

Список литературы

- [1] H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, editors, *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, Washington DC, USA, 2005, ACM Press.
- [2] C. PAUL, H. LIPSON, and F. J. V. CUEVAS, Evolutionary form-finding of tensegrity structures, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 3–10, Washington DC, USA, 2005, ACM Press.
- [3] V. VALSALAM, J. BEDNAR, and R. MIIKKULAINEN, Constructing good learners using evolved pattern generators, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 11–18, Washington DC, USA, 2005, ACM Press.
- [4] J. SCHONFELD and D. ASHLOCK, A study of evolutionary robustness in stochastically tiled polyominoes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 19–26, Washington DC, USA, 2005, ACM Press.
- [5] R. L. BECERRA and C. A. COELLO COELLO, Optimization with constraints using a cultured differential evolution approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 27–34, Washington DC, USA, 2005, ACM Press.
- [6] M. SCHEUTZ and P. SCHERMERHORN, Predicting population dynamics and evolutionary trajectories based on performance evaluations in alife simulations, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 35–42, Washington DC, USA, 2005, ACM Press.
- [7] K. L. DOWNING, The predictive basis of situated and embodied artificial intelligence, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 43–50, Washington DC, USA, 2005, ACM Press.
- [8] M. MCPARTLAND, S. NOLFI, and H. A. ABBASS, Emergence of communication in competitive multi-agent systems: a pareto multi-objective approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA,

- K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 51–58, Washington DC, USA, 2005, ACM Press.
- [9] D. ASHLOCK and E.-Y. KIM, The impact of cellular representation on finite state agents for prisoner’s dilemma, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 59–66, Washington DC, USA, 2005, ACM Press.
 - [10] H.-L. LIANG, C. LEE, and J.-S. WU, Multiplex PCR primer design for gene family using genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 67–74, Washington DC, USA, 2005, ACM Press.
 - [11] A. E. EIBEN, M. C. SCHUT, and T. TOMA, Comparing multicast and newscast communication in evolving agent societies, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 75–81, Washington DC, USA, 2005, ACM Press.
 - [12] T. G. W. GORDON and P. J. BENTLEY, Bias and scalability in evolutionary development, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 83–90, Washington DC, USA, 2005, ACM Press.
 - [13] S. LUKE, Evolutionary computation and the c-value paradox, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 91–97, Washington DC, USA, 2005, ACM Press.
 - [14] J. RIEFFEL and J. POLLACK, Automated assembly as situated development: using artificial ontogenies to evolve buildable 3-D objects, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 99–106, Washington DC, USA, 2005, ACM Press.
 - [15] R. BREUKELAAR and T. BäCK, Using a genetic algorithm to evolve behavior in multi dimensional cellular automata: emergence of behavior, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O’REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 107–114, Washington DC, USA, 2005, ACM Press.

- [16] E. SCHLESSINGER, P. J. BENTLEY, and R. B. LOTTO, Evolving visually guided agents in an ambiguous virtual world, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 115–120, Washington DC, USA, 2005, ACM Press.
- [17] R. R. CAZANGI, F. J. VON ZUBEN, and M. F. FIGUEIREDO, Autonomous navigation system applied to collective robotics with ant-inspired communication, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 121–128, Washington DC, USA, 2005, ACM Press.
- [18] A. BRABAZON, A. SILVA, T. F. DE SOUSA, M. O'NEILL, R. MATTHEWS, and E. COSTA, Agent-based modelling of product invention, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 129–136, Washington DC, USA, 2005, ACM Press.
- [19] A. STOUT and L. SPECTOR, Validation of evolutionary activity metrics for long-term evolutionary dynamics, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 137–142, Washington DC, USA, 2005, ACM Press.
- [20] T. MURATA and M. YAMAGUCHI, Neighboring crossover to improve GA-based Q-learning method for multi-legged robot control, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 145–146, Washington DC, USA, 2005, ACM Press.
- [21] G. PARKER and R. GEORGESCU, Evolution of multi-loop controllers for fixed morphology with a cyclic genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 147–148, Washington DC, USA, 2005, ACM Press.
- [22] A. MATOS, R. SUZUKI, and T. ARITA, Evolutionary models for maternal effects in simulated developmental systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 149–150, Washington DC, USA, 2005, ACM Press.
- [23] H. F. WEDDE, M. FAROOQ, T. PANNENBAECKER, B. VOGEL, C. MUELLER, J. METH, and R. JERUSCHKAT, BeeAdHoc: an energy efficient routing algorithm for mobile ad hoc networks inspired by bee behavior, in *GECCO 2005: Proceedings of the 2005 conference on Genetic*

- and evolutionary computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 153–160, Washington DC, USA, 2005, ACM Press.
- [24] M. SETTLES and T. SOULE, Breeding swarms: a GA/PSO hybrid, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 161–168, Washington DC, USA, 2005, ACM Press.
 - [25] R. POLI, C. DI CHIO, and W. B. LANGDON, Exploring extended particle swarms: a genetic programming approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 169–176, Washington DC, USA, 2005, ACM Press.
 - [26] S. DAS, A. KONAR, and U. K. CHAKRABORTY, Improving particle swarm optimization with differentially perturbed velocity, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 177–184, Washington DC, USA, 2005, ACM Press.
 - [27] M. SETTLES, P. NATHAN, and T. SOULE, Breeding swarms: a new approach to recurrent neural network training, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 185–192, Washington DC, USA, 2005, ACM Press.
 - [28] C. K. MONSON and K. D. SEPPI, Bayesian optimization models for particle swarms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 193–200, Washington DC, USA, 2005, ACM Press.
 - [29] J. KENNEDY, Dynamic-probabilistic particle swarms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 201–207, Washington DC, USA, 2005, ACM Press.
 - [30] A. E. M. ZAVALA, A. H. AGUIRRE, and E. R. V. DIHARCE, Constrained optimization via particle evolutionary swarm optimization algorithm (PESO), in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 209–216, Washington DC, USA, 2005, ACM Press.

- [31] V. HARTMANN, Evolving agent swarms for clustering and sorting, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 217–224, Washington DC, USA, 2005, ACM Press.
- [32] E. MEZURA-MONTES, J. VELÁZQUEZ-REYES, and C. A. COELLO COELLO, Promising infeasibility and multiple offspring incorporated to differential evolution for constrained optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 225–232, Washington DC, USA, 2005, ACM Press.
- [33] M. FLEISCHER, Scale invariant pareto optimality: a meta-formalism for characterizing and modeling cooperativity in evolutionary systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 233–240, Washington DC, USA, 2005, ACM Press.
- [34] C. K. MONSON and K. D. SEPPI, Exposing origin-seeking bias in PSO, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 241–248, Washington DC, USA, 2005, ACM Press.
- [35] W. K. FOONG, H. R. MAIER, and A. R. SIMPSON, Ant colony optimization for power plant maintenance scheduling optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 249–256, Washington DC, USA, 2005, ACM Press.
- [36] C. R. RAQUEL and P. C. NAVAL, JR., An effective use of crowding distance in multiobjective particle swarm optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 257–264, Washington DC, USA, 2005, ACM Press.
- [37] B.-F. LIU, H.-M. CHEN, J.-H. CHEN, S.-F. HWANG, and S.-Y. HO, MeSwarm: memetic particle swarm optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 267–268, Washington DC, USA, 2005, ACM Press.
- [38] M. EL-ABD and M. KAMEL, Factors governing the behavior of multiple cooperating swarms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG,

- H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 269–270, Washington DC, USA, 2005, ACM Press.
- [39] T. N. BUI and M. COLPAN, Solving geometric TSP with ants, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 271–272, Washington DC, USA, 2005, ACM Press.
- [40] T. SCHMICKL, R. THENIUS, and K. CRAILSHEIM, Simulating swarm intelligence in honey bees: foraging in differently fluctuating environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 273–274, Washington DC, USA, 2005, ACM Press.
- [41] R. BELLO, A. NOWE, Y. CABALLERO, Y. GóMEZ, and P. VRANCX, A model based on ant colony system and rough set theory to feature selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 275–276, Washington DC, USA, 2005, ACM Press.
- [42] Z. CUI and J. ZENG, A modified particle swarm optimization predicted by velocity, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 277–278, Washington DC, USA, 2005, ACM Press.
- [43] Z. JI and D. DASGUPTA, Estimating the detector coverage in a negative selection algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 281–288, Washington DC, USA, 2005, ACM Press.
- [44] F. O. DE FRANça, F. J. VON ZUBEN, and L. N. DE CASTRO, An artificial immune network for multimodal function optimization on dynamic environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 289–296, Washington DC, USA, 2005, ACM Press.
- [45] F. A. GONZáLEZ, J. C. GALEANO, D. A. ROJAS, and A. VELOZA-SUAN, Discriminating and visualizing anomalies using negative selection and self-organizing maps, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 297–304, Washington DC, USA, 2005, ACM Press.
- [46] Z. GUO, H. K. HAN, and J. C. TAY, Sufficiency verification of HIV-1 pathogenesis based on multi-agent simulation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic*

