

EDITORIAL

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The prestige achieved by the Ibero-American Journal *Computación y Sistemas* is now a reality. This prestige has been reached by the quality of the numerous articles published during its existence. This journal was born to be a forum between the Ibero-American scientific community, nevertheless, nowadays it is been expanded to the whole world. Once again, it is remarkable the quality of the papers published in the present issue and that of their authors. The five articles and the PhD abstract, that compose this edition, are a parameter of the quality of research results published in CyS. The works in this issue are described as follows:

In the first article, Jovanovic Dolecek and Mitra propose a simple multiplierless filter design procedure for a desired high performance of the designed filter. The authors focus to the finite impulse response (FIR) filters, since they can be designed with exact linear phase and exhibit no stability problems. The proposed procedure is composed of a two steps. In the first step of the procedure, the impulse response coefficients of an equiripple FIR designed to satisfy the given specifications are rounded to the nearest integers. Then, in the second step, a sharpening technique is applied to the filter with the rounded impulse response such that the given specification is met. Given the sharpening technique used by the authors, the method has a better performance than those based on simultaneous optimization of the subfilters and the corresponding sharpening polynomial coefficients.

In the second work, Tlelo-Cuautle, Duarte-Villaseñor, Reyes-García and Reyes-Salgado describe an automatic synthesis method based on the application of genetic algorithms for the synthesis of voltage followers (VF's) using CMOS integrated circuit technology of 0.35 μ m. It is shown the usefulness of the nullor element to model the ideal behavior of the VF's, and to codify its topology using a chromosome which is divided into four genes: gene of small-signal, gene of synthesis of the MOSFET, gene of bias, and gene of synthesis of current mirrors.

In the next paper, Ramírez and Salas focus their research to the identification of a screw fastener system with noises in measurements. Nowadays, system identification has allowed solving the problem of knowing the system model with high precision, considering that the system variables measurements are made without error or by filtering treatment. However, since there are cases where the filtering treatment is not possible or where errors are attributable to the model, the authors present a solution to the problem of system identification with measurement noises by means of an Over-Extended Least Squares scheme.

In the fourth paper, Chacón Murguía, Corral Sáenz and Sandoval Rodríguez present a new method to determine image complexity based only on information obtained from the image independent of human evaluation. To generate a human independent scheme for determining the complexity of an image which avoids giving misleading information, a new fuzzy image complexity measure scheme independent of human evaluation is proposed.

In the final paper, Peña, Sossa and Gutiérrez state how Cognitive Maps can be used to model causal phenomena. Cognitive Maps set and simulate the systems dynamics based upon qualitative knowledge. A Cognitive Map is a tool that gives away the entities of the issue of study, an also bring out the causal phenomena as cause-effect relationships between concepts. According to the relationships, a topology and a workflow of causal effects is designed. Cognitive Maps aim to predict the evolution of a model through simulation. During the process are achieved causal inferences that estimate the variation on the state of the concepts. The simulation breaks down when the concept values reach a fixed point, a pattern of states or a chaotic region in the search space. Therefore, in this paper the authors depict the underlying concepts for Causal Modeling by means of Cognitive Maps. Besides to reveal their mathematical baseline, their application focused on Student Model is illustrated.

Finally, in this issue, Clempner presents an abstract of his doctoral dissertation, where, a new modeling paradigm for developing decision process representation for shortest-path problem and games is introduced. The main point of this work is its ability to represent the system-dynamic and trajectory-dynamic properties of a decision process. The potential of this approach remains in its formal proof simplicity for the existence of an equilibrium point. This is a novel approach in decision process, game theory and Petri Nets.

We would like to take this opportunity to thank all the authors for contributing their latest research results to this issue of CyS and we invite the authors interested in publishing their results to submit their works to this journal.

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Associate Editor