## Список литературы

- [1] JIN, Y., OKABE, T., and SENDHOFF, B., Neural network regularization and ensembling using multi-objective evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1–8, Portland, Oregon, 2004, IEEE Press.
- [2] FARINA, M. and GOBBI, M., A fuzzy-optima definition based multiobjective optimization of a racing car tyre-suspension system, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 9–16, Portland, Oregon, 2004, IEEE Press.
- [3] COELHO, R. F. and BOUILLARD, P., Pamuc ii for multicriteria optimization of mechanical designs with expert rules, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 17–22, Portland, Oregon, 2004, IEEE Press.
- [4] SMITH, K., EVERSON, R., and FIELDSEND, J., Dominance measures for multi-objective simulated annealing, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 23–30, Portland, Oregon, 2004, IEEE Press.
- [5] DEUGO, D. and FERGUSON, D., Evolution to the xtreme: Evolving evolutionary strategies using a meta-level approach, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 31–38, Portland, Oregon, 2004, IEEE Press.
- [6] PING CHEN, Y. and GOLDBERG, D., Convergence time for the linkage learning genetic algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 39–46, Portland, Oregon, 2004, IEEE Press.
- [7] ARNOLD, D., An analysis of evolutionary gradient search, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 47–54, Portland, Oregon, 2004, IEEE Press.
- [8] DUKKIPATI, A., MUSTI, N. M., and BHATNAGAR, S., Cauchy annealing schedule: An annealing schedule for boltzmann selection scheme in evolutionary algorithms, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 55–62, Portland, Oregon, 2004, IEEE Press.
- [9] KOBAYASHI, Y. and AIYOSHI, E., Optimization algorithm using multi-agents and reinforcement learning, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 63–68, Portland, Oregon, 2004, IEEE Press.
- [10] TAVARES, J., PEREIRA, F., and COSTA, E., Understanding the role of insertion and correction in the evolution of golomb rulers, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 69–76, Portland, Oregon, 2004, IEEE Press.
- [11] SHENG, W. and LIU, X., A hybrid algorithm for k-medoid clustering of large data sets, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 77–82, Portland, Oregon, 2004, IEEE Press.
- [12] BERNSTEIN, Y., LI, X., CIESIELSKI, V., and SONG, A., Multiobjective parsimony enforcement for superior generalisation performance, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 83–89, Portland, Oregon, 2004, IEEE Press.
- [13] HU, X., SHI, Y., and EBERHART, R., Recent advances in particle swarm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 90–97, Portland, Oregon, 2004, IEEE Press.
- [14] PARROTT, D. and LI, X., A particle swarm model for tracking multiple peaks in a dynamic environment using speciation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 98–103, Portland, Oregon, 2004, IEEE Press.
- [15] O'NEILL, M., BRABAZON, A., and ADLEY, C., The automatic generation of programs for classification problems with grammatical swarm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 104–110, Portland, Oregon, 2004, IEEE Press.

- [16] DOZIER, G. V., BROWN, D., HURLEY, J., and CAIN, K., Vulnerability analysis of ais-based intrusion detection systems via genetic and particle swarm red teams, in *Proceedings of the 2004* IEEE Congress on Evolutionary Computation, pp. 111–116, Portland, Oregon, 2004, IEEE Press.
- [17] KENDALL, G. and SPOERER, K., Scripting the game of lemmings with a genetic algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 117–124, Portland, Oregon, 2004, IEEE Press.
- [18] DENZINGER, J., CHAN, B., GATES, D., LOOSE, K., and BUCHANAN, J., Evolutionary behavior testing of commercial computer games, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 125–132, Portland, Oregon, 2004, IEEE Press.
- [19] CORNO, F., SANCHEZ, E., and SQUILLERO, G., On the evolution of corewar warriors, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 133–138, Portland, Oregon, 2004, IEEE Press.
- [20] COLE, N., LOUIS, S., and MILES, C., Using a genetic algorithm to tune first-person shooter bots, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 139–145, Portland, Oregon, 2004, IEEE Press.
- [21] SPIETH, C., STREICHERT, F., SPEER, N., and ZELL, A., Utilizing an island model for ea to preserve solution diversity for inferring gene regulatory networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 146–151, Portland, Oregon, 2004, IEEE Press.
- [22] SPIETH, C., STREICHERT, F., SPEER, N., and ZELL, A., A memetic inference method for gene regulatory networks based on s-systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 152–157, Portland, Oregon, 2004, IEEE Press.
- [23] ROWLAND, J., On genetic programming and knowledge discovery in transcriptome data, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 158–165, Portland, Oregon, 2004, IEEE Press.
- [24] BLEULER, S., PRELIC, A., and ZITZLER, E., An ea framework for biclustering of gene expression data, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 166–173, Portland, Oregon, 2004, IEEE Press.
- [25] JI, Z., CHEN, A., and SUBPRASOM, K., Finding multi-objective paths in stochastic networks: A simulation-based genetic algorithm approach, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 174–180, Portland, Oregon, 2004, IEEE Press.
- [26] CHEN, A., CHOOTINAN, P., and PRAVINVONGVUTH, S., An evolutionary approach for finding optimal automatic vehicle identification reader locations in transportation networks, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 181–187, Portland, Oregon, 2004, IEEE Press.
- [27] SATO, H., AGUIRRE, H., and TANAKA, K., Local dominance using polar coordinates to enhance multiobjective evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 188–195, Portland, Oregon, 2004, IEEE Press.
- [28] AGUIRRE, H. and TANAKA, K., Insights on properties of multiobjective mnk-landscapes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 196–203, Portland, Oregon, 2004, IEEE Press.
- [29] PARSOPOULOS, K., TASOULIS, D., PAVLIDIS, N., PLAGIANAKOS, V., and VRAHATIS, M., Vector evaluated differential evolution for multiobjective optimization, in *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pp. 204–211, Portland, Oregon, 2004, IEEE Press.
- [30] MOSTAGHIM, S., HOFFMANN, M., KOENIG, P. H., FRAUENHEIM, T., and TEICH, J., Molecular force field parametrization using multi-objective evolutionary algorithms, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 212–219, Portland, Oregon, 2004, IEEE Press.

- [31] WEINBERG, B. and TALBI, E.-G., Nfl theorem is unusable on structured classes of problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 220–226, Portland, Oregon, 2004, IEEE Press.
- [32] ENGLISH, T., No more lunch: Analysis of sequential search, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 227–234, Portland, Oregon, 2004, IEEE Press.
- [33] KOEPPEN, M., No-free-lunch theorems and the diversity of algorithms, in *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pp. 235–241, Portland, Oregon, 2004, IEEE Press.
- [34] CHOW, R., Effects of phenotypic feedback and the coupling of genotypic and phenotypic spaces in genetic searches, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 242–249, Portland, Oregon, 2004, IEEE Press.
- [35] SCHONFELD, J. and ASHLOCK, D., Comparison of robustness of solutions located by evolutionary computation and other search algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 250–257, Portland, Oregon, 2004, IEEE Press.
- [36] GREENWOOD, G., Differing mathematical perspectives of genotype space in combinatorial problems: Metric spaces vs pretopological spaces, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 258–264, Portland, Oregon, 2004, IEEE Press.
- [37] BAIN, S., THORNTON, J., and SATTAR, A., Evolving algorithms for constraint satisfaction, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 265–272, Portland, Oregon, 2004, IEEE Press.
- [38] DOZIER, G. V., Recurrent distributed constraint satisfaction via genetic and evolutionary societies of hill-climbers, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 273–279, Portland, Oregon, 2004, IEEE Press.
- [39] YUCHI, M. and KIM, J.-H., Grouping-based evolutionary algorithm: Seeking balance between feasible and infeasible individuals of constrained optimization problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 280–287, Portland, Oregon, 2004, IEEE Press.
- [40] VENKATRAMAN, S. and YEN, G., A simple elitist genetic algorithm for constrained optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 288–295, Portland, Oregon, 2004, IEEE Press.
- [41] SIMIONESCU, P. A., BEALE, D. G., and DOZIER, G. V., Constrained optimization problem solving using estimation of distribution algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 296–302, Portland, Oregon, 2004, IEEE Press.
- [42] ALKHALIFAH, Y. and WAINWRIGHT, R., A genetic algorithm applied to graph problems involving subsets of vertices, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 303–308, Portland, Oregon, 2004, IEEE Press.
- [43] KATARE, S., KALOS, A., and WEST, D., A hybrid swarm optimizer for efficient parameter estimation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 309–315, Portland, Oregon, 2004, IEEE Press.
- [44] CUI, Z., ZENG, J., and CAI, X., A new stochastic particle swarm optimizer, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 316–319, Portland, Oregon, 2004, IEEE Press.
- [45] SHUYUAN, Y., MIN, W., and LICHENG, J., A quantum particle swarm optimization, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 320–324, Portland, Oregon, 2004, IEEE Press.
- [46] SUN, J., FENG, B., XU, W., LIU, J., and BAO, L., Particle swarm optimization with particles having quantum behavior, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 325–331, Portland, Oregon, 2004, IEEE Press.

