

## **Journal Papers**

1. Naoki Mori, **Bob McKay**, Nguyen Xuan Hoai, Daryl Essam, Saori Takeuchi, "A New Method for Simplifying Algebraic Expressions in Genetic Programming Called Equivalent Decision Simplification", *Journal of Advanced Computational Intelligence and Intelligent Informatics* **13** (3) 2009, Pp. 237 - 244
2. Bo Liu, Juhui Pan, **R I (Bob) McKay**, "Entropy-Based Metrics in Swarm Clustering", *International Journal of Intelligent Systems* **24** (9) 2009, Pp. 989-1011
3. Byungho Min, Jinhyuck Kim, Chongyoun Choe, Hyeonsang Eom, **Bob McKay**, "A Compound Framework for Sports Results Prediction: A Football Case Study", *Knowledge Based Systems* **21** (7) 2008, Pp. 551-562
4. **Bob McKay**, Shu-Heng Chen, Xuan Hoai Nguyen, "Genetic Programming: An emerging engineering tool", *International Journal of Knowledge-Based and Intelligent Engineering Systems* **12** (1) 2008, Pp. 1-2
5. Tuan-Hao Hoang, Daryl Essam, **R I (Bob) McKay**, Nguyen Xuan Hoai, "Developmental evaluation in Genetic Programming: The TAG-based frame work", *International Journal of Knowledge-Based and Intelligent Engineering Systems* **12** (1) 2008, Pp. 69-82
6. Nguyen, M H, Abbass, H A, **McKay, R I (Bob)**, "Analysis of CCME: Coevolutionary Dynamics, Automatic Problem Decomposition and Regularization", *Systems, Man and Cybernetics C* **38** (1) 2008, Pp. 100-109
7. Nguyen, M H, Abbass, H A, **McKay, R I (Bob)**, "A Novel Mixture of Experts Model Based on Cooperative Coevolution", *Neurocomputing* **70** (1-3) 2006, Pp. 155-163
8. **McKay, R I (Bob)**, Hoang, T H, Mori, N, Nguyen, X H, Essam, D L, "Model-Building with Interpolated Temporal Data", *Ecological Informatics* **1** (3) 2006, Pp. 259-268
9. Shan, Y, Paull, D, **McKay, R I (Bob)**, "Machine Learning of Poorly Predictable Ecological Data", *Ecological Modelling* **195** (1-2) 2006, Pp. 129-138
10. Nguyen, X H, **McKay, R I (Bob)**, Essam, D L, "Representation and Structural Difficulty in Genetic Programming", *IEEE Transactions on Evolutionary Computation* **10** (2) 2006, Pp. 157-166
11. Nguyen, M H, Abbass, H A, **McKay, R I (Bob)**, "Stopping Criteria for Ensembles of Artificial Neural Networks", *Applied Soft Computing* **6** (1) 2005, Pp. 100-107
12. Liu, B, Abbass, H, **McKay, R I (Bob)**, "Classification Rule Discovery with Ant Colony Optimisation", *IEEE Computational Intelligence Bulletin* **3** (1) 2004, Pp. 31-35
13. Cao, H Q, Yu, J, Kang, L S, **McKay, R I (Bob)**, "An Experimental Study of Some Control Parameters in Parallel Genetic Programming", *Neural, Parallel and Scientific Computations* **11** (4) 2003, Pp. 377-393
14. **McKay, R I (Bob)**, Abbass, H A, "Artificial Life: An Introduction", *International Journal of Computational Intelligence and Applications* **3** (2) 2003, Pp. 143-144
15. **McKay, R I (Bob)**, "An Investigation of Fitness Sharing in Genetic Programming", *The Australian Journal of Intelligent Information Processing Systems* **7** (1/2) 2001, Pp. 43-51
16. **McKay, R I (Bob)**, Abbass, H.A, "Anti-correlation: A Diversity Promoting Mechanism in Ensemble Learning", *The Australian Journal of Intelligent Information Processing Systems* **7** (3/4) 2001, Pp. 139-149

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17. Nguyen, X H, **McKay, R I (Bob)**, Essam, D L, "Solving the Symbolic Regression Problem with Tree-Adjunct Grammar Guided Genetic Programming: The Comparative Results", *The Australian Journal of Intelligent Information Processing Systems* **7** (3/4) 2001, Pp. 114-121
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19. **McKay, R I (Bob)**, "Variants of Genetic Programming for Species Distribution Modelling - Fitness Sharing, Partial Functions, Population Evaluation", *Ecological Modelling* **146** (1-3) 2001, Pp. 231-241
20. Yao, X, **McKay, R I (Bob)**, "Simulated Evolution and Learning: An Introduction", *Applied Intelligence* **15** (3) 2001, Pp. 151-152
21. **McKay, R I (Bob)**, Sarker, R, Yao, X, "Intelligent and Evolutionary Systems: An Introduction", *KES Journal* **4** 2000, Pp. 1-2
22. **McKay, R I (Bob)**, Davis, J R, "Artificial Intelligence in the Natural World", *AI Applications* **8** (3) 1994, Pp. 1-2
23. **R.I. (Bob) McKay**, N.X. Hoai, P.A. Whigham, Y. Shan, M. O'Neill, "Grammar-based Genetic Programming: A Survey", *Genetic Programming and Evolvable Machines* (10th Anniversary Special Issue)

