

Список литературы

- [1] Jin, Y, Okabe, T, & Sendhoff, B. (2004) *Neural network regularization and ensembling using multi-objective evolutionary algorithms*. (IEEE Press, Portland, Oregon), pp. 1–8.
- [2] Farina, M & Gobbi, M. (2004) *A fuzzy-optima definition based Multiobjective optimization of a racing car tyre-suspension system*. (IEEE Press, Portland, Oregon), pp. 9–16.
- [3] Coelho, R. F & Bouillard, P. (2004) *PAMUC II for Multicriteria Optimization of Mechanical Designs with Expert Rules*. (IEEE Press, Portland, Oregon), pp. 17–22.
- [4] Smith, K, Everson, R, & Fieldsend, J. (2004) *Dominance Measures for Multi-Objective Simulated Annealing*. (IEEE Press, Portland, Oregon), pp. 23–30.
- [5] Deugo, D & Ferguson, D. (2004) *Evolution to the Xtreme: Evolving Evolutionary Strategies Using A Meta-Level Approach*. (IEEE Press, Portland, Oregon), pp. 31–38.
- [6] ping Chen, Y & Goldberg, D. (2004) *Convergence Time for the Linkage Learning Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 39–46.
- [7] Arnold, D. (2004) *An Analysis of Evolutionary Gradient Search*. (IEEE Press, Portland, Oregon), pp. 47–54.
- [8] Dukkipati, A, Musti, N. M, & Bhatnagar, S. (2004) *Cauchy Annealing Schedule: An Annealing Schedule for Boltzmann Selection Scheme in Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 55–62.
- [9] Kobayashi, Y & Aiyoshi, E. (2004) *Optimization Algorithm Using Multi-Agents and Reinforcement Learning*. (IEEE Press, Portland, Oregon), pp. 63–68.
- [10] Tavares, J, Pereira, F, & Costa, E. (2004) *Understanding the Role of Insertion and Correction in the Evolution of Golomb Rulers*. (IEEE Press, Portland, Oregon), pp. 69–76.
- [11] Sheng, W & Liu, X. (2004) *A Hybrid Algorithm for K-medoid Clustering of Large Data Sets*. (IEEE Press, Portland, Oregon), pp. 77–82.
- [12] Bernstein, Y, Li, X, Ciesielski, V, & Song, A. (2004) *Multiobjective Parsimony Enforcement for Superior Generalisation Performance*. (IEEE Press, Portland, Oregon), pp. 83–89.
- [13] Hu, X, Shi, Y, & Eberhart, R. (2004) *Recent Advances in Particle Swarm*. (IEEE Press, Portland, Oregon), pp. 90–97.
- [14] Parrott, D & Li, X. (2004) *A Particle Swarm Model for Tracking Multiple Peaks in a Dynamic Environment using Speciation*. (IEEE Press, Portland, Oregon), pp. 98–103.
- [15] O'Neill, M, Brabazon, A, & Adley, C. (2004) *The Automatic Generation of Programs for Classification Problems with Grammatical Swarm*. (IEEE Press, Portland, Oregon), pp. 104–110.
- [16] Dozier, G. V, Brown, D, Hurley, J, & Cain, K. (2004) *Vulnerability Analysis of AIS-Based Intrusion Detection Systems via Genetic and Particle Swarm Red Teams*. (IEEE Press, Portland, Oregon), pp. 111–116.
- [17] Kendall, G & Spoerer, K. (2004) *Scripting the Game of Lemmings with a Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 117–124.
- [18] Denzinger, J, Chan, B, Gates, D, Loose, K, & Buchanan, J. (2004) *Evolutionary behavior testing of commercial computer games*. (IEEE Press, Portland, Oregon), pp. 125–132.
- [19] Corno, F, Sanchez, E, & Squillero, G. (2004) *On The Evolution of Corewar Warriors*. (IEEE Press, Portland, Oregon), pp. 133–138.
- [20] Cole, N, Louis, S, & Miles, C. (2004) *Using a Genetic Algorithm to Tune First-Person Shooter Bots*. (IEEE Press, Portland, Oregon), pp. 139–145.

- [21] Spieth, C, Streichert, F, Speer, N, & Zell, A. (2004) *Utilizing an Island Model for EA to Preserve Solution Diversity for Inferring Gene Regulatory Networks*. (IEEE Press, Portland, Oregon), pp. 146–151.
- [22] Spieth, C, Streichert, F, Speer, N, & Zell, A. (2004) *A Memetic Inference Method for Gene Regulatory Networks Based on S-Systems*. (IEEE Press, Portland, Oregon), pp. 152–157.
- [23] Rowland, J. (2004) *On Genetic Programming and Knowledge Discovery in Transcriptome Data*. (IEEE Press, Portland, Oregon), pp. 158–165.
- [24] Bleuler, S, Prelic, A, & Zitzler, E. (2004) *An EA Framework for Biclustering of Gene Expression Data*. (IEEE Press, Portland, Oregon), pp. 166–173.
- [25] Ji, Z, Chen, A, & Subprasom, K. (2004) *Finding Multi-Objective Paths in Stochastic Networks: A Simulation-based Genetic Algorithm Approach*. (IEEE Press, Portland, Oregon), pp. 174–180.
- [26] Chen, A, Chootinan, P, & Pravinvongvuth, S. (2004) *An Evolutionary Approach for Finding Optimal Automatic Vehicle Identification Reader Locations in Transportation Networks*. (IEEE Press, Portland, Oregon), pp. 181–187.
- [27] Sato, H, Aguirre, H, & Tanaka, K. (2004) *Local Dominance Using Polar Coordinates to Enhance Multiobjective Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 188–195.
- [28] Aguirre, H & Tanaka, K. (2004) *Insights on Properties of Multiobjective MNK-Landscapes*. (IEEE Press, Portland, Oregon), pp. 196–203.
- [29] Parsopoulos, K, Tasoulis, D, Pavlidis, N, Plagianakos, V, & Vrahatis, M. (2004) *Vector Evaluated Differential Evolution for Multiobjective Optimization*. (IEEE Press, Portland, Oregon), pp. 204–211.
- [30] Mostaghim, S, Hoffmann, M, Koenig, P. H, Frauenheim, T, & Teich, J. (2004) *Molecular Force Field Parametrization using Multi-Objective Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 212–219.
- [31] Weinberg, B & Talbi, E.-G. (2004) *NFL theorem is unusable on structured classes of problems*. (IEEE Press, Portland, Oregon), pp. 220–226.
- [32] English, T. (2004) *No More Lunch: Analysis of Sequential Search*. (IEEE Press, Portland, Oregon), pp. 227–234.
- [33] Koeppe, M. (2004) *No-Free-Lunch Theorems and the Diversity of Algorithms*. (IEEE Press, Portland, Oregon), pp. 235–241.
- [34] Chow, R. (2004) *Effects of Phenotypic Feedback and the Coupling of Genotypic and Phenotypic Spaces in Genetic Searches*. (IEEE Press, Portland, Oregon), pp. 242–249.
- [35] Schonfeld, J & Ashlock, D. (2004) *Comparison of Robustness of Solutions Located by Evolutionary Computation and Other Search Algorithms*. (IEEE Press, Portland, Oregon), pp. 250–257.
- [36] Greenwood, G. (2004) *Differing Mathematical Perspectives of Genotype Space in Combinatorial Problems: Metric Spaces vs Pretopological Spaces*. (IEEE Press, Portland, Oregon), pp. 258–264.
- [37] Bain, S, Thornton, J, & Sattar, A. (2004) *Evolving Algorithms for Constraint Satisfaction*. (IEEE Press, Portland, Oregon), pp. 265–272.
- [38] Dozier, G. V. (2004) *Recurrent Distributed Constraint Satisfaction via Genetic and Evolutionary Societies of Hill-Climbers*. (IEEE Press, Portland, Oregon), pp. 273–279.
- [39] Yuchi, M & Kim, J.-H. (2004) *Grouping-based Evolutionary Algorithm: Seeking Balance Between Feasible and Infeasible Individuals of Constrained Optimization Problems*. (IEEE Press, Portland, Oregon), pp. 280–287.
- [40] Venkatraman, S & Yen, G. (2004) *A Simple Elitist Genetic Algorithm for Constrained Optimization*. (IEEE Press, Portland, Oregon), pp. 288–295.