- [47] KRINK, T., FILIPIC, B., FOGEL, G. B., and THOMSEN, R., Noisy optimization problems a particular challenge for differential evolution?, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 332–339, Portland, Oregon, 2004, IEEE Press.
- [48] KENNEDY, J., Probability and dynamics in the particle swarm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 340–347, Portland, Oregon, 2004, IEEE Press.
- [49] CHONG, S. Y. and YAO, X., The impact of noise on iterated prisoner's dilemma with multiple levels of cooperation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 348–355, Portland, Oregon, 2004, IEEE Press.
- [50] FRANKEN, N. and ENGELBRECHT, A., Pso approaches to co-evolve ipd strategies, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 356–363, Portland, Oregon, 2004, IEEE Press.
- [51] HINGSTON, P. and KENDALL, G., Learning versus evolution in iterated prisoner's dilemma, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 364–372, Portland, Oregon, 2004, IEEE Press.
- [52] MARK, A., SENDHOFF, B., and WERSING, H., A decision making framework for game playing using evolutionary optimization and learning, in *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pp. 373–380, Portland, Oregon, 2004, IEEE Press.
- [53] ASHLOCK, D., YOUN KIM, E., and von Roeschlaub, W., Fingerprints: Enabling visualization and automatic analysis of strategies for two player games, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 381–387, Portland, Oregon, 2004, IEEE Press.
- [54] SUN, X. and JUST, W., Evolution of strategies in modified sequential assessment games, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 388–394, Portland, Oregon, 2004, IEEE Press.
- [55] PARMEE, I. and ABRAHAM, J., Supporting implicit learning via the visualisation of coga multi-objective data, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 395–402, Portland, Oregon, 2004, IEEE Press.
- [56] HERNANDEZ-AGUIRRE, A., BOTELLO-RIONDA, S., and COELLO-COELLO, C., Passss: An implementation of a novel diversity strategy for handling constraints, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 403–410, Portland, Oregon, 2004, IEEE Press.
- [57] KICINGER, R., ARCISZEWSKI, T., and De Jong, K., Morphogenesis and structural design: Cellular automata representations of steel structures in tall buildings, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 411–418, Portland, Oregon, 2004, IEEE Press.
- [58] BRYDEN, K., ASHLOCK, D., and MCCORKLE, D., An application of graph based evolutionary algorithms for diversity preservation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 419–426, Portland, Oregon, 2004, IEEE Press.
- [59] SURAM, S., BRYDEN, K., and ASHLOCK, D., Quantitative trait loci based solution of an inverse radiation heat transfer problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 427–432, Portland, Oregon, 2004, IEEE Press.
- [60] DORRIS, N., CARNAHAN, B., ORSINI, L., and KUNTZ, L.-A., Interactive evolutionary design of anthropomorphic symbols, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 433–440, Portland, Oregon, 2004, IEEE Press.
- [61] ISHIBUCHI, H. and NARUKAWA, K., Performance evaluation of simple multiobjective genetic local search algorithms on multiobjective 0/1 knapsack problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 441–448, Portland, Oregon, 2004, IEEE Press.
- [62] AGUIRRE, H. and TANAKA, K., Effects of elitism and population climbing on multiobjective mnk-landscapes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 449–456, Portland, Oregon, 2004, IEEE Press.

- [63] DUNN, E., OLAGUE, G., LUTTON, E., and SCHOENAUER, M., Pareto optimal sensing strategies for an active vision system, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 457–463, Portland, Oregon, 2004, IEEE Press.
- [64] YUN, Y., NAKAYAMA, H., and ARAKAWA, M., Fitness evaluation using generalized data envelopment analysis in moga, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 464–471, Portland, Oregon, 2004, IEEE Press.
- [65] NGUYEN, X. H. and IAN, M. R., An investigation on the roles of insertion and deletion operators in tree adjoining grammar guided genetic programming, in *Proceedings of the 2004* IEEE Congress on Evolutionary Computation, pp. 472–477, Portland, Oregon, 2004, IEEE Press.
- [66] SHAN, Y., MCKAY, R. I., BAXTER, R., ABBASS, H., ESSAM, D., et al., Grammar model-based program evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 478–485, Portland, Oregon, 2004, IEEE Press.
- [67] TOMASSINI, M., VANNESCHI, L., CUENDET, J., and FERNANDEZ, F., A new technique for dynamic size populations in genetic programming, in *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pp. 486–493, Portland, Oregon, 2004, IEEE Press.
- [68] CIESIELSKI, V. and LI, X., Experiments with explicit for-loops in genetic programming, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 494–501, Portland, Oregon, 2004, IEEE Press.
- [69] LEON, E., NASRAOUI, O., and GOMEZ, J., Anomaly detection based on unsupervised niche clustering with application to network intrusion detection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 502–508, Portland, Oregon, 2004, IEEE Press.
- [70] TEREDESAI, A. and GOVINDARAJU, V., Issues in evolving gp based classifiers for a pattern recognition task, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 509–515, Portland, Oregon, 2004, IEEE Press.
- [71] OUELLETTE, R., BROWNE, M., and HIRASAWA, K., Genetic algorithm optimization of a convolutional neural network for autonomous crack detection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 516–521, Portland, Oregon, 2004, IEEE Press.
- [72] ASHBURN, T. and BONABEAU, E., Interactive inversion of financial markets agent-based models, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 522–529, Portland, Oregon, 2004, IEEE Press.
- [73] DEVICHARAN, D. and MOHAN, C., Particle swarm optimization with adaptive linkage learning, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 530–535, Portland, Oregon, 2004, IEEE Press.
- [74] CAGNINA, L., ESQUIVEL, S., and GALLARD, R., Particle swarm optimization for sequencing problems: A case study, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 536–541, Portland, Oregon, 2004, IEEE Press.
- [75] LIU, Y., QIN, Z., and HE, X., Supervisor-student model in particle swarm optimization, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 542–547, Portland, Oregon, 2004, IEEE Press.
- [76] MOHAIS, A., WARD, C., and POSTHOFF, C., Randomized directed neighborhoods with edge migration in particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 548–555, Portland, Oregon, 2004, IEEE Press.
- [77] CASTILLO, F., SWEENEY, J., and ZIRK, W., Using evolutionary algorithms to suggest variable transformations in linear model lack-of-fit situations, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 556–560, Portland, Oregon, 2004, IEEE Press.
- [78] KORDON, A. and LUE, C.-T., Symbolic regression modeling of blown film process effects, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 561–568, Portland, Oregon, 2004, IEEE Press.