- and evolutionary computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 305–312, Washington DC, USA, 2005, ACM Press.
- [47] P. SPELLWARD and T. KOVACS, On the contribution of gene libraries to artificial immune systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 313–319, Washington DC, USA, 2005, ACM Press.
 - [48] T. STIBOR, P. MOHR, J. TIMMIS, and C. ECKERT, Is negative selection appropriate for anomaly detection?, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 321–328, Washington DC, USA, 2005, ACM Press.
 - [49] J.-Y. WU and Y.-K. CHUNG, Artificial immune system for solving generalized geometric problems: a preliminary results, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 329–336, Washington DC, USA, 2005, ACM Press.
 - [50] J. M. SHAPIRO, G. B. LAMONT, and G. L. PETERSON, An evolutionary algorithm to generate hyper-ellipsoid detectors for negative selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 337–344, Washington DC, USA, 2005, ACM Press.
 - [51] X. HANG and H. DAI, Applying both positive and negative selection to supervised learning for anomaly detection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 345–352, Washington DC, USA, 2005, ACM Press.
 - [52] I. NUNN and T. WHITE, The application of antigenic search techniques to time series forecasting, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 353–360, Washington DC, USA, 2005, ACM Press.
 - [53] J. C. GALEANO, A. VELOZA-SUAN, and F. A. GONZALEZ, A comparative analysis of artificial immune network models, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R.

- RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 361–368, Washington DC, USA, 2005, ACM Press.
- [54] H. KNIDEL, L. N. DE CASTRO, and F. J. VON ZUBEN, RABNET: a real-valued antibody network for data clustering, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 371–372, Washington DC, USA, 2005, ACM Press.
- [55] M. GONG, L. JIAO, H. DU, R. SHANG, and B. LU, Performance assessment of an artificial immune system multiobjective optimizer by two improved metrics, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 373–374, Washington DC, USA, 2005, ACM Press.
- [56] J. L. PAYNE and M. J. EPPSTEIN, A hybrid genetic algorithm with pattern search for finding heavy atoms in protein crystals, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 377–384, Washington DC, USA, 2005, ACM Press.
- [57] T. N. BUI and G. SUNDARRAJ, An efficient genetic algorithm for predicting protein tertiary structures in the 2D HP model, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 385–392, Washington DC, USA, 2005, ACM Press.
- [58] P. KODURU, S. DAS, S. WELCH, J. L. ROE, and Z. P. LOPEZ-DEE, A co-evolutionary hybrid algorithm for multi-objective optimization of gene regulatory network models, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 393–399, Washington DC, USA, 2005, ACM Press.
- [59] R. SEEHUUS, A. TVEIT, and O. EDSBERG, Discovering biological motifs with genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 401–408, Washington DC, USA, 2005, ACM Press.
- [60] G. C. TOWNSEND, W. N. HAZEL, and R. SMOCK, Using evolutionary computation methods to support analytical models for the evolution and maintenance of conditional strategies in *chthamalus anisopoma*, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 409–414, Washington DC, USA, 2005, ACM Press.

- [61] L. POLADIAN, A GA for maximum likelihood phylogenetic inference using neighbour-joining as a genotype to phenotype mapping, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 415–422, Washington DC, USA, 2005, ACM Press.
- [62] T. HOHM and D. HOFFMANN, A multi-objective evolutionary approach to peptide structure redesign and stabilization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 423–429, Washington DC, USA, 2005, ACM Press.
- [63] H. RESSOM, R. S. VARGHESE, D. SAHA, E. ORVISKY, L. GOLDMAN, E. F. PETRICON, T. P. CONRADS, T. D. VEENSTRA, M. ABDEL-HAMID, C. A. LOFFREDO, and R. GOLDMAN, Particle swarm optimization for analysis of mass spectral serum profiles, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 431–438, Washington DC, USA, 2005, ACM Press.
- [64] N. NOMAN and H. IBA, Inference of gene regulatory networks using s-system and differential evolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 439–446, Washington DC, USA, 2005, ACM Press.
- [65] D. CHE, Y. SONG, and K. RASHEED, MDGA: motif discovery using a genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 447–452, Washington DC, USA, 2005, ACM Press.
- [66] T. K. PAUL and H. IBA, Extraction of informative genes from microarray data, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 453–460, Washington DC, USA, 2005, ACM Press.
- [67] H. FIRPI, E. GOODMAN, and J. ECHAUZ, Epileptic seizure detection by means of genetically programmed artificial features, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 461–466, Washington DC, USA, 2005, ACM Press.
- [68] C. SPIETH, F. STREICHERT, N. SPEER, and A. ZELL, Identifying valid solutions for the inference of regulatory networks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD,

- W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 469–470, Washington DC, USA, 2005, ACM Press.
- [69] D. E. CAIRNS, G. J. CAMERON, and T. J. WESS, Evolving an improved axial structure for fibrillar collagen, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 471–472, Washington DC, USA, 2005, ACM Press.
- [70] J. S. AGUILAR-RUIZ and F. DIVINA, GA-based approach to discover meaningful biclusters, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 473–474, Washington DC, USA, 2005, ACM Press.
- [71] F.-M. LIN, H.-D. HUANG, H.-Y. HUANG, and J.-T. HORNG, Primer design for multiplex PCR using a genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 475–476, Washington DC, USA, 2005, ACM Press.
- [72] P. SEELUANGSAWAT and P. CHONGSTITVATANA, A multiple objective evolutionary algorithm for multiple sequence alignment, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 477–478, Washington DC, USA, 2005, ACM Press.
- [73] K. C. WIESE, A. HENDRIKS, A. DESCHêNES, and B. B. YOUSSEF, The impact of pseudorandom number quality on P-RnaPredict, a parallel genetic algorithm for RNA secondary structure prediction, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 479–480, Washington DC, USA, 2005, ACM Press.
- [74] E. DE JONG, The MaxSolve algorithm for coevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 483–489, Washington DC, USA, 2005, ACM Press.
- [75] F. J. GOMEZ and J. SCHMIDHUBER, Co-evolving recurrent neurons learn deep memory POMDPs, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 491–498, Washington DC, USA, 2005, ACM Press.

- [76] S. G. FICICI, Monotonic solution concepts in coevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 499–506, Washington DC, USA, 2005, ACM Press.
- [77] E. POPOVICI and K. DE JONG, Understanding cooperative co-evolutionary dynamics via simple fitness landscapes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 507–514, Washington DC, USA, 2005, ACM Press.
- [78] P. FUNES and E. PUJALS, Intransitivity revisited coevolutionary dynamics of numbers games, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 515–521, Washington DC, USA, 2005, ACM Press.
- [79] N. WILLIAMS and M. MITCHELL, Investigating the success of spatial coevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 523–530, Washington DC, USA, 2005, ACM Press.
- [80] J. C. BONGARD and H. LIPSON, 'Managed challenge' alleviates disengagement in co-evolutionary system identification, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 531–538, Washington DC, USA, 2005, ACM Press.
- [81] A. BUCCI and J. B. POLLACK, On identifying global optima in cooperative coevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 539–544, Washington DC, USA, 2005, ACM Press.
- [82] C.-F. HUANG and L. M. ROCHA, Tracking extrema in dynamic environments using a coevolutionary agent-based model of genotype edition, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 545–552, Washington DC, USA, 2005, ACM Press.
- [83] D. V. DUONG and J. GREFENSTETTE, The emulation of social institutions as a method of coevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE,

- A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 555–556, Washington DC, USA, 2005, ACM Press.
- [84] J. HORN, Shape nesting by coevolving species, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 557–558, Washington DC, USA, 2005, ACM Press.
 - [85] C. PHILEMOTTE and H. BERSINI, Intrinsic emergence boosts adaptive capacity, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 559–560, Washington DC, USA, 2005, ACM Press.
 - [86] K. A. LEHMANN and M. KAUFMANN, Evolutionary algorithms for the self-organized evolution of networks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 563–570, Washington DC, USA, 2005, ACM Press.
 - [87] C. GUNIA, On the analysis of the approximation capability of simple evolutionary algorithms for scheduling problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 571–578, Washington DC, USA, 2005, ACM Press.
 - [88] B. SKELLETT, B. CAIRNS, N. GEARD, B. TONKES, and J. WILES, Maximally rugged NK landscapes contain the highest peaks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 579–584, Washington DC, USA, 2005, ACM Press.
 - [89] B. A. JULSTROM, The blob code is competitive with edge-sets in genetic algorithms for the minimum routing cost spanning tree problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 585–590, Washington DC, USA, 2005, ACM Press.
 - [90] K. TUMER and A. AGOGINO, Coordinating multi-rover systems: evaluation functions for dynamic and noisy environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 591–598, Washington DC, USA, 2005, ACM Press.
 - [91] A. DEFAWEUX, T. LENAERTS, J. VAN HEMERT, and J. PARENT, Transition models as an incremental approach for problem solving in evolutionary algorithms, in *GECCO 2005:*

Proceedings of the 2005 conference on Genetic and evolutionary computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 599–606, Washington DC, USA, 2005, ACM Press.

