

This issue of *Computación y Sistemas* presents five research papers and one Ph.D. thesis report dedicated to the topics of software engineering, automatic control, image recognition, and computer hardware.

M. J. Escalona, et al., describe a system that presents to the public, through a simple web interface, the information on the cultural heritage of Andalusia and helps the user to formulate their preferences and build a personalized itinerary of their cultural visit. The system applies qualitative reasoning to automatically generate the itineraries. For the interface design, techniques based on semi-qualitative constraints and web system design methodologies are used. The conclusion is that object-oriented programming with constraints is an adequate paradigm for the tasks of this type.

L. P. Sánchez Fernández, show a neural network with backpropagation allows for recognition of first and second order dynamic models in virtual instrumentation. The presented technique recognizes well even noisy signals. This work is a step forward in the development of efficient algorithms for predictive alerting with minimum processing time.

F. Flores-Ando, et al., suggest a simple method for determining the parameters and velocity state of a Duffing oscillator, which is an important problem in automatic control. They use a genetic algorithm with the parameter set to be found as the genome and the similarity between the model and the real observations as the fitness function. The numerical experiments show that this method can be efficiently applied to modeling of the systems of the type under consideration.

M. L. Barrón-Estrada and R. Stansifer, illustrate the compatibility problems between binary methods (simply put, binary operations on the objects of the same type) and generic (parameterized) classes and interfaces in implementation of Java programs. These new features will be included in the next release of Java language which is expected to be available later in this year. The authors show that the existent object-oriented programming models do not provide seamless compatibility between these two language extensions.

C. Martínez and O. Fuentes, consider the problem of identification of a person by a photo when only very few training examples (one image per person) are available. The authors achieve a very high increase in accuracy (up to 92%, with the baseline being 35%) when they add to the training set a large number of unclassified images. The classification necessary for learning is simulated with automatic classifiers.

Finally, O. Camacho Nieto and his advisors report the results of a thesis dedicated to increasing performance of cache memory, the bottleneck of the modern processors. They suggest a hierarchical scheme of caches with a dynamic intelligent algorithm for access to its first level, which provides more than 11% of improvement in access time.

These papers are of interest for researchers and students in the corresponding fields.

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