- [79] FILIPIC, B. and ROBIC, T., A comparative study of coolant flow optimization on a steel casting machine, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 569–573, Portland, Oregon, 2004, IEEE Press.
- [80] JONES, P., TIWARI, A., ROY, R., and CORBETT, J., Optimisation of the high efficiency deep grinding process with fuzzy fitness function and constraints, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 574–581, Portland, Oregon, 2004, IEEE Press.
- [81] CORNE, D. and PRIDGEON, C., Investigating issues in the reconstructability of genetic regulatory networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 582–589, Portland, Oregon, 2004, IEEE Press.
- [82] CHO, S.-B. and PARK, C., Speciated ga for optimal ensemble classifiers in dna microarray classification, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 590–597, Portland, Oregon, 2004, IEEE Press.
- [83] DESCHENES, A. and WIESE, K. C., Using stacking-energies (inn and inn-hb) for improving the accuracy of rna secondary structure prediction with an evolutionary algorithm a comparison to known structures, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 598–606, Portland, Oregon, 2004, IEEE Press.
- [84] FOGEL, G. B., WEEKES, D. G., SAMPATH, R., and ECKER, D. J., Parameter optimization of an evolutionary algorithm for rna structure discovery, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 607–613, Portland, Oregon, 2004, IEEE Press.
- [85] KOTANI, M. and KATO, D., Feature extraction using coevolutionary genetic programming, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 614–619, Portland, Oregon, 2004, IEEE Press.
- [86] CHAN, K. Y., AYDIN, E., and FOGARTY, T., An empirical study on the performance of factorial design based crossover on parametrical problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 620–627, Portland, Oregon, 2004, IEEE Press.
- [87] ZOU, Y., ZHUANG, Z., and CHEN, H., Hw-sw partitioning based on genetic algorithm, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 628–633, Portland, Oregon, 2004, IEEE Press.
- [88] HONG, J.-H. and CHO, S.-B., Evolution of emergent behaviors for shooting game characters in robocode, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 634–638, Portland, Oregon, 2004, IEEE Press.
- [89] de Garis, H. and BATTY, T., Robust, reversible, nano-scale, femto-second-switching circuits and their evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 639–645, Portland, Oregon, 2004, IEEE Press.
- [90] HATANAKA, T., KAWAGUCHI, Y., and UOSAKI, K., Nonlinear system identification based on evolutionary fuzzy modeling, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 646–651, Portland, Oregon, 2004, IEEE Press.
- [91] BRABAZON, A., SILVA, A., de Sousa, T. F., O'NEILL, M., MATTHEWS, R., et al., Investigating organizational strategic inertia using a particle swarm model, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 652–659, Portland, Oregon, 2004, IEEE Press.
- [92] GUTIERREZ, C., Heuristics in a general scheduling problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 660–665, Portland, Oregon, 2004, IEEE Press.
- [93] GAO, W., Fast immunized evolutionary programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 666–670, Portland, Oregon, 2004, IEEE Press.
- [94] COHEN, D., Using sat scores as predictors for future academic success, in *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pp. 671–677, Portland, Oregon, 2004, IEEE Press.

- [95] CHUNG-YUAN, H. and CHUEN-TSAI, S., Self-adaptive routing based on learning classifier systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 678–682, Portland, Oregon, 2004, IEEE Press.
- [96] ETO, S., HIRASAWA, K., and HU, J., Functional localization of genetic network programming and its application to a pursuit problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 683–690, Portland, Oregon, 2004, IEEE Press.
- [97] BANDTE, O., Visualizing information in an interactive evolutionary design process, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 691–698, Portland, Oregon, 2004, IEEE Press.
- [98] De San Pedro, M., PANDOLFI, D., VILLAGRA, A., LASSO, M., and GALLARD, R., Effect of crossover operators under multirecombination: Weighted tardiness, a test case, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 699–705, Portland, Oregon, 2004, IEEE Press.
- [99] ZHENG, J., LING, C. X., SHI, Z., and XIE, Y., Some discussions about mogas: Individual relations, non-dominated set, and application on automatic negotiation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 706–712, Portland, Oregon, 2004, IEEE Press.
- [100] NAKAGOE, H., HIRASAWA, K., and HU, J., Genetic network programming with automatically generated variable size macro nodes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 713–719, Portland, Oregon, 2004, IEEE Press.
- [101] SASTRY, K., PELIKAN, M., and GOLDBERG, D., Efficiency enhancement of genetic algorithms via building-block-wise fitness estimation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 720–727, Portland, Oregon, 2004, IEEE Press.
- [102] KLEEMAN, M., DAY, R., and LAMONT, G., Multi-objective evolutionary search performance with explicit building-block sizes for npc problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 728–735, Portland, Oregon, 2004, IEEE Press.
- [103] FERREIRA, T., VASCONCELOS, G., and ADEODATO, P., A hybrid intelligent system approach for improving the prediction of real world time series, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 736–743, Portland, Oregon, 2004, IEEE Press.
- [104] CHEN, J. and WINEBERG, M., Enhancement of the shifting balance genetic algorithm for highly multimodal problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 744–751, Portland, Oregon, 2004, IEEE Press.
- [105] HOTZ, P. E., Comparing direct and developmental encoding schemes in artificial evolution: A case study in evolving lens shapes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 752–757, Portland, Oregon, 2004, IEEE Press.
- [106] OSMERA, P., Evolvable controllers with hierarchical structure, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 758–765, Portland, Oregon, 2004, IEEE Press.
- [107] PARKER, G. and BLUMENTHAL, J., Varying sample sizes for the co-evolution of heterogeneous agents, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 766–771, Portland, Oregon, 2004, IEEE Press.
- [108] HOU, H. and DOZIER, G. V., Comparing performance of binary-coded and constraint-based detectors, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 772–777, Portland, Oregon, 2004, IEEE Press.
- [109] KIN CHOW, C. and TAT TSUI, H., Autonomous agent response learning by a multi-species particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 778–785, Portland, Oregon, 2004, IEEE Press.

- [110] DANESHYARI, M. and YEN, G., Talent based social algorithm for optimization, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 786–791, Portland, Oregon, 2004, IEEE Press.
- [111] S., B. and SUGANTHAN, P. N., A novel concurrent particle swarm optimization (cpso), in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 792–796, Portland, Oregon, 2004, IEEE Press.
- [112] ISAACS, J. and FOO, S., Optimized wavelet hand pose estimation for american sign language recognition, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 797–802, Portland, Oregon, 2004, IEEE Press.
- [113] WU, Z., TANG, Z., ZOU, J., KANG, L., and LI, M., An evolutionary algorithm for solving parameter identification problems in elliptic systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 803–808, Portland, Oregon, 2004, IEEE Press.
- [114] ESKRIDGE, B. and HOUGEN, D., Imitating success: A memetic crossover operator for genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 809–815, Portland, Oregon, 2004, IEEE Press.
- [115] de Garis, H. and BATTY, T., "multi-mod": A pc based software system for handling the interconnectivity and neural signaling of an artificial brain containing 10,000 evolved neural net modules, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 816–819, Portland, Oregon, 2004, IEEE Press.
- [116] SHUYUAN, Y., MIN, W., and LICHENG, J., A novel quantum evolutionary algorithm and its application, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 820–826, Portland, Oregon, 2004, IEEE Press.
- [117] ANDO, S. and IBA, H., Estimation of gene network using real-coded ga and robustness analysis, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 827–834, Portland, Oregon, 2004, IEEE Press.
- [118] GORDON, S. and MATLEY, Z., Evolving sparse direction maps for maze pathfinding, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 835–838, Portland, Oregon, 2004, IEEE Press.
- [119] OH, J. and VOLPER, D., Design of rationality-based computing middleware: A preliminary study, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 839–846, Portland, Oregon, 2004, IEEE Press.
- [120] AUGUGLIARO, A., DUSONCHET, L., FAVUZZA, S., and SANSEVERINO, E. R., A fuzzy-logic based evolutionary multiobjective approach for automated distribution networks management, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 847–854, Portland, Oregon, 2004, IEEE Press.
- [121] KIMBROUGH, S., LU, M., and SAFAVI, S., Exploring a financial product model with a two-population genetic algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 855–862, Portland, Oregon, 2004, IEEE Press.
- [122] NEAL, M. and LABROSSE, F., Rotation-invariant appearance based maps for robot navigation using an artificial immune network algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 863–870, Portland, Oregon, 2004, IEEE Press.
- [123] SANCHEZ, E., SQUILLERO, G., and VIOLANTE, M., A local analysis of the genotype-fitness mapping in hardware optimization problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 871–878, Portland, Oregon, 2004, IEEE Press.
- [124] ESQUIVEL, S., GARCIA, M., LEGUIZAMON, G., and RIBBA, M., A comparison of two mutation operators for the path planning problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 879–883, Portland, Oregon, 2004, IEEE Press.

