

Editorial

The journal Tecciencia, from the Colombian School for Industrial Studies University (ECCI, its Spanish acronym), has always aimed to disseminate and to contribute to scientific knowledge through its various issues. The magazine stands out for its publication of papers of great scientific value and interest for the academic community. These papers can be a referent for innovation and social, economic and industrial development at the national and international level. Tecciencia publishes papers from ECCI University authors as well as those from other universities throughout Colombia.

Science and technology are essential bases for development. Through research, knowledge can be acquired and transformed, improving the quality of life in society. Each day, a range of research is being carried out, strengthening and consolidating the growth of our societies. Hence, the dissemination of research is vital to materialize and create new opportunities for the generation and implementation of knowledge.

The first paper that appears is called "Techniques for Alarm Management with Fault Diagnostic System in Startups and Shutdowns Industrial Process", which presents different techniques for the studying and diagnosis of faults in industrial processes for On/Off control.

Next, we present the research developed at Jorge Tadeo Lozano University, called "Discussion on the Implications upon the Environment of some Technologies from the Second Green Revolution",

where the authors explore the genetic progress of plants and organisms based on the application of biotechnology.

Now, in the field of signal processing application, the Distrital University presents the paper "Identification of eight bird Species of Bogota Wetlands Using Pattern Recognition and component analysis", in which eight native species are recognized through the digital processing of their sounds, in order to analyze the characteristics of birds using pattern recognition.

Santander University (UDES, its Spanish acronym) together with the Center for Research, Development and Innovation in Rehabilitation Engineering (CIDi – IngeRehab) present a study called "Design and Development of Transcutaneous Electrical Stimulation Equipment for Neuromuscular Rehabilitation in Individuals with Facial Palsy". This paper shows the development of electrical stimulation equipment, which is used for facial neuromuscular rehabilitation.

Currently, organizations have given greater importance to knowledge generated from within and without, considering it a valuable asset. Hence the paper "Systematic Review of Acquisition Techniques & Knowledge Representation" presented by Santander Industrial University. It reviews various techniques for knowledge management and identifies some acquisition techniques and knowledge representation that can be replicated in organizations.

Another paper related to knowledge management is "Model for Knowledge Management in Software Project Planning in University Research Groups". It proposes a software which allows the management of knowledge in university project planning by controlling processes and improving the implementation of practices and tools.

Moreover, the Technological University of Pereira and ECCI University present the paper "Identification and Multivariable Control in State Space of a Permanent Magnet Synchronous Generator", where a strategy for the identification of multivariable systems is presented, with the goal of evaluating a wind turbine with a simultaneous permanent magnetic generator.

Sergio Arboleda University presents the paper "Analysis of Meteorological Data for the Station 'La Selva' by Applying the Biotic Pump Theory", which analyzes the relationships between the atmospheric variables reported daily by the Biological Station 'La Selva' (located in the foothills of the Caribbean in Costa Rica), based on the biotic pump theory developed by Victor Gorshkov and Anastasia Makarieva.

In the field of materials, the ECCI University presents "The Synthesis and Characterization of a Material Made by a Polymer Matrix Reinforced with Nylon Fiber and Glass Fiber", which studies the reinforcement of epoxy resin with nylon fiber and glass fiber via the evaluation of parameters such as weight, ductility and stress, in order to obtain a better characterization of the material.

Finally, we present a study called "Measuring the Carbon Footprint in the Enterprise Mobile Operating Systems, Transmilenio" which covers one of the most significant global issues regarding climate change. The authors measure the carbon footprint by using the standard ISO 14064-1: 2006, associated with emissions from the Transmilenio system.

The papers published in the current issue have as their main objective the continued contribution to the dissemination of scientific knowledge.

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