

EDITORIAL

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This third number of volume twelve of *Computación y Sistemas* compiles seven works of research, six regular papers and one resume of thesis.

In short, the first work (Time Coordination by Time Adaptive Function) by A. Conde et al. presents a new method to coordinate time overcurrent relays. The purpose is to find a time element function that allows it to operate using a constant back-up time delay for any fault current. A simple methodology is proposed that improves the time coordination even with the presence of distributed generation. Experiments were carried out in a laboratory test situation using signals from a power electrical system physics simulator. A virtual prototype of the time overcurrent relay with adaptive algorithms was developed using real time acquired signals. The tests showed the enhanced performance of the overcurrent relay.

The second work (Evolutionary Algorithm for the Vehicles Routing Problem with Time Windows Based on a Constraint Satisfaction Techniques), by M. A. Cruz et al. proposes a Memetic Algorithm (MA) for solving the Vehicles Routing Problem with Time Windows (VRPTW) multi-objective, using a constraint satisfaction heuristic that allows pruning of the search space to direct a search towards good solutions that represent the individuals of the population. The results of MA demonstrate that the use of Constraints Satisfaction Technique permits MA to work more efficiently in the VRPTW.

The third work (Run-Time Assertion Checking with Énfasis), by J. O. Olmedo et al. addresses the run-time assertion checking problem involving local variables in Java programs by means of language Énfasis. The contribution of this work consists on showing that run-time assertion checking is more effective in Énfasis by its greater expressive power than in other approaches such as AspectJ and the interface specification language JML.

The fourth work (Analysis of LRD series with time-varying Hurst parameter) by S. Ledesma et al. presents and analyses an iterative method to compute the value of the Hurst parameter as a function of time. Experimental results show that the proposed method provides a good estimation of the Hurst parameter as a function of time. Additionally, this method allows the detection on changes of the Hurst parameter for long data series. The proposed method is compared with traditional methods for Hurst parameter estimation.

The fifth work (Active Vibration Control Using On-line Algebraic Identification and Sliding Modes), by F. Beltrán et al. describes the application of an on-line algebraic identification methodology for parameter and signal estimation in vibrating systems. The algebraic identification is employed to estimate the frequency and amplitude of exogenous vibrations affecting the mechanical system using only position measurements. The technique is combined with an adaptive-like sliding mode control scheme to asymptotically stabilize the system response and, simultaneously, cancel the harmonic vibrations.

The sixth work (Assessing Data Quality of Integrated Data by Quality Aggregation of its Ancestors) M. del Pilar Angeles et al. presents a method to assess data quality at multiple levels of granularity, including derived non-atomic data, considering data provenance. The Data Quality Manager prototype has been implemented and tested to prove such assessment.

Finally, the seventh work (Automatic Compensation of Dynamical Forces in Rotating Systems), by M. A. Meraz et al. studies the development of parameter representations which are interconnected in flexible rotor and autobalance systems coupled. This goal consists in achieving independent set of differential equations for each section of the shaft and applying stiffness method to obtain a global matrix. In the case of a single rotor and a single drum (with balls) in different plane, an experimental model was developed; theoretical (software) and experimental results were similar, and this showed the efficiency of the balancing method. Values for the frequency and associated masses where the system works were found.

I want to the opportunity, in the one hand, to thank the great work developed by the editors in chief and associate editors after three years of intensive activities, they finish their period as members of the editorial body of *Computación y Sistemas*. Sincerely, without their professionalism and dedication *Computación y Sistemas* did not had attained the level of acceptance that it has in the national and international community.

In the other hand, I want to express my gratitude to the new researchers that become part of the body of editors in chief ((Prof. Ulises Cortés) and associate editors (Leonid Tineo, André C. Ponce de León, Oscar Dieste, Francisco J. Mendieta y Manuel Duarte). I am convinced that with their experience, professionalism and dedication, *Computación y Sistemas* not only will keep its standards of quality, but also will step more to its consolidation.

To all out-coming and incoming colleagues, thanks, many thanks.

Juan Humberto Sossa Azuela
Editor in Chief for Mexico