- [125] UOSAKI, K., KIMURA, Y., and HATANAKA, T., Evolution strategies based particle filters for state and parameter estimation of nonlinear models, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 884–890, Portland, Oregon, 2004, IEEE Press.
- [126] SINKA, M. and CORNE, D., Evolving document features for web document clustering: A feasability study, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 891–897, Portland, Oregon, 2004, IEEE Press.
- [127] YONG-DUK, K., JONG-HWAN, K., and YONG-JAE, K., Behavior selection and learning for synthetic character, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 898–903, Portland, Oregon, 2004, IEEE Press.
- [128] NEUMANN, F., Expected runtimes of evolutionary algorithms for the eulerian cycle problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 904–910, Portland, Oregon, 2004, IEEE Press.
- [129] CHAKRABORTY, U., Analysis of encoding in 1+1-ea, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 911–917, Portland, Oregon, 2004, IEEE Press.
- [130] SALOMON, R., The curse of high-dimensional search spaces: Observing premature convergence in unimodal functions, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 918–923, Portland, Oregon, 2004, IEEE Press.
- [131] VEREL, S., COLLARD, P., and CLERGUE, M., Scuba search: when selection meets innovation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 924–931, Portland, Oregon, 2004, IEEE Press.
- [132] STREICHERT, F., ULMER, H., and ZELL, A., Evaluating a hybrid encoding and three crossover operators on the constrained portfolio selection problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 932–939, Portland, Oregon, 2004, IEEE Press.
- [133] KORCZAK, J. J. and LIPINSKI, P., Evolutionary building of stock trading experts in a real-time system, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 940–947, Portland, Oregon, 2004, IEEE Press.
- [134] HAYWARD, S., Setting up performance surface of an artificial neural network with genetic algorithm optimization: in search of an accurate and profitable prediction for stock trading, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 948–954, Portland, Oregon, 2004, IEEE Press.
- [135] TANAKA-YAMAWAKI, M. and MOTOYAMA, T., Predicting the tick-wise price fluctuations by means of evolutional computation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 955–958, Portland, Oregon, 2004, IEEE Press.
- [136] KROHLING, R. A., HOFFMANN, F., and dos Santos Coelho, L., Co-evolutionary particle swarm optimization for min-max problems using gaussian distribution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 959–964, Portland, Oregon, 2004, IEEE Press.
- [137] KRUSIENSKI, D. and JENKINS, W. K., Particle swarm optimization for adaptive iir filter structures, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 965–970, Portland, Oregon, 2004, IEEE Press.
- [138] SLADE, W., RESSOM, H., MUSAVI, M., and MILLER, R., Ocean color inversion by particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 971–977, Portland, Oregon, 2004, IEEE Press.
- [139] MIGUELANEZ, E., ZALZALA, A., and TABOR, P., Evolving neural networks using swarm intelligence for binmap classification, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 978–985, Portland, Oregon, 2004, IEEE Press.

- [140] YANNAKAKIS, G., LEVINE, J., and HALLAM, J., An evolutionary approach for interactive computer games, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 986–993, Portland, Oregon, 2004, IEEE Press.
- [141] FLETCHER, J. and ZWICK, M., Hamilton's rule applied to reciprocal altruism, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 994–1000, Portland, Oregon, 2004, IEEE Press.
- [142] DAOUD, M., KHARMA, N., HAIDAR, A., and POPOOLA, J., Ayo, the awari player, or how better representation trumps deeper search, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1001–1006, Portland, Oregon, 2004, IEEE Press.
- [143] LUCAS, S., Cellz: A simple dynamic game for testing evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1007–1014, Portland, Oregon, 2004, IEEE Press.
- [144] ZHANG, G.-Z. and HUANG, D.-S., Radial basis function neural network optimized by ga for soybean protein sequence residue spatial distance prediction, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1015–1019, Portland, Oregon, 2004, IEEE Press.
- [145] DAY, R. and LAMONT, G., Force field approximations using artificial neural networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1020–1027, Portland, Oregon, 2004, IEEE Press.
- [146] YANG, J.-M. and SHEN, T.-W., A pharmacophore-based evolutionary approach for screening estrogen receptor antagonists, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1028–1035, Portland, Oregon, 2004, IEEE Press.
- [147] LAMONT, G., ESSLINGER, M., EWING, R., and ABDEL-ATY-ZOHDY, H., An artificial immune system strategy for robust chemical spectra classification via distributed heterogeneous sensors, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1036–1043, Portland, Oregon, 2004, IEEE Press.
- [148] TIMMIS, J., EDMONDS, C., and KELSEY, J., Assessing the performance of two immune inspired algorithms and a hybrid genetic algorithm for function optimisation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1044–1051, Portland, Oregon, 2004, IEEE Press.
- [149] GARRETT, S., Parameter-free, adaptive clonal selection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1052–1058, Portland, Oregon, 2004, IEEE Press.
- [150] de Paula, F., de Castro, L., and de Geus, P., An intrusion detection system using ideas from the immune system, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1059–1066, Portland, Oregon, 2004, IEEE Press.
- [151] HAMAKER, J. and BOGGESS, L., Non-euclidean distance measures in airs, an artificial immune classification system, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1067–1073, Portland, Oregon, 2004, IEEE Press.
- [152] NICOSIA, G., CUTELLO, V., and PAVONE, M., An immune algorithm with hyper-macromutations for the 2d hydrophilic-hydrophobic model, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1074–1080, Portland, Oregon, 2004, IEEE Press.
- [153] JI, Z. and DASGUPTA, D., Augmented negative selection algorithm with variable-coverage detectors, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1081–1088, Portland, Oregon, 2004, IEEE Press.
- [154] ANDERSON, C., BONABEAU, E., and SCOTT, J., Evolutionary testing as both a testing and redesign tool: a study of a shipboard firemain's valve and pump controls, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1089–1097, Portland, Oregon, 2004, IEEE Press.

- [155] MALINCHIK, S., ORME, B., ROTHERMICH, J., and BONABEAU, E., Interactive exploratory data analysis, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1098–1104, Portland, Oregon, 2004, IEEE Press.
- [156] FERNANDEZ, E., GRANA, M., and RUIZ-CABELLO, J., An instantaneous memetic algorithm for illumination correction, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1105–1110, Portland, Oregon, 2004, IEEE Press.
- [157] BARTZ-BEIELSTEIN, T. and MARKON, S., Tuning search algorithms for real-world applications: A regression tree based approach, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1111–1118, Portland, Oregon, 2004, IEEE Press.
- [158] SALOMON, R., The force model: Concept, behavior, interpretation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1119–1126, Portland, Oregon, 2004, IEEE Press.
- [159] LEE, G., BULITKO, V., and LEVNER, I., Automated selection of vision operator libraries with evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1127–1134, Portland, Oregon, 2004, IEEE Press.
- [160] DAHAL, K. P., SIEWIERSKI, T. A., GALLOWAY, S. J., BURT, G. M., and MCDONALD, J. R., An evolutionary generation scheduling in an open electricity market, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1135–1142, Portland, Oregon, 2004, IEEE Press.
- [161] LASSO, M., PANDOLFI, D., De San Pedro, M., VILLAGRA, A., and GALLARD, R., Solving dynamic tardiness problems in single machine environments, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1143–1149, Portland, Oregon, 2004, IEEE Press.
- [162] TSUTSUI, S. and WILSON, G., Solving capacitated vehicle routing problems using edge histogram based sampling algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1150–1157, Portland, Oregon, 2004, IEEE Press.
- [163] ALDASHT, M., ORTEGA, J., PUNTONET, C. G., and DIAZ, A. F., A genetic exploration of dynamic load balancing algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1158–1163, Portland, Oregon, 2004, IEEE Press.
- [164] DANDASS, Y., Genetic list scheduling for soft real-time parallel applications, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1164–1171, Portland, Oregon, 2004, IEEE Press.
- [165] ALETI, S. H. and de Garis, H., Evolutionary algorithms based on machine learning accelerate mathematical function optimization but not neural net evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1172–1177, Portland, Oregon, 2004, IEEE Press.
- [166] HU, J. and GOODMAN, E., Wireless access point configuration by genetic programming, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1178–1184, Portland, Oregon, 2004, IEEE Press.
- [167] BURIAN, A. and TAKALA, J., Evolved gate arrays for image restoration, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1185–1192, Portland, Oregon, 2004, IEEE Press.
- [168] HABIB, S. and PARKER, A., Synthesizing complex multimedia network topologies using an evolutionary approach, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1193–1200, Portland, Oregon, 2004, IEEE Press.
- [169] INOUE, Y., TOHGE, T., and IBA, H., Object transportation by two humanoid robots using cooperative learning, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1201–1208, Portland, Oregon, 2004, IEEE Press.

