

Editorial

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I welcome our readers to the first issue of Volume 17 of the Journal of the Brazilian Computer Society. Known to the computer science research community in Brazil since 1995, when it started being published sponsored by the Brazilian Computer Society, this is the second volume of JBCS as a Springer journal. We are glad this move enabled us to reach a wider audience of both readers and authors, and hope you continue to support JBCS in both roles.

This first issue of Volume 17 includes five original contributions. In the first paper, authors V.S. Anitha and M.P. Sebastian present adaptive centralized and distributed clustering algorithms for ad hoc wireless sensor networks. Their proposed algorithms allow clusters of variable diameter and cater for scalability, load balancing, and stability.

The second paper, by Mariá C.V. Nascimento and André P.L.F. de Carvalho also addresses clustering, but in the context of graphs. It introduces a new validation measure for graph clustering and an algorithm for finding graph partitions with the maximum clustering coefficient that does not require the number of clusters in the partition to be defined *a priori*. Computational experiments indicate a very good potential for finding good graph partitions.

The third paper, by Fernando Luís Dotti, Paulo Fernandes, and Cristina M. Nunes, is also on wireless networks. The authors consider the problem of characterizing node mobility in such networks, and adopt a structured Markovian formalism, namely SAN (*Stochastic Automata Networks*), to

model and analyze two popular mobility models for wireless networks: the Random Waypoint and Random Direction.

The paper by Nelson Neto, Carlos Patrick, Aldebaro Klautau, and Isabel Trancoso describes the development of free tools for Brazilian Portuguese speech recognition that are publicly available and already being used in application development. The authors compare performance of their tools with that of a commercial software, and also describe an application dedicated to statistical machine translation from Brazilian Portuguese to English and vice versa.

Finally, José Angelo Gurzoni, Jr., Murilo Fernandes Martins, Flavio Tonidandel, and Reinaldo A.C. Bianchi discuss issues and solutions in the development of a successful robot soccer team. Contributions include a computer vision system employing an artificial neural network to recognize colors, a heuristic algorithm to recognize partially detected objects, an implementation of the rapidly exploring random trees (RRT) path planning algorithm which enables controlling the angle of approach of the robot, and a layered strategy software system.

Readers are invited to access papers from this and previous volumes, now available online also at Springer (<http://www.springer.com/jbcs/>), and consider JBCS as a possible publication venue for their own research results. I also express my warm thanks to paper reviewers for the previous year of 2010, and to JBCS editorial board members, for their invaluable work and support.

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