## Список литературы

- [1] Adnan Acan. Clonal selection algorithm with operator multiplicity. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1909–1915, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [2] Hernan Aguirre and Kiyoshi Tanaka. Effects of elitism and population climbing on multiobjective mnk-landscapes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 449–456, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [3] Hernan Aguirre and Kiyoshi Tanaka. Insights on properties of multiobjective mnk-landscapes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 196–203, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [4] Mohammed Aldasht, Julio Ortega, Carlos G. Puntonet, and Antonio F. Diaz. A genetic exploration of dynamic load balancing algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1158–1163, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [5] Sree Harsha Aleti and Hugo de Garis. 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*, pages 1172–1177, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [6] Yaser Alkhalifah and Roger Wainwright. A genetic algorithm applied to graph problems involving subsets of vertices. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 303–308, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [7] Carl Anderson, Eric Bonabeau, and John Scott. 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*, pages 1089–1097, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [8] Shin Ando and Hitoshi Iba. Estimation of gene network using real-coded ga and robustness analysis. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 827–834, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [9] Rajeev Annaluru, Sanjoy Das, and Anil Pahwa. Multi-level ant colony algorithm for optimal placement of capacitors in distribution systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1932–1937, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [10] Dirk Arnold. An analysis of evolutionary gradient search. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 47–54, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [11] Trent Ashburn and Eric Bonabeau. Interactive inversion of financial markets agent-based models. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 522–529, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [12] Daniel Ashlock and Kenneth Bryden. Evolutionary control of lsystem interpretation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2273–2279, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [13] Daniel Ashlock, Kenneth Bryden, and Steven Corns. On taxonomy of evolutionary computation problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1713–1719, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [14] Daniel Ashlock and James Lathrop. Program induction: Building a wall. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1844–1850, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [15] Daniel Ashlock and Jessica Oftelie. Simulation of floral specialization in bees. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1859–1864, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [16] Daniel Ashlock and Brad Powers. The effect of tag recognition on non-local adaptation. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 2045–2051, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [17] Daniel Ashlock, Stephen Willson, and Nicole Leahy. Coevolution and tartarus. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1618–1624, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [18] Daniel Ashlock, Eun youn Kim, and Warren von Roeschlaub. Fingerprints: Enabling visualization and automatic analysis of strategies for two player games. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 381–387, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [19] Antonino Augugliaro, Luigi Dusonchet, Salvatore Favuzza, and Eleonora Riva Sanseverino. A fuzzy-logic based evolutionary multiobjective approach for automated distribution networks management. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 847–854, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [20] Stuart Bain, John Thornton, and Abdul Sattar. Evolving algorithms for constraint satisfaction. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 265–272, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [21] Andrei Bajurnow and Vic Ciesielski. Layered learning for evolving goal scoring behavior in soccer players. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1828–1835, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [22] Oliver Bandte. Visualizing information in an interactive evolutionary design process. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 691–698, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [23] Thomas Bartz-Beielstein and Sandor Markon. Tuning search algorithms for real-world applications: A regression tree based approach. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1111–1118, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [24] Yaniv Bernstein, Xiaodong Li, Vic Ciesielski, and Andy Song. Multiobjective parsimony enforcement for superior generalisation performance. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 83–89, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [25] Stefan Bleuler, Amela Prelic, and Eckart Zitzler. An ea framework for biclustering of gene expression data. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 166–173, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [26] Joseph Blumenthal and Gary Parker. Punctuated anytime learning for evolving multi-agent capture strategies. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1820–1827, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [27] Dario Bonino, Fulvio Corno, and Giovanni Squillero. Dynamic optimization of semantic annotation relevance. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1301–1308, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [28] Anthony Brabazon, Arlindo Silva, Tiago Ferra de Sousa, Michael O'Neill, Robin Matthews, and Ernesto Costa. Investigating organizational strategic inertia using a particle swarm model. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 652–659, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [29] Juergen Branke, Hartmut Schmeck, Kalyan Deb, and Reddy.S Maheshwar. Parallelizing multiobjective evolutionary algorithms: Cone separation. In *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pages 1952–1957, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [30] Jon Brewster and Robert G. Reynolds. Alternative fuel adoption. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2364–2371, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [31] Kenneth Bryden, Daniel Ashlock, and Douglas McCorkle. An application of graph based evolutionary algorithms for diversity preservation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 419–426, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [32] Adrian Burian and Jarmo Takala. Evolved gate arrays for image restoration. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1185–1192, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [33] P. Buzing, A. Eiben, M. Schut, and T. Toma. Cooperation and communication in evolving artificial societies. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2030–2037, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [34] Leticia Cagnina, Susana Esquivel, and Raul Gallard. Particle swarm optimization for sequencing problems: A case study. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 536–541, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [35] Flor Castillo, Jeff Sweeney, and Wayne Zirk. Using evolutionary algorithms to suggest variable transformations in linear model lack-of-fit situations. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 556–560, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [36] Uday Chakraborty. Analysis of encoding in 1+1-ea. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 911–917, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [37] Kit Yan Chan, Emin Aydin, and Terry Fogarty. An empirical study on the performance of factorial design based crossover on parametrical problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 620–627, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [38] Kit Yan Chan, Emin Aydin, and Terry Fogarty. Parameterisation of mutation in evolutionary algorithms using the estimated main effect of genes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1972–1979, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [39] Ming Chang, Kazuhiro Ohkura, Kanji Ueda, and Masaharu Sugiyama. Modeling coevolutionary genetic algorithms on two-bit landscapes: Partnering strategies. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2349–2356, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [40] Anthony Chen, Piya Chootinan, and Surachet Pravinvongvuth. An evolutionary approach for finding optimal automatic vehicle identification reader locations in transportation networks. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 181–187, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [41] Hua Chen and Deng guo Feng. An effective evolutionary strategy for bijective s-boxes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2120–2123, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [42] Jun Chen and Mark Wineberg. Enhancement of the shifting balance genetic algorithm for highly multimodal problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 744–751, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [43] Cheng-Hsiung Chiang and Liang-Hsuan Chen. 