- [170] WALKER, R. L., Honeybee search strategies: Adaptive exploration of an information ecosystem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1209–1216, Portland, Oregon, 2004, IEEE Press.
- [171] DAIDA, J., SAMPLES, M., HART, B., HALIM, J., and KUMAR, A., Demonstrating constraints to diversity with a tunably difficulty problem for genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1217–1224, Portland, Oregon, 2004, IEEE Press.
- [172] DAIDA, J., WARD, D., HILSS, A., LONG, S., and HODGES, M., Visualizing the loss of diversity in genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1225–1232, Portland, Oregon, 2004, IEEE Press.
- [173] KATADA, Y., OHKURA, K., and UEDA, K., The nei's standard genetic distance in artificial evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1233–1239, Portland, Oregon, 2004, IEEE Press.
- [174] HERNANDEZ, G., DASGUPTA, D., NINO, F., and GARCIA, J., On geometric and statistical properties of the attractors of a generic evolutionary algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1240–1247, Portland, Oregon, 2004, IEEE Press.
- [175] HE, J., YAO, X., and ZHANG, Q., To understand one-dimensional continuous fitness landscapes by drift analysis, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1248–1253, Portland, Oregon, 2004, IEEE Press.
- [176] Di Pietro, A., WHILE, L., and BARONE, L., Applying evolutionary algorithms to problems with noisy, time-consuming fitness functions, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1254–1261, Portland, Oregon, 2004, IEEE Press.
- [177] YANG, S., Constructing dynamic test environments for genetic algorithms based on problem difficulty, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1262–1269, Portland, Oregon, 2004, IEEE Press.
- [178] SCHOENEMANN, L., The impact of population sizes and diversity on the adaptability of evolution strategies in dynamic environments, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1270–1277, Portland, Oregon, 2004, IEEE Press.
- [179] TINOS, R. and CARVALHO, A., A genetic algorithm with gene dependent mutation probability for non-stationary optimization problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1278–1285, Portland, Oregon, 2004, IEEE Press.
- [180] KANG, L., ZHOU, A., MCKAY, R. I., LI, Y., and KANG, Z., Benchmarking algorithms for dynamic travelling salesman problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1286–1292, Portland, Oregon, 2004, IEEE Press.
- [181] ERIKSSON, R. and OLSSON, B., On the performance of evolutionary algorithms with lifetime adaptation in dynamic fitness landscapes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1293–1300, Portland, Oregon, 2004, IEEE Press.
- [182] BONINO, D., CORNO, F., and SQUILLERO, G., Dynamic optimization of semantic annotation relevance, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1301–1308, Portland, Oregon, 2004, IEEE Press.
- [183] HERNANDEZ-AGUIRRE, A. and COELLO-COELLO, C., Mutual information-based fitness functions for evolutionary circuit synthesis, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1309–1316, Portland, Oregon, 2004, IEEE Press.
- [184] SARIF, B., ABD-EL-BARR, M., SAIT, S. M., and AL-SAIARI, U., Fuzzified ant colony optimization algorithm for efficient combinational circuits, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1317–1324, Portland, Oregon, 2004, IEEE Press.

- [185] CRUZ, A., A hybrid deterministic/genetic test generator to improve fault, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1325–1330, Portland, Oregon, 2004, IEEE Press.
- [186] SIMSEK, B., ALBAYRAK, S., and KORTH, A., Reinforcement learning for procurement agents of the factory of the future, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1331–1337, Portland, Oregon, 2004, IEEE Press.
- [187] SEDIGHI, K., ASHENAYI, K., MANIKAS, T., TAI, H.-M., and WAINWRIGHT, R., Autonomous local path-planning for a mobile robot using a genetic algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1338–1345, Portland, Oregon, 2004, IEEE Press.
- [188] HATI, S. and SENGUPTA, S., A ga-based integrated approach to model-assisted matching and pose estimation for automated visual inspection applications, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1346–1353, Portland, Oregon, 2004, IEEE Press.
- [189] COHEN, D., Ea-lect: An evolutionary algorithm for constructing logical rules to predict election into cooperstown, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1354–1361, Portland, Oregon, 2004, IEEE Press.
- [190] TONGCHIM, S. and YAO, X., Parallel evolutionary programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1362–1367, Portland, Oregon, 2004, IEEE Press.
- [191] SANTOS, E. and OHISHI, T., A hydro unit commitment model using genetic algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1368–1374, Portland, Oregon, 2004, IEEE Press.
- [192] OZCAN, E. and ONBASIOGLU, E., Genetic algorithms for parallel code optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1375–1381, Portland, Oregon, 2004, IEEE Press.
- [193] THOMSEN, R., Multimodal optimization using crowding-based differential evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1382–1389, Portland, Oregon, 2004, IEEE Press.
- [194] DOCTOR, S., VENAYAGAMOORTHY, G., and GUDISE, V., Optimal pso for collective robotic search applications, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1390–1395, Portland, Oregon, 2004, IEEE Press.
- [195] PULIDO, G. T. and COELLO-COELLO, C., A constraint-handling mechanism for particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1396–1403, Portland, Oregon, 2004, IEEE Press.
- [196] MOSTAGHIM, S. and TEICH, J., Covering pareto-optimal fronts by subswarms in multi-objective particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1404–1411, Portland, Oregon, 2004, IEEE Press.
- [197] TASGETIREN, M. F., SEVKLI, M., LIANG, Y.-C., and GENCYILMAZ, G., Particle swarm optimization algorithm for single machine total weighted tardiness problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1412–1419, Portland, Oregon, 2004, IEEE Press.
- [198] FOGEL, D. B., HAYS, T., and JOHNSON, D., A platform for evolving characters in competitive games, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1420–1426, Portland, Oregon, 2004, IEEE Press.
- [199] FOGEL, D. B., Evolving strategies in blackjack, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1427–1434, Portland, Oregon, 2004, IEEE Press.

