

## Editorial

This issue of the journal “*Computación y Sistemas*” is the anniversary edition—the journal is **15 years since its foundation**. The journal was improving during the time and augmenting its impact in computing science in Mexico as well as in the world.

The journal has international editorial board. It publishes papers by authors from a wide range of countries with emphasis on Ibero-American community. Our journal has high standards of quality that are guaranteed by double blind peer-reviewing procedure and careful selection of international reviewers. As recognition of its quality, our journal belongs to the index of excellence of CONACYT (Mexican Ministry of Science) during many years, among very few journals of the area, and to various international indexes. Since this month our journal is indexed by Scopus.

We are sure that the journal accomplishes its mission of dissemination of scientific knowledge at the cutting edge of computing science and its applications.

The current issue contains invited paper, seven regular papers and a report on a PhD thesis.

The invited paper “*Advances in Iris Recognition: Perspectives and Opportunities of Research in Biometric Algorithms*” by Mireya S. García-Vazquez and Alejandro A. Ramírez-Acosta presents the advances in applying iris based biometric systems and describes the algorithms that are used for iris recognition.

In the paper “*A New Analytical Method for Calculating the Characteristic Impedance  $Z_C$  of Uniform Transmission Lines*” by José Eleazar Zuñiga Juarez, J. Apolinar Reynoso Hernández, Ma. Carmen Maya Sánchez, and Roberto Murphy Arteaga, a new analytical method is proposed for calculating the characteristic impedance of transmission lines embedded in identical, symmetrical, and reciprocal connectors. The method was successfully applied to characterize microstrip lines printed on an FR4 substrate.

A method of reducing speckle noise in applications for ultrasound image processing

using low degree unbiased FIR filters is discussed in the paper “*Speckle Noise Reduction in Ultrasound Imaging Using the Key Points in the Low Degree unbiased FIL Filters*” by Luis Javier Morales Mendoza, René Fabian Vázquez Bautista, Efrén Morales Mendoza, and Yuriy S. Shmaliy. The authors show that ultrasound image enhancing with different degree FIR filters at special lags allows getting best results in various applications.

The paper “*Supervised Learning Algorithms Evaluation on Recognizing Semantic Types of Spanish Verb-Noun Collocations*” by Alexander Gelbukh and Olga Kolesnikova shows that existing supervised machine learning methods can be applied to the task of annotating Spanish collocations with generalized meanings (like, *make decision, provide support*, etc.) with promising results.

José Luis Gordillo Angélica Salazar Aguilar, José Luis González Velarde, and Roger Z. Ríos Mercado present the paper “*A Divide and Conquer Approach to Commercial Territory Design*”, where they propose a new heuristic procedure for commercial territory design based on divide and conquer paradigm.

An issue of construction of multi-objective hyper-heuristics using the multi-objective evolutionary algorithm for solving irregular 2D cutting stock problems under a bi-objective minimization schema is addressed in the paper “*Building General Hyper-Heuristics for Multi-Objective Cutting Stock Problem*” by Fabián Juan Carlos Gómez and Hugo Terashima Marín.

The paper “*Multi-Objective Variable Neighborhood Search to Solve the Problem of Partitioning of Spatial Data with Population Characteristics*” by María Beatriz Bernábe Loranca and Carlos Guillen Galván proposes a heuristic algorithm for solving partitioning problem using a special type of multi-objective optimization with two objectives: minimization of distances and of census variables. Variable Neighborhood Search is used to avoid local optima.

In the paper “*Efficient Hybrid Grouping Heuristics for the Bin Packing Problem*” by Laura

Cruz Reyes, Marcela Quiroz C., Adriana C. V. Alvim, Hector J. Fraire Huacuja, Claudia Gómez S. and José Torres Jiménez, an application of hybrid grouping genetic algorithm is proposed for solving the classic Bin Packing Problem.

In this issue, the section "Report on PhD Thesis" contains the paper "*Localization of Compact Invariant Sets of Physical and Electromechanical Systems and their Applications*" by Luis Nestor Coria de los Rios and Konstantin E. Starkov who present the solution of the conditional extremum problem in the study of a model of a permanent magnet synchronous motor. In their case, the localization set is given by a one-parameter set of ellipsoids, crossed by an elliptical paraboloid and a cylinder.

I am sure that these excellent papers will be of interest for the readers of this issue of the journal.

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