Список литературы

- [1] D. Palmer-Brown and M. Kang, Adfunn: An adaptive function neural network, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 1–4, Coimbra, Portugal, 2005, Springer.
- [2] B. Beliczynski, Certain comments on data preparation for neural networks based modelling, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 5–8, Coimbra, Portugal, 2005, Springer.
- [3] H. Saxen and F. Pettersson, A simple method for selection of inputs and structure of feedforward neural networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 9–12, Coimbra, Portugal, 2005, Springer.
- [4] M. Huk and H. Kwasnicka, The concept and properties of sigma-if neural network, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 13–17, Coimbra, Portugal, 2005, Springer.
- [5] W. Bellil, C. Amar, and A. Alimi, Beta wavelet networks for function approximation, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 18–21, Coimbra, Portugal, 2005, Springer.
- [6] P. Cruz, Speeding up backpropagation with multiplicative batch update step, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 22–24, Coimbra, Portugal, 2005, Springer.
- [7] J. Sima, Generating sequential triangle strips by using hopfield nets, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 25–28, Coimbra, Portugal, 2005, Springer.
- [8] S. I. Bauk, S. M. Perovich, and A. Lompar, The linear approximation method to the modified hopfield neural network parameters analysis, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 29–32, Coimbra, Portugal, 2005, Springer.
- [9] S. M. Perovich, S. I. Bauk, and N. Konjevic, The analytical analysis of hopfield neuron parameters by the application of special trans function theory, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 33–37, Coimbra, Portugal, 2005, Springer.
- [10] M. Jankovic and H. Ogawa, Time-oriented hierarchical method for computation of minor components, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 38–41, Coimbra, Portugal, 2005, Springer.
- [11] H. Soula, G. Beslon, and J. Favrel, Evolution versus learning in temporal neural networks, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 42–45, Coimbra, Portugal, 2005, Springer.
- [12] V. Kurkova, Minimization of empirical error over perceptron networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 46–49, Coimbra, Portugal, 2005, Springer.
- [13] A. Horzyk, Interval basis neural network, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 50–53, Coimbra, Portugal, 2005, Springer.

- [14] J. Eidson, B. Hamilton, and V. Kanevsky, Learning from randomly-distributed inaccurate measurements, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 54–61, Coimbra, Portugal, 2005, Springer.
- [15] H. Sun, Combining topological and cardinal directional relation information in qsr, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 62–65, Coimbra, Portugal, 2005, Springer.
- [16] H. Altincay, An evidence theoretic ensemble design technique, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 66–69, Coimbra, Portugal, 2005, Springer.
- [17] O. Hoshino, Cortical modulation of synaptic efficacies through norepinephrine, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 70–73, Coimbra, Portugal, 2005, Springer.
- [18] N. Davey, L. Calcraft, and R. Adams, Associative memories with small world connectivity, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 74–77, Coimbra, Portugal, 2005, Springer.
- [19] M. Murata and S. Ozawa, A memory-based reinforcement learning model utilizing macroactions, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 78–81, Coimbra, Portugal, 2005, Springer.
- [20] C. C. Peck, J. Kozloski, G. A. Cecchi, and A. R. Rao, A biologically motivated classifier that preserves implicit relationship information in layered networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 82–85, Coimbra, Portugal, 2005, Springer.
- [21] Y. Yatsuzuka and Y. Ho, Large scale hetero-associative networks with very high classification ability and attractor discrimination consisting of cumulative-learned 3-layer neural networks, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 86–91, Coimbra, Portugal, 2005, Springer.
- [22] C. Avila, Y. Tsuji, and Y. Shiraishi, Crack width prediction of rc structures by artificial neural networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 92–95, Coimbra, Portugal, 2005, Springer.
- [23] B. Lamrini, A. Benhammou, A. Karama, and M.-V. L. Lann, A neural network system for modelling of coagulant dosage used in drinking water treatment, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 96–99, Coimbra, Portugal, 2005, Springer.
- [24] M. Ronnholm et al., Ann modeling applied to nox reduction with octane. ann future in personal vehicles, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 100–103, Coimbra, Portugal, 2005, Springer.
- [25] M. Helle and H. Saxen, A method for detecting cause-effects in data from complex processes, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 104–107, Coimbra, Portugal, 2005, Springer.