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*, pages 1901–1908, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [44] Sung-Bae Cho and Chanho Park. Speciated ga for optimal ensemble classifiers in dna microarray classification. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 590–597, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [45] Siang Yew Chong and Xin Yao. The impact of noise on iterated prisoner's dilemma with multiple levels of cooperation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 348–355, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [46] Rick Chow. 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*, pages 242–249, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [47] Huang Chung-Yuan and Sun Chuen-Tsai. Self-adaptive routing based on learning classifier systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 678–682, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [48] Vic Ciesielski and Xiang Li. Experiments with explicit for-loops in genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 494–501, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [49] John A. Clark, Jeremy L. Jacob, and Susan Stepney. The design of s-boxes by simulated annealing. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1533–1537, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [50] John A. Clark, Jeremy L. Jacob, and Susan Stepney. Searching for cost functions. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1517–1524, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [51] Rajan Filomeno Coelho and Philippe Bouillard. Pamuc ii for multicriteria optimization of mechanical designs with expert rules. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 17–22, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [52] David Cohen. Ea-lect: An evolutionary algorithm for constructing logical rules to predict election into cooperstown. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1354–1361, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [53] David Cohen. Using sat scores as predictors for future academic success. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 671–677, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [54] Nicholas Cole, Sushil Louis, and Chris Miles. Using a genetic algorithm to tune first-person shooter bots. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 139–145, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [55] David Corne and Carey Pridgeon. Investigating issues in the reconstructability of genetic regulatory networks. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 582–589, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [56] Fulvio Corno, Ernesto Sanchez, and Giovanni Squillero. On the evolution of corewar warriors. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 133–138, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [57] Alfredo Cruz. A hybrid deterministic/genetic test generator to improve fault. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1325–1330, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [58] Zhihua Cui, Jianchao Zeng, and Xingjuan Cai. A new stochastic particle swarm optimizer. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 316–319, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [59] Dara Curran and Colm O'Riordan. The effect of noise on the performance of cultural evolution in multi-agent systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1767–1773, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [60] Andrew Czarn, Cara MacNish, Kaipillil Vijayan, and Berwin Turlach. Statistical exploratory analysis of genetic algorithms: The importance of interaction. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2288–2295, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [61] Keshav P. Dahal, Tomasz A. Siewierski, Stuart J. Galloway, Graeme M. Burt, and Jim R. McDonald. An evolutionary generation scheduling in an open electricity market. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1135–1142, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [62] Jason Daida, Michael Samples, Bryan Hart, Jeffry Halim, and Aditya Kumar. Demonstrating constraints to diversity with a tunably difficulty problem for genetic programming. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1217–1224, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [63] Jason Daida, David Ward, Adam Hilss, Stephen Long, and Mark Hodges. Visualizing the loss of diversity in genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1225–1232, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [64] Yoginder Dandass. Genetic list scheduling for soft real-time parallel applications. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 1164–1171, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [65] Moayed Daneshyari and Gary Yen. Talent based social algorithm for optimization. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 786–791, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [66] Mohammed Daoud, Nawwaf Kharma, Ali Haidar, and Julius Popoola. Ayo, the awari player, or how better representation trumps deeper search. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1001–1006, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [67] Richard Day, Mark Kleeman, and Gary Lamont. Multi-objective fast messy genetic algorithm solving deception problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1502–1509, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [68] Richard Day and Gary Lamont. Force field approximations using artificial neural networks. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 1020–1027, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [69] Hugo de Garis and Thayne Batty. "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*, pages 816–819, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [70] Hugo de Garis and Thayne Batty. Robust, reversible, nano-scale, femto-second-switching circuits and their evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 639–645, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [71] Edwin De Jong. Towards a bounded pareto-coevolution archive. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2341–2348, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [72] Jesus Manuel de la Cruz-Garcia, Jose Luis Risco-Martin, Alberto Herran-Gonzalez, and Pablo Fernandez-Blanco. Hybrid heuristic and mathematical programming in oil pipelines networks. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 1479–1486, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [73] Fabricio de Paula, Leandro de Castro, and Paulo de Geus. An intrusion detection system using ideas from the immune system. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1059–1066, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [74] Maria De San Pedro, Daniel Pandolfi, Andrea Villagra, Marta Lasso, and Raul Gallard. Effect of crossover operators under multirecombination: Weighted tardiness, a test case. In *Proceedings of* the 2004 IEEE Congress on Evolutionary Computation, pages 699–705, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [75] Orhan Dengiz, Gerry V. Dozier, and Alice E. Smith. Non-deterministic decoding with memory to enhance precision in binary-coded genetic algorithms. In *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pages 2166–2172, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [76] Joerg Denzinger, Ben Chan, Darryl Gates, Kevin Loose, and John Buchanan. Evolutionary behavior testing of commercial computer games. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 125–132, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [77] Alain Deschenes and Kay C. Wiese. 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*, pages 598–606, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [78] Dwight Deugo and Darrell Ferguson. Evolution to the xtreme: Evolving evolutionary strategies using a meta-level approach. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 31–38, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [79] Deepak Devicharan and Chilukuri Mohan. Particle swarm optimization with adaptive linkage learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 530–535, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [80] Anthony Di Pietro, Lyndon While, and Luigi Barone. Applying evolutionary algorithms to problems with noisy, time-consuming fitness functions. In *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pages 1254–1261, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [81] Christos Dimopoulos. A review of evolutionary multiobjective optimization applications in the area of production research. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1487–1494, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [82] Shengchao Ding, Juan Liu, Chanle Wu, and Qing Yang. A genetic algorithm applied to optimal gene subset selection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1654–1660, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [83] Sheetal Doctor, Ganesh Venayagamoorthy, and Venu Gudise. Optimal pso for collective robotic search applications. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1390–1395, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [84] Nathan Dorris, Brian Carnahan, Luke Orsini, and Lois-Ann Kuntz. Interactive evolutionary design of anthropomorphic symbols. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 433–440, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [85] Bernabe Dorronsoro, Enrique Alba, Mario Giacobini, and Marco Tomassini. The influence of grid shape and asynchronicity on cellular evolutionary algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2152–2158, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [86] David Doty. Non-local evolutionary adaptation in gridplants. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 1602–1609, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [87] Gerry V. Dozier. Recurrent distributed constraint satisfaction via genetic and evolutionary societies of hill-climbers. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 273–279, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [88] Gerry V. Dozier, Douglas Brown, John Hurley, and Krystal Cain. Vulnerability analysis of aisbased intrusion detection systems via genetic and particle swarm red teams. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 111–116, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [89] Ambedkar Dukkipati, Narsimha Murty Musti, and Shalabh Bhatnagar. Cauchy annealing schedule: An annealing schedule for boltzmann selection scheme in evolutionary algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 55–62, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [90] Enrique Dunn, Gustavo Olague, Evelyne Lutton, and Marc Schoenauer. Pareto optimal sensing strategies for an active vision system. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 457–463, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [91] Eugene Eberbach and Andrew Eberbach. 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*, pages 1836–1843, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [92] Toru Eguchi, Kotaro Hirasawa, Jinglu Hu, and Sandor Markon. Elevator group supervisory control systems using genetic network programming. In *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pages 1661–1667, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [93] Gilles Enee and Cathy Escazut. Evolution of communication in a genetic based multi-agent system: Use wise resources. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2038–2044, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [94] Thomas English. No more lunch: Analysis of sequential search. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 227–234, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [95] Roger Eriksson and Bjorn Olsson. On the performance of evolutionary algorithms with lifetime adaptation in dynamic fitness landscapes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1293–1300, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [96] Brent Eskridge and Dean Hougen. Imitating success: A memetic crossover operator for genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 809–815, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [97] Susana Esquivel, Marcos Garcia, Guillermo Leguizamon, and Maximiliano Ribba. A comparison of two mutation operators for the path planning problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 879–883, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [98] Shinji Eto, Kotaro Hirasawa, and Jinglu Hu. Functional localization of genetic network programming and its application to a pursuit problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 683–690, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [99] Zhun Fan, Erik Goodman, Wang Jiachuan, Rosenberg Ronald, Seo Kisung, and Hu Jianjun. Hierarchical evolutionary synthesis of mems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2320–2327, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [100] Marco Farina and Massimiliano Gobbi. A fuzzy-optima definition based multiobjective optimization of a racing car tyre-suspension system. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 9–16, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [101] Elsa Fernandez, Manuel Grana, and Jesus Ruiz-Cabello. An instantaneous memetic algorithm for illumination correction. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1105–1110, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [102] Tiago Ferreira, Germano Vasconcelos, and Paulo Adeodato. A hybrid intelligent system approach for improving the prediction of real world time series. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 736–743, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [103] Bogdan Filipic and Tea Robic. A comparative study of coolant flow optimization on a steel casting machine. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 569–573, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [104] Jeffrey Fletcher and Martin Zwick. Hamilton's rule applied to reciprocal altruism. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 994–1000, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [105] David B. Fogel. Evolving strategies in blackjack. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1427–1434, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [106] David B. Fogel, Timothy Hays, and Douglas Johnson. A platform for evolving characters in competitive games. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1420–1426, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [107] Gary B. Fogel, Dana G. Weekes, Rangarajan Sampath, and David J. Ecker. Parameter optimization of an evolutionary algorithm for rna structure discovery. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 607–613, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [108] Nelis Franken and Andries Engelbrecht. Pso approaches to co-evolve ipd strategies. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 356–363, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [109] Joanne Fuller, William Millan, and Ed Dawson. Multi-objective optimisation of bijective s-boxes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1525–1532, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [110] Pablo Funes, Eric Bonabeau, Jerome Herve, and Yves Morieux. Interactive multi-participant task allocation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1699–1705, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [111] Wei Gao. Fast immunized evolutionary programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 666–670, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [112] Simon Garrett. Parameter-free, adaptive clonal selection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1052–1058, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [113] Michel Goldstein and Gary Yen. An evolutionary algorithm method for sampling n-partite graphs. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2250–2257, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [114] Jonatan Gomez. Evolution of fuzzy rule based classifiers. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1727–1734, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [115] Jonatan Gomez. Self adaptation of operator rates in evolutionary algorithms. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1720–1726, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [116] Luis Gonzalez and James Cannady. A self-adaptive negative selection approach for anomaly detection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1561–1568, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [117] Scott Gordon and Zach Matley. Evolving sparse direction maps for maze pathfinding. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 835–838, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [118] Scott Gordon and Terrill Slocum. The knight's tour evolutionary vs. depth-first search. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1435–1440, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [119] Garrison Greenwood. Differing mathematical perspectives of genotype space in combinatorial problems: Metric spaces vs pretopological spaces. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 258–264, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [120] Crina Grosan. 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*, pages 1958–1963, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [121] Zigang Guo and K.L. Mak. A heuristic ga for the stochastic vehicle routing problems with soft time windows. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1449–1456, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [122] Celia Gutierrez. Heuristics in a general scheduling problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 660–665, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [123] Sami Habib and Alice Parker. Synthesizing complex multimedia network topologies using an evolutionary approach. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1193–1200, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [124] Janna Hamaker and Lois Boggess. Non-euclidean distance measures in airs, an artificial immune classification system. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1067–1073, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [125] Simon Harding and Julian Miller. Evolution in materio: A tone discriminator in liquid crystal. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1800–1807, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [126] Pitoyo Hartono, Shuji Hashimoto, and Mattias Wahde. Labeled-ga with adaptive mutation rate. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1851–1858, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [127] Toshiharu Hatanaka, Yoshio Kawaguchi, and Katsuji Uosaki. Nonlinear system identification based on evolutionary fuzzy modeling. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 646–651, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [128] Subhas Hati and Somanth Sengupta. 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*, pages 1346–1353, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [129] Serge Hayward. 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*, pages 948–954, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [130] Jun He, Xin Yao, and Qingfu Zhang. To understand one-dimensional continuous fitness landscapes by drift analysis. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1248–1253, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [131] German Hernandez, Dipankar Dasgupta, Fernando Nino, and Julian Garcia. On geometric and statistical properties of the attractors of a generic evolutionary algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1240–1247, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [132] Julio Cesar Hernandez and Pedro Isasi. New results on the genetic cryptanalysis of tea and reduced-round versions of xtea. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2124–2129, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [133] Julio Cesar Hernandez, Pedro Isasi, and Andre Seznec. 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*, pages 1510–1516, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [134] Arturo Hernandez-Aguirre, Salvador Botello-Rionda, and Carlos Coello-Coello. Passss: An implementation of a novel diversity strategy for handling constraints. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 403–410, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [135] Arturo Hernandez-Aguirre and Carlos Coello-Coello. Mutual information-based fitness functions for evolutionary circuit synthesis. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1309–1316, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [136] Philip Hingston and Graham Kendall. Learning versus evolution in iterated prisoner's dilemma. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 364–372, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [137] Nhu Binh Ho and Joc Cing Tay. Genace: An efficient cultural algorithm to solve the flexible job-shop problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1759–1766, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [138] Jin-Hyuk Hong and Sung-Bae Cho. Evolution of emergent behaviors for shooting game characters in robocode. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 634–638, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [139] Peter Eggenberger Hotz. Asymmetric cell division in artificial evolution. In *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pages 2180–2186, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [140] Peter Eggenberger Hotz. 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*, pages 752–757, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [141] Haiyu Hou and Gerry V. Dozier. Comparing performance of binary-coded and constraint-based detectors. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 772–777, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [142] Jianjun Hu and Erik Goodman. Wireless access point configuration by genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1178–1184, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [143] Xiaohui Hu, Yuhui Shi, and Russell Eberhart. Recent advances in particle swarm. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 90–97, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [144] Evan Hughes. Swarm guidance using a multi-objective co-evolutionary on-line evolutionary algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2357–2363, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [145] David Hunter. Some lessons learned on constructing an automated testbench for evolvable hardware experiments. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1808–1812, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [146] Yutaka Inoue, Takahiro Tohge, and Hitoshi Iba. Object transportation by two humanoid robots using cooperative learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1201–1208, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [147] Mariano Ippolito, Eleonora Riva Sanseverino, and Ferruccio Vuinovich. Multiobjective ant colony search algorithm for optimal electrical distribution system strategical planning. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1924–1931, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [148] Jason Isaacs and Simon Foo. Optimized wavelet hand pose estimation for american sign language recognition. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 797–802, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [149] Hisao Ishibuchi and Kaname Narukawa. 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*, pages 441–448, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [150] Jun-Su Jang, Kuk-Hyun Han, and Jong-Hwan Kim. Face detection using quantum-inspired evolutionary algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2100–2106, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [151] Zhaowang Ji, Anthony Chen, and Kitti Subprasom. Finding multi-objective paths in stochastic networks: A simulation-based genetic algorithm approach. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 174–180, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [152] Zhou Ji and Dipankar Dasgupta. Augmented negative selection algorithm with variable-coverage detectors. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1081–1088, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [153] Yaochu Jin, Tatsuya Okabe, and Bernhard Sendhoff. Neural network regularization and ensembling using multi-objective evolutionary algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1–8, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [154] Rodney Johnson, Michael Melich, Zbigniew Michalewicz, and Martin Schmidt. Coevolutionary tempo game. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1610–1617, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [155] Philip Jones, Ashutosh Tiwari, Rajkumar Roy, and John Corbett. Optimisation of the high efficiency deep grinding process with fuzzy fitness function and constraints. In *Proceedings of* the 2004 IEEE Congress on Evolutionary Computation, pages 574–581, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [156] Shotaro Kamio and Hitoshi Iba. Evolutionary construction of a simulator for real robots. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2202–2209, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [157] Lishan Kang, Aimin Zhou, Robert I. McKay, Yan Li, and Zhuo Kang. Benchmarking algorithms for dynamic travelling salesman problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1286–1292, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [158] Yoshiaki Katada, Kazuhiro Ohkura, and Kanji Ueda. The nei's standard genetic distance in artificial evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1233–1239, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [159] Santhoji Katare, Alex Kalos, and David West. A hybrid swarm optimizer for efficient parameter estimation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 309–315, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [160] Yuji Katsumata and Takao Terano. Cabling and scheduling for electric power plant operation via tabu-boa algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1675–1682, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [161] Graham Kendall and Kristian Spoerer. Scripting the game of lemmings with a genetic algorithm. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 117–124, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [162] Graham Kendall, Razali Yaakob, and Philip Hingston. An investigation of an evolutionary approach to the opening of go. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2052–2059, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [163] James Kennedy. Probability and dynamics in the particle swarm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 340–347, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [164] David Kephart and Jeff Lefevre. Codegen: The generation and testing of dna code words. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1865–1873, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [165] Mohammed Khabzaoui, Clarisse Dhaenens, and El-Ghazali Talbi. A multicriteria genetic algorithm to analyze dna microarray data. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1874–1881, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [166] Mozammel H.A. Khan and Marek A Perkowski. Genetic algorithm based synthesis of multioutput ternary functions using quantum cascade of generalized ternary gates. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 2194–2201, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [167] Rafal Kicinger, Tomasz Arciszewski, and Kenneth De Jong. Morphogenesis and structural design: Cellular automata representations of steel structures in tall buildings. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 411–418, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [168] Steven Kimbrough, Ming Lu, and Soofi Safavi. Exploring a financial product model with a two-population genetic algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 855–862, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [169] Chi kin Chow and Hung tat Tsui. Autonomous agent response learning by a multi-species particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 778–785, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [170] Mark Kleeman, Richard Day, and Gary Lamont. Multi-objective evolutionary search performance with explicit building-block sizes for npc problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 728–735, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [171] Yoko Kobayashi and Eitaro Aiyoshi. Optimization algorithm using multi-agents and reinforcement learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 63–68, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [172] Ziad Kobti, Robert G. Reynolds, and Tim Kohler. 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*, pages 1743–1750, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [173] Praveen Koduru, Sanjoy Das, Stephen Welch, and Judith L. Roe. A multi-objective ga-simplex hybrid approach for gene regulatory network models. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2084–2091, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [174] Mario Koeppen. No-free-lunch theorems and the diversity of algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 235–241, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [175] Jerzy J. Korczak and Piotr Lipinski. Evolutionary building of stock trading experts in a real-time system. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 940–947, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [176] Arthur Kordon and Ching-Tai Lue. Symbolic regression modeling of blown film process effects. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 561–568, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [177] Manabu Kotani and Daisuke Kato. Feature extraction using coevolutionary genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 614–619, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [178] Thiemo Krink, Bogdan Filipic, Gary B. Fogel, and Rene Thomsen. Noisy optimization problems a particular challenge for differential evolution? In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 332–339, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [179] Renato A. Krohling, Frank Hoffmann, and Leandro dos Santos Coelho. Co-evolutionary particle swarm optimization for min-max problems using gaussian distribution. In *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pages 959–964, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [180] Dean Krusienski and W. Kenneth Jenkins. Particle swarm optimization for adaptive iir filter structures. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 965–970, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [181] Gary Lamont, Mark Esslinger, Robert Ewing, and Hoda Abdel-Aty-Zohdy. An artificial immune system strategy for robust chemical spectra classification via distributed heterogeneous sensors. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 1036–1043, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [182] Marta Lasso, Daniel Pandolfi, Maria De San Pedro, Andrea Villagra, and Raul Gallard. Solving dynamic tardiness problems in single machine environments. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1143–1149, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [183] Greg Lee, Vadim Bulitko, and Ilya Levner. Automated selection of vision operator libraries with evolutionary algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1127–1134, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [184] Shane Legg, Marcus Hutter, and Akshat Kumar. Tournament versus fitness uniform selection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2144–2151, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [185] Elizabeth Leon, Olfa Nasraoui, and Jonatan Gomez. Anomaly detection based on unsupervised niche clustering with application to network intrusion detection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 502–508, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [186] Peter Lichodzijewski, Nur Zincir-Heywood, and Malcolm Heywood. Cascaded gp models for data mining. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2258–2264, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [187] Hongwei Liu and Hitoshi Iba. A hierarchical approach for adaptive humanoid robot control. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1546–1553, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [188] Yu Liu, Zheng Qin, and Xingshi He. Supervisor-student model in particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 542–547, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [189] Simon Lucas. Cellz: A simple dynamic game for testing evolutionary algorithms. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1007–1014, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [190] Philippe Lucidarme. An evolutionary algorithm for multi-robot unsupervised learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2210–2215, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [191] Sergey Malinchik, Belinda Orme, Joseph Rothermich, and Eric Bonabeau. Interactive exploratory data analysis. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1098–1104, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [192] Alexandra Mark, Bernhard Sendhoff, and Heiko Wersing. A decision making framework for game playing using evolutionary optimization and learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 373–380, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [193] Shivanajay Marwaha, Dipti Srinivasan, Chen Khong Tham, and Athanasios Vasilakos. Evolutionary fuzzy multi-objective routing for wireless mobile ad hoc networks. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1964–1971, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [194] Emilio Miguelanez, Ali Zalzala, and Paul Tabor. Evolving neural networks using swarm intelligence for binmap classification. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 978–985, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [195] Chris Miles, Sushil Louis, Nicholas Cole, and John McDonnell. Learning to play like a human: Case injected genetic algorithms for strategic computer gaming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1441–1448, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [196] Damon Miller, Rodrigo Arguello, and Garrison Greenwood. Evolving artificial neural network structures: Experimental results for biologically-inspired adaptive mutations. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2114–2119, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [197] Arvind Mohais, Christopher Ward, and Christian Posthoff. Randomized directed neighborhoods with edge migration in particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 548–555, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [198] Sanaz Mostaghim, Michael Hoffmann, Peter H. Koenig, Thomas Frauenheim, and Juergen Teich. Molecular force field parametrization using multi-objective evolutionary algorithms. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 212–219, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [199] Sanaz Mostaghim and Juergen Teich. Covering pareto-optimal fronts by subswarms in multi-objective particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1404–1411, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [200] Christine Mumford. A hierarchical evolutionary approach to multi-objective optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1944–1951, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [201] Yuichi Nagata. Criteria for designing crossovers for tsp. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1465–1472, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [202] Hiroshi Nakagoe, Kotaro Hirasawa, and Jinglu Hu. Genetic network programming with automatically generated variable size macro nodes. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 713–719, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [203] Morikazu Nakamura, Naruhiko Yamashiro, and Yiyuan Gong. Iterative parallel and distributed genetic algorithms with biased initial population. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2296–2301, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [204] Mark Neal and Frederic Labrosse. Rotation-invariant appearance based maps for robot navigation using an artificial immune network algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 863–870, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [205] Nadia Nedjah and Luiza Mourelle. Secure evolutionary hardware for public-key cryptosystems. In Proceedings of the 2004 IEEE Congress on Evolutionary Computation, pages 2130–2137, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [206] Andrew Neel, Max Garzon, and Phani Penumetsa. Soundness and quality of semantic retrieval in dna-based memories with abiotic data. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1889–1895, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [207] Frank Neumann. Expected runtimes of evolutionary algorithms for the eulerian cycle problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 904–910, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [208] Xuan Hoai Nguyen and McKay Robert Ian. 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, pages 472–477, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [209] Giuseppe Nicosia, Vincenzo Cutello, and Mario Pavone. An immune algorithm with hypermacromutations for the 2d hydrophilic-hydrophobic model. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1074–1080, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [210] Yusuke Nojima, Naoyuki Kubota, and Fumio Kojima. Trajectory generation and accumulation for partner robots based on structured learning. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2224–2229, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [211] Nasimul Noman, Kouichi Okada, Naoki Hosoyama, and Hitoshi Iba. Use of clustering to improve the layout of gene network for visualization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2068–2075, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [212] Maryam Nuser and Russell Deaton. A probabilistic analysis of in vitro selection of independent dna words for computation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1882–1888, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [213] Choong Oh and Gregory Barlow. Autonomous controller design for unmanned aerial vehicles using multi-objective genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1538–1545, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [214] Jae Oh and Dimitri Volper. Design of rationality-based computing middleware: A preliminary study. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 839–846, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [215] Tatsuya Okabe, Yaochu Jin, Bernhard Sendhoff, and Markus Olhofer. Voronoi-based estimation of distribution algorithm for multi-objective optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1594–1601, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [216] Mihai Oltean. Solving even-parity problems using traceless genetic programming. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1813–1819, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [217] Michael O'Neill, Anthony Brabazon, and Catherine Adley. The automatic generation of programs for classification problems with grammatical swarm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 104–110, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [218] Isao Ono, Yoshiaki Seike, Ryohei Morishita, Norihiko Ono, and Masahiko Matsui. 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*, pages 2060–2067, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [219] Colm O'Riordan, Josephine Griffith, John Newell, and Humphrey Sorensen. Co-evolution of strategies for an n-player dilemma. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1625–1630, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [220] Pavel Osmera. Evolvable controllers with hierarchical structure. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 758–765, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [221] David Ostrowski and Robert G. Reynolds. Using cultural algorithms to evolve strategies for recessionary markets. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1780–1785, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [222] Robert Ouellette, Matthew Browne, and Kotaro Hirasawa. Genetic algorithm optimization of a convolutional neural network for autonomous crack detection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 516–521, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [223] Ender Ozcan and Esin Onbasioglu. Genetic algorithms for parallel code optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1375–1381, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [224] Gary Parker. Partial recombination for the co-evolution of model parameters. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 2216–2223, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [225] Gary Parker and Joseph Blumenthal. Varying sample sizes for the co-evolution of heterogeneous agents. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 766–771, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [226] Ian Parmee and Johnson Abraham. Supporting implicit learning via the visualisation of coga multi-objective data. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 395–402, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [227] Daniel Parrott and Xiaodong Li. A particle swarm model for tracking multiple peaks in a dynamic environment using speciation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 98–103, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [228] Konstantinos Parsopoulos, Dimitris Tasoulis, Nicos Pavlidis, Vassilis Plagianakos, and Michael Vrahatis. Vector evaluated differential evolution for multiobjective optimization. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 204–211, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [229] Sandra Paterlini and Thiemo Krink. High performance clustering with differential evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2004–2011, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [230] Topon Paul and Hitoshi Iba. Selection of the most useful subset of genes for gene expression-based classification. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2076–2083, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [231] Bin Peng and Robert G. Reynolds. Cultural algorithms: Knowledge learning in dynamic environments. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1751–1758, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [232] Jeffrey Pfaffmann, Konstantinos Bousmalis, and Silvano Colombano. A scouting-inspired evolutionary algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1706–1712, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [233] Wojciech Piaseczny, Hideaki Suzuki, and Hidefumi Sawai. Chemical genetic programming evolution of amino acid rewriting rules used for genotype-phenotype translation. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1639–1646, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [234] Ying ping Chen and David Goldberg. Convergence time for the linkage learning genetic algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 39–46, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [235] Asad Pirzada, Amitava Datta, and Chris McDonald. Trusted routing in ad-hoc networks using pheromone trails. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1938–1943, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [236] Gregorio Toscano Pulido and Carlos Coello-Coello. A constraint-handling mechanism for particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1396–1403, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [237] Marcus Randall. Heuristics for ant colony optimisation using the generalised assignment problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1916–1923, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [238] Tapabrata Ray, Neelakantam Venkatarayalu, Kok Sung Won, and Kian Ping Chan. 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*, pages 1996–2003, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [239] Peter Ross, Javier G. Marin-Blazquez, and Emma Hart. Hyper-heuristics applied to class and exam timetabling problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1691–1698, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [240] Jem Rowland. On genetic programming and knowledge discovery in transcriptome data. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 158–165, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [241] Baskar S., A. Alphones, and Ponnuthurai Nagaratnam Suganthan. Concurrent pso and fdr-pso based reconfigurable phase-differentiated antenna array design. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2173–2179, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [242] Baskar S. and Ponnuthurai Nagaratnam Suganthan. A novel concurrent particle swarm optimization (cpso). In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 792–796, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [243] Sadiq M. Sait and Muhammad Al-Ismail. 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*, pages 1794–1799, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [244] Ralf Salomon. The curse of high-dimensional search spaces: Observing premature convergence in unimodal functions. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 918–923, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [245] Ralf Salomon. The force model: Concept, behavior, interpretation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1119–1126, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [246] Ernesto Sanchez, Giovanni Squillero, and Massimo Violante. A local analysis of the genotypefitness mapping in hardware optimization problems. In *Proceedings of the 2004 IEEE Congress* on *Evolutionary Computation*, pages 871–878, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [247] Javier J. Sanchez, Manuel Galan, and Enrique Rubio. Genetic algorithms and cellular automata: A new architecture for traffic light cycles optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1668–1674, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [248] Erinaldo Santos and Takaaki Ohishi. A hydro unit commitment model using genetic algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1368–1374, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [249] Bambang Sarif, Mostafa Abd-El-Barr, Sadiq M. Sait, and Uthman Al-Saiari. Fuzzified ant colony optimization algorithm for efficient combinational circuits. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1317–1324, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [250] Kumara Sastry, Martin Pelikan, and David Goldberg. Efficiency enhancement of genetic algorithms via building-block-wise fitness estimation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 720–727, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [251] Hiroyuki Sato, Hernan Aguirre, and Kiyoshi Tanaka. Local dominance using polar coordinates to enhance multiobjective evolutionary algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 188–195, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [252] Lutz Schoenemann. 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*, pages 1270–1277, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [253] Justin Schonfeld and Daniel Ashlock. Comparison of robustness of solutions located by evolutionary computation and other search algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 250–257, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [254] Kamran Sedighi, Kaveh Ashenayi, Theodore Manikas, Heng-Ming Tai, and Roger Wainwright. Autonomous local path-planning for a mobile robot using a genetic algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1338–1345, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [255] Daekwan Seo, Moritoshi Yasunaga, and Jung Hwan Kim. A computatioal approach to detect transcritpion regulatory elements in dictyostelium discoideum. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1647–1653, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [256] Marcin Seredynski and Pascal Bouvry. Block cipher based on reversible cellular automata. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2138–2143, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [257] Yin Shan, Robert I. McKay, Rohan Baxter, Hussein Abbass, Daryl Essam, and Hoai Nguyen. Grammar model-based program evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 478–485, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [258] Weiguo Sheng and Xiaohui Liu. A hybrid algorithm for k-medoid clustering of large data sets. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 77–82, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [259] Yang Shuyuan, Wang Min, and Jiao Licheng. A novel quantum evolutionary algorithm and its application. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 820–826, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [260] Yang Shuyuan, Wang Min, and Jiao Licheng. A quantum particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 320–324, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [261] P. A. Simionescu, D. G. Beale, and Gerry V. Dozier. Constrained optimization problem solving using estimation of distribution algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 296–302, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [262] Burak Simsek, Sahin Albayrak, and Alexander Korth. Reinforcement learning for procurement agents of the factory of the future. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1331–1337, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [263] Mark Sinka and David Corne. Evolving document features for web document clustering: A feasability study. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 891–897, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [264] Wayne Slade, Habtom Ressom, Mohamad Musavi, and Richard Miller. Ocean color inversion by particle swarm optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 971–977, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [265] Kevin Smith, Richard Everson, and Jonathan Fieldsend. Dominance measures for multi-objective simulated annealing. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 23–30, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [266] Andy Song and Vic Ciesielski. Texture analysis by genetic programming. In *Proceedings of the* 2004 IEEE Congress on Evolutionary Computation, pages 2092–2099, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [267] Nora Speer, Christian Spieth, and Andreas Zell. A memetic co-clustering algorithm for gene expression profiles and biological annotation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1631–1638, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [268] Christian Spieth, Felix Streichert, Nora Speer, and Andreas Zell. A memetic inference method for gene regulatory networks based on s-systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 152–157, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [269] Christian Spieth, Felix Streichert, Nora Speer, and Andreas Zell. 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*, pages 146–151, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [270] Stephen Stanhope. Evolution strategies for multivariate-to-anything partially specified random vector generation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2235–2240, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [271] Craig Stephan and John Sullivan. An agent-based hydrogen vehicle/infrastructure model. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1774–1779, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [272] Adrian Stoica, Tughrul Arslan, Didier Keymeulen, Vu Duong, Ricardo Zebulum, Xin Guo, Ian Ferguson, and Taher Daud. Evolutionary recovery of electronic circuits from radiation induced faults. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1786–1793, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [273] Felix Streichert, Holger Ulmer, and Andreas Zell. Evaluating a hybrid encoding and three crossover operators on the constrained portfolio selection problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 932–939, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [274] Jun Sun, Bin Feng, Wenbo Xu, Jing Liu, and Ling Bao. Particle swarm optimization with particles having quantum behavior. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 325–331, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [275] Xiaolu Sun and Winfried Just. Evolution of strategies in modified sequential assessment games. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 388–394, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [276] Sunil Suram, Kenneth Bryden, and Daniel Ashlock. Quantitative trait loci based solution of an inverse radiation heat transfer problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 427–432, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [277] Osamu Takahashi and Shigenobu Kobayashi. An angular distance dependent alternation model for real-coded genetic algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2159–2165, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [278] Mieko Tanaka-Yamawaki and Tomohiro Motoyama. Predicting the tick-wise price fluctuations by means of evolutional computation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 955–958, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [279] Ivan Tanev, Thomas Ray, and Andrzej Buller. Evolutionary design, robustness and adaptation of sidewinding locomotion of simulated libmless wheelless robot. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2312–2319, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [280] Ke Tang, Ponnuthurai Nagaratnam Suganthan, and Xin Yao. Generalized lda using relevance weighting and evolution strategy. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2230–2234, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [281] M. Fatih Tasgetiren, Mehmet Sevkli, Yun-Chia Liang, and Gunes Gencyilmaz. Particle swarm optimization algorithm for single machine total weighted tardiness problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1412–1419, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [282] Dimitris Tasoulis, Nicos Pavlidis, Vassilis Plagianakos, and Michael Vrahatis. Parallel differential evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2023–2029, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [283] Jorge Tavares, Francisco Pereira, and Ernesto Costa. Understanding the role of insertion and correction in the evolution of golomb rulers. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 69–76, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [284] Ankur Teredesai and Venu Govindaraju. Issues in evolving gp based classifiers for a pattern recognition task. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 509–515, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [285] Rene Thomsen. Multimodal optimization using crowding-based differential evolution. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1382–1389, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [286] Jonathan Timmis, Camilla Edmonds, and Johnny Kelsey. 