardo P Arciniega-Rocha
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-19651-6_23

*** Interactive Visualization Interfaces for Big Data Analysis Using Combination of Dimensionality Reduction Methods: A Brief Review**

International Conference on ' Knowledge Society: Technology, Sustainability and Educational Innovation, TSIE 2019.
 Ana C Umaquina-Criollo, Diego H Peluffo-Ordóñez, Paúl D Rosero-Montalvo, Pamela E Godoy-Trujillo, Henry Benítez-Pereira
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-37221-7_17

*** Urban Pollution Environmental Monitoring System Using IoT Devices and Data Visualization: A Case Study**

International Conference on Hybrid Artificial Intelligence Systems, HAIS 2019.
 Paul D Rosero-Montalvo, Vivian F López-Batista, Diego H Peluffo-Ordóñez, Leandro L Lorente-Leyva, XP Blanco-Valencia
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-29859-3_58

*** Optimization of the Master Production Scheduling in a Textile Industry Using Genetic Algorithm**

International Conference on Hybrid Artificial Intelligence Systems, HAIS 2019.
 Leandro L Lorente-Leyva, Jefferson R Murillo-Valle, Yakcleem Montero-Santos, Israel D Herrera-Granda, Erick P Herrera-Granda, Paul D Rosero-Montalvo, Diego H Peluffo-Ordóñez, Xiomara P Blanco-Valencia
 Available at : https://link.springer.com/chapter/10.1007/978-3-030-29859-3_57

*** A New Approach of Service Platform for Water Optimization in Lettuce Crops Using Wireless Sensor Network**

Proceedings of SAI Intelligent Systems Conference, IntelliSys 2019.
 Edgar Maya-Olalla, Hernán Domínguez-Limaico, Carlos Vásquez-Ayala, Edgar Jaramillo-Vinueza, Marcelo Zambrano, Alexandra Jácome-Ortega, Paul D Rosero-Montalvo, Diego Hernán Peluffo-Ordóñez
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-29513-4_1

*** An Intelligent System for Detecting a Person Sitting Position to Prevent Lumbar Diseases**

Proceedings of the Future Technologies Conference, FTC 2019.
 Paul D Rosero-Montalvo, Vivian López-Batista, Vanessa E Alvear Puertas, Edgar Maya-Olalla, Mauricio Dominguez-Limaico, Marcelo Zambrano-Vizuetete, Ricardo P Arcienegas-Rocha, Vanessa C Erazo-Chamorro
 Available at: https://link.springer.com/chapter/10.1007/978-3-030-32520-6_60

*** People Identification through Facial Recognition using Deep Learning**

IEEE Latin American Conference on Computational Intelligence, LA-CCI 2019.
 Bolívar Chacua, Iván García, Paul Rosero, Luis Suárez, Iván Ramírez, Zhima Simbaña, Marco

Pusda

Available at: <https://ieeexplore.ieee.org/abstract/document/9037043/>

*** Hardware and Software Filter Design for ECG Signal Acquisition and Processing**

International Conference on Applied Technologies, ICAT 2019.

Paul D Rosero-Montalvo, Edgar Maya-Olalla, Marcelo Zambrano Vizuete, Pamela Godoy-Trujillo, Ana Checa-Ramirez, Julio Andrade-Collahuazo, Christian Montalvo-Loza

Available at: https://link.springer.com/chapter/10.1007/978-3-030-42531-9_23

*** Regression Models Comparison for Efficiency in Electricity Consumption in Ecuadorian Schools: A Case of Study**

International Conference on Applied Technologies, ICAT 2019.

Alejandro Toapanta-Lema, Walberto Gallegos, Jefferson Rubio-Aguilar, Edilberto Llanes-Cedeño, Jorge Carrascal-García, Letty García-López, Paul D Rosero-Montalvo

Available at: https://link.springer.com/chapter/10.1007/978-3-030-42520-3_29

*** Sign Language recognition Based on Intelligent Glove Using Machine Learning Techniques**

IEEE Ecuador Technical Chapters Meeting, ETCM 2018.

Paul D Rosero-Montalvo, Pamela Godoy-Trujillo, Edison Flores-Bosmediano, Jorge Carrascal-García, Santiago Otero-Potosí, Henry Benitez-Pereira, Diego H Peluffo-Ordóñez

Available at: <https://ieeexplore.ieee.org/document/8580268>

*** Intelligent System of Squat Analysis Exercise to Prevent Back Injuries**

Conference on Information Technologies and Communication of Ecuador, TIC.EC 2018.