- [26] M. Trebar and U. Lotric, Predictive data mining on rubber compound database, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 108–111, Coimbra, Portugal, 2005, Springer.
- [27] Z. Bingul and H. M. Ertunc, Applying neural network to inverse kinematic problem for 6r robot manipulator with offset wrist, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 112–115, Coimbra, Portugal, 2005, Springer.
- [28] L. Zhang, J. Sitte, and U. Rueckert, Local cluster neural network chip for control, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 116–119, Coimbra, Portugal, 2005, Springer.
- [29] M. Boumehraz and K. Benmahammed, A switching controller for nonlinear systems via fuzzy models, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 120–123, Coimbra, Portugal, 2005, Springer.
- [30] T. Ohba and M. Ishida, Competitive decentralized autonomous neural net controllers, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 124–127, Coimbra, Portugal, 2005, Springer.
- [31] T. M. Jelleli and A. M. Alimi, Improved hierarchical fuzzy control scheme, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 128–131, Coimbra, Portugal, 2005, Springer.
- [32] I. Gabrijel and A. Dobnikar, On-line inference of finite automata in noisy environments, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 132–135, Coimbra, Portugal, 2005, Springer.
- [33] D. W. Pearson and M. Batton-Hubert, Improved clustering by rotation of cluster centres, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 136–139, Coimbra, Portugal, 2005, Springer.
- [34] K. A. J. Doherty, R. G. Adams, and N. Davey, Hierarchical growing neural gas, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 140–143, Coimbra, Portugal, 2005, Springer.
- [35] R. Rastegar, A. Hariri, and M. Meybodi, A fuzzy clustering algorithm using cellular learning automata based evolutionary algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 144–150, Coimbra, Portugal, 2005, Springer.
- [36] U. Moller, Estimating the number of clusters from distributional results of partitioning a given data set, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 151–154, Coimbra, Portugal, 2005, Springer.
- [37] H. A. Boubacar, S. Lecoeuche, and S. Maouche, Audyc neural network using a new gaussian densities merge mechanism, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 155–158, Coimbra, Portugal, 2005, Springer.

- [38] M. Boudour and A. Hellal, The growing hierarchical self-organizing feature maps and genetic algorithms for large scale power system security, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 159–163, Coimbra, Portugal, 2005, Springer.
- [39] F. Boudjemai, P. B. Enberg, and J. G. Postaire, 3d self organizing convex neural network architectures, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 164– 167, Coimbra, Portugal, 2005, Springer.
- [40] K. Marzouki and T. Yamakawa, Novel learning algorithm aiming at generating a unique units distribution in standard som, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 168–172, Coimbra, Portugal, 2005, Springer.
- [41] T. Tambouratzis, Som-based estimation of meteorological profiles, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 173–176, Coimbra, Portugal, 2005, Springer.
- [42] C. Garcia and J. Moreno, An efficient heuristic for the traveling salesman problem based on a growing som-like algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 177–180, Coimbra, Portugal, 2005, Springer.
- [43] H. Niska, T. Hiltunen, A. Karppinen, and M. Kolehmainen, Evolutionary design and evaluation of modeling system for forecasting urban airborne maximum pollutant concentrations, in *Adaptive* and *Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 181–184, Coimbra, Portugal, 2005, Springer.
- [44] G. W. Braught, Evolving evolvability: Evolving both representations and operators, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 185–188, Coimbra, Portugal, 2005, Springer.
- [45] A. Gaspar-Cunha, A multi-objective evolutionary algorithm for solving traveling salesman problems: Application to the design of polymer extruders, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 189–193, Coimbra, Portugal, 2005, Springer.
- [46] M. Koppen, R. Vicente-Garcia, and B. Nickolay, The pareto-box problem for the modelling of evolutionary multiobjective optimization algorithms, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 194–197, Coimbra, Portugal, 2005, Springer.
- [47] J. Jedrzejowicz and P. Jedrzejowicz, Implementation and experimental validation of the population learning algorithm applied to solving qap instances, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 198–201, Coimbra, Portugal, 2005, Springer.
- [48] S. Shakya, J. McCall, and D. F. Brown, Estimating the distribution in an eda, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 202–205, Coimbra, Portugal, 2005, Springer.
- [49] P. Jonkergouw, E. Keedwell, and S.-T. Khu, Modelling chlorine decay in water networks with genetic programming, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 206–209, Coimbra, Portugal, 2005, Springer.

