

**The 2003 Congress on
Evolutionary Computation
CEC 2003**

Canberra, Australia
9-12 December,
2003

IEEE Catalogue Number **03TH8674C**

ISBN 0-7803-7804-0

Library of Congress: 2003100788

Copyright ©2003 IEEE-Press

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. Copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Dr., Danvers, MA 01923. For other copying, reprint, or republication permission, write to IEEE Copyright Manager, IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. All rights reserved. © 2003 IEEE.

PREFACE

The 2003 Congress on Evolutionary Computation brings together researchers in Evolutionary Computation from all over the world, in Canberra, Australia. It was initiated by a small group within the School of IT&EE, UNSW@ADFA in Canberra, and given enthusiastic support by the heads of school and rector of UNSW@ADFA. Support from the Australian EC community and the ACT and Australian Governments, especially the Canberra Convention Bureau, facilitated the development of a persuasive portfolio which led IEEE Neural Networks Society, the Evolutionary Programming Society, and Engineers Australia to approve holding the Congress in Canberra. We thank all involved in this process for their ready support.

Overall 545 papers were submitted to the conference by researchers, practitioners, and students from around the world. This included 351 regular session papers and 194 special session papers. From this a total of 383 were selected for publication in the proceedings. The review process employed 164 reviewers for the regular session papers. Final publication decisions were made by the technical co-chairs, in consultation with the general chair. As a result, the conference has emerged through the hard work of many individuals scattered throughout the world. Special thanks go to the Program Committee, as well as those on the numerous other committees, all of which needed to work in synchrony to achieve our goals.

Along with the regular session papers, the special sessions chairs successfully attracted 18 special sessions, contributing enormously to the success of the Congress.

Our thanks go to all the individuals and groups who have helped to make the Congress a success, and especially to Canberra Convention Bureau for their enthusiastic support of the initial proposal, to Conference Logistics for their efficient administration of the conference processes, to Rydges' Lakeside Hotel for their effective venue support, and to staff of the Australian Academy of Science for their helpful assistance with the conference's venue and communications needs. We wish to thank the following for their contribution to the success of this conference: Air Force Office of Scientific Research, Asian Office of Aerospace Research and Development, Army Research Office - Far East. We also wish to thank the invited speakers, IEEE Neural Networks Society, the Evolutionary Programming Society, and Engineers Australia.

Ruhul Sarker, Robert Reynolds, Hussein Abbass, Kay Chen Tan, Bob McKay, Daryl Essam, Tom Gedeon

Sponsors

Air Force Office of Scientific Research

Asian Office of Aerospace Research and Development

Army Research Office - Far East

CISCO

Evolutionary Programming Society

Institution of Electrical Engineers

Institution of Engineers, Australia

Institute of Electrical and Electronics Engineers

Neural Networks Society

University of New South Wales

Program Review Committee

Abbass, Hussein	Abraham, Ajith	Aickelin, Uwe	Aktan, Burcin
Alba, Enrique	Arnold, Dirk	Aswathanarayanan, Srinivas	Bean, James
Beielstein, Thomas	Bentley, Peter	Beyer, Hans-Georg	Blair, Alan
Bonarini, Andrea	Bull, Larry	Bullinaria, John	Cantu-Paz, Erick
Cau, Doan Hoang	Chen, Tan Kay	Cho, Sung-Bae	Ciesielski, Vic
Coello Coello, Carlos	Collet, Pierre	Corne, David	Cornforth, David
Cotta, Carlos	Dahal, Keshav P	Darwen, Paul	De Causmaecker, Patrick
De Falco, Ivanoe	Deb, Kalyanmoy	Della Cioppa, Antonio	Di Marzo S., Giovanna
Dorigo, Marco	Droste, Stefan	Engelbrecht, Andries	English, Thomas
Ernandez, German	Essam, Daryl	Fernández, Jose Luis	Fischer, Manfred
Flockton, Stuart	Fogel, David	Fogel, Gary	Foley, Christopher
Fukunaga, Alex	Fun, Khor Eik	Garibaldi, Jon	Garzon, Max H.
Gedeon, Tom	Ghosh, Ashish	Gosling, Tim	Gottlieb, Jens
Greenwood, Garrison	Guan Sheng-Uei, Steven	Hansen, Nikolaus	Hao, Jin-Kao
Hart, William	He, Jun	Herrmann, Jeffrey W.	Hernandez-Aguirre, Arturo
Hiot, Lim Meng	Hughes, Evan	Iba, Hitoshi	Igel, Christian
Julstrom, Bryant	Kacem, Imed	Kamruzzaman, Joarder	Keane, Andy
Kendall, Graham	Kennedy, Jim	Keong, Chan Chee	keymeulen, Didier
Kim, Jungwon	Kirley, Michael	Korczak, Jerzy	Kouadri, Soraya
Krohling, Renato	Kushchu, Ibrahim	Kwan, Raymond S K	Leung, KS
Li, Jin	Li, Wei	Li, Xiaodong	Liang, Ko-Hsin
Louis, Sushil	Lozano Alonso, Jose Antonio	Lucas, Simon	Luchian, Henri
Lutton, E	Masao, K	Mattfeld, Dirk Christian	McCollum, Barry
McKay, Bob	Mckinlay, Steve	Merelo, JJ	Middendorf, Martin
Mohan, Chilukuri	Montana, David	Mori, Naoki	Mueller, Sibylle

Nath, Baikunth	Negoita, Mircea	Neri, Filippo	Nguyen Xuan, Hoai
Nino, Fernando	Norman, Bryan	Ochoa, Alberto	Odetayo, Michael
Ombuki, Beatrice	Ozcan, Ender	Papadimitriou, Georgios	Parker, Gary
Percus, Allon	Petrovic, Sanja	Poladian, Leon	Raidl, Günther
Rajgopal, Jayant	Ranjithan, Ranji	Reynolds, Robert	Rizki, Matt
Rocha, Luis	Rosenman, Mike	Ross, Brian	Rudolph, Guenter
Runarsson, Thomas	Rychtycky, Nestor	Sanderson, Arthur	Sarker, Ruhul
Sato, Hiroshi	Sawai, Hidefumi	Schnier, Thorsten	Schoenemann, Lutz
Sendhoff, Bernhard	Seredynski, Franciszek	Shan, Yin	Shapiro, Jonathan
Sharma, Dharmendra	Shi, Yuhui	Sipper, Moshe	Smith, Jim
Stewart, Paul	Stoica, Adrian	Stroud, Phil	Su, Yan
Tamaki, Hisashi	Tarantino, Ernesto	Tay, Arthur	Thierens, Dirk
Thomsen, Rene	Tsang, Edward	Tsutsui, Shigeyoshi	Tyrrell, Andy
Ursem, Rasmus K.	Venturini, Gilles	Verma, Brijesh	Voigt, Hans-Michael
Von Zuben, Fernando J.	Vose, Michael	Wang, Lingfeng	Watson, Jean-Paul
Wegener, Ingo	Weicker, Karsten	Whigham, Peter	Wiles, Janet
Wineberg, Mark