- [200] GORDON, S. and SLOCUM, T., The knight's tour evolutionary vs. depth-first search, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1435–1440, Portland, Oregon, 2004, IEEE Press.
- [201] MILES, C., LOUIS, S., COLE, N., and MCDONNELL, J., Learning to play like a human: Case injected genetic algorithms for strategic computer gaming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1441–1448, Portland, Oregon, 2004, IEEE Press.
- [202] GUO, Z. and MAK, K., A heuristic ga for the stochastic vehicle routing problems with soft time windows, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1449–1456, Portland, Oregon, 2004, IEEE Press.
- [203] WEI, J.-D. and LEE, D.-T., A new approach to the traveling salesman problem using genetic algorithms with priority encoding, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1457–1464, Portland, Oregon, 2004, IEEE Press.
- [204] NAGATA, Y., Criteria for designing crossovers for tsp, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1465–1472, Portland, Oregon, 2004, IEEE Press.
- [205] WHITE, C. and YEN, G., A hybrid evolutionary algorithm for traveling salesman problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1473–1478, Portland, Oregon, 2004, IEEE Press.
- [206] de la Cruz-Garcia, J. M., RISCO-MARTIN, J. L., HERRAN-GONZALEZ, A., and FERNANDEZ-BLANCO, P., Hybrid heuristic and mathematical programming in oil pipelines networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1479– 1486, Portland, Oregon, 2004, IEEE Press.
- [207] DIMOPOULOS, C., A review of evolutionary multiobjective optimization applications in the area of production research, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1487–1494, Portland, Oregon, 2004, IEEE Press.
- [208] WONG, T., COTE, P., and SABOURIN, R., A hybrid moea for the capacitated exam proximity problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1495–1501, Portland, Oregon, 2004, IEEE Press.
- [209] DAY, R., KLEEMAN, M., and LAMONT, G., Multi-objective fast messy genetic algorithm solving deception problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1502–1509, Portland, Oregon, 2004, IEEE Press.
- [210] HERNANDEZ, J. C., ISASI, P., and SEZNEC, A., On the design of state-of-the-art pseudorandom number generators by means of genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1510–1516, Portland, Oregon, 2004, IEEE Press.
- [211] CLARK, J. A., JACOB, J. L., and STEPNEY, S., Searching for cost functions, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1517–1524, Portland, Oregon, 2004, IEEE Press.
- [212] FULLER, J., MILLAN, W., and DAWSON, E., Multi-objective optimisation of bijective s-boxes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1525–1532, Portland, Oregon, 2004, IEEE Press.
- [213] CLARK, J. A., JACOB, J. L., and STEPNEY, S., The design of s-boxes by simulated annealing, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1533–1537, Portland, Oregon, 2004, IEEE Press.
- [214] OH, C. and BARLOW, G., Autonomous controller design for unmanned aerial vehicles using multi-objective genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1538–1545, Portland, Oregon, 2004, IEEE Press.

- [215] LIU, H. and IBA, H., A hierarchical approach for adaptive humanoid robot control, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 1546–1553, Portland, Oregon, 2004, IEEE Press.
- [216] WALSH, P. and FENTON, P., A high-throughput computing environment for job shop scheduling genetic algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1554–1560, Portland, Oregon, 2004, IEEE Press.
- [217] GONZALEZ, L. and CANNADY, J., A self-adaptive negative selection approach for anomaly detection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1561–1568, Portland, Oregon, 2004, IEEE Press.
- [218] ULMER, H., STREICHERT, F., and ZELL, A., Evolution strategies with controlled model assistance, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1569–1576, Portland, Oregon, 2004, IEEE Press.
- [219] WON, K. S. and RAY, T., Performance of kriging and cokriging based surrogate models within the unified framework for surrogate assisted optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1577–1585, Portland, Oregon, 2004, IEEE Press.
- [220] ZHOU, Z., ONG, Y. S., and NAIR, P. B., Hierarchical surrogate-assisted evolutionary optimization framework, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1586–1593, Portland, Oregon, 2004, IEEE Press.
- [221] OKABE, T., JIN, Y., SENDHOFF, B., and OLHOFER, M., Voronoi-based estimation of distribution algorithm for multi-objective optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1594–1601, Portland, Oregon, 2004, IEEE Press.
- [222] DOTY, D., Non-local evolutionary adaptation in gridplants, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1602–1609, Portland, Oregon, 2004, IEEE Press.
- [223] JOHNSON, R., MELICH, M., MICHALEWICZ, Z., and SCHMIDT, M., Coevolutionary tempo game, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1610–1617, Portland, Oregon, 2004, IEEE Press.
- [224] ASHLOCK, D., WILLSON, S., and LEAHY, N., Coevolution and tartarus, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1618–1624, Portland, Oregon, 2004, IEEE Press.
- [225] O'RIORDAN, C., GRIFFITH, J., NEWELL, J., and SORENSEN, H., Co-evolution of strategies for an n-player dilemma, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1625–1630, Portland, Oregon, 2004, IEEE Press.
- [226] SPEER, N., SPIETH, C., and ZELL, A., A memetic co-clustering algorithm for gene expression profiles and biological annotation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1631–1638, Portland, Oregon, 2004, IEEE Press.
- [227] PIASECZNY, W., SUZUKI, H., and SAWAI, H., Chemical genetic programming evolution of amino acid rewriting rules used for genotype-phenotype translation, in *Proceedings of the 2004* IEEE Congress on Evolutionary Computation, pp. 1639–1646, Portland, Oregon, 2004, IEEE Press.
- [228] SEO, D., YASUNAGA, M., and KIM, J. H., A computatioal approach to detect transcritpion regulatory elements in dictyostelium discoideum, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1647–1653, Portland, Oregon, 2004, IEEE Press.
- [229] DING, S., LIU, J., WU, C., and YANG, Q., A genetic algorithm applied to optimal gene subset selection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1654–1660, Portland, Oregon, 2004, IEEE Press.
- [230] EGUCHI, T., HIRASAWA, K., HU, J., and MARKON, S., Elevator group supervisory control systems using genetic network programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1661–1667, Portland, Oregon, 2004, IEEE Press.

- [231] SANCHEZ, J. J., GALAN, M., and RUBIO, E., Genetic algorithms and cellular automata: A new architecture for traffic light cycles optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1668–1674, Portland, Oregon, 2004, IEEE Press.
- [232] KATSUMATA, Y. and TERANO, T., Cabling and scheduling for electric power plant operation via tabu-boa algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1675–1682, Portland, Oregon, 2004, IEEE Press.
- [233] WATANABE, I. and NODU, M., A genetic algorithm for optimizing switching sequence of service restoration in distribution systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1683–1690, Portland, Oregon, 2004, IEEE Press.
- [234] ROSS, P., MARIN-BLAZQUEZ, J. G., and HART, E., Hyper-heuristics applied to class and exam timetabling problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1691–1698, Portland, Oregon, 2004, IEEE Press.
- [235] FUNES, P., BONABEAU, E., HERVE, J., and MORIEUX, Y., Interactive multi-participant task allocation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1699–1705, Portland, Oregon, 2004, IEEE Press.
- [236] PFAFFMANN, J., BOUSMALIS, K., and COLOMBANO, S., A scouting-inspired evolutionary algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1706–1712, Portland, Oregon, 2004, IEEE Press.
- [237] ASHLOCK, D., BRYDEN, K., and CORNS, S., On taxonomy of evolutionary computation problems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1713–1719, Portland, Oregon, 2004, IEEE Press.
- [238] GOMEZ, J., Self adaptation of operator rates in evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1720–1726, Portland, Oregon, 2004, IEEE Press.
- [239] GOMEZ, J., Evolution of fuzzy rule based classifiers, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1727–1734, Portland, Oregon, 2004, IEEE Press.
- [240] ZHANG, J., YUAN, X., and BUCKLES, B., Subspace fdc for sharing distance estimation, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1735–1742, Portland, Oregon, 2004, IEEE Press.
- [241] KOBTI, Z., REYNOLDS, R. G., and KOHLER, T., The effect of kinship cooperation learning strategy and culture on the resilience of social systems in the village multi-agent simulation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1743–1750, Portland, Oregon, 2004, IEEE Press.
- [242] PENG, B. and REYNOLDS, R. G., Cultural algorithms: Knowledge learning in dynamic environments, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1751–1758, Portland, Oregon, 2004, IEEE Press.
- [243] HO, N. B. and TAY, J. C., Genace: An efficient cultural algorithm to solve the flexible jobshop problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1759–1766, Portland, Oregon, 2004, IEEE Press.
- [244] CURRAN, D. and O'RIORDAN, C., The effect of noise on the performance of cultural evolution in multi-agent systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1767–1773, Portland, Oregon, 2004, IEEE Press.
- [245] STEPHAN, C. and SULLIVAN, J., An agent-based hydrogen vehicle/infrastructure model, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1774–1779, Portland, Oregon, 2004, IEEE Press.
- [246] OSTROWSKI, D. and REYNOLDS, R. G., Using cultural algorithms to evolve strategies for recessionary markets, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1780–1785, Portland, Oregon, 2004, IEEE Press.