- [50] D. Curran and C. O'Riordan, Evolving blackjack strategies using cultural learning, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 210–213, Coimbra, Portugal, 2005, Springer.
- [51] N. Gupta and V. K. Agrawal, Two-criterion optimization in state assignment for synchronous finite state machines using nsga-ii, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 214–217, Coimbra, Portugal, 2005, Springer.
- [52] M. Affenzeller and S. Wagner, Offspring selection: A new self-adaptive selection scheme for genetic algorithms, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 218– 221, Coimbra, Portugal, 2005, Springer.
- [53] J. Kubalik, Using genetic algorithms with real-coded binary representation for solving non-stationary problems, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 222–225, Coimbra, Portugal, 2005, Springer.
- [54] A. Agrawal, I. Mitchell, P. Passmore, and I. Litovski, Dynamics in proportionate selection, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 226–229, Coimbra, Portugal, 2005, Springer.
- [55] L. E. Da Costa and J.-A. Landry, Generating grammatical plant models with genetic algorithms, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 230–234, Coimbra, Portugal, 2005, Springer.
- [56] J. Tavares, F. B. Pereira, and E. Costa, Golomb rulers: Experiments with marks representation, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 235–238, Coimbra, Portugal, 2005, Springer.
- [57] J. Tavares, T. Leitao, F. B. Pereira, and E. Costa, Evolving segments length in golomb rulers, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 239–242, Coimbra, Portugal, 2005, Springer.
- [58] S. Silva, P. J. N. Silva, and E. Costa, Resource-limited genetic programming: Replacing tree depth limits, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 243– 246, Coimbra, Portugal, 2005, Springer.
- [59] Y. Kilani and A. Mohdzin, Treating some constraints as hard speeds up the esg local search algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 247–249, Coimbra, Portugal, 2005, Springer.
- [60] L. M. Wang et al., Applications of pso algorithm and oif elman neural network to assessment and forecasting for atmospheric quality, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 250–254, Coimbra, Portugal, 2005, Springer.
- [61] T. R. Machado and H. S. Lopes, A hybrid particle swarm optimization model for the traveling salesman problem, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 255– 258, Coimbra, Portugal, 2005, Springer.