Paul D Rosero-Montalvo, Anderson Dibujes, Carlos Vásquez-Ayala, Ana Umaquinga-Criollo, Jaime R Michilena, Luis Suárez, Stefany Flores, Daniel Jaramillo

Available at: https://link.springer.com/chapter/10.1007/978-3-030-02828-2_15

*** Intelligence in Embedded Systems: Overview and Applications**

Future Technologies Conference, FTC 2018.

Paul D Rosero-Montalvo, Vivian F López Batista, Edwin A Rosero, Edgar D Jaramillo, Jorge A Caraguay, José Pijal-Rojas, DH Peluffo-Ordóñez

Available at: https://link.springer.com/chapter/10.1007/978-3-030-02686-8_65

*** Angle-based model for interactive dimensionality reduction and data visualization**

International Workshop on Artificial Intelligence and Pattern Recognition, IWAIPR 2018.

Cielo K Basante-Villota, Carlos M Ortega-Castillo, Diego F Peña-Unigarro, E Javier Revelo-Fuelagán, Jose A Salazar-Castro, MacArthur Ortega-Bustamante, Paul Rosero-Montalvo, Laura Stella Vega-Escobar, Diego H Peluffo-Ordóñez

Available at: https://link.springer.com/chapter/10.1007/978-3-030-01132-1_17

*** Developments on Solutions of the Normalized-Cut-Clustering Problem Without Eigenvectors**

Advances in Neural Networks, ISNN 2018.

Leandro Leonardo Lorente-Leyva, Israel David Herrera-Granda, Paul D Rosero-Montalvo, Karina L Ponce-Guevara, Andrés Eduardo Castro-Ospina, Miguel A Becerra, Diego Hernán Peluffo-Ordóñez, José Luis Rodríguez-Sotelo

Available at: https://link.springer.com/chapter/10.1007/978-3-319-92537-0_37

*** A novel color-based data visualization approach using a circular interaction model and dimensionality reduction**

Advances in Neural Networks, ISNN 2018.

Jose Alejandro Salazar-Castro, Paul D Rosero-Montalvo, Diego Fernando Peña-Unigarro, Ana Cristina Umaquinga-Criollo, Zenaida Castillo-Marrero, Edgardo Javier Revelo-Fuelagán, Diego Hernán Peluffo-Ordóñez, César Germán Castellanos-Domínguez

Available at: https://link.springer.com/chapter/10.1007/978-3-319-92537-0_64

*** Cardiac Pulse Modeling Using a Modified van der Pol Oscillator and Genetic Algorithms**

6th International Work-Conference on Bioinformatics and Biomedical Engineering, IWBBIO 2018.

Fabián M Lopez-Chamorro, Andrés F Arciniegas-Mejia, David Esteban Imbajoa-Ruiz, Paul D Rosero-Montalvo, Pedro García, Andrés Eduardo Castro-Ospina, Antonio Acosta, Diego Hernán

Peluffo-Ordóñez

Available at: https://link.springer.com/chapter/10.1007/978-3-319-78723-7_8

*** Wireless sensor networks for irrigation in crops using multivariate regression models**

IEEE Third Ecuador Technical Chapters Meeting, ETCM 2018.

Paul D Rosero-Montalvo, José Pijal-Rojas, Carlos Vásquez-Ayala, Edgar Maya, Carlos Pupiales, Luis Suárez, Henry Benítez-Pereira, DH Peluffo-Ordóñez

Available at: <https://ieeexplore.ieee.org/abstract/document/8580322/>

*** Air quality monitoring intelligent system using machine learning techniques**

International Conference on Information Systems and Computer Science, INCISCOS 2018.

Paul D Rosero-Montalvo, Jorge A Caraguay-Procet, Edgar D Jaramillo, Jaime M Michilena-Calderón, Ana C Umaquinga-Criollo, Mario Mediavilla-Valverde, Miguel A Ruiz, Luis A Beltrán, Diego H Peluffo

Available at: <https://ieeexplore.ieee.org/abstract/document/8580322/>

*** Wearable Textil for Accident Prevention for Babies in Crawl Phase**

International Conference on Information Systems and Computer Science 2017, INCISCOS 2017.

Inti Javier Chico Morales, Sandra Karina Narváez Pupiales, Ana Cristina Umaquinga Criollo, Paúl David Rosero Montalvo

Available at: <https://ieeexplore.ieee.org/document/8328087/>

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