### **Keynote Addresses**

1. **R I (Bob) McKay**, "Evolution, Development and Fitness in Genetic Programming", Eleventh Asia-Pacific Symposium on Intelligent and Evolutionary Systems November 2007, Yokosuka, Japan, Keynote Address
2. **McKay, R I (Bob)**, "Complexity in Genetic Programming: Using Entropy and Compression Metrics to Understand GP Behaviour", International Symposium on Intelligence, Computation and Applications September 2007, Wuhan, China, Keynote Address
3. **McKay, R I (Bob)**, "A Research Introduction to Genetic Programming", Third Asia-Pacific Workshop on Genetic Programming October 2006, Hanoi, VietNam, Keynote Address
4. **McKay, R I (Bob)**, "Using Human Speech Structures to Model Reality: Grammars in Genetic Programming", International Symposium on Intelligence, Computation and Applications April 2005, Wuhan, China, Keynote Address
5. **McKay, R I (Bob)**, "Machine Learning with Genetic Programming: Some Challenges", Asia-Pacific Symposium on Intelligent and Evolutionary Systems November 2003, Kitakyushu, Japan, Keynote Address
6. **McKay, R I (Bob)**, "Inspirations from Nature: Evolution and Complexity", International Conference on Communications, Circuits and Systems July 2002, Chengdu, China, Keynote Address
7. **McKay, R I (Bob)**, "Complexity and Hierarchy in Natural and Artificial Systems", Australian Workshop on Artificial Life November 2001, Adelaide, Australia, Keynote Address
8. Newton, C S, **McKay, R I (Bob)**, "Evolutionary Computation in Defence", Japan-Australia Workshop on Intelligent and Evolutionary Systems November 2000, Yokosuka, Japan, Keynote Address

## **Refereed Book Chapters**

1. W B Langdon, **R I McKay**, L Spector, "Genetic Programming", in Handbook of Metaheuristics, Springer Verlag To Appear 2010
2. Raymond Chiong, Ferrante Neri, **RI (Bob) McKay**, "Nature that Breeds Selection", in R Chiong (eds), Nature-Inspired Informatics for Intelligent Applications and Knowledge Discovery: Implications in Business, Science and Engineering, IGI Global July 2009
3. **McKay, R I (Bob)**, "Evolutionary Algorithms", in The Encyclopaedia of Ecology, Elsevier July 2008, Pp. 1464-1472
4. Shin, J, Kang, M, **McKay, R I (Bob)**, Nguyen, X, Hoang, T H, Mori, N, Essam, D, "Analysing the Regularity of Genomes using Compression and Expression Simplification", in Ebner, M and O'Neill, M and Ekart, A and Vanneschi, L and Esparcia-Alcazar, A I (eds), Proceedings of the 10th European Conference on Genetic Programming (EuroGP2007), Springer Lecture Note in Computer Science **4445** Springer-Verlag April 11-13 2007, Pp. 251-260
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8. **McKay, R I (Bob)**, Hoang, T H, Essam, D L, Nguyen, X H, "Developmental Evaluation in Genetic Programming: the Preliminary Results", in Collet, P and Tomassini, M and Ebner, M and Gustafson, S and Ekart, A (eds), Proceedings of the 9th European Conference on Genetic Programming (EuroGP 2006), Springer Lecture Note in Computer Science **3905** Springer-Verlag April 10-12 2006, Pp. 280-289
9. Hoang, T H, Nguyen, X H, **McKay, R I (Bob)**, Essam, D L, "The Importance of Local Search: A Grammar Based Approach to Environmental Time Series Modelling", in Yu, T and Riolo, R and Worzel, B (eds), Genetic Programming Theory and Practice III, Springer series on Genetic Programming **9** Springer US June 18 2006, Pp. 159-175
10. Kirley, M, Abbass, H A, **McKay, R I (Bob)**, "Diversity Mechanisms in Pitt-Style Evolutionary Classifier Systems", in Triantaphyllou, E and Felici, G (eds), Data Mining and Knowledge Discovery Approaches Based on Rule Induction