- [92] B. A. JULSTROM, Greedy, genetic, and greedy genetic algorithms for the quadratic knapsack problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 607–614, Washington DC, USA, 2005, ACM Press.
- [93] G. HERNANDEZ, K. WILDER, F. NINO, and J. GARCIA, Towards a self-stopping evolutionary algorithm using coupling from the past, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 615–620, Washington DC, USA, 2005, ACM Press.
- [94] J. TANG, M. H. LIM, Y. S. ONG, and M. J. ER, Solving large scale combinatorial optimization using PMA-SLS, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 621–628, Washington DC, USA, 2005, ACM Press.
- [95] Y. YOON, Y.-H. KIM, and B.-R. MOON, An evolutionary lagrangian method for the 0/1 multiple knapsack problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 629–635, Washington DC, USA, 2005, ACM Press.
- [96] H. TERASHIMA-MARíN, E. J. FLORES-ÁLVAREZ, and P. ROSS, Hyper-heuristics and classifier systems for solving 2D-regular cutting stock problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 637–643, Washington DC, USA, 2005, ACM Press.
- [97] L. PERELMAN and A. OSTFELD, Water distribution systems optimal design using cross entropy, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 647–648, Washington DC, USA, 2005, ACM Press.
- [98] I. BORGULYA, A hybrid evolutionary algorithm for the p-median problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 649–650, Washington DC, USA, 2005, ACM Press.

- [99] Z. W. GEEM, K. S. LEE, and C.-L. TSENG, Harmony search for structural design, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 651–652, Washington DC, USA, 2005, ACM Press.
- [100] M. V. BUTZ, M. PELIKAN, X. LLORA, and D. E. GOLDBERG, Extracted global structure makes local building block processing effective in XCS, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 655–662, Washington DC, USA, 2005, ACM Press.
- [101] M. PELIKAN, K. SASTRY, and D. E. GOLDBERG, Multiobjective hBOA, clustering, and scalability, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 663–670, Washington DC, USA, 2005, ACM Press.
- [102] K. SASTRY, H. A. ABBASS, D. E. GOLDBERG, and D. D. JOHNSON, Sub-structural niching in estimation of distribution algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 671–678, Washington DC, USA, 2005, ACM Press.
- [103] S. DROSTE, Not all linear functions are equally difficult for the compact genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 679–686, Washington DC, USA, 2005, ACM Press.
- [104] I. TANEV, Learned mutation strategies in genetic programming for evolution and adaptation of simulated snakebot, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 687–694, Washington DC, USA, 2005, ACM Press.
- [105] A. H. WRIGHT and S. PULAVARTY, On the convergence of an estimation of distribution algorithm based on linkage discovery and factorization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 695–702, Washington DC, USA, 2005, ACM Press.
- [106] J. SAKUMA and S. KOBAYASHI, Real-coded crossover as a role of kernel density estimation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG,

- H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 703–710, Washington DC, USA, 2005, ACM Press.
- [107] S. YANG, Population-based incremental learning with memory scheme for changing environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 711–718, Washington DC, USA, 2005, ACM Press.
- [108] B. YUAN and M. GALLAGHER, On the importance of diversity maintenance in estimation of distribution algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 719–726, Washington DC, USA, 2005, ACM Press.
- [109] S. SHAKYA, J. MCCALL, and D. BROWN, Using a Markov network model in a univariate EDA: an empirical cost-benefit analysis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 727–734, Washington DC, USA, 2005, ACM Press.
- [110] C. F. LIMA, K. SASTRY, D. E. GOLDBERG, and F. G. LOBO, Combining competent crossover and mutation operators: a probabilistic model building approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 735–742, Washington DC, USA, 2005, ACM Press.
- [111] Y. HONG, Q. REN, and J. ZENG, Genetic drift in univariate marginal distribution algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 745–746, Washington DC, USA, 2005, ACM Press.
- [112] M. LOOKS, B. GOERTZEL, and C. PENNACHIN, Learning computer programs with the bayesian optimization algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 747–748, Washington DC, USA, 2005, ACM Press.
- [113] S. I. V. PEñA, S. B. RIONDA, and A. H. AGUIRRE, Multiobjective shape optimization with constraints based on estimation distribution algorithms and correlated information, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 749–750, Washington DC, USA, 2005, ACM Press.

- [114] C.-F. HUANG, S. BIENIAWSKI, D. H. WOLPERT, and C. E. M. STRAUSS, A comparative study of probability collectives based multi-agent systems and genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 751–752, Washington DC, USA, 2005, ACM Press.
- [115] P. A. N. BOSMAN and E. D. DE JONG, Exploiting gradient information in numerical multi-objective evolutionary optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 755–762, Washington DC, USA, 2005, ACM Press.
- [116] F. NEUMANN and I. WEGENER, Minimum spanning trees made easier via multi-objective optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 763–769, Washington DC, USA, 2005, ACM Press.
- [117] M. LI, S. AZARM, and V. AUTE, A multi-objective genetic algorithm for robust design optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 771–778, Washington DC, USA, 2005, ACM Press.
- [118] L. T. BUI, H. A. ABBASS, and D. ESSAM, Fitness inheritance for noisy evolutionary multi-objective optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 779–785, Washington DC, USA, 2005, ACM Press.
- [119] H. ISHIBUCHI and K. NARUKAWA, Comparison of evolutionary multiobjective optimization with reference solution-based single-objective approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 787–794, Washington DC, USA, 2005, ACM Press.
- [120] Y. ZHANG and P. I. ROCKETT, Evolving optimal feature extraction using multi-objective genetic programming: a methodology and preliminary study on edge detection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 795–802, Washington DC, USA, 2005, ACM Press.
- [121] M. E. KURZ and S. CANTERBURY, Minimizing total flowtime and maximum earliness on a single machine using multiple measures of fitness, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V.

- ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 803–809, Washington DC, USA, 2005, ACM Press.
- [122] K. XU, S. J. LOUIS, and R. C. MANCINI, A scalable parallel genetic algorithm for x-ray spectroscopic analysis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 811–816, Washington DC, USA, 2005, ACM Press.
- [123] H. ISHIBUCHI, K. NARUKAWA, and Y. NOJIMA, An empirical study on the handling of overlapping solutions in evolutionary multiobjective optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 817–824, Washington DC, USA, 2005, ACM Press.
- [124] K. SCHMITT, J. MEHNEN, and T. MICHELITSCH, Using predators and preys in evolution strategies, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 827–828, Washington DC, USA, 2005, ACM Press.
- [125] S. WATANABE and K. SAKAKIBARA, The effectiveness of multiobjective optimizer in single-objective optimization environment, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 829–830, Washington DC, USA, 2005, ACM Press.
- [126] T. STORCH, On the impact of objective function transformations on evolutionary and black-box algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 833–840, Washington DC, USA, 2005, ACM Press.
- [127] T. JANSEN and U. SCHELLBACH, Theoretical analysis of a mutation-based evolutionary algorithm for a tracking problem in the lattice, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 841–848, Washington DC, USA, 2005, ACM Press.
- [128] J. JäGERSKüPPER and C. WITT, Rigorous runtime analysis of a (μ+1)ES for the sphere function, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 849–856, Washington DC, USA, 2005, ACM Press.