- [62] B. Kaewkamnerdpong and P. J. Bentley, Perceptive particle swarm optimisation, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 259–263, Coimbra, Portugal, 2005, Springer.
- [63] P. Pinto, T. A. Runkler, and J. M. Sousa, Wasp swarm optimization of logistic systems, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 264–267, Coimbra, Portugal, 2005, Springer.
- [64] I. L. Schoeman and A. P. Engelbrecht, A parallel vector-based particle swarm optimizer, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 268–271, Coimbra, Portugal, 2005, Springer.
- [65] A. Sicard, J. Ospina, and M. Velez, Numerical simulations of a possible hypercomputational quantum algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 272– 275, Coimbra, Portugal, 2005, Springer.
- [66] M. Udrescu, L. Prodan, and M. Vladutiu, Efficient quantum circuits simulation with the bubble bit technique, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 276– 279, Coimbra, Portugal, 2005, Springer.
- [67] A. Pereira and R. Rodrigues, Redundant quantum arithmetic, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 280–283, Coimbra, Portugal, 2005, Springer.
- [68] T. Abualrub, A. Ghrayeb, and X. Zeng, A special class of additive cyclic codes for dna computing, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 284–287, Coimbra, Portugal, 2005, Springer.
- [69] M. Rocha, J. Neves, and A. Veloso, Evolutionary algorithms for static and dynamic optimization of fed-batch fermentation processes, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 288–291, Coimbra, Portugal, 2005, Springer.
- [70] R. Oliveira and R. Salcedo, Benchmark testing of simulated annealing, adaptive random search and genetic algorithms for the global optimization of bioprocesses, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 292–295, Coimbra, Portugal, 2005, Springer.
- [71] A. Teixeira et al., Dynamic modelling and optimisation of a ammalian cells process using hybrid grey-box systems, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 296–299, Coimbra, Portugal, 2005, Springer.
- [72] R. Oliveira, A. Cunha, J. Clemente, and M. J. T. Carrondo, Adaptive do-based control of substrate feeding in high cell density cultures operated under oxygen transfer limitation, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 300–303, Coimbra, Portugal, 2005, Springer.
- [73] M. Rocha, P. Cortez, and J. Neves, Evolutionary design of neural networks for classification and regression, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 304– 307, Coimbra, Portugal, 2005, Springer.

- [74] D. Gangadhar, Pelican protein-structure alignment using cellular automaton models, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 308–311, Coimbra, Portugal, 2005, Springer.
- [75] S. Brunetti, D. Dutta, S. Liberatori, E. Mori, and D. Varrazzo, An efficient algorithm for de novo peptide sequencing, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 312–315, Coimbra, Portugal, 2005, Springer.
- [76] A. Bisler, Emergent behavior of interacting groups of communicative agents, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 316–320, Coimbra, Portugal, 2005, Springer.
- [77] A. Krishna, A. Narayanan, and E. C. Keedwell, Reverse engineering gene networks with artificial neural networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 325– 328, Coimbra, Portugal, 2005, Springer.
- [78] F. Barth and E. Gomi, A meta-level architecture for adaptive applications, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 329–332, Coimbra, Portugal, 2005, Springer.
- [79] H. Pistori, P. S. Martins, and A. A. de Castro, Jr., Adaptive finite state automata and genetic algorithms: Merging individual adaptation and population evolution, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 333–336, Coimbra, Portugal, 2005, Springer.
- [80] A. R. Camolesi, Modeling a tool for the generation of programming environments for adaptive formalisms, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 337–340, Coimbra, Portugal, 2005, Springer.
- [81] T. C. Pedrazzi, A. H. Tchemra, and R. L. A. Rocha, Adaptive decision tables: A case study of their application to decision-taking problems, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 341–344, Coimbra, Portugal, 2005, Springer.
- [82] M. A. de Abreu de Sousa and A. R. Hirakawa, Robotic mapping and navigation in unknown environments using adaptive automata, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 345–348, Coimbra, Portugal, 2005, Springer.
- [83] J. J. Neto and P. S. M. Silva, An adaptive framework for the design of software specification languages, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 349–352, Coimbra, Portugal, 2005, Springer.
- [84] Q. Li, Z. Shi, and Z. Shi, Swarm intelligence clustering algorithm based on attractor, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 353–356, Coimbra, Portugal, 2005, Springer.
- [85] C. A. Silva, J. M. Sousa, T. Runkler, and J. M. G. S. da Costa, Ant-based distributed optimization for supply chain management, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 357–360, Coimbra, Portugal, 2005, Springer.
- [86] U. Honig and W. Schiffmann, Comparison of nature inspired and deterministic scheduling heuristics considering optimal schedules, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 361–364, Coimbra, Portugal, 2005, Springer.