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, pages 1044–1051, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [287] Renato Tinos and Andre Carvalho. A genetic algorithm with gene dependent mutation probability for non-stationary optimization problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1278–1285, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [288] Marco Tomassini, Leonardo Vanneschi, Jerome Cuendet, and Francisco Fernandez. A new technique for dynamic size populations in genetic programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 486–493, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [289] Shisanu Tongchim and Xin Yao. Parallel evolutionary programming. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1362–1367, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [290] Andre Treptow and Andreas Zell. Combining adaboost learning and evolutionary search to select features for real-time object detection. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2107–2113, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [291] Shigeyoshi Tsutsui and Gordon Wilson. Solving capacitated vehicle routing problems using edge histogram based sampling algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1150–1157, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [292] Alexander Tulai and Franz Oppacher. Maintaining diversity and increasing the accuracy of classification rules through automatic speciation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2241–2249, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [293] Holger Ulmer, Felix Streichert, and Andreas Zell. Evolution strategies with controlled model assistance. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1569–1576, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [294] Katsuji Uosaki, Yuuya Kimura, and Toshiharu Hatanaka. Evolution strategies based particle filters for state and parameter estimation of nonlinear models. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 884–890, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [295] A. Sima Uyar and H. Turgut Uyar. An event-driven test framework for evolutionary algorithms in dynamic environments. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2265–2272, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [296] Sangameswar Venkatraman and Gary Yen. A simple elitist genetic algorithm for constrained optimization. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 288–295, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [297] Sebastien Verel, Philippe Collard, and Manuel Clergue. Scuba search: when selection meets innovation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 924–931, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [298] Jakob Vesterstroem and Rene Thomsen. 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*, pages 1980–1987, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [299] Saranyan Vigraham and John Gallagher. On the relative efficacies of space saving \*cgas for evolvable hardware applications. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2187–2193, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [300] Reginald L. Walker. Honeybee search strategies: Adaptive exploration of an information ecosystem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1209–1216, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [301] Paul Walsh and Pio Fenton. A high-throughput computing environment for job shop scheduling genetic algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1554–1560, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [302] Isamu Watanabe and Makoto Nodu. A genetic algorithm for optimizing switching sequence of service restoration in distribution systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1683–1690, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [303] Jyh-Da Wei and Der-Tsai Lee. A new approach to the traveling salesman problem using genetic algorithms with priority encoding. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1457–1464, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [304] Benjamin Weinberg and El-Ghazali Talbi. Nfl theorem is unusable on structured classes of problems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 220–226, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [305] Christopher White and Gary Yen. A hybrid evolutionary algorithm for traveling salesman problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1473–1478, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [306] Kok Sung Won and Tapabrata Ray. 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*, pages 1577–1585, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [307] Tony Wong, Pascal Cote, and Robert Sabourin. A hybrid moea for the capacitated exam proximity problem. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1495–1501, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [308] David Wood and Junghuei Chen. Fredkin gate circuits via recombination enzymes. In *Proceedings* of the 2004 IEEE Congress on Evolutionary Computation, pages 1896–1900, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [309] Zhijian Wu, Zhilong Tang, Jun Zou, Lishan Kang, and Mingbiao Li. An evolutionary algorithm for solving parameter identification problems in elliptic systems. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 803–808, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [310] Xiao-Feng Xie, Wen-Jun Zhang, and De-Chun Bi. Handling equality constraints by adaptive relaxing rule for swarm algorithms. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2012–2016, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [311] Xiao-Feng Xie, Wen-Jun Zhang, and De-Chun Bi. Optimizing semiconductor devices by self-organizing particle swarm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2017–2022, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [312] Yong Xu, Sancho Salcedo-Sanz, and Xin Yao. Non-standard cost terminal assignment problems using tabu search approach. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2302–2306, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [313] Jinn-Moon Yang and Tsai-Wei Shen. A pharmacophore-based evolutionary approach for screening estrogen receptor antagonists. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1028–1035, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [314] Shengxiang Yang. Constructing dynamic test environments for genetic algorithms based on problem difficulty. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1262–1269, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [315] Georgios Yannakakis, John Levine, and John Hallam. An evolutionary approach for interactive computer games. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 986–993, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [316] Haluk Yapicioglu, Gerry V. Dozier, and Alice E. Smith. 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*, pages 2328–2334, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [317] Kim Yong-Duk, Kim Jong-Hwan, and Kim Yong-Jae. Behavior selection and learning for synthetic character. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 898–903, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [318] Ming Yuchi and Jong-Hwan Kim. 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, pages 280–287, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [319] Yeboon Yun, Hirotaka Nakayama, and Masao Arakawa. Fitness evaluation using generalized data envelopment analysis in moga. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 464–471, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [320] Funing Zhang and Gerry V. Dozier. 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*, pages 1988–1995, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [321] Guang-Zheng Zhang and De-Shuang Huang. 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*, pages 1015–1019, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [322] Jian Zhang, Xiaohui Yuan, and Bill Buckles. Subspace fdc for sharing distance estimation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1735–1742, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [323] Jun Zhang, H.s.h. Chung, and B.J. Hu. Adaptive probabilities of crossover and mutation in genetic algorithms based on clustering technique. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2280–2287, Portland, Oregon, 20-23 June 2004. IEEE Press.

- [324] Wen-Jun Zhang, Xiao-Feng Xie, and De-Chun Bi. Handling boundary constraints for numrical optimization by particle swarm flying in periodic search space. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2307–2311, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [325] Jinhua Zheng, Charles X. Ling, Zhongzhi Shi, and Yong Xie. Some discussions about mogas: Individual relations, non-dominated set, and application on automatic negotiation. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 706–712, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [326] Zongzhao Zhou, Yew Soon Ong, and Prasanth B. Nair. Hierarchical surrogate-assisted evolutionary optimization framework. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 1586–1593, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [327] Peng Zou, Zhi Zhou, Guoliang Chen, and Xin Yao. A novel memetic algorithm with random multi-local-search: A case study of tsp. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 2335–2340, Portland, Oregon, 20-23 June 2004. IEEE Press.
- [328] Yi Zou, Zhenquan Zhuang, and Huanhuan Chen. Hw-sw partitioning based on genetic algorithm. In *Proceedings of the 2004 IEEE Congress on Evolutionary Computation*, pages 628–633, Portland, Oregon, 20-23 June 2004. IEEE Press.