- [41] Simionescu, P. A, Beale, D. G, & Dozier, G. V. (2004) *Constrained Optimization Problem Solving Using Estimation of Distribution Algorithms*. (IEEE Press, Portland, Oregon), pp. 296–302.
- [42] Alkhalifah, Y & Wainwright, R. (2004) *A Genetic Algorithm Applied to Graph Problems Involving Subsets of Vertices*. (IEEE Press, Portland, Oregon), pp. 303–308.
- [43] Katare, S, Kalos, A, & West, D. (2004) *A Hybrid Swarm Optimizer for Efficient Parameter Estimation*. (IEEE Press, Portland, Oregon), pp. 309–315.
- [44] Cui, Z, Zeng, J, & Cai, X. (2004) *A New Stochastic Particle Swarm Optimizer*. (IEEE Press, Portland, Oregon), pp. 316–319.
- [45] Shuyuan, Y, Min, W, & Licheng, J. (2004) *A Quantum Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 320–324.
- [46] Sun, J, Feng, B, Xu, W, Liu, J, & Bao, L. (2004) *Particle Swarm Optimization with Particles Having Quantum Behavior*. (IEEE Press, Portland, Oregon), pp. 325–331.
- [47] Krink, T, Filipic, B, Fogel, G. B, & Thomsen, R. (2004) *Noisy Optimization Problems - A Particular Challenge for Differential Evolution?* (IEEE Press, Portland, Oregon), pp. 332–339.
- [48] Kennedy, J. (2004) *Probability and Dynamics in the Particle Swarm*. (IEEE Press, Portland, Oregon), pp. 340–347.
- [49] Chong, S. Y & Yao, X. (2004) *The Impact of Noise on Iterated Prisoner’s Dilemma with Multiple Levels of Cooperation*. (IEEE Press, Portland, Oregon), pp. 348–355.
- [50] Franken, N & Engelbrecht, A. (2004) *PSO approaches to co-evolve IPD strategies*. (IEEE Press, Portland, Oregon), pp. 356–363.
- [51] Hingston, P & Kendall, G. (2004) *Learning versus Evolution in Iterated Prisoner’s Dilemma*. (IEEE Press, Portland, Oregon), pp. 364–372.
- [52] Mark, A, Sendhoff, B, & Wersing, H. (2004) *A Decision Making Framework for Game Playing Using Evolutionary Optimization and Learning*. (IEEE Press, Portland, Oregon), pp. 373–380.
- [53] Ashlock, D, youn Kim, E, & von Roeschlaub, W. (2004) *Fingerprints: Enabling Visualization and Automatic Analysis of Strategies for Two Player Games*. (IEEE Press, Portland, Oregon), pp. 381–387.
- [54] Sun, X & Just, W. (2004) *Evolution of Strategies in Modified Sequential Assessment Games*. (IEEE Press, Portland, Oregon), pp. 388–394.
- [55] Parmee, I & Abraham, J. (2004) *Supporting Implicit Learning via the Visualisation of COGA Multi-objective Data*. (IEEE Press, Portland, Oregon), pp. 395–402.
- [56] Hernandez-Aguirre, A, Botello-Rionda, S, & Coello-Coello, C. (2004) *PASSSS: An Implementation of a Novel Diversity Strategy for Handling Constraints*. (IEEE Press, Portland, Oregon), pp. 403–410.
- [57] Kicing, R, Arciszewski, T, & De Jong, K. (2004) *Morphogenesis and Structural Design: Cellular Automata Representations of Steel Structures in Tall Buildings*. (IEEE Press, Portland, Oregon), pp. 411–418.
- [58] Bryden, K, Ashlock, D, & McCorkle, D. (2004) *An Application of Graph Based Evolutionary Algorithms for Diversity Preservation*. (IEEE Press, Portland, Oregon), pp. 419–426.
- [59] Suram, S, Bryden, K, & Ashlock, D. (2004) *Quantitative Trait Loci based Solution of an Inverse Radiation Heat Transfer Problem*. (IEEE Press, Portland, Oregon), pp. 427–432.
- [60] Dorris, N, Carnahan, B, Orsini, L, & Kuntz, L.-A. (2004) *Interactive Evolutionary Design of Anthropomorphic Symbols*. (IEEE Press, Portland, Oregon), pp. 433–440.

- [61] Ishibuchi, H & Narukawa, K. (2004) *Performance Evaluation of Simple Multiobjective Genetic Local Search Algorithms on Multiobjective 0/1 Knapsack Problems*. (IEEE Press, Portland, Oregon), pp. 441–448.
- [62] Aguirre, H & Tanaka, K. (2004) *Effects of Elitism and Population Climbing on Multiobjective MNK-Landscapes*. (IEEE Press, Portland, Oregon), pp. 449–456.
- [63] Dunn, E, Olague, G, Lutton, E, & Schoenauer, M. (2004) *Pareto Optimal Sensing Strategies for an Active Vision System*. (IEEE Press, Portland, Oregon), pp. 457–463.
- [64] Yun, Y, Nakayama, H, & Arakawa, M. (2004) *Fitness Evaluation using Generalized Data Envelopment Analysis in MOGA*. (IEEE Press, Portland, Oregon), pp. 464–471.
- [65] Nguyen, X. H & Ian, M. R. (2004) *An Investigation on the Roles of Insertion and Deletion Operators in Tree Adjoining Grammar Guided Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 472–477.
- [66] Shan, Y, McKay, R. I, Baxter, R, Abbass, H, Essam, D, & Nguyen, H. (2004) *Grammar Model-based Program Evolution*. (IEEE Press, Portland, Oregon), pp. 478–485.
- [67] Tomassini, M, Vanneschi, L, Cuendet, J, & Fernandez, F. (2004) *A New Technique for Dynamic Size Populations in Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 486–493.
- [68] Ciesielski, V & Li, X. (2004) *Experiments with Explicit For-loops in Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 494–501.
- [69] Leon, E, Nasraoui, O, & Gomez, J. (2004) *Anomaly Detection Based on Unsupervised Niche Clustering with Application to Network Intrusion Detection*. (IEEE Press, Portland, Oregon), pp. 502–508.
- [70] Teredesai, A & Govindaraju, V. (2004) *Issues in Evolving GP based Classifiers for a Pattern Recognition Task*. (IEEE Press, Portland, Oregon), pp. 509–515.
- [71] Ouellette, R, Browne, M, & Hirasawa, K. (2004) *Genetic Algorithm Optimization of a Convolutional Neural Network for Autonomous Crack Detection*. (IEEE Press, Portland, Oregon), pp. 516–521.
- [72] Ashburn, T & Bonabeau, E. (2004) *Interactive Inversion of Financial Markets Agent-Based Models*. (IEEE Press, Portland, Oregon), pp. 522–529.
- [73] Devicharan, D & Mohan, C. (2004) *Particle Swarm Optimization with Adaptive Linkage Learning*. (IEEE Press, Portland, Oregon), pp. 530–535.
- [74] Cagnina, L, Esquivel, S, & Gallard, R. (2004) *Particle Swarm Optimization for Sequencing Problems: A Case Study*. (IEEE Press, Portland, Oregon), pp. 536–541.
- [75] Liu, Y, Qin, Z, & He, X. (2004) *Supervisor-Student Model in Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 542–547.
- [76] Mohais, A, Ward, C, & Posthoff, C. (2004) *Randomized Directed Neighborhoods with Edge Migration in Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 548–555.
- [77] Castillo, F, Sweeney, J, & Zirk, W. (2004) *Using Evolutionary Algorithms to Suggest Variable Transformations in Linear Model Lack-of-Fit Situations*. (IEEE Press, Portland, Oregon), pp. 556–560.
- [78] Kordon, A & Lue, C.-T. (2004) *Symbolic Regression Modeling of Blown Film Process Effects*. (IEEE Press, Portland, Oregon), pp. 561–568.
- [79] Filipic, B & Robic, T. (2004) *A Comparative Study of Coolant Flow Optimization on a Steel Casting Machine*. (IEEE Press, Portland, Oregon), pp. 569–573.