- [129] A. AUGER, M. SCHOENAUER, and O. TEYTAUD, Local and global order 3/2 convergence of a surrogate evolutionary algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 857–864, Washington DC, USA, 2005, ACM Press.
- [130] M. PREUSS, L. SCHNEEMANN, and M. EMMERICH, Counteracting genetic drift and disruptive recombination in (ϵ)-EA on multimodal fitness landscapes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 865–872, Washington DC, USA, 2005, ACM Press.
- [131] X. LI, Efficient differential evolution using speciation for multimodal function optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 873–880, Washington DC, USA, 2005, ACM Press.
- [132] J. LIU and J. LAMPINEN, A differential evolution based incremental training method for RBF networks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 881–888, Washington DC, USA, 2005, ACM Press.
- [133] P. Y. HO and K. SHIMIZU, Simple addition of ranking method for constrained optimization in evolutionary algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 889–896, Washington DC, USA, 2005, ACM Press.
- [134] M. NASHVILI, M. OLHOFFER, and B. SENDHOFF, Morphing methods in evolutionary design optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 897–904, Washington DC, USA, 2005, ACM Press.
- [135] T. PHIENTHRAKUL and B. KIJSIRIKUL, Evolutionary strategies for multi-scale radial basis function kernels in support vector machines, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 905–911, Washington DC, USA, 2005, ACM Press.
- [136] O. M. SHIR and T. BICK, Niching in evolution strategies, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ,

- D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 915–916, Washington DC, USA, 2005, ACM Press.
- [137] O. KRAMER, C.-K. TING, and H. K. BüNING, A mutation operator for evolution strategies to handle constrained problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 917–918, Washington DC, USA, 2005, ACM Press.
- [138] K. SCHMITT, Using gene deletion and gene duplication in evolution strategies, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 919–920, Washington DC, USA, 2005, ACM Press.
- [139] S. M. SAIT, S. SANAULLAH, A. M. ZAIDI, and M. I. ALI, Comparative evaluation of parallelization strategies for evolutionary and stochastic heuristics, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 921–922, Washington DC, USA, 2005, ACM Press.
- [140] L. SCHöNEMANN, Optimal number of evolution strategies mutation step sizes in dynamic environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 923–924, Washington DC, USA, 2005, ACM Press.
- [141] D. KEYMEULEN, W. FINK, M. I. FERGUSON, C. PEAY, B. OKS, R. TERRILE, and K. YEE, Evolutionary computation applied to the tuning of MEMS gyroscopes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 927–932, Washington DC, USA, 2005, ACM Press.
- [142] S. A. VIGRAHAM, J. C. GALLAGHER, and S. K. BODDHU, Evolving analog controllers for correcting thermoacoustic instability in real hardware, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 933–940, Washington DC, USA, 2005, ACM Press.
- [143] L. PRODAN, M. UDRESCU, and M. VLADUTIU, Multiple-level concatenated coding in embryonics: a dependability analysis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 941–948, Washington DC, USA, 2005, ACM Press.

- [144] M. K. PAKHIRA and R. K. DE, A hardware pipeline for function optimization using genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 949–956, Washington DC, USA, 2005, ACM Press.
- [145] R. HUNT, G. S. HORNBY, and J. D. LOHN, Toward evolved flight, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 957–964, Washington DC, USA, 2005, ACM Press.
- [146] N. NOMAN and H. IBA, Enhancing differential evolution performance with local search for high dimensional function optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 967–974, Washington DC, USA, 2005, ACM Press.
- [147] J. F. McLOUGHLIN, III and W. CEDEÑO, The enhanced evolutionary tabu search and its application to the quadratic assignment problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 975–982, Washington DC, USA, 2005, ACM Press.
- [148] D. QUINTANA, C. LUQUE, and P. ISASI, Evolutionary rule-based system for IPO underpricing prediction, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 983–989, Washington DC, USA, 2005, ACM Press.
- [149] S. DAS, A. KONAR, and U. K. CHAKRABORTY, Two improved differential evolution schemes for faster global search, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 991–998, Washington DC, USA, 2005, ACM Press.
- [150] A. DUARTE, S. NGELSON, F. FERNÁNDEZ, and R. CABIDO, A low-level hybridization between memetic algorithm and VNS for the max-cut problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 999–1006, Washington DC, USA, 2005, ACM Press.
- [151] S. F. ADRA, I. GRIFFIN, and P. J. FLEMING, Hybrid multiobjective genetic algorithm with a new adaptive local search process, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB,

- J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1009–1010, Washington DC, USA, 2005, ACM Press.
- [152] P. MCMINN and M. HOLCOMBE, Evolutionary testing of state-based programs, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1013–1020, Washington DC, USA, 2005, ACM Press.
 - [153] L. C. BRIAND, Y. LABICHE, and M. SHOUSHA, Stress testing real-time systems with genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1021–1028, Washington DC, USA, 2005, ACM Press.
 - [154] M. HARMAN, S. SWIFT, and K. MAHDAVI, An empirical study of the robustness of two module clustering fitness functions, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1029–1036, Washington DC, USA, 2005, ACM Press.
 - [155] C. D. GROSSO, G. ANTONIOL, M. D. PENTA, P. GALINIER, and E. MERLO, Improving network applications security: a new heuristic to generate stress testing data, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1037–1043, Washington DC, USA, 2005, ACM Press.
 - [156] O. SENG, M. BAUER, M. BIEHL, and G. PACHE, Search-based improvement of subsystem decompositions, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1045–1051, Washington DC, USA, 2005, ACM Press.
 - [157] S. WAPPLER and F. LAMMERMAN, Using evolutionary algorithms for the unit testing of object-oriented software, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1053–1060, Washington DC, USA, 2005, ACM Press.
 - [158] Y. ZHAN and J. A. CLARK, Search-based mutation testing for Simulink models, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1061–1068, Washington DC, USA, 2005, ACM Press.
 - [159] G. CANFORA, M. D. PENTA, R. ESPOSITO, and M. L. VILLANI, An approach for QoS-aware service composition based on genetic algorithms, in *GECCO 2005: Proceedings of the 2005*

- conference on Genetic and evolutionary computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1069–1075, Washington DC, USA, 2005, ACM Press.
- [160] A. SUTTON, H. KAGDI, J. I. MALETIC, and L. G. VOLKERT, Hybridizing evolutionary algorithms and clustering algorithms to find source-code clones, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1079–1080, Washington DC, USA, 2005, ACM Press.
 - [161] K. DERDERIAN, R. M. HIERONS, M. HARMAN, and Q. GUO, Generating feasible input sequences for extended finite state machines (EFSMs) using genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1081–1082, Washington DC, USA, 2005, ACM Press.
 - [162] F. LAMMERMAN and S. WAPPLER, Benefits of software measures for evolutionary white-box testing, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1083–1084, Washington DC, USA, 2005, ACM Press.
 - [163] J. HAAS, M. PEYSAKHOV, and S. MANCORIDIS, GA-based parameter tuning for multi-agent systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 1, pp. 1085–1086, Washington DC, USA, 2005, ACM Press.
 - [164] S. YANG, Memory-based immigrants for genetic algorithms in dynamic environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1115–1122, Washington DC, USA, 2005, ACM Press.
 - [165] E. ALBA, H. ALFONSO, and B. DORRONSORO, Advanced models of cellular genetic algorithms evaluated on SAT, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1123–1130, Washington DC, USA, 2005, ACM Press.
 - [166] A. SOKOLOV and D. WHITLEY, Unbiased tournament selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1131–1138, Washington DC, USA, 2005, ACM Press.