- [87] A. Acan and A. Gunay, An external memory supported aco for the frequency assignment problem, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 365–368, Coimbra, Portugal, 2005, Springer.
- [88] M. Holena, Neural-networks for extraction of fuzzy logic rules with application to eeg data, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 369–372, Coimbra, Portugal, 2005, Springer.
- [89] R. Barzamini, M. B. Menhaj, S. Kamalvand, and M. A. Fasihi, A new neuro-based method for short term load forecasting of iran national power system, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 373–376, Coimbra, Portugal, 2005, Springer.
- [90] N. Viet and M. Kleiber, Approximating the algebraic solution of systems of interval linear equations with use of neural networks, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 377–380, Coimbra, Portugal, 2005, Springer.
- [91] D. Rehor, J. Tozicka, and P. Slavik, Visualization of meta-reasoning in multi-agent systems, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 385–388, Coimbra, Portugal, 2005, Springer.
- [92] C. Wu, Y. Liang, H. Lee, and C. Lu, Intelligent agent inspired genetic algorithm, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 389–392, Coimbra, Portugal, 2005, Springer.
- [93] G. Bontempi, M. Birattari, and P. E. Meyer, Combining lazy learning, racing and subsampling for effective feature selection, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 393–396, Coimbra, Portugal, 2005, Springer.
- [94] D. G. Kaklamanos and K. G. Margaritis, Personalized news access, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 397–400, Coimbra, Portugal, 2005, Springer.
- [95] R.-M. Xin and W.-L. Zuo, A more accurate text classifier for positive and unlabeled data, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 401–404, Coimbra, Portugal, 2005, Springer.
- [96] H. Kawasnicka and M. Paradowski, Efficiency aspects of neural network architecture evolution using direct and indirect encoding, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 405–408, Coimbra, Portugal, 2005, Springer.
- [97] S. Hayward, Genetic algorithm optimization of an artificial neural network for financial applications, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 409–416, Coimbra, Portugal, 2005, Springer.
- [98] A. Vieira, J. C. Neves, and B. Ribeiro, A method to improve generalization of neural networks: Application to the problem of bankruptcy prediction, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 417–420, Coimbra, Portugal, 2005, Springer.

- [99] A. Dantas and J. Seixas, An adaptive neural system for financial time series tracking, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 421–424, Coimbra, Portugal, 2005, Springer.
- [100] R. Joshi, C. Reeves, and C. Johnston, Probabilistic artificial neural networks for malignant melanoma prognosis, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 425–428, Coimbra, Portugal, 2005, Springer.
- [101] S. Kita, S. Maekawa, S. Ozawa, and S. Abe, Boosting kernel discriminant analysis with adaptive kernel selection, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 429– 432, Coimbra, Portugal, 2005, Springer.
- [102] K. Petra and S. Terezie, Product kernel regularization networks, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 433–436, Coimbra, Portugal, 2005, Springer.
- [103] Q. Liu, A. H. Sung, and B. M. Ribeiro, Statistical correlations and machine learning for steganalysis, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 437– 440, Coimbra, Portugal, 2005, Springer.
- [104] S. Doan and S. Horiguchi, The use of multi-criteria in feature selection to enhance text categorization, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 441–444, Coimbra, Portugal, 2005, Springer.
- [105] C. Silva and B. Ribeiro, Text classification from partially labeled distributed data, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 445–448, Coimbra, Portugal, 2005, Springer.
- [106] K. Li, Y. Li, C. Teng, and Y. Wang, Solving the roots of cyclic-code generated polynomial by using evolutionary computation, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 449–453, Coimbra, Portugal, 2005, Springer.
- [107] E. Corchado, A. Herrero, B. Baruque, and J. M. Saiz, Intrusion detection system based on a cooperative topology preserving method, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 454–457, Coimbra, Portugal, 2005, Springer.
- [108] S. Mukkamala, A. H. Sung, and B. M. Ribeiro, Model selection for kernel based intrusion detection systems, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 458– 461, Coimbra, Portugal, 2005, Springer.
- [109] E. Tamura, J. V. Busquets-Mataix, J. J. S. Martin, and A. M. Campoy, A comparison of three genetic algorithms for locking-cache contents selection in real-time systems, in *Adaptive* and *Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 462–465, Coimbra, Portugal, 2005, Springer.
- [110] H. Dongfeng and L. Wenhui, A binary digital watermarking scheme based on the orthogonal vector and ica-scs denoising, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 466–469, Coimbra, Portugal, 2005, Springer.