- [80] Jones, P, Tiwari, A, Roy, R, & Corbett, J. (2004) *Optimisation of the High Efficiency Deep Grinding Process with Fuzzy Fitness Function and Constraints*. (IEEE Press, Portland, Oregon), pp. 574–581.
- [81] Corne, D & Pridgeon, C. (2004) *Investigating Issues in the Reconstructability of Genetic Regulatory Networks*. (IEEE Press, Portland, Oregon), pp. 582–589.
- [82] Cho, S.-B & Park, C. (2004) *Speciated GA for Optimal Ensemble Classifiers in DNA Microarray Classification*. (IEEE Press, Portland, Oregon), pp. 590–597.
- [83] Deschenes, A & Wiese, K. C. (2004) *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*. (IEEE Press, Portland, Oregon), pp. 598–606.
- [84] Fogel, G. B, Weekes, D. G, Sampath, R, & Ecker, D. J. (2004) *Parameter Optimization of an Evolutionary Algorithm for RNA Structure Discovery*. (IEEE Press, Portland, Oregon), pp. 607–613.
- [85] Kotani, M & Kato, D. (2004) *Feature Extraction Using Coevolutionary Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 614–619.
- [86] Chan, K. Y, Aydin, E, & Fogarty, T. (2004) *An Empirical Study on the Performance of Factorial Design Based Crossover on Parametrical Problems*. (IEEE Press, Portland, Oregon), pp. 620–627.
- [87] Zou, Y, Zhuang, Z, & Chen, H. (2004) *HW-SW Partitioning Based on Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 628–633.
- [88] Hong, J.-H & Cho, S.-B. (2004) *Evolution of Emergent Behaviors for Shooting Game Characters in Robocode*. (IEEE Press, Portland, Oregon), pp. 634–638.
- [89] de Garis, H & Batty, T. (2004) *Robust, Reversible, Nano-Scale, Femto-Second-Switching Circuits and their Evolution*. (IEEE Press, Portland, Oregon), pp. 639–645.
- [90] Hatanaka, T, Kawaguchi, Y, & Uosaki, K. (2004) *Nonlinear System Identification Based on Evolutionary Fuzzy Modeling*. (IEEE Press, Portland, Oregon), pp. 646–651.
- [91] Brabazon, A, Silva, A, de Sousa, T. F, O'Neill, M, Matthews, R, & Costa, E. (2004) *Investigating Organizational Strategic Inertia Using a Particle Swarm Model*. (IEEE Press, Portland, Oregon), pp. 652–659.
- [92] Gutierrez, C. (2004) *Heuristics in a General Scheduling Problem*. (IEEE Press, Portland, Oregon), pp. 660–665.
- [93] Gao, W. (2004) *Fast Immunized Evolutionary Programming*. (IEEE Press, Portland, Oregon), pp. 666–670.
- [94] Cohen, D. (2004) *Using SAT Scores as Predictors for Future Academic Success*. (IEEE Press, Portland, Oregon), pp. 671–677.
- [95] Chung-Yuan, H & Chuen-Tsai, S. (2004) *Self-Adaptive Routing Based on Learning Classifier Systems*. (IEEE Press, Portland, Oregon), pp. 678–682.
- [96] Eto, S, Hirasawa, K, & Hu, J. (2004) *Functional Localization of Genetic Network Programming and its Application to a Pursuit Problem*. (IEEE Press, Portland, Oregon), pp. 683–690.
- [97] Bandte, O. (2004) *Visualizing Information in an Interactive Evolutionary Design Process*. (IEEE Press, Portland, Oregon), pp. 691–698.
- [98] De San Pedro, M, Pandolfi, D, Villagra, A, Lasso, M, & Gallard, R. (2004) *Effect of Crossover Operators under Multirecombination: Weighted Tardiness, a Test Case*. (IEEE Press, Portland, Oregon), pp. 699–705.

- [99] Zheng, J, Ling, C. X, Shi, Z, & Xie, Y. (2004) *Some Discussions about MOGAs: Individual Relations, Non-dominated Set, and Application on Automatic Negotiation*. (IEEE Press, Portland, Oregon), pp. 706–712.
- [100] Nakagoe, H, Hirasawa, K, & Hu, J. (2004) *Genetic Network Programming with Automatically Generated Variable Size Macro Nodes*. (IEEE Press, Portland, Oregon), pp. 713–719.
- [101] Sastry, K, Pelikan, M, & Goldberg, D. (2004) *Efficiency Enhancement of Genetic Algorithms via Building-Block-Wise Fitness Estimation*. (IEEE Press, Portland, Oregon), pp. 720–727.
- [102] Kleeman, M, Day, R, & Lamont, G. (2004) *Multi-Objective Evolutionary Search Performance with Explicit Building-Block Sizes for NPC Problems*. (IEEE Press, Portland, Oregon), pp. 728–735.
- [103] Ferreira, T, Vasconcelos, G, & Adeodato, P. (2004) *A Hybrid Intelligent System Approach for Improving the Prediction of Real World Time Series*. (IEEE Press, Portland, Oregon), pp. 736–743.
- [104] Chen, J & Wineberg, M. (2004) *Enhancement of the Shifting Balance Genetic Algorithm for Highly Multimodal Problems*. (IEEE Press, Portland, Oregon), pp. 744–751.
- [105] Hotz, P. E. (2004) *Comparing direct and developmental encoding schemes in artificial evolution: A case study in evolving lens shapes*. (IEEE Press, Portland, Oregon), pp. 752–757.
- [106] Osmera, P. (2004) *Evolvable Controllers with Hierarchical Structure*. (IEEE Press, Portland, Oregon), pp. 758–765.
- [107] Parker, G & Blumenthal, J. (2004) *Varying Sample Sizes for the Co-Evolution of Heterogeneous Agents*. (IEEE Press, Portland, Oregon), pp. 766–771.
- [108] Hou, H & Dozier, G. V. (2004) *Comparing Performance of Binary-Coded and Constraint-Based Detectors*. (IEEE Press, Portland, Oregon), pp. 772–777.
- [109] kin Chow, C & tat Tsui, H. (2004) *Autonomous Agent Response Learning by a Multi-Species Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 778–785.
- [110] Daneshyari, M & Yen, G. (2004) *Talent Based Social Algorithm for Optimization*. (IEEE Press, Portland, Oregon), pp. 786–791.
- [111] S., B & Suganthan, P. N. (2004) *A Novel Concurrent Particle Swarm Optimization (CPSO)*. (IEEE Press, Portland, Oregon), pp. 792–796.
- [112] Isaacs, J & Foo, S. (2004) *Optimized Wavelet Hand Pose Estimation for American Sign Language Recognition*. (IEEE Press, Portland, Oregon), pp. 797–802.
- [113] Wu, Z, Tang, Z, Zou, J, Kang, L, & Li, M. (2004) *An Evolutionary Algorithm for Solving Parameter Identification Problems in Elliptic Systems*. (IEEE Press, Portland, Oregon), pp. 803–808.
- [114] Eskridge, B & Hougen, D. (2004) *Imitating Success: A Memetic Crossover Operator for Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 809–815.
- [115] de Garis, H & Batty, T. (2004) *"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*. (IEEE Press, Portland, Oregon), pp. 816–819.
- [116] Shuyuan, Y, Min, W, & Licheng, J. (2004) *A Novel Quantum Evolutionary Algorithm And Its Application*. (IEEE Press, Portland, Oregon), pp. 820–826.
- [117] Ando, S & Iba, H. (2004) *Estimation of Gene Network using Real-coded GA and Robustness Analysis*. (IEEE Press, Portland, Oregon), pp. 827–834.
- [118] Gordon, S & Matley, Z. (2004) *Evolving Sparse Direction Maps for Maze Pathfinding*. (IEEE Press, Portland, Oregon), pp. 835–838.