- [167] R. GIRáLDEZ and J. S. AGUILAR-RUIZ, Feature influence for evolutionary learning, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1139–1145, Washington DC, USA, 2005, ACM Press.
- [168] U. C. DE SILVA and J. SUZUKI, On the stationary distribution of GAs with fixed crossover probability, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1147–1151, Washington DC, USA, 2005, ACM Press.
- [169] N. F. MCPHEE and E. F. CRANE, A theoretical analysis of the HIFF problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1153–1160, Washington DC, USA, 2005, ACM Press.
- [170] D. SUDHOLT, Crossover is provably essential for the ising model on trees, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1161–1167, Washington DC, USA, 2005, ACM Press.
- [171] D.-I. SEO and B.-R. MOON, Computing the epistasis variance of large-scale traveling salesman problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1169–1176, Washington DC, USA, 2005, ACM Press.
- [172] I. GARIBAY, A. S. WU, and O. GARIBAY, On favoring positive correlations between form and quality of candidate solutions via the emergence of genomic self-similarity, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1177–1184, Washington DC, USA, 2005, ACM Press.
- [173] C. ZHANG and K. RASHEED, Improving GA search reliability using maximal hyper-rectangle analysis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1185–1192, Washington DC, USA, 2005, ACM Press.
- [174] H. J. BARBOSA and A. C. LEMONGE, A genetic algorithm encoding for a class of cardinality constraints, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE,

- A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1193–1200, Washington DC, USA, 2005, ACM Press.
- [175] E. D. DE JONG, R. A. WATSON, and D. THIERENS, On the complexity of hierarchical problem solving, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1201–1208, Washington DC, USA, 2005, ACM Press.
 - [176] M. LUNACEK, D. WHITLEY, and J. N. KNIGHT, Measuring mobility and the performance of global search algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1209–1216, Washington DC, USA, 2005, ACM Press.
 - [177] T.-L. YU, K. SASTRY, and D. E. GOLDBERG, Linkage learning, overlapping building blocks, and systematic strategy for scalable recombination, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1217–1224, Washington DC, USA, 2005, ACM Press.
 - [178] S. WHITESON, P. STONE, K. O. STANLEY, R. MIKKULAINEN, and N. KOHL, Automatic feature selection in neuroevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1225–1232, Washington DC, USA, 2005, ACM Press.
 - [179] J. N. RICHTER, J. PAXTON, and A. WRIGHT, EA models and population fixed-points versus mutation rates for functions of unitation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1233–1240, Washington DC, USA, 2005, ACM Press.
 - [180] S.-S. CHOI, K. JUNG, and J. H. KIM, Phase transition in a random NK landscape model, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1241–1248, Washington DC, USA, 2005, ACM Press.
 - [181] H. STRINGER and A. S. WU, Behavior of finite population variable length genetic algorithms under random selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1249–1255, Washington DC, USA, 2005, ACM Press.

- [182] S. UYAR and G. ERYIğIT, Improvements to penalty-based evolutionary algorithms for the multi-dimensional knapsack problem using a gene-based adaptive mutation approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1257–1264, Washington DC, USA, 2005, ACM Press.
- [183] L. GRAHAM, H. MASUM, and F. OPPACHER, Statistical analysis of heuristics for evolving sorting networks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1265–1270, Washington DC, USA, 2005, ACM Press.
- [184] S. LEGG and M. HUTTER, Fitness uniform deletion: a simple way to preserve diversity, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1271–1278, Washington DC, USA, 2005, ACM Press.
- [185] A. KONAK and A. E. SMITH, Designing resilient networks using a hybrid genetic algorithm approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1279–1285, Washington DC, USA, 2005, ACM Press.
- [186] B. YOSSEI and R. POLI, Information landscapes and the analysis of search algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1287–1294, Washington DC, USA, 2005, ACM Press.
- [187] Z. SKOLICKI and K. DE JONG, The influence of migration sizes and intervals on island models, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1295–1302, Washington DC, USA, 2005, ACM Press.
- [188] M. T. IGLESIAS, B. NAUDTS, A. VERSCHOREN, and C. VIDAL, Walsh transforms, balanced sum theorems and partition coefficients over multary alphabets, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1303–1308, Washington DC, USA, 2005, ACM Press.
- [189] A. AGOGINO, K. TUMER, and R. MIIKKULAINEN, Efficient credit assignment through evaluation function decomposition, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A.

- FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1309–1316, Washington DC, USA, 2005, ACM Press.
- [190] A. S. YILMAZ and A. S. WU, Preservation of genetic redundancy in the existence of developmental error and fitness assignment error, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1317–1324, Washington DC, USA, 2005, ACM Press.
- [191] K. W. TANG and R. A. JARVIS, From supervised ranking to evolving behaviours of a robotic team, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1325–1332, Washington DC, USA, 2005, ACM Press.
- [192] M. GIACOBINI, M. TOMASSINI, and A. TETTAMANZI, Takeover time curves in random and small-world structured populations, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1333–1340, Washington DC, USA, 2005, ACM Press.
- [193] S. KIMURA and K. MATSUMURA, Genetic algorithms using low-discrepancy sequences, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1341–1346, Washington DC, USA, 2005, ACM Press.
- [194] J. SAKUMA and S. KOBAYASHI, Latent variable crossover for k-tablet structures and its application to lens design problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1347–1354, Washington DC, USA, 2005, ACM Press.
- [195] A. V. SAMSONOVICH and K. A. DE JONG, Pricing the 'free lunch' of meta-evolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1355–1362, Washington DC, USA, 2005, ACM Press.
- [196] X. LLORA, K. SASTRY, D. E. GOLDBERG, A. GUPTA, and L. LAKSHMI, Combating user fatigue in iGAs: partial ordering, support vector machines, and synthetic fitness, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1363–1370, Washington DC, USA, 2005, ACM Press.

- [197] J. K. BASSETT, M. A. POTTER, and K. A. DE JONG, Applying price's equation to survival selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1371–1378, Washington DC, USA, 2005, ACM Press.
- [198] D. PARDOE, M. RYOO, and R. MIIKKULAINEN, Evolving neural network ensembles for control problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1379–1384, Washington DC, USA, 2005, ACM Press.
- [199] C. KAVKA, P. ROGGERO, and M. SCHOENAUER, Evolution of Voronoi based fuzzy recurrent controllers, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1385–1392, Washington DC, USA, 2005, ACM Press.
- [200] Y.-H. KIM and B.-R. MOON, New topologies for genetic search space, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1393–1399, Washington DC, USA, 2005, ACM Press.
- [201] W. A. GREENE, Schema disruption in tree-structured chromosomes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1401–1408, Washington DC, USA, 2005, ACM Press.
- [202] L. DING and J. YU, Some theoretical results about the computation time of evolutionary algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1409–1415, Washington DC, USA, 2005, ACM Press.
- [203] S. ANDO, J. SAKUMA, and S. KOBAYASHI, Adaptive isolation model using data clustering for multimodal function optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1417–1424, Washington DC, USA, 2005, ACM Press.
- [204] Y. BORENSTEIN and R. POLI, Information landscapes and problem hardness, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1425–1431, Washington DC, USA, 2005, ACM Press.

- [205] J. BRANKE, E. SALIHOLU, and IMA UYAR, Towards an analysis of dynamic environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1433–1440, Washington DC, USA, 2005, ACM Press.
- [206] N. GUOFANG, L. MINQIANG, and K. JISONG, Multi-level genetic algorithm (MLGA) for the construction of clock binary tree, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1441–1445, Washington DC, USA, 2005, ACM Press.
- [207] Y. GONG, M. NAKAMURA, and S. TAMAKI, Parallel genetic algorithms on line topology of heterogeneous computing resources, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1447–1454, Washington DC, USA, 2005, ACM Press.
- [208] J.-H. CHEN, S.-Y. HO, and D. E. GOLDBERG, Quality-time analysis of multi-objective evolutionary algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1455–1462, Washington DC, USA, 2005, ACM Press.
- [209] T. J. ONG, R. SAUNDERS, J. KEYSER, and J. J. LEGGETT, Terrain generation using genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1463–1470, Washington DC, USA, 2005, ACM Press.
- [210] C. HSIUNG CHAN, S.-A. LEE, C.-Y. KAO, and H.-K. TSAI, Improving EAX with restricted 2-opt, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1471–1476, Washington DC, USA, 2005, ACM Press.
- [211] S. YILMAZ, K. IVANOV, and S. LEVINE, Application of genetic algorithm to optimize burnable poison placement in pressurized water reactors, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1477–1483, Washington DC, USA, 2005, ACM Press.
- [212] N. MORI, M. TAKEDA, and K. MATSUMOTO, A comparison study between genetic algorithms and bayesian optimize algorithms by novel indices, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY,

- D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1485–1492, Washington DC, USA, 2005, ACM Press.
- [213] W. RAND and R. RIOLO, The problem with a self-adaptative mutation rate in some environments: a case study using the shaky ladder hyperplane-defined functions, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1493–1500, Washington DC, USA, 2005, ACM Press.
- [214] Z. HUA YANG, J. CHENG FANG, and Z. QIANG QI, Flight midcourse guidance control based on genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1501–1506, Washington DC, USA, 2005, ACM Press.
- [215] J. G. MARTIN, Subproblem optimization by gene correlation with singular value decomposition, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1507–1514, Washington DC, USA, 2005, ACM Press.
- [216] Y. BORENSTEIN and R. POLI, Information landscapes, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1515–1522, Washington DC, USA, 2005, ACM Press.
- [217] M. A. RUSSELL and G. B. LAMONT, A genetic algorithm for unmanned aerial vehicle routing, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1523–1530, Washington DC, USA, 2005, ACM Press.
- [218] H. B. AMOR and A. RETTINGER, Intelligent exploration for genetic algorithms: using self-organizing maps in evolutionary computation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1531–1538, Washington DC, USA, 2005, ACM Press.
- [219] D. THIERENS, An adaptive pursuit strategy for allocating operator probabilities, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1539–1546, Washington DC, USA, 2005, ACM Press.