- [247] STOICA, A., ARSLAN, T., KEYMEULEN, D., DUONG, V., ZEBULUM, R., et al., Evolutionary recovery of electronic circuits from radiation induced faults, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1786–1793, Portland, Oregon, 2004, IEEE Press.
- [248] SAIT, S. M. and AL-ISMAIL, M., Enhanced simulated evolution algorithm for digital circuit design yielding faster execution in a larger solution space, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1794–1799, Portland, Oregon, 2004, IEEE Press.
- [249] HARDING, S. and MILLER, J., Evolution in materio: A tone discriminator in liquid crystal, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1800–1807, Portland, Oregon, 2004, IEEE Press.
- [250] HUNTER, D., Some lessons learned on constructing an automated testbench for evolvable hardware experiments, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1808–1812, Portland, Oregon, 2004, IEEE Press.
- [251] OLTEAN, M., Solving even-parity problems using traceless genetic programming, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 1813–1819, Portland, Oregon, 2004, IEEE Press.
- [252] BLUMENTHAL, J. and PARKER, G., Punctuated anytime learning for evolving multi-agent capture strategies, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1820–1827, Portland, Oregon, 2004, IEEE Press.
- [253] BAJURNOW, A. and CIESIELSKI, V., Layered learning for evolving goal scoring behavior in soccer players, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1828–1835, Portland, Oregon, 2004, IEEE Press.
- [254] EBERBACH, E. and EBERBACH, A., On designing co\$t: A new approach and programming environment for distributed problem solving based on evolutionary computation and anytime algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1836–1843, Portland, Oregon, 2004, IEEE Press.
- [255] ASHLOCK, D. and LATHROP, J., Program induction: Building a wall, in *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pp. 1844–1850, Portland, Oregon, 2004, IEEE Press.
- [256] HARTONO, P., HASHIMOTO, S., and WAHDE, M., Labeled-ga with adaptive mutation rate, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1851–1858, Portland, Oregon, 2004, IEEE Press.
- [257] ASHLOCK, D. and OFTELIE, J., Simulation of floral specialization in bees, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1859–1864, Portland, Oregon, 2004, IEEE Press.
- [258] KEPHART, D. and LEFEVRE, J., Codegen: The generation and testing of dna code words, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1865–1873, Portland, Oregon, 2004, IEEE Press.
- [259] KHABZAOUI, M., DHAENENS, C., and TALBI, E.-G., A multicriteria genetic algorithm to analyze dna microarray data, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1874–1881, Portland, Oregon, 2004, IEEE Press.
- [260] NUSER, M. and DEATON, R., A probabilistic analysis of in vitro selection of independent dna words for computation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1882–1888, Portland, Oregon, 2004, IEEE Press.
- [261] NEEL, A., GARZON, M., and PENUMETSA, P., Soundness and quality of semantic retrieval in dna-based memories with abiotic data, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1889–1895, Portland, Oregon, 2004, IEEE Press.

- [262] WOOD, D. and CHEN, J., Fredkin gate circuits via recombination enzymes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1896–1900, Portland, Oregon, 2004, IEEE Press.
- [263] CHIANG, C.-H. and CHEN, L.-H., A new cellular automaton: Five elements balance chart and its application to forest industry ecosystem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1901–1908, Portland, Oregon, 2004, IEEE Press.
- [264] ACAN, A., Clonal selection algorithm with operator multiplicity, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1909–1915, Portland, Oregon, 2004, IEEE Press.
- [265] RANDALL, M., Heuristics for ant colony optimisation using the generalised assignment problem, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1916–1923, Portland, Oregon, 2004, IEEE Press.
- [266] IPPOLITO, M., SANSEVERINO, E. R., and VUINOVICH, F., Multiobjective ant colony search algorithm for optimal electrical distribution system strategical planning, in *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pp. 1924–1931, Portland, Oregon, 2004, IEEE Press.
- [267] ANNALURU, R., DAS, S., and PAHWA, A., Multi-level ant colony algorithm for optimal placement of capacitors in distribution systems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1932–1937, Portland, Oregon, 2004, IEEE Press.
- [268] PIRZADA, A., DATTA, A., and MCDONALD, C., Trusted routing in ad-hoc networks using pheromone trails, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1938–1943, Portland, Oregon, 2004, IEEE Press.
- [269] MUMFORD, C., A hierarchical evolutionary approach to multi-objective optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1944–1951, Portland, Oregon, 2004, IEEE Press.
- [270] BRANKE, J., SCHMECK, H., DEB, K., and MAHESHWAR, R., Parallelizing multi-objective evolutionary algorithms: Cone separation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1952–1957, Portland, Oregon, 2004, IEEE Press.
- [271] GROSAN, C., Improving the performance of evolutionary algorithms for the multiobjective 0/1 knapsack problem using epsilon -dominance, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1958–1963, Portland, Oregon, 2004, IEEE Press.
- [272] MARWAHA, S., SRINIVASAN, D., THAM, C. K., and VASILAKOS, A., Evolutionary fuzzy multi-objective routing for wireless mobile ad hoc networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1964–1971, Portland, Oregon, 2004, IEEE Press.
- [273] CHAN, K. Y., AYDIN, E., and FOGARTY, T., Parameterisation of mutation in evolutionary algorithms using the estimated main effect of genes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1972–1979, Portland, Oregon, 2004, IEEE Press.
- [274] VESTERSTROEM, J. and THOMSEN, R., A comparative study of differential evolution, particle swarm optimization, and evolutionary algorithms on numerical benchmark problems, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1980–1987, Portland, Oregon, 2004, IEEE Press.
- [275] ZHANG, F. and DOZIER, G. V., A comparison of distributed restricted recombination operators for genetic and evolutionary societies of hill-climbers: A disacsp perspective, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 1988–1995, Portland, Oregon, 2004, IEEE Press.
- [276] RAY, T., VENKATARAYALU, N., WON, K. S., and CHAN, K. P., Study on the behaviour and implementation of parent centric crossover within the generalized generation gap model, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 1996–2003, Portland, Oregon, 2004, IEEE Press.

- [277] PATERLINI, S. and KRINK, T., High performance clustering with differential evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2004–2011, Portland, Oregon, 2004, IEEE Press.
- [278] XIE, X.-F., ZHANG, W.-J., and BI, D.-C., Handling equality constraints by adaptive relaxing rule for swarm algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2012–2016, Portland, Oregon, 2004, IEEE Press.
- [279] XIE, X.-F., ZHANG, W.-J., and BI, D.-C., Optimizing semiconductor devices by self-organizing particle swarm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2017–2022, Portland, Oregon, 2004, IEEE Press.
- [280] TASOULIS, D., PAVLIDIS, N., PLAGIANAKOS, V., and VRAHATIS, M., Parallel differential evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2023–2029, Portland, Oregon, 2004, IEEE Press.
- [281] BUZING, P., EIBEN, A., SCHUT, M., and TOMA, T., Cooperation and communication in evolving artificial societies, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2030–2037, Portland, Oregon, 2004, IEEE Press.
- [282] ENEE, G. and ESCAZUT, C., Evolution of communication in a genetic based multi-agent system: Use wise resources, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2038–2044, Portland, Oregon, 2004, IEEE Press.
- [283] ASHLOCK, D. and POWERS, B., The effect of tag recognition on non-local adaptation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2045–2051, Portland, Oregon, 2004, IEEE Press.
- [284] KENDALL, G., YAAKOB, R., and HINGSTON, P., An investigation of an evolutionary approach to the opening of go, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2052–2059, Portland, Oregon, 2004, IEEE Press.
- [285] ONO, I., SEIKE, Y., MORISHITA, R., ONO, N., and MATSUI, M., An evolutionary algorithm taking account of mutual interactions among substances for inference of genetic networks, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2060–2067, Portland, Oregon, 2004, IEEE Press.
- [286] NOMAN, N., OKADA, K., HOSOYAMA, N., and IBA, H., Use of clustering to improve the layout of gene network for visualization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2068–2075, Portland, Oregon, 2004, IEEE Press.
- [287] PAUL, T. and IBA, H., Selection of the most useful subset of genes for gene expression-based classification, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2076–2083, Portland, Oregon, 2004, IEEE Press.
- [288] KODURU, P., DAS, S., WELCH, S., and ROE, J. L., A multi-objective ga-simplex hybrid approach for gene regulatory network models, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2084–2091, Portland, Oregon, 2004, IEEE Press.
- [289] SONG, A. and CIESIELSKI, V., Texture analysis by genetic programming, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2092–2099, Portland, Oregon, 2004, IEEE Press.
- [290] JANG, J.-S., HAN, K.-H., and KIM, J.-H., Face detection using quantum-inspired evolutionary algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2100–2106, Portland, Oregon, 2004, IEEE Press.
- [291] TREPTOW, A. and ZELL, A., Combining adaboost learning and evolutionary search to select features for real-time object detection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2107–2113, Portland, Oregon, 2004, IEEE Press.