- [119] Oh, J & Volper, D. (2004) *Design of Rationality-based Computing Middleware: A Preliminary Study*. (IEEE Press, Portland, Oregon), pp. 839–846.
- [120] Augugliaro, A, Dusonchet, L, Favuzza, S, & Sanseverino, E. R. (2004) *A Fuzzy-Logic based Evolutionary Multiobjective Approach for Automated Distribution Networks Management*. (IEEE Press, Portland, Oregon), pp. 847–854.
- [121] Kimbrough, S, Lu, M, & Safavi, S. (2004) *Exploring a Financial Product Model with a Two-Population Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 855–862.
- [122] Neal, M & Labrosse, F. (2004) *Rotation-invariant appearance based maps for robot navigation using an artificial immune network algorithm*. (IEEE Press, Portland, Oregon), pp. 863–870.
- [123] Sanchez, E, Squillero, G, & Violante, M. (2004) *A Local Analysis of the Genotype-Fitness Mapping in Hardware Optimization Problems*. (IEEE Press, Portland, Oregon), pp. 871–878.
- [124] Esquivel, S, Garcia, M, Leguizamón, G, & Ribba, M. (2004) *A Comparison of Two Mutation Operators for the Path Planning Problem*. (IEEE Press, Portland, Oregon), pp. 879–883.
- [125] Uosaki, K, Kimura, Y, & Hatanaka, T. (2004) *Evolution Strategies Based Particle Filters for State and Parameter Estimation of Nonlinear Models*. (IEEE Press, Portland, Oregon), pp. 884–890.
- [126] Sinka, M & Corne, D. (2004) *Evolving Document Features for Web Document Clustering: A Feasibility Study*. (IEEE Press, Portland, Oregon), pp. 891–897.
- [127] Yong-Duk, K, Jong-Hwan, K, & Yong-Jae, K. (2004) *Behavior Selection and Learning for Synthetic Character*. (IEEE Press, Portland, Oregon), pp. 898–903.
- [128] Neumann, F. (2004) *Expected Runtimes of Evolutionary Algorithms for the Eulerian Cycle Problem*. (IEEE Press, Portland, Oregon), pp. 904–910.
- [129] Chakraborty, U. (2004) *Analysis of Encoding in 1+1-EA*. (IEEE Press, Portland, Oregon), pp. 911–917.
- [130] Salomon, R. (2004) *The Curse of High-Dimensional Search Spaces: Observing Premature Convergence in Unimodal Functions*. (IEEE Press, Portland, Oregon), pp. 918–923.
- [131] Verel, S, Collard, P, & Clergue, M. (2004) *Scuba Search: when selection meets innovation*. (IEEE Press, Portland, Oregon), pp. 924–931.
- [132] Streichert, F, Ulmer, H, & Zell, A. (2004) *Evaluating a Hybrid Encoding and Three Crossover Operators on the Constrained Portfolio Selection Problem*. (IEEE Press, Portland, Oregon), pp. 932–939.
- [133] Korczak, J. J & Lipinski, P. (2004) *Evolutionary building of stock trading experts in a real-time system*. (IEEE Press, Portland, Oregon), pp. 940–947.
- [134] Hayward, S. (2004) *Setting up Performance Surface of an Artificial Neural Network With Genetic Algorithm Optimization: in Search of an Accurate and Profitable Prediction for Stock Trading*. (IEEE Press, Portland, Oregon), pp. 948–954.
- [135] Tanaka-Yamawaki, M & Motoyama, T. (2004) *Predicting the Tick-wise Price Fluctuations by Means of Evolutional Computation*. (IEEE Press, Portland, Oregon), pp. 955–958.
- [136] Krohling, R. A, Hoffmann, F, & dos Santos Coelho, L. (2004) *Co-evolutionary Particle Swarm Optimization for Min-Max Problems using Gaussian Distribution*. (IEEE Press, Portland, Oregon), pp. 959–964.
- [137] Krusienski, D & Jenkins, W. K. (2004) *Particle Swarm Optimization for Adaptive IIR Filter Structures*. (IEEE Press, Portland, Oregon), pp. 965–970.
- [138] Slade, W, Resson, H, Musavi, M, & Miller, R. (2004) *Ocean Color Inversion by Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 971–977.

- [139] Miguelanez, E, Zalazala, A, & Tabor, P. (2004) *Evolving Neural Networks using Swarm Intelligence for Binmap Classification*. (IEEE Press, Portland, Oregon), pp. 978–985.
- [140] Yannakakis, G, Levine, J, & Hallam, J. (2004) *An Evolutionary Approach for Interactive Computer Games*. (IEEE Press, Portland, Oregon), pp. 986–993.
- [141] Fletcher, J & Zwick, M. (2004) *Hamilton’s Rule Applied to Reciprocal Altruism*. (IEEE Press, Portland, Oregon), pp. 994–1000.
- [142] Daoud, M, Kharm, N, Haidar, A, & Popoola, J. (2004) *Ayo, the Awari Player, or How Better Representation Trumps Deeper Search*. (IEEE Press, Portland, Oregon), pp. 1001–1006.
- [143] Lucas, S. (2004) *Cellz: A Simple Dynamic Game for Testing Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 1007–1014.
- [144] Zhang, G.-Z & Huang, D.-S. (2004) *Radial Basis Function Neural Network Optimized by GA for Soybean Protein Sequence Residue Spatial Distance Prediction*. (IEEE Press, Portland, Oregon), pp. 1015–1019.
- [145] Day, R & Lamont, G. (2004) *Force Field Approximations Using Artificial Neural Networks*. (IEEE Press, Portland, Oregon), pp. 1020–1027.
- [146] Yang, J.-M & Shen, T.-W. (2004) *A Pharmacophore-Based Evolutionary Approach for Screening Estrogen Receptor Antagonists*. (IEEE Press, Portland, Oregon), pp. 1028–1035.
- [147] Lamont, G, Esslinger, M, Ewing, R, & Abdel-Aty-Zohdy, H. (2004) *An Artificial Immune System Strategy for Robust Chemical Spectra Classification via Distributed Heterogeneous Sensors*. (IEEE Press, Portland, Oregon), pp. 1036–1043.
- [148] Timmis, J, Edmonds, C, & Kelsey, J. (2004) *Assessing the Performance of Two Immune Inspired Algorithms and a Hybrid Genetic Algorithm for Function Optimisation*. (IEEE Press, Portland, Oregon), pp. 1044–1051.
- [149] Garrett, S. (2004) *Parameter-Free, Adaptive Clonal Selection*. (IEEE Press, Portland, Oregon), pp. 1052–1058.
- [150] de Paula, F, de Castro, L, & de Geus, P. (2004) *An Intrusion Detection System Using Ideas from the Immune System*. (IEEE Press, Portland, Oregon), pp. 1059–1066.
- [151] Hamaker, J & Boggess, L. (2004) *Non-Euclidean Distance Measures in AIRS, an Artificial Immune Classification System*. (IEEE Press, Portland, Oregon), pp. 1067–1073.
- [152] Nicosia, G, Cutello, V, & Pavone, M. (2004) *An Immune Algorithm with Hyper-Macromutations for the 2D Hydrophilic-Hydrophobic Model*. (IEEE Press, Portland, Oregon), pp. 1074–1080.
- [153] Ji, Z & Dasgupta, D. (2004) *Augmented Negative Selection Algorithm with Variable-Coverage Detectors*. (IEEE Press, Portland, Oregon), pp. 1081–1088.
- [154] Anderson, C, Bonabeau, E, & Scott, J. (2004) *Evolutionary testing as both a testing and redesign tool: a study of a shipboard firemain’s valve and pump controls*. (IEEE Press, Portland, Oregon), pp. 1089–1097.
- [155] Malinchik, S, Orme, B, Rothermich, J, & Bonabeau, E. (2004) *Interactive Exploratory Data Analysis*. (IEEE Press, Portland, Oregon), pp. 1098–1104.
- [156] Fernandez, E, Grana, M, & Ruiz-Cabello, J. (2004) *An Instantaneous Memetic Algorithm for Illumination Correction*. (IEEE Press, Portland, Oregon), pp. 1105–1110.
- [157] Bartz-Beielstein, T & Markon, S. (2004) *Tuning Search Algorithms for Real-World Applications: A Regression Tree Based Approach*. (IEEE Press, Portland, Oregon), pp. 1111–1118.
- [158] Salomon, R. (2004) *The Force Model: Concept, Behavior, Interpretation*. (IEEE Press, Portland, Oregon), pp. 1119–1126.