- [220] M. R. PETERSON, T. E. DOOM, and M. L. RAYMER, GA-facilitated classifier optimization with varying similarity measures, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1549–1550, Washington DC, USA, 2005, ACM Press.
- [221] M. LYMAN and G. LEWANDOWSKI, Genetic programming for association rules on card sorting data, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1551–1552, Washington DC, USA, 2005, ACM Press.
- [222] A. PASZYNSKA, An extension of vose's markov chain model for genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1553–1554, Washington DC, USA, 2005, ACM Press.
- [223] Z.-G. WANG, M. RAHMAN, and Y.-S. WONG, Multi-niche crowding in the development of parallel genetic simulated annealing, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1555–1556, Washington DC, USA, 2005, ACM Press.
- [224] L. T. BUI, J. BRANKE, and H. A. ABBASS, Diversity as a selection pressure in dynamic environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1557–1558, Washington DC, USA, 2005, ACM Press.
- [225] J. A. M. H., Search space modulation in genetic algorithms: evolving the search space by sinusoidal transformations, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1559–1560, Washington DC, USA, 2005, ACM Press.
- [226] K. OHNISHI and K. YOSHIDA, Evolutionary change in developmental timing, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1561–1562, Washington DC, USA, 2005, ACM Press.
- [227] D. VRAJITORU and J. DEBONI, Hybrid real-coded mutation for genetic algorithms applied to graph layouts, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE,

- A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1563–1564, Washington DC, USA, 2005, ACM Press.
- [228] D. M. CHERBA, W. PUNCH, P. DUXBURY, S. BILLINGE, and P. JUHAS, Conformation of an ideal bucky ball molecule by genetic algorithm and geometric constraint from pair distance data: genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1565–1566, Washington DC, USA, 2005, ACM Press.
 - [229] S. AUWATANAMONGKOL, Inexact pattern matching using genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1567–1568, Washington DC, USA, 2005, ACM Press.
 - [230] L. CONG, Y. SHA, L. JIAO, and F. LIU, Directional self-learning of genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1569–1570, Washington DC, USA, 2005, ACM Press.
 - [231] C. REIS, J. A. T. MACHADO, and J. B. CUNHA, Fractional dynamic fitness functions for GA-based circuit design, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1571–1572, Washington DC, USA, 2005, ACM Press.
 - [232] S. ANDO and S. KOBAYASHI, Fitness-based neighbor selection for multimodal function optimization, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1573–1574, Washington DC, USA, 2005, ACM Press.
 - [233] J. BERNTSSON and M. TANG, Adaptive sizing of populations and number of islands in distributed genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1575–1576, Washington DC, USA, 2005, ACM Press.
 - [234] J. ZHANG, H. S. H. CHUNG, and J. ZHONG, Adaptive crossover and mutation in genetic algorithms based on clustering technique, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1577–1578, Washington DC, USA, 2005, ACM Press.
 - [235] J. BERNTSSON and M. TANG, Dynamic optimization of migration topology in internet-based distributed genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic*

- and evolutionary computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1579–1580, Washington DC, USA, 2005, ACM Press.
- [236] J.-H. KIM, S.-S. CHOI, and B.-R. MOON, Normalization for neural network in genetic search, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1581–1582, Washington DC, USA, 2005, ACM Press.
 - [237] C. W. AHN, S. OH, and R. S. RAMAKRISHNA, On the practical genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1583–1584, Washington DC, USA, 2005, ACM Press.
 - [238] S. M. SAIT, M. FAHEEMUDDIN, M. R. MINHAS, and S. SANAULLAH, Multiobjective VLSI cell placement using distributed genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1585–1586, Washington DC, USA, 2005, ACM Press.
 - [239] E. FERRETTI and S. ESQUIVEL, Knowledge insertion: an efficient approach to reduce effort in simple genetic algorithms for unrestricted parallel equal machines scheduling, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1587–1588, Washington DC, USA, 2005, ACM Press.
 - [240] A. SOKOLOV, D. WHITLEY, and M. LUNACEK, Alternative implementations of the Griewangk function, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1589–1590, Washington DC, USA, 2005, ACM Press.
 - [241] P. A. DIAZ-GOMEZ and D. F. HOUGEN, Analysis and mathematical justification of a fitness function used in an intrusion detection system, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1591–1592, Washington DC, USA, 2005, ACM Press.
 - [242] P. FENTON and P. WALSH, A comparison of messy GA and permutation based GA for job shop scheduling, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1593–1594, Washington DC, USA, 2005, ACM Press.

- [243] M. AFFENZELLER, S. WAGNER, and S. WINKLER, Goal-oriented preservation of essential genetic information by offspring selection, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1595–1596, Washington DC, USA, 2005, ACM Press.
- [244] A. LEÓN-BARRANCO, S. E. BARAJAS, and C. A. REYES, ARGEN + AREPO: mixing the artificial genetic engineering and artificial evolution of populations to improve the search process, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1597–1598, Washington DC, USA, 2005, ACM Press.
- [245] F. W. MOORE, A genetic algorithm for optimized reconstruction of quantized one-dimensional signals, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1599–1600, Washington DC, USA, 2005, ACM Press.
- [246] S. CHEN and G. PITT, Isolating the benefits of respect, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1601–1602, Washington DC, USA, 2005, ACM Press.
- [247] J. STEVENS, R. B. HECKENDORN, and T. SOULE, Exploiting disruption aversion to control code bloat, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1605–1612, Washington DC, USA, 2005, ACM Press.
- [248] M. COLLINS, Finding needles in haystacks is harder with neutrality, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1613–1618, Washington DC, USA, 2005, ACM Press.
- [249] J. HU, X. ZHONG, and E. D. GOODMAN, Open-ended robust design of analog filters using genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1619–1626, Washington DC, USA, 2005, ACM Press.
- [250] J. M. DAIDA, Towards identifying populations that increase the likelihood of success in genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D.

- DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1627–1634, Washington DC, USA, 2005, ACM Press.
- [251] C. W. G. LASARCZYK and W. BANZHAF, Total synthesis of algorithmic chemistries, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1635–1640, Washington DC, USA, 2005, ACM Press.
- [252] E. M. ZECHMAN and S. R. RANJITHAN, Multipopulation cooperative coevolutionary programming (MCCP) to enhance design innovation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1641–1648, Washington DC, USA, 2005, ACM Press.
- [253] J. A. WALKER and J. F. MILLER, Investigating the performance of module acquisition in cartesian genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1649–1656, Washington DC, USA, 2005, ACM Press.
- [254] P. MASSEY, J. A. CLARK, and S. STEPNEY, Evolution of a human-competitive quantum fourier transform algorithm using genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1657–1663, Washington DC, USA, 2005, ACM Press.
- [255] I. DEMPSEY, M. O'NEILL, and A. BRABAZON, Meta-grammar constant creation with grammatical evolution by grammatical evolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1665–1671, Washington DC, USA, 2005, ACM Press.
- [256] S. SILVA and E. COSTA, Resource-limited genetic programming: the dynamic approach, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1673–1680, Washington DC, USA, 2005, ACM Press.
- [257] D. JACKSON, Parsing and translation of expressions by genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1681–1688, Washington DC, USA, 2005, ACM Press.
- [258] L. SPECTOR, J. KLEIN, and M. KEIJZER, The Push3 execution stack and the evolution of control, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary*

- computation, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1689–1696, Washington DC, USA, 2005, ACM Press.
- [259] C. Z. JANIKOW and C. J. MANN, CGP visits the Santa Fe trail: effects of heuristics on GP, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1697–1704, Washington DC, USA, 2005, ACM Press.
- [260] T. MURATA and T. NAKAMURA, Genetic network programming with automatically defined groups for assigning proper roles to multiple agents, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1705–1712, Washington DC, USA, 2005, ACM Press.
- [261] J. M. DAIDA, M. E. SAMPLES, and M. J. BYOM, Probing for limits to building block mixing with a tunably-difficult problem for genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1713–1720, Washington DC, USA, 2005, ACM Press.
- [262] M. D. RICHARDS, D. WHITLEY, J. R. BEVERIDGE, T. MYTKOWICZ, D. NGUYEN, and D. ROME, Evolving cooperative strategies for UAV teams, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1721–1728, Washington DC, USA, 2005, ACM Press.
- [263] G. S. HORNBY, Measuring, enabling and comparing modularity, regularity and hierarchy in evolutionary design, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1729–1736, Washington DC, USA, 2005, ACM Press.
- [264] J. F. SMITH, III, Evolving fuzzy decision tree structure that adapts in real-time, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1737–1744, Washington DC, USA, 2005, ACM Press.
- [265] D. JACKSON, Dormant program nodes and the efficiency of genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1745–1751, Washington DC, USA, 2005, ACM Press.