- [111] S. Morita, Simulating binocular eye movements based on 3-d short-term memory image in reading, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 470–473, Coimbra, Portugal, 2005, Springer.
- [112] W. Cao, C. Xu, and S. Wang, An algorithm for face pose adjustment based on eye location, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 474–477, Coimbra, Portugal, 2005, Springer.
- [113] S. Rahnamayan, H. R. Tizhoosh, and M. Salama, Learning image filtering from a gold sample based on genetic optimization of morphological processing, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 478–481, Coimbra, Portugal, 2005, Springer.
- [114] C. Shirota, M. Y. Barretto, and C. Itiki, Associative memories and diagnostic classification of emg signals, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 482– 485, Coimbra, Portugal, 2005, Springer.
- [115] K. Shibata, Discretization of series of communication signals in noisy environment by reinforcement learning, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 486–489, Coimbra, Portugal, 2005, Springer.
- [116] W. Cao, X. Pan, and S. Wang, The research of speaker-independent continuous mandarin chinese digits speech-recognition based on the dynamic search method of high-dimension space vertex cover, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 490–493, Coimbra, Portugal, 2005, Springer.
- [117] M. Marolt, A connectionist model of finding partial groups in music recordings with application to music transcription, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 494–497, Coimbra, Portugal, 2005, Springer.
- [118] M. Kherallah, F. Bouri, and M. A. Alimi, Toward an on-line handwriting recognition system based on visual coding and genetic algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 502–505, Coimbra, Portugal, 2005, Springer.
- [119] D. Torres and C. Rocco, Assessing the reliability of complex networks through hybrid intelligent systems, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 510–513, Coimbra, Portugal, 2005, Springer.
- [120] R. Vaculin and R. Neruda, Autonomous behavior of computational agents, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 514–517, Coimbra, Portugal, 2005, Springer.
- [121] J. Koutnik and M. Snorek, Neural network generating hidden markov chain, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 518–521, Coimbra, Portugal, 2005, Springer.
- [122] M. Ciglaric, B. S. M. Pancur, and A. Dobnikar, Datamining in grid environment, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 522–525, Coimbra, Portugal, 2005, Springer.

- [123] M. Yoshikawa, T. Fujino, and H. Terai, Parallel placement procedure based on distributed genetic algorithms, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 526–529, Coimbra, Portugal, 2005, Springer.
- [124] F. G. Lobo, C. F. Lima, and H. Martires, Massive parallelization of the compact genetic algorithm, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 530–533, Coimbra, Portugal, 2005, Springer.
- [125] U. Lotric and A. Dobnikar, Parallel implementations of feed-forward neural network using mpi and c# on .net platform, in *Adaptive and Natural Computing Algorithms*, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 534–537, Coimbra, Portugal, 2005, Springer.
- [126] S. Wagner and M. Affenzeller, Heuristiclab: A generic and extensible optimization environment, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 538–541, Coimbra, Portugal, 2005, Springer.
- [127] C. Osterman, C. Rego, and D. Gamboa, The satellite list: A reversible doubly-linked list, in Adaptive and Natural Computing Algorithms, edited by B. Ribeiro, R. F. Albrecht, A. Dobnikar, D. W. Pearson, and N. C. Steele, Springer Computer Series, pages 542–545, Coimbra, Portugal, 2005, Springer.