- [159] Lee, G, Bulitko, V, & Levner, I. (2004) *Automated Selection of Vision Operator Libraries with Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 1127–1134.
- [160] Dahal, K. P, Siewierski, T. A, Galloway, S. J, Burt, G. M, & McDonald, J. R. (2004) *An Evolutionary Generation Scheduling in an Open Electricity Market*. (IEEE Press, Portland, Oregon), pp. 1135–1142.
- [161] Lasso, M, Pandolfi, D, De San Pedro, M, Villagra, A, & Gallard, R. (2004) *Solving Dynamic Tardiness Problems in Single Machine Environments*. (IEEE Press, Portland, Oregon), pp. 1143–1149.
- [162] Tsutsui, S & Wilson, G. (2004) *Solving Capacitated Vehicle Routing Problems Using Edge Histogram Based Sampling Algorithms*. (IEEE Press, Portland, Oregon), pp. 1150–1157.
- [163] Aldasht, M, Ortega, J, Puntonet, C. G, & Diaz, A. F. (2004) *A Genetic Exploration of Dynamic Load Balancing Algorithms*. (IEEE Press, Portland, Oregon), pp. 1158–1163.
- [164] Dandass, Y. (2004) *Genetic List Scheduling for Soft Real-Time Parallel Applications*. (IEEE Press, Portland, Oregon), pp. 1164–1171.
- [165] Aleti, S. H & de Garis, H. (2004) *Evolutionary Algorithms Based on Machine Learning Accelerate Mathematical Function Optimization but not Neural Net Evolution*. (IEEE Press, Portland, Oregon), pp. 1172–1177.
- [166] Hu, J & Goodman, E. (2004) *Wireless Access Point Configuration by Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 1178–1184.
- [167] Burian, A & Takala, J. (2004) *Evolved Gate Arrays for Image Restoration*. (IEEE Press, Portland, Oregon), pp. 1185–1192.
- [168] Habib, S & Parker, A. (2004) *Synthesizing Complex Multimedia Network Topologies Using An Evolutionary Approach*. (IEEE Press, Portland, Oregon), pp. 1193–1200.
- [169] Inoue, Y, Tohge, T, & Iba, H. (2004) *Object Transportation by Two Humanoid Robots using Cooperative Learning*. (IEEE Press, Portland, Oregon), pp. 1201–1208.
- [170] Walker, R. L. (2004) *Honeybee Search Strategies: Adaptive Exploration of an Information Ecosystem*. (IEEE Press, Portland, Oregon), pp. 1209–1216.
- [171] Daida, J, Samples, M, Hart, B, Halim, J, & Kumar, A. (2004) *Demonstrating Constraints to Diversity with a Tunably Difficulty Problem for Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 1217–1224.
- [172] Daida, J, Ward, D, Hilss, A, Long, S, & Hodges, M. (2004) *Visualizing the Loss of Diversity in Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 1225–1232.
- [173] Katada, Y, Ohkura, K, & Ueda, K. (2004) *The Nei's Standard Genetic Distance in Artificial Evolution*. (IEEE Press, Portland, Oregon), pp. 1233–1239.
- [174] Hernandez, G, Dasgupta, D, Nino, F, & Garcia, J. (2004) *On Geometric and Statistical Properties of the Attractors of a Generic Evolutionary Algorithm*. (IEEE Press, Portland, Oregon), pp. 1240–1247.
- [175] He, J, Yao, X, & Zhang, Q. (2004) *To Understand One-Dimensional Continuous Fitness Landscapes by Drift Analysis*. (IEEE Press, Portland, Oregon), pp. 1248–1253.
- [176] Di Pietro, A, While, L, & Barone, L. (2004) *Applying Evolutionary Algorithms to Problems with Noisy, Time-consuming Fitness Functions*. (IEEE Press, Portland, Oregon), pp. 1254–1261.
- [177] Yang, S. (2004) *Constructing Dynamic Test Environments for Genetic Algorithms Based on Problem Difficulty*. (IEEE Press, Portland, Oregon), pp. 1262–1269.
- [178] Schoenemann, L. (2004) *The Impact of Population Sizes and Diversity on the Adaptability of Evolution Strategies in Dynamic Environments*. (IEEE Press, Portland, Oregon), pp. 1270–1277.

- [179] Tinos, R & Carvalho, A. (2004) *A Genetic Algorithm with Gene Dependent Mutation Probability for Non-Stationary Optimization Problems*. (IEEE Press, Portland, Oregon), pp. 1278–1285.
- [180] Kang, L, Zhou, A, McKay, R. I, Li, Y, & Kang, Z. (2004) *Benchmarking Algorithms for Dynamic Travelling Salesman Problems*. (IEEE Press, Portland, Oregon), pp. 1286–1292.
- [181] Eriksson, R & Olsson, B. (2004) *On the Performance of Evolutionary Algorithms with Life-time Adaptation in Dynamic Fitness Landscapes*. (IEEE Press, Portland, Oregon), pp. 1293–1300.
- [182] Bonino, D, Corno, F, & Squillero, G. (2004) *Dynamic Optimization of Semantic Annotation Relevance*. (IEEE Press, Portland, Oregon), pp. 1301–1308.
- [183] Hernandez-Aguirre, A & Coello-Coello, C. (2004) *Mutual Information-based Fitness Functions for Evolutionary Circuit Synthesis*. (IEEE Press, Portland, Oregon), pp. 1309–1316.
- [184] Sarif, B, Abd-El-Barr, M, Sait, S. M, & Al-Saiari, U. (2004) *Fuzzified Ant Colony Optimization Algorithm for Efficient Combinational Circuits*. (IEEE Press, Portland, Oregon), pp. 1317–1324.
- [185] Cruz, A. (2004) *A Hybrid Deterministic/Genetic Test Generator to Improve Fault*. (IEEE Press, Portland, Oregon), pp. 1325–1330.
- [186] Simsek, B, Albayrak, S, & Korth, A. (2004) *Reinforcement Learning for Procurement Agents of the Factory of the Future*. (IEEE Press, Portland, Oregon), pp. 1331–1337.
- [187] Sedighi, K, Ashenayi, K, Manikas, T, Tai, H.-M, & Wainwright, R. (2004) *Autonomous Local Path-Planning for a Mobile Robot Using a Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 1338–1345.
- [188] Hati, S & Sengupta, S. (2004) *A GA-Based Integrated Approach to Model-Assisted Matching and Pose Estimation for Automated Visual Inspection Applications*. (IEEE Press, Portland, Oregon), pp. 1346–1353.
- [189] Cohen, D. (2004) *EA-lect: An Evolutionary Algorithm for Constructing Logical Rules to Predict Election into Cooperstown*. (IEEE Press, Portland, Oregon), pp. 1354–1361.
- [190] Tongchim, S & Yao, X. (2004) *Parallel Evolutionary Programming*. (IEEE Press, Portland, Oregon), pp. 1362–1367.
- [191] Santos, E & Ohishi, T. (2004) *A Hydro Unit Commitment Model Using Genetic Algorithm*. (IEEE Press, Portland, Oregon), pp. 1368–1374.
- [192] Ozcan, E & Onbasioglu, E. (2004) *Genetic Algorithms for Parallel Code Optimization*. (IEEE Press, Portland, Oregon), pp. 1375–1381.
- [193] Thomsen, R. (2004) *Multimodal Optimization Using Crowding-Based Differential Evolution*. (IEEE Press, Portland, Oregon), pp. 1382–1389.
- [194] Doctor, S, Venayagamoorthy, G, & Gudise, V. (2004) *Optimal PSO for Collective Robotic Search Applications*. (IEEE Press, Portland, Oregon), pp. 1390–1395.
- [195] Pulido, G. T & Coello-Coello, C. (2004) *A Constraint-Handling Mechanism for Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 1396–1403.
- [196] Mostaghim, S & Teich, J. (2004) *Covering Pareto-optimal Fronts by Subswarms in Multi-objective Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 1404–1411.
- [197] Tasgetiren, M. F, Sevkli, M, Liang, Y.-C, & Gencyilmaz, G. (2004) *Particle Swarm Optimization Algorithm For Single Machine Total Weighted Tardiness Problem*. (IEEE Press, Portland, Oregon), pp. 1412–1419.
- [198] Fogel, D. B, Hays, T, & Johnson, D. (2004) *A Platform for Evolving Characters in Competitive Games*. (IEEE Press, Portland, Oregon), pp. 1420–1426.

- [199] Fogel, D. B. (2004) *Evolving Strategies in Blackjack*. (IEEE Press, Portland, Oregon), pp. 1427–1434.
- [200] Gordon, S & Slocum, T. (2004) *The Knight's Tour - Evolutionary vs. Depth-First Search*. (IEEE Press, Portland, Oregon), pp. 1435–1440.
- [201] Miles, C, Louis, S, Cole, N, & McDonnell, J. (2004) *Learning to Play Like a Human: Case Injected Genetic Algorithms for Strategic Computer Gaming*. (IEEE Press, Portland, Oregon), pp. 1441–1448.
- [202] Guo, Z & Mak, K. (2004) *A Heuristic GA for The Stochastic Vehicle Routing Problems with Soft Time Windows*. (IEEE Press, Portland, Oregon), pp. 1449–1456.
- [203] Wei, J.-D & Lee, D.-T. (2004) *A New Approach to the Traveling Salesman Problem Using Genetic Algorithms with Priority Encoding*. (IEEE Press, Portland, Oregon), pp. 1457–1464.
- [204] Nagata, Y. (2004) *Criteria for designing crossovers for TSP*. (IEEE Press, Portland, Oregon), pp. 1465–1472.
- [205] White, C & Yen, G. (2004) *A Hybrid Evolutionary Algorithm for Traveling Salesman Problem*. (IEEE Press, Portland, Oregon), pp. 1473–1478.
- [206] de la Cruz-Garcia, J. M, Risco-Martin, J. L, Herran-Gonzalez, A, & Fernandez-Blanco, P. (2004) *Hybrid Heuristic and Mathematical Programming in Oil Pipelines Networks*. (IEEE Press, Portland, Oregon), pp. 1479–1486.
- [207] Dimopoulos, C. (2004) *A Review of Evolutionary Multiobjective Optimization Applications in the Area of Production Research*. (IEEE Press, Portland, Oregon), pp. 1487–1494.
- [208] Wong, T, Cote, P, & Sabourin, R. (2004) *A Hybrid MOEA for the Capacitated Exam Proximity Problem*. (IEEE Press, Portland, Oregon), pp. 1495–1501.
- [209] Day, R, Kleeman, M, & Lamont, G. (2004) *Multi-Objective fast messy Genetic Algorithm Solving Deception Problems*. (IEEE Press, Portland, Oregon), pp. 1502–1509.
- [210] Hernandez, J. C, Isasi, P, & Seznev, A. (2004) *On the design of state-of-the-art pseudorandom number generators by means of genetic programming*. (IEEE Press, Portland, Oregon), pp. 1510–1516.
- [211] Clark, J. A, Jacob, J. L, & Stepney, S. (2004) *Searching for Cost Functions*. (IEEE Press, Portland, Oregon), pp. 1517–1524.
- [212] Fuller, J, Millan, W, & Dawson, E. (2004) *Multi-objective Optimisation of Bijective S-boxes*. (IEEE Press, Portland, Oregon), pp. 1525–1532.
- [213] Clark, J. A, Jacob, J. L, & Stepney, S. (2004) *The Design of S-Boxes by Simulated annealing*. (IEEE Press, Portland, Oregon), pp. 1533–1537.
- [214] Oh, C & Barlow, G. (2004) *Autonomous Controller Design for Unmanned Aerial Vehicles using Multi-objective Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 1538–1545.
- [215] Liu, H & Iba, H. (2004) *A Hierarchical Approach for Adaptive Humanoid Robot Control*. (IEEE Press, Portland, Oregon), pp. 1546–1553.
- [216] Walsh, P & Fenton, P. (2004) *A High-Throughput Computing Environment for Job Shop Scheduling Genetic Algorithms*. (IEEE Press, Portland, Oregon), pp. 1554–1560.
- [217] Gonzalez, L & Cannady, J. (2004) *A self-adaptive negative selection approach for anomaly detection*. (IEEE Press, Portland, Oregon), pp. 1561–1568.
- [218] Ulmer, H, Streichert, F, & Zell, A. (2004) *Evolution Strategies with Controlled Model Assistance*. (IEEE Press, Portland, Oregon), pp. 1569–1576.