- [292] MILLER, D., ARGUELLO, R., and GREENWOOD, G., Evolving artificial neural network structures: Experimental results for biologically-inspired adaptive mutations, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2114–2119, Portland, Oregon, 2004, IEEE Press.
- [293] CHEN, H. and GUO FENG, D., An effective evolutionary strategy for bijective s-boxes, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2120–2123, Portland, Oregon, 2004, IEEE Press.
- [294] HERNANDEZ, J. C. and ISASI, P., New results on the genetic cryptanalysis of tea and reduced-round versions of xtea, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2124–2129, Portland, Oregon, 2004, IEEE Press.
- [295] NEDJAH, N. and MOURELLE, L., Secure evolutionary hardware for public-key cryptosystems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2130–2137, Portland, Oregon, 2004, IEEE Press.
- [296] SEREDYNSKI, M. and BOUVRY, P., Block cipher based on reversible cellular automata, in Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pp. 2138–2143, Portland, Oregon, 2004, IEEE Press.
- [297] LEGG, S., HUTTER, M., and KUMAR, A., Tournament versus fitness uniform selection, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2144–2151, Portland, Oregon, 2004, IEEE Press.
- [298] DORRONSORO, B., ALBA, E., GIACOBINI, M., and TOMASSINI, M., The influence of grid shape and asynchronicity on cellular evolutionary algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2152–2158, Portland, Oregon, 2004, IEEE Press.
- [299] TAKAHASHI, O. and KOBAYASHI, S., An angular distance dependent alternation model for real-coded genetic algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2159–2165, Portland, Oregon, 2004, IEEE Press.
- [300] DENGIZ, O., DOZIER, G. V., and SMITH, A. E., Non-deterministic decoding with memory to enhance precision in binary-coded genetic algorithms, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2166–2172, Portland, Oregon, 2004, IEEE Press.
- [301] S., B., ALPHONES, A., and SUGANTHAN, P. N., Concurrent pso and fdr-pso based reconfigurable phase-differentiated antenna array design, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2173–2179, Portland, Oregon, 2004, IEEE Press.
- [302] HOTZ, P. E., Asymmetric cell division in artificial evolution, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2180–2186, Portland, Oregon, 2004, IEEE Press.
- [303] VIGRAHAM, S. and GALLAGHER, J., On the relative efficacies of space saving \*cgas for evolvable hardware applications, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2187–2193, Portland, Oregon, 2004, IEEE Press.
- [304] KHAN, M. H. and PERKOWSKI, M. A., Genetic algorithm based synthesis of multi-output ternary functions using quantum cascade of generalized ternary gates, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2194–2201, Portland, Oregon, 2004, IEEE Press.
- [305] KAMIO, S. and IBA, H., Evolutionary construction of a simulator for real robots, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 2202–2209, Portland, Oregon, 2004, IEEE Press.
- [306] LUCIDARME, P., An evolutionary algorithm for multi-robot unsupervised learning, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2210–2215, Portland, Oregon, 2004, IEEE Press.

- [307] PARKER, G., Partial recombination for the co-evolution of model parameters, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2216–2223, Portland, Oregon, 2004, IEEE Press.
- [308] NOJIMA, Y., KUBOTA, N., and KOJIMA, F., Trajectory generation and accumulation for partner robots based on structured learning, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2224–2229, Portland, Oregon, 2004, IEEE Press.
- [309] TANG, K., SUGANTHAN, P. N., and YAO, X., Generalized lda using relevance weighting and evolution strategy, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2230–2234, Portland, Oregon, 2004, IEEE Press.
- [310] STANHOPE, S., Evolution strategies for multivariate-to-anything partially specified random vector generation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2235–2240, Portland, Oregon, 2004, IEEE Press.
- [311] TULAI, A. and OPPACHER, F., Maintaining diversity and increasing the accuracy of classification rules through automatic speciation, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2241–2249, Portland, Oregon, 2004, IEEE Press.
- [312] GOLDSTEIN, M. and YEN, G., An evolutionary algorithm method for sampling n-partite graphs, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2250–2257, Portland, Oregon, 2004, IEEE Press.
- [313] LICHODZIJEWSKI, P., ZINCIR-HEYWOOD, N., and HEYWOOD, M., Cascaded gp models for data mining, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2258–2264, Portland, Oregon, 2004, IEEE Press.
- [314] UYAR, A. S. and UYAR, H. T., An event-driven test framework for evolutionary algorithms in dynamic environments, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2265–2272, Portland, Oregon, 2004, IEEE Press.
- [315] ASHLOCK, D. and BRYDEN, K., Evolutionary control of lsystem interpretation, in *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pp. 2273–2279, Portland, Oregon, 2004, IEEE Press.
- [316] ZHANG, J., CHUNG, H., and HU, B., Adaptive probabilities of crossover and mutation in genetic algorithms based on clustering technique, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2280–2287, Portland, Oregon, 2004, IEEE Press.
- [317] CZARN, A., MACNISH, C., VIJAYAN, K., and TURLACH, B., Statistical exploratory analysis of genetic algorithms: The importance of interaction, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2288–2295, Portland, Oregon, 2004, IEEE Press.
- [318] NAKAMURA, M., YAMASHIRO, N., and GONG, Y., Iterative parallel and distributed genetic algorithms with biased initial population, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2296–2301, Portland, Oregon, 2004, IEEE Press.
- [319] XU, Y., SALCEDO-SANZ, S., and YAO, X., Non-standard cost terminal assignment problems using tabu search approach, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2302–2306, Portland, Oregon, 2004, IEEE Press.
- [320] ZHANG, W.-J., XIE, X.-F., and BI, D.-C., Handling boundary constraints for numrical optimization by particle swarm flying in periodic search space, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2307–2311, Portland, Oregon, 2004, IEEE Press.
- [321] TANEV, I., RAY, T., and BULLER, A., Evolutionary design, robustness and adaptation of sidewinding locomotion of simulated libraless wheelless robot, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2312–2319, Portland, Oregon, 2004, IEEE Press.
- [322] FAN, Z., GOODMAN, E., JIACHUAN, W., RONALD, R., KISUNG, S., et al., Hierarchical evolutionary synthesis of mems, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2320–2327, Portland, Oregon, 2004, IEEE Press.

- [323] YAPICIOGLU, H., DOZIER, G. V., and SMITH, A. E., Bi-criteria model for locating a semi-desirable facility on a plane using particle swarm optimization, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2328–2334, Portland, Oregon, 2004, IEEE Press.
- [324] ZOU, P., ZHOU, Z., CHEN, G., and YAO, X., A novel memetic algorithm with random multi-local-search: A case study of tsp, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2335–2340, Portland, Oregon, 2004, IEEE Press.
- [325] De Jong, E., Towards a bounded pareto-coevolution archive, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2341–2348, Portland, Oregon, 2004, IEEE Press.
- [326] CHANG, M., OHKURA, K., UEDA, K., and SUGIYAMA, M., Modeling coevolutionary genetic algorithms on two-bit landscapes: Partnering strategies, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2349–2356, Portland, Oregon, 2004, IEEE Press.
- [327] HUGHES, E., Swarm guidance using a multi-objective co-evolutionary on-line evolutionary algorithm, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2357–2363, Portland, Oregon, 2004, IEEE Press.
- [328] BREWSTER, J. and REYNOLDS, R. G., Alternative fuel adoption, in *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pp. 2364–2371, Portland, Oregon, 2004, IEEE Press.