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  13. Nguyen, X H, **McKay, R I (Bob)**, Essam, D L, Abbass, H A, “Toward an Alternative Comparison Between Genetic Programming Systems”, in Keijzer, M and O'Reilly, UM and Lucas, S M and Costa, E and Soule, T (eds), Proceedings of The 7th European Conference on Genetic Programming (EuroGP 2004), Springer Lecture Note in Computer Science **3003** Springer-Verlag April 5-7 2004, Pp. 67-77
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1. Keehyung Kim, Hyukgeun Choi, **R.I. Bob McKay**, "Hybrid Integration of Reasoning Techniques in Suspect Investigation", in Proceedings, International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE 2010), Lecture Note in Computer Science Springer 2010, Pp. To appear
2. Quang Uy Nguyen, Xuan Hoai Nguyen, Michael O'Neill, **Bob McKay**, Edgar Galvan Lopez, "An Analysis of Semantic Aware Crossover", in Zhihua Cai and Zhenhua Li and Zhuo Kang and Yong Liu (eds), Proceedings of the International Symposium on Intelligent Computation and Applications, Communications in Computer and Information Science **51** Springer October 2009, Pp. 56-65
3. Quang Uy Nguyen, Michael O'Neill, Xuan Hoai Nguyen, **Bob McKay**, Edgar Galvan Lopez, "Semantic Similarity based Crossover in GP: The Case for Real-valued Function Regression", in Pierre Collet (eds), Evolution Artificielle, 9th International Conference, Lecture Notes in Computer Science Springer 26-28 October 2009, Pp. 13-24
4. Huynh Thi Thanh Binh, Nguyen Xuan Hoai, **R.I. Bob McKay**, Nguyen Duc Nghia, "New Heuristic and Hybrid Genetic Algorithm for Solving the Bounded Diameter Minimum Spanning Tree Problem", in Genetic and Evolutionary Computation Conference (GECCO), Proceedings, July 8-12 2009, Pp. 373-380
5. Yun-Geun Lee, **Robert Ian McKay**, Nguyen Xuan Hoai, Dong-Kyun Kim, "The Effect of Vesicular Selection in Dynamic Environments", in Genetic and Evolutionary Computation Conference (GECCO), Proceedings, July 8-12 2009, Pp. 1867-1868
6. **Robert I. McKay**, Nguyen Xuan Hoai, James R. Cheney, MinHyeok Kim, Naoki Mori, Tuan Hao Hoang, "Estimating the Distribution and Propagation of Genetic Programming Building Blocks through Tree Compression", in Genetic and Evolutionary Computation Conference (GECCO), Proceedings, July 8-12 2009, Pp. 1011-1018
7. Haisoo Shin, Yun-Geun Lee, **Bob McKay**, Nguyen Xuan Hoai, "Evolutionary Algorithms in Unreliable Memory", in Martin Suess and Tughrul Arslan and Didier Keymuellen and Adrian Stoica and Ahmet T. Erdogan and David Merodio (eds), Adaptive Hardware and Systems, Proceedings, NASA/ESA Conference on, Jul 29 - Aug 1 2009, Pp. 236-243

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8. Juho Kim, Won-Wook Hong, **Robert Ian McKay**, "Evolutionary Topic Maps", in Korean Human-Computer Interface Conference, Feb 9-11 2009
9. Tuan Pham, Kangil Kim, **Bob McKay**, Xuan Hoai Nguyen, "An Adaptive, Personalised Chording Keyboard", in Korean Human-Computer Interface Conference, Feb 9-11 2009
10. Dharani Punithan, **Bob McKay**, "Cognitive Based Context Aware Reference History Management", in Korean Human-Computer Interface Conference, Feb 9-11 2009
11. MinHyeok Kim, **R I (Bob) McKay**, "Simple Music Analysis using Plain Genetic Programming", in Proceedings of the KIISE Symposium on Ubiquitous Computing and Web Information Technology, 2 Korean Institute of Information Scientists and Engineers November 2008, Pp. 195-199
12. Tuan-Hao Hoang, **R I (Bob) McKay**, Daryl Essam, Xuan Hoai Nguyen, "Learning General Solutions through Multiple Evaluations during Development", in Lukas Sekanina and Pauline Haddow (eds), Proceedings of the Eighth International Conference on Evolvable Systems, Springer Lecture Notes in Computer Science Springer September 21 - 24 2008, Pp. 201-212
13. H T H Binh, X H Nguyen, **R I (Bob) McKay**, "A New Hybrid Genetic Algorithm for Solving the Bounded Diameter Minimum Spanning Tree Problem", in Proceedings of the IEEE Congress on Evolutionary Computation, IEEE Press June 2008
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