- [219] Won, K. S & Ray, T. (2004) *Performance of Kriging and Cokriging based Surrogate Models within the Unified Framework for Surrogate Assisted Optimization*. (IEEE Press, Portland, Oregon), pp. 1577–1585.
- [220] Zhou, Z, Ong, Y. S, & Nair, P. B. (2004) *Hierarchical Surrogate-Assisted Evolutionary Optimization Framework*. (IEEE Press, Portland, Oregon), pp. 1586–1593.
- [221] Okabe, T, Jin, Y, Sendhoff, B, & Olhofer, M. (2004) *Voronoi-based Estimation of Distribution Algorithm for Multi-objective Optimization*. (IEEE Press, Portland, Oregon), pp. 1594–1601.
- [222] Doty, D. (2004) *Non-local Evolutionary Adaptation in Gridplants*. (IEEE Press, Portland, Oregon), pp. 1602–1609.
- [223] Johnson, R, Melich, M, Michalewicz, Z, & Schmidt, M. (2004) *Coevolutionary TEMPO Game*. (IEEE Press, Portland, Oregon), pp. 1610–1617.
- [224] Ashlock, D, Willson, S, & Leahy, N. (2004) *Coevolution and Tartarus*. (IEEE Press, Portland, Oregon), pp. 1618–1624.
- [225] O’Riordan, C, Griffith, J, Newell, J, & Sorensen, H. (2004) *Co-evolution of Strategies for an N-player Dilemma*. (IEEE Press, Portland, Oregon), pp. 1625–1630.
- [226] Speer, N, Spieth, C, & Zell, A. (2004) *A Memetic Co-Clustering Algorithm for Gene Expression Profiles and Biological Annotation*. (IEEE Press, Portland, Oregon), pp. 1631–1638.
- [227] Piaseczny, W, Suzuki, H, & Sawai, H. (2004) *Chemical Genetic Programming - Evolution of Amino Acid Rewriting Rules Used for Genotype-Phenotype Translation*. (IEEE Press, Portland, Oregon), pp. 1639–1646.
- [228] Seo, D, Yasunaga, M, & Kim, J. H. (2004) *A Computational Approach to Detect Transcription Regulatory Elements in Dictyostelium Discoideum*. (IEEE Press, Portland, Oregon), pp. 1647–1653.
- [229] Ding, S, Liu, J, Wu, C, & Yang, Q. (2004) *A genetic algorithm applied to optimal gene subset selection*. (IEEE Press, Portland, Oregon), pp. 1654–1660.
- [230] Eguchi, T, Hirasawa, K, Hu, J, & Markon, S. (2004) *Elevator Group Supervisory Control Systems Using Genetic Network Programming*. (IEEE Press, Portland, Oregon), pp. 1661–1667.
- [231] Sanchez, J. J, Galan, M, & Rubio, E. (2004) *Genetic Algorithms and Cellular Automata: A New Architecture for Traffic Light Cycles Optimization*. (IEEE Press, Portland, Oregon), pp. 1668–1674.
- [232] Katsumata, Y & Terano, T. (2004) *Cabling and Scheduling for Electric Power Plant Operation via TABU-BOA Algorithm*. (IEEE Press, Portland, Oregon), pp. 1675–1682.
- [233] Watanabe, I & Nodu, M. (2004) *A Genetic Algorithm for Optimizing Switching Sequence of Service Restoration in Distribution Systems*. (IEEE Press, Portland, Oregon), pp. 1683–1690.
- [234] Ross, P, Marin-Blazquez, J. G, & Hart, E. (2004) *Hyper-heuristics applied to Class and Exam Timetabling problems*. (IEEE Press, Portland, Oregon), pp. 1691–1698.
- [235] Funes, P, Bonabeau, E, Herve, J, & Morieux, Y. (2004) *Interactive Multi-Participant Task Allocation*. (IEEE Press, Portland, Oregon), pp. 1699–1705.
- [236] Pfaffmann, J, Bousmalis, K, & Colombano, S. (2004) *A Scouting-Inspired Evolutionary Algorithm*. (IEEE Press, Portland, Oregon), pp. 1706–1712.
- [237] Ashlock, D, Bryden, K, & Corns, S. (2004) *On Taxonomy of Evolutionary Computation Problems*. (IEEE Press, Portland, Oregon), pp. 1713–1719.
- [238] Gomez, J. (2004) *Self Adaptation of Operator Rates in Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 1720–1726.

- [239] Gomez, J. (2004) *Evolution of Fuzzy Rule Based Classifiers*. (IEEE Press, Portland, Oregon), pp. 1727–1734.
- [240] Zhang, J, Yuan, X, & Buckles, B. (2004) *Subspace FDC for Sharing Distance Estimation*. (IEEE Press, Portland, Oregon), pp. 1735–1742.
- [241] Kobti, Z, Reynolds, R. G, & Kohler, T. (2004) *The Effect of Kinship Cooperation Learning Strategy and Culture on the Resilience of Social Systems in the Village Multi-Agent Simulation*. (IEEE Press, Portland, Oregon), pp. 1743–1750.
- [242] Peng, B & Reynolds, R. G. (2004) *Cultural Algorithms: Knowledge Learning in Dynamic Environments*. (IEEE Press, Portland, Oregon), pp. 1751–1758.
- [243] Ho, N. B & Tay, J. C. (2004) *GENACE: An Efficient Cultural Algorithm to Solve the Flexible Job-Shop Problem*. (IEEE Press, Portland, Oregon), pp. 1759–1766.
- [244] Curran, D & O’Riordan, C. (2004) *The Effect of Noise on the Performance of Cultural Evolution in Multi-Agent Systems*. (IEEE Press, Portland, Oregon), pp. 1767–1773.
- [245] Stephan, C & Sullivan, J. (2004) *An Agent-Based Hydrogen Vehicle/Infrastructure Model*. (IEEE Press, Portland, Oregon), pp. 1774–1779.
- [246] Ostrowski, D & Reynolds, R. G. (2004) *Using Cultural Algorithms to Evolve Strategies for Recessionary Markets*. (IEEE Press, Portland, Oregon), pp. 1780–1785.
- [247] Stoica, A, Arslan, T, Keymeulen, D, Duong, V, Zebulum, R, Guo, X, Ferguson, I, & Daud, T. (2004) *Evolutionary Recovery of Electronic Circuits from Radiation Induced Faults*. (IEEE Press, Portland, Oregon), pp. 1786–1793.
- [248] Sait, S. M & Al-Ismael, M. (2004) *Enhanced Simulated Evolution Algorithm For Digital Circuit Design Yielding Faster Execution in a Larger Solution Space*. (IEEE Press, Portland, Oregon), pp. 1794–1799.
- [249] Harding, S & Miller, J. (2004) *Evolution in materio : A Tone Discriminator In Liquid Crystal*. (IEEE Press, Portland, Oregon), pp. 1800–1807.
- [250] Hunter, D. (2004) *Some Lessons Learned on Constructing an Automated Testbench for Evolvable Hardware Experiments*. (IEEE Press, Portland, Oregon), pp. 1808–1812.
- [251] Oltean, M. (2004) *Solving Even-Parity Problems using Traceless Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 1813–1819.
- [252] Blumenthal, J & Parker, G. (2004) *Punctuated Anytime Learning for Evolving Multi-Agent Capture Strategies*. (IEEE Press, Portland, Oregon), pp. 1820–1827.
- [253] Bajurnow, A & Ciesielski, V. (2004) *Layered Learning for Evolving Goal Scoring Behavior in Soccer Players*. (IEEE Press, Portland, Oregon), pp. 1828–1835.
- [254] Eberbach, E & Eberbach, A. (2004) *On Designing CO\$T: A New Approach and Programming Environment for Distributed Problem Solving Based on Evolutionary Computation and Anytime Algorithms*. (IEEE Press, Portland, Oregon), pp. 1836–1843.
- [255] Ashlock, D & Lathrop, J. (2004) *Program Induction: Building a Wall*. (IEEE Press, Portland, Oregon), pp. 1844–1850.
- [256] Hartono, P, Hashimoto, S, & Wahde, M. (2004) *Labeled-GA with Adaptive Mutation Rate*. (IEEE Press, Portland, Oregon), pp. 1851–1858.
- [257] Ashlock, D & Oftelie, J. (2004) *Simulation of Floral Specialization in Bees*. (IEEE Press, Portland, Oregon), pp. 1859–1864.
- [258] Kephart, D & Lefevre, J. (2004) *CodeGen: The Generation and Testing of DNA Code Words*. (IEEE Press, Portland, Oregon), pp. 1865–1873.

- [259] Khabzaoui, M, Dhaenens, C, & Talbi, E.-G. (2004) *A Multicriteria Genetic Algorithm to analyze DNA microarray data*. (IEEE Press, Portland, Oregon), pp. 1874–1881.
- [260] Nuser, M & Deaton, R. (2004) *A Probabilistic Analysis of in Vitro Selection of Independent DNA Words for Computation*. (IEEE Press, Portland, Oregon), pp. 1882–1888.
- [261] Neel, A, Garzon, M, & Penumetsa, P. (2004) *Soundness and Quality of Semantic Retrieval in DNA-based Memories with Abiotic Data*. (IEEE Press, Portland, Oregon), pp. 1889–1895.
- [262] Wood, D & Chen, J. (2004) *Fredkin Gate Circuits via Recombination Enzymes*. (IEEE Press, Portland, Oregon), pp. 1896–1900.
- [263] Chiang, C.-H & Chen, L.-H. (2004) *A New Cellular Automaton: Five Elements Balance Chart and Its Application to Forest Industry Ecosystem*. (IEEE Press, Portland, Oregon), pp. 1901–1908.
- [264] Acan, A. (2004) *Clonal Selection Algorithm with Operator Multiplicity*. (IEEE Press, Portland, Oregon), pp. 1909–1915.
- [265] Randall, M. (2004) *Heuristics for Ant Colony Optimisation using the Generalised Assignment Problem*. (IEEE Press, Portland, Oregon), pp. 1916–1923.
- [266] Ippolito, M, Sanseverino, E. R, & Vuinovich, F. (2004) *Multiobjective Ant Colony Search Algorithm For Optimal Electrical Distribution System Strategical Planning*. (IEEE Press, Portland, Oregon), pp. 1924–1931.
- [267] Annaluru, R, Das, S, & Pahwa, A. (2004) *Multi-Level Ant Colony Algorithm for Optimal Placement of Capacitors in Distribution Systems*. (IEEE Press, Portland, Oregon), pp. 1932–1937.
- [268] Pirzada, A, Datta, A, & McDonald, C. (2004) *Trusted Routing in Ad-hoc Networks using Pheromone Trails*. (IEEE Press, Portland, Oregon), pp. 1938–1943.
- [269] Mumford, C. (2004) *A Hierarchical Evolutionary Approach to Multi-Objective Optimization*. (IEEE Press, Portland, Oregon), pp. 1944–1951.
- [270] Branke, J, Schmeck, H, Deb, K, & Maheshwar, R. (2004) *Parallelizing Multi-Objective Evolutionary Algorithms: Cone Separation*. (IEEE Press, Portland, Oregon), pp. 1952–1957.
- [271] Grosan, C. (2004) *Improving the performance of evolutionary algorithms for the multiobjective 0/1 knapsack problem using epsilon -dominance*. (IEEE Press, Portland, Oregon), pp. 1958–1963.
- [272] Marwaha, S, Srinivasan, D, Tham, C. K, & Vasilakos, A. (2004) *Evolutionary Fuzzy Multi-Objective Routing For Wireless Mobile Ad Hoc Networks*. (IEEE Press, Portland, Oregon), pp. 1964–1971.
- [273] Chan, K. Y, Aydin, E, & Fogarty, T. (2004) *Parameterisation of Mutation in Evolutionary Algorithms Using the Estimated Main Effect of Genes*. (IEEE Press, Portland, Oregon), pp. 1972–1979.
- [274] Vesterstroem, J & Thomsen, R. (2004) *A Comparative Study of Differential Evolution, Particle Swarm Optimization, and Evolutionary Algorithms on Numerical Benchmark Problems*. (IEEE Press, Portland, Oregon), pp. 1980–1987.
- [275] Zhang, F & Dozier, G. V. (2004) *A Comparison of Distributed Restricted Recombination Operators for Genetic and Evolutionary Societies of Hill-Climbers: A DisACSP Perspective*. (IEEE Press, Portland, Oregon), pp. 1988–1995.
- [276] Ray, T, Venkatarayalu, N, Won, K. S, & Chan, K. P. (2004) *Study on the Behaviour and Implementation of Parent Centric Crossover within the Generalized Generation Gap Model*. (IEEE Press, Portland, Oregon), pp. 1996–2003.

- [277] Paterlini, S & Krink, T. (2004) *High Performance Clustering with Differential Evolution*. (IEEE Press, Portland, Oregon), pp. 2004–2011.
- [278] Xie, X.-F, Zhang, W.-J, & Bi, D.-C. (2004) *Handling Equality Constraints by Adaptive Relaxing Rule for Swarm Algorithms*. (IEEE Press, Portland, Oregon), pp. 2012–2016.
- [279] Xie, X.-F, Zhang, W.-J, & Bi, D.-C. (2004) *Optimizing Semiconductor Devices by Self-organizing Particle Swarm*. (IEEE Press, Portland, Oregon), pp. 2017–2022.
- [280] Tasoulis, D, Pavlidis, N, Plagianakos, V, & Vrahatis, M. (2004) *Parallel Differential Evolution*. (IEEE Press, Portland, Oregon), pp. 2023–2029.
- [281] Buzing, P, Eiben, A, Schut, M, & Toma, T. (2004) *Cooperation and Communication in Evolving Artificial Societies*. (IEEE Press, Portland, Oregon), pp. 2030–2037.
- [282] Enee, G & Escazut, C. (2004) *Evolution of Communication in a Genetic Based Multi-Agent System: Use Wise Resources*. (IEEE Press, Portland, Oregon), pp. 2038–2044.
- [283] Ashlock, D & Powers, B. (2004) *The Effect of Tag Recognition on Non-Local Adaptation*. (IEEE Press, Portland, Oregon), pp. 2045–2051.
- [284] Kendall, G, Yaakob, R, & Hingston, P. (2004) *An Investigation of an Evolutionary Approach to the Opening of Go*. (IEEE Press, Portland, Oregon), pp. 2052–2059.
- [285] Ono, I, Seike, Y, Morishita, R, Ono, N, & Matsui, M. (2004) *An Evolutionary Algorithm Taking Account of Mutual Interactions among Substances for Inference of Genetic Networks*. (IEEE Press, Portland, Oregon), pp. 2060–2067.
- [286] Noman, N, Okada, K, Hosoyama, N, & Iba, H. (2004) *Use of Clustering to Improve the Layout of Gene Network for Visualization*. (IEEE Press, Portland, Oregon), pp. 2068–2075.
- [287] Paul, T & Iba, H. (2004) *Selection of the Most Useful Subset of Genes for Gene Expression-Based Classification*. (IEEE Press, Portland, Oregon), pp. 2076–2083.
- [288] Koduru, P, Das, S, Welch, S, & Roe, J. L. (2004) *A Multi-objective GA-Simplex Hybrid Approach for Gene Regulatory Network Models*. (IEEE Press, Portland, Oregon), pp. 2084–2091.
- [289] Song, A & Ciesielski, V. (2004) *Texture Analysis by Genetic Programming*. (IEEE Press, Portland, Oregon), pp. 2092–2099.
- [290] Jang, J.-S, Han, K.-H, & Kim, J.-H. (2004) *Face Detection using Quantum-inspired Evolutionary Algorithm*. (IEEE Press, Portland, Oregon), pp. 2100–2106.
- [291] Treptow, A & Zell, A. (2004) *Combining Adaboost Learning and Evolutionary Search to select Features for Real-Time Object Detection*. (IEEE Press, Portland, Oregon), pp. 2107–2113.
- [292] Miller, D, Arguello, R, & Greenwood, G. (2004) *Evolving Artificial Neural Network Structures: Experimental Results for Biologically-Inspired Adaptive Mutations*. (IEEE Press, Portland, Oregon), pp. 2114–2119.
- [293] Chen, H & guo Feng, D. (2004) *An Effective Evolutionary Strategy for Bijective S-boxes*. (IEEE Press, Portland, Oregon), pp. 2120–2123.
- [294] Hernandez, J. C & Isasi, P. (2004) *New results on the genetic cryptanalysis of TEA and reduced-round versions of XTEA*. (IEEE Press, Portland, Oregon), pp. 2124–2129.
- [295] Nedjah, N & Mourelle, L. (2004) *Secure Evolutionary Hardware for Public-Key Cryptosystems*. (IEEE Press, Portland, Oregon), pp. 2130–2137.
- [296] Serebinski, M & Bouvry, P. (2004) *Block Cipher based on Reversible Cellular Automata*. (IEEE Press, Portland, Oregon), pp. 2138–2143.
- [297] Legg, S, Hutter, M, & Kumar, A. (2004) *Tournament versus Fitness Uniform Selection*. (IEEE Press, Portland, Oregon), pp. 2144–2151.