- [266] R. CAVILL, S. SMITH, and A. TYRRELL, Multi-chromosomal genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1753–1759, Washington DC, USA, 2005, ACM Press.
- [267] B.-T. ZHANG and H.-Y. JANG, Molecular programming: evolving genetic programs in a test tube, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1761–1768, Washington DC, USA, 2005, ACM Press.
- [268] S. BESETTI and T. SOULE, Function choice, resiliency and growth in genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1771–1772, Washington DC, USA, 2005, ACM Press.
- [269] H. MAJEED, C. RYAN, and R. M. A. AZAD, Evaluating GP schema in context, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1773–1774, Washington DC, USA, 2005, ACM Press.
- [270] K. YANAI and H. IBA, Probabilistic distribution models for EDA-based GP, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1775–1776, Washington DC, USA, 2005, ACM Press.
- [271] R. POLI and W. B. LANGDON, Backward-chaining genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1777–1778, Washington DC, USA, 2005, ACM Press.
- [272] N. FOREMAN and M. EVETT, Preventing overfitting in GP with canary functions, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1779–1780, Washington DC, USA, 2005, ACM Press.
- [273] N. PILLAY, An investigation into using genetic programming as a means of inducing solutions to novice procedural programming problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1781–1782, Washington DC, USA, 2005, ACM Press.

- [274] S. GELLY, O. TEYTAUD, N. BREDECHE, and M. SCHOENAUER, A statistical learning theory approach of bloat, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1783–1784, Washington DC, USA, 2005, ACM Press.
- [275] R. ONDAS, M. PELIKAN, and K. SASTRY, Scalability of genetic programming and probabilistic incremental program evolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1785–1786, Washington DC, USA, 2005, ACM Press.
- [276] X. LUO, M. I. HEYWOOD, and A. N. ZINCIR-HEYWOOD, Evolving recurrent models using linear GP, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1787–1788, Washington DC, USA, 2005, ACM Press.
- [277] J. ANTOLík and W. H. HSU, Evolutionary tree genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1789–1790, Washington DC, USA, 2005, ACM Press.
- [278] M. E. SAMPLES, J. M. DAIDA, M. BYOM, and M. PIZZIMENTI, Parameter sweeps for exploring GP parameters, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1791–1792, Washington DC, USA, 2005, ACM Press.
- [279] D. WIERSTRA, F. J. GOMEZ, and J. SCHMIDHUBER, Modeling systems with internal state using evolino, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1795–1802, Washington DC, USA, 2005, ACM Press.
- [280] B. RAVICHANDRAN, A. GANDHE, and R. E. SMITH, XCS for robust automatic target recognition, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1803–1810, Washington DC, USA, 2005, ACM Press.
- [281] L. S. SHAFTI and E. P. Pérez, Constructive induction and genetic algorithms for learning concepts with complex interaction, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB,

- J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1811–1818, Washington DC, USA, 2005, ACM Press.
- [282] D. MELLOR, A first order logic classifier system, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1819–1826, Washington DC, USA, 2005, ACM Press.
- [283] P. L. LANZI, D. LOIACONO, S. W. WILSON, and D. E. GOLDBERG, Extending XCSF beyond linear approximation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1827–1834, Washington DC, USA, 2005, ACM Press.
- [284] M. V. BUTZ, Kernel-based, ellipsoidal conditions in the real-valued XCS classifier system, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1835–1842, Washington DC, USA, 2005, ACM Press.
- [285] J. BACARDIT, Analysis of the initialization stage of a Pittsburgh approach learning classifier system, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1843–1850, Washington DC, USA, 2005, ACM Press.
- [286] J. DRUGOWITSCH and A. M. BARRY, XCS with eligibility traces, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1851–1858, Washington DC, USA, 2005, ACM Press.
- [287] P. L. LANZI, D. LOIACONO, S. W. WILSON, and D. E. GOLDBERG, XCS with computed prediction in multistep environments, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1859–1866, Washington DC, USA, 2005, ACM Press.
- [288] S. LANDAU, O. SIGAUD, and M. SCHOENAUER, ATNoSFERES revisited, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1867–1874, Washington DC, USA, 2005, ACM Press.
- [289] W. BROWNE and D. SCOTT, An abstraction algorithm for genetics-based reinforcement learning, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*,

- edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1875–1882, Washington DC, USA, 2005, ACM Press.
- [290] H. H. DAM, H. A. ABBASS, and C. LOKAN, DXCS: an XCS system for distributed data mining, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1883–1890, Washington DC, USA, 2005, ACM Press.
- [291] X. LLORà, K. SASTRY, and D. E. GOLDBERG, The compact classifier system: motivation, analysis, and first results, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1993–1994, Washington DC, USA, 2005, ACM Press.
- [292] I. ECEMIS, E. BONABEAU, and T. ASHBURN, Interactive estimation of agent-based financial markets models: modularity and learning, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1897–1904, Washington DC, USA, 2005, ACM Press.
- [293] J. BUDYNEK, E. BONABEAU, and B. SHARGEL, Evolving computer intrusion scripts for vulnerability assessment and log analysis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1905–1912, Washington DC, USA, 2005, ACM Press.
- [294] Y. F. SIT and R. MIIKKULAINEN, Learning basic navigation for personal satellite assistant using neuroevolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1913–1920, Washington DC, USA, 2005, ACM Press.
- [295] D. GARRETT, J. VANNUCCI, R. SILVA, D. DASGUPTA, and J. SIMIEN, Genetic algorithms for the sailor assignment problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1921–1928, Washington DC, USA, 2005, ACM Press.
- [296] J. P. RIDDER and J. C. HANDUBER, Mission planning for joint suppression of enemy air defenses using a genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R.

- RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1929–1936, Washington DC, USA, 2005, ACM Press.
- [297] L. BRADSTREET, L. BARONE, and L. WHILE, Map-labelling with a multi-objective evolutionary algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1937–1944, Washington DC, USA, 2005, ACM Press.
- [298] T. SCHLICHTER, C. HAUBELT, and J. TEICH, Improving EA-based design space exploration by utilizing symbolic feasibility tests, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1945–1952, Washington DC, USA, 2005, ACM Press.
- [299] J. R. KOZA, S. H. AL-SAKRAN, and L. W. JONES, Automated re-invention of six patented optical lens systems using genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1953–1960, Washington DC, USA, 2005, ACM Press.
- [300] U. GRASEMANN and R. MIIKKULAINEN, Effective image compression using evolved wavelets, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1961–1968, Washington DC, USA, 2005, ACM Press.
- [301] E.-W. LAMEIJER, A. IJZERMAN, and J. KOK, The molecule evaluator: an interactive evolutionary algorithm for designing drug molecules, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1969–1976, Washington DC, USA, 2005, ACM Press.
- [302] K. STANLEY, N. KOHL, R. SHERONY, and R. MIIKKULAINEN, Neuroevolution of an automobile crash warning system, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1977–1984, Washington DC, USA, 2005, ACM Press.
- [303] I. MIERSWA, Incorporating fuzzy knowledge into fitness: multiobjective evolutionary 3D design of process plants, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1985–1992, Washington DC, USA, 2005, ACM Press.

