

Editorial

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I welcome readers to the first issue of volume 19 of the *Journal of the Brazilian Computer Society*. This issue includes seven original contributions on diverse Computer Science topics.

In the first paper, Rafael A. M. Gonçalves, Diego R. Cueva, Marcos R. Pereira-Barretto, and Fabio G. Cozman propose a reference model to recognize emotions on faces and describe its application to detect slow conveyed emotions and to infer a speaker's overall emotional state in videos where a human is talking.

The second contribution, by authors Hugo de Brito, Humberto Torres Marques-Neto, Ricardo Terra, Henrique Rocha, and Marco Tulio Valente, is on object graphs applied to reverse software engineering. The paper describes an on-the-fly, non-invasive approach and tool to extract hierarchical object graphs that can help understanding the running architecture of software systems.

The paper by Carlos Maziero, Douglas dos Santos, and Altair Santin contains an evaluation of some popular general-purpose operating systems under memory thrashing conditions, i.e., when system throughput is significantly reduced due to extensive paging activity. Authors describe a portable benchmark tool, identify the performance data about memory management in each system and discuss the different behaviors observed.

The paper by Fabiano A. Dorça, Luciano V. Lima, Márcia A. Fernandes, and Carlos R. Lopes addresses student assessment in e-learning. The authors propose and compare two innovative approaches, based on Markov chains and

genetic algorithms, respectively, to automatically detect and to precisely adjust student learning styles during an adaptive-course.

Vinícius Mourão Alves de Souza and Valéria Delisandra Feltrim report on the development of a coherence analysis module for SciPo, a tool devised to assist novice writers in producing scientific abstracts for computer science papers written in Portuguese. The module automatically detects semantic coherence aspects of abstracts and provides suggestions for improvement.

Vladia Pinheiro, Vasco Furtado, Tarcísio Pequeno, and Wellington Franco introduce a semi-automated method for the acquisition of common-sense and inferentialist concepts in Portuguese. Its distinguishing feature, as compared with existing solutions, is a module of reasoning over the pre-existing knowledge that generates new common-sense and pragmatic facts for concepts.

Finally, the paper by Éfren L. Souza, Eduardo F. Nakamura, Horácio A. B. F. de Oliveira, and Carlos M. S. Figueiredo addresses a problem in wireless sensor networks, the distance estimation procedure that is a major source of errors in localization algorithms. They employ a Kalman Filter to improve the distance estimation within localization algorithms and reduce errors, increasing accuracy in target tracking.

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