- [298] Dorronsoro, B, Alba, E, Giacobini, M, & Tomassini, M. (2004) *The Influence of Grid Shape and Asynchronicity on Cellular Evolutionary Algorithms*. (IEEE Press, Portland, Oregon), pp. 2152–2158.
- [299] Takahashi, O & Kobayashi, S. (2004) *An Angular Distance Dependent Alternation Model for Real-Coded Genetic Algorithms*. (IEEE Press, Portland, Oregon), pp. 2159–2165.
- [300] Dengiz, O, Dozier, G. V, & Smith, A. E. (2004) *Non-deterministic Decoding with Memory to Enhance Precision in Binary-Coded Genetic Algorithms*. (IEEE Press, Portland, Oregon), pp. 2166–2172.
- [301] S., B, Alphones, A, & Suganthan, P. N. (2004) *Concurrent PSO and FDR-PSO based reconfigurable Phase-Differentiated Antenna Array Design*. (IEEE Press, Portland, Oregon), pp. 2173–2179.
- [302] Hotz, P. E. (2004) *Asymmetric cell division in artificial evolution*. (IEEE Press, Portland, Oregon), pp. 2180–2186.
- [303] Vigraham, S & Gallagher, J. (2004) *On the Relative Efficacies of Space Saving *CGAs for Evolvable Hardware Applications*. (IEEE Press, Portland, Oregon), pp. 2187–2193.
- [304] Khan, M. H & Perkowski, M. A. (2004) *Genetic Algorithm Based Synthesis of Multi-Output Ternary Functions Using Quantum Cascade of Generalized Ternary Gates*. (IEEE Press, Portland, Oregon), pp. 2194–2201.
- [305] Kamio, S & Iba, H. (2004) *Evolutionary Construction of a Simulator for Real Robots*. (IEEE Press, Portland, Oregon), pp. 2202–2209.
- [306] Lucidarme, P. (2004) *An Evolutionary Algorithm for Multi-Robot Unsupervised Learning*. (IEEE Press, Portland, Oregon), pp. 2210–2215.
- [307] Parker, G. (2004) *Partial Recombination for the Co-Evolution of Model Parameters*. (IEEE Press, Portland, Oregon), pp. 2216–2223.
- [308] Nojima, Y, Kubota, N, & Kojima, F. (2004) *Trajectory Generation and Accumulation for Partner Robots based on Structured Learning*. (IEEE Press, Portland, Oregon), pp. 2224–2229.
- [309] Tang, K, Suganthan, P. N, & Yao, X. (2004) *Generalized Lda Using Relevance Weighting and Evolution Strategy*. (IEEE Press, Portland, Oregon), pp. 2230–2234.
- [310] Stanhope, S. (2004) *Evolution Strategies for Multivariate-to-Anything Partially Specified Random Vector Generation*. (IEEE Press, Portland, Oregon), pp. 2235–2240.
- [311] Tulai, A & Oppacher, F. (2004) *Maintaining Diversity and Increasing the Accuracy of Classification Rules through Automatic Speciation*. (IEEE Press, Portland, Oregon), pp. 2241–2249.
- [312] Goldstein, M & Yen, G. (2004) *An Evolutionary Algorithm Method for Sampling N-Partite Graphs*. (IEEE Press, Portland, Oregon), pp. 2250–2257.
- [313] Lichodziejewski, P, Zincir-Heywood, N, & Heywood, M. (2004) *Cascaded GP Models for Data Mining*. (IEEE Press, Portland, Oregon), pp. 2258–2264.
- [314] Uyar, A. S & Uyar, H. T. (2004) *An Event-Driven Test Framework for Evolutionary Algorithms in Dynamic Environments*. (IEEE Press, Portland, Oregon), pp. 2265–2272.
- [315] Ashlock, D & Bryden, K. (2004) *Evolutionary Control of Lsystem Interpretation*. (IEEE Press, Portland, Oregon), pp. 2273–2279.
- [316] Zhang, J, Chung, H, & Hu, B. (2004) *Adaptive Probabilities of Crossover and Mutation in Genetic Algorithms Based on Clustering Technique*. (IEEE Press, Portland, Oregon), pp. 2280–2287.

- [317] Czarn, A, MacNish, C, Vijayan, K, & Turlach, B. (2004) *Statistical Exploratory Analysis of Genetic Algorithms: The Importance of Interaction*. (IEEE Press, Portland, Oregon), pp. 2288–2295.
- [318] Nakamura, M, Yamashiro, N, & Gong, Y. (2004) *Iterative Parallel and Distributed Genetic Algorithms with Biased Initial Population*. (IEEE Press, Portland, Oregon), pp. 2296–2301.
- [319] Xu, Y, Salcedo-Sanz, S, & Yao, X. (2004) *Non-standard Cost Terminal Assignment Problems Using Tabu Search Approach*. (IEEE Press, Portland, Oregon), pp. 2302–2306.
- [320] Zhang, W.-J, Xie, X.-F, & Bi, D.-C. (2004) *Handling Boundary Constraints for Numerical Optimization by Particle Swarm Flying in Periodic Search Space*. (IEEE Press, Portland, Oregon), pp. 2307–2311.
- [321] Tanev, I, Ray, T, & Buller, A. (2004) *Evolutionary Design, Robustness and Adaptation of Sidewinding Locomotion of Simulated Limbless Wheelless Robot*. (IEEE Press, Portland, Oregon), pp. 2312–2319.
- [322] Fan, Z, Goodman, E, Jiachuan, W, Ronald, R, Kisung, S, & Jianjun, H. (2004) *Hierarchical Evolutionary Synthesis of MEMS*. (IEEE Press, Portland, Oregon), pp. 2320–2327.
- [323] Yapicioglu, H, Dozier, G. V, & Smith, A. E. (2004) *Bi-criteria model for Locating a Semi-desirable Facility on a Plane Using Particle Swarm Optimization*. (IEEE Press, Portland, Oregon), pp. 2328–2334.
- [324] Zou, P, Zhou, Z, Chen, G, & Yao, X. (2004) *A Novel Memetic Algorithm with Random Multi-local-search: A case study of TSP*. (IEEE Press, Portland, Oregon), pp. 2335–2340.
- [325] De Jong, E. (2004) *Towards a Bounded Pareto-Coevolution Archive*. (IEEE Press, Portland, Oregon), pp. 2341–2348.
- [326] Chang, M, Ohkura, K, Ueda, K, & Sugiyama, M. (2004) *Modeling Coevolutionary Genetic Algorithms on Two-Bit Landscapes: Partnering Strategies*. (IEEE Press, Portland, Oregon), pp. 2349–2356.
- [327] Hughes, E. (2004) *Swarm Guidance using a Multi-Objective Co-evolutionary On-Line Evolutionary Algorithm*. (IEEE Press, Portland, Oregon), pp. 2357–2363.
- [328] Brewster, J & Reynolds, R. G. (2004) *Alternative Fuel Adoption*. (IEEE Press, Portland, Oregon), pp. 2364–2371.