- [304] D. MONTANA and J. REDI, Optimizing parameters of a mobile ad hoc network protocol with a genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1993–1998, Washington DC, USA, 2005, ACM Press.
- [305] M. KEIJZER, M. BAPTIST, V. BABOVIC, and J. R. UTHURBURU, Determining equations for vegetation induced resistance using genetic programming, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 1999–2006, Washington DC, USA, 2005, ACM Press.
- [306] R. KICINGER, T. ARCISZEWSKI, and K. DE JONG, Parameterized versus generative representations in structural design: an empirical comparison, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2007–2014, Washington DC, USA, 2005, ACM Press.
- [307] D. STEVENS, S. DAS, and B. NATARAJAN, A multi-objective algorithm for DS-CDMA code design based on the clonal selection principle, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2015–2020, Washington DC, USA, 2005, ACM Press.
- [308] F. ROTHLAUF, D. SCHUNK, and J. PFEIFFER, Classification of human decision behavior: finding modular decision rules with genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2021–2028, Washington DC, USA, 2005, ACM Press.
- [309] G. LEE and V. BULITKO, GAMM: genetic algorithms with meta-models for vision, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2029–2036, Washington DC, USA, 2005, ACM Press.
- [310] Y.-S. CHOI, B.-R. MOON, and S. Y. SEO, Genetic fuzzy discretization with adaptive intervals for classification problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2037–2043, Washington DC, USA, 2005, ACM Press.
- [311] J. HAN and B. BHANU, Hierarchical multi-sensor image registration using evolutionary computation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D.

- DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2045–2052, Washington DC, USA, 2005, ACM Press.
- [312] B. T. NASSU, E. P. DUARTE, JR., and A. T. R. POZO, A comparison of evolutionary algorithms for system-level diagnosis, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2053–2060, Washington DC, USA, 2005, ACM Press.
- [313] Y.-K. KWON, S.-S. CHOI, and B.-R. MOON, Stock prediction based on financial correlation, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2061–2066, Washington DC, USA, 2005, ACM Press.
- [314] G. WILSON and M. HEYWOOD, Use of a genetic algorithm in brill's transformation-based part-of-speech tagger, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2067–2073, Washington DC, USA, 2005, ACM Press.
- [315] J. WIGHT and Y. ZHANG, An "ageing" operator and its use in the highly constrained topological optimization of HVAC system design, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2075–2082, Washington DC, USA, 2005, ACM Press.
- [316] B. AHRENS, Genetic algorithm optimization of superresolution parameters, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2083–2088, Washington DC, USA, 2005, ACM Press.
- [317] Y.-K. KWON and B.-R. MOON, Nonlinear feature extraction using a neuro genetic hybrid, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2089–2096, Washington DC, USA, 2005, ACM Press.
- [318] A. SUREKA and P. R. WURMAN, Applying metaheuristic techniques to search the space of bidding strategies in combinatorial auctions, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2097–2103, Washington DC, USA, 2005, ACM Press.

- [319] M. GONG, L. WANG, L. JIAO, and H. DU, An artificial immune system algorithm for CDMA multiuser detection over multi-path channels, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2105–2111, Washington DC, USA, 2005, ACM Press.
- [320] E. CARTER, S. EBDON, and C. NEAL-STURGEES, Optimization of passenger car design for the mitigation of pedestrian head injury using a genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2113–2120, Washington DC, USA, 2005, ACM Press.
- [321] S. L. HIJAZI, B. NATARAJAN, and S. DAS, An ant colony algorithm for multi-user detection in wireless communication systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2121–2126, Washington DC, USA, 2005, ACM Press.
- [322] G. COCHENOUR, J. SIMON, S. DAS, A. PAHWA, and S. NAG, A pareto archive evolutionary strategy based radial basis function neural network training algorithm for failure rate prediction in overhead feeders, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2127–2132, Washington DC, USA, 2005, ACM Press.
- [323] J. NUMMELA and B. A. JULSTROM, Evolving petri nets to represent metabolic pathways, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2133–2139, Washington DC, USA, 2005, ACM Press.
- [324] B. YUAN, M. GALLAGHER, and S. CROZIER, MRI magnet design: search space analysis, EDAs and a real-world problem with significant dependencies, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2141–2148, Washington DC, USA, 2005, ACM Press.
- [325] S. TALAIE, R. LEIGH, S. J. LOUIS, and G. L. RAINES, Predicting mining activity with parallel genetic algorithms, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2149–2155, Washington DC, USA, 2005, ACM Press.
- [326] S. DAS, A. KONAR, and U. K. CHAKRABORTY, An efficient evolutionary algorithm applied to the design of two-dimensional IIR filters, in *GECCO 2005: Proceedings of the 2005 conference*

- on *Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2157–2163, Washington DC, USA, 2005, ACM Press.
- [327] A. SOLTOGGIO, An enhanced GA to improve the search process reliability in tuning of control systems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2165–2172, Washington DC, USA, 2005, ACM Press.
- [328] M. HASENJEGER, B. SENDHOFF, T. SONODA, and T. ARIMA, Three dimensional evolutionary aerodynamic design optimization with CMA-ES, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2173–2180, Washington DC, USA, 2005, ACM Press.
- [329] Q. T. PHAM, Evolutionary optimization of dynamic control problems accelerated by progressive step reduction, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2181–2187, Washington DC, USA, 2005, ACM Press.
- [330] F. ALIM and K. IVANOV, Heuristic rules embedded genetic algorithm to solve in-core fuel management optimization problem, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2191–2192, Washington DC, USA, 2005, ACM Press.
- [331] E. SANCHEZ, M. SCHILLACI, M. S. REORDA, G. SQUILLERO, L. STERPONE, and M. VIOLANTE, New evolutionary techniques for test-program generation for complex microprocessor cores, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2193–2194, Washington DC, USA, 2005, ACM Press.
- [332] T. HIROYASU, M. MIKI, S. NAKAYAMA, and Y. HANADA, Multi-objective optimization of diesel engine emissions and fuel economy using SPEA2+, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2195–2196, Washington DC, USA, 2005, ACM Press.
- [333] K. P. DAHAL, S. J. GALLOWAY, G. M. BURT, J. R. McDONALD, and I. HOPKINS, A case study of process facility optimization using discrete event simulation and genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU,

- E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2197–2198, Washington DC, USA, 2005, ACM Press.
- [334] S. R. SZUMLANSKI, A. S. WU, and C. E. HUGHES, Collaborative interactive evolution, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2199–2200, Washington DC, USA, 2005, ACM Press.
- [335] Y. SATO and R. KANNO, Event-driven learning classifier systems for online soccer games, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2201–2202, Washington DC, USA, 2005, ACM Press.
- [336] P. WHITING, P. W. POON, and J. N. CARTER, A genetic algorithm approach to the selection of near-optimal subsets from large sets, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2203–2204, Washington DC, USA, 2005, ACM Press.
- [337] M.-H. JIN, C.-Y. KAO, Y.-C. HUANG, D. F. HSU, R.-G. LEE, and C.-K. LEE, Compact genetic algorithm for active interval scheduling in hierarchical sensor networks, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2205–2206, Washington DC, USA, 2005, ACM Press.
- [338] F. A. CASTILLO and C. M. VILLA, Symbolic regression in multicollinearity problems, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2207–2208, Washington DC, USA, 2005, ACM Press.
- [339] M. DAOUD and N. KHARMA, GATS 1.0: a novel GA-based scheduling algorithm for task scheduling on heterogeneous processor nets, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2209–2210, Washington DC, USA, 2005, ACM Press.
- [340] T. MEEKHOF and R. B. HECKENDORN, Using evolutionary optimization to improve markov-based classification with limited training data, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2211–2212, Washington DC, USA, 2005, ACM Press.

- [341] R. O. DAY, A. S. NUNEZ, and G. B. LAMONT, MOEA design of robust digital symbol sets, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2213–2214, Washington DC, USA, 2005, ACM Press.
- [342] K. SEO, E. D. GOODMAN, and R. C. ROSENBERG, Design of air pump system using bond graph and genetic programming method, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2215–2216, Washington DC, USA, 2005, ACM Press.
- [343] C. LIM and E. SIM, Production planning in manufacturing/remanufacturing environment using genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2217–2218, Washington DC, USA, 2005, ACM Press.
- [344] D. S. DíAZ and M. G. ROMAY, Introducing a watermarking with a multi-objective genetic algorithm, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2219–2220, Washington DC, USA, 2005, ACM Press.
- [345] T. A. E. FERREIRA, G. C. VASCONCELOS, and P. J. L. ADEODATO, A new evolutionary method for time series forecasting, in *GECCO 2005: Proceedings of the 2005 conference on Genetic and evolutionary computation*, edited by H.-G. BEYER, U.-M. O'REILLY, D. V. ARNOLD, W. BANZHAF, C. BLUM, E. W. BONABEAU, E. CANTU-PAZ, D. DASGUPTA, K. DEB, J. A. FOSTER, E. D. DE JONG, H. LIPSON, X. LLORA, S. MANCORIDIS, M. PELIKAN, G. R. RAIDL, T. SOULE, A. M. TYRRELL, J.-P. WATSON, and E. ZITZLER, volume 2, pp. 2221–2222, Washington DC, USA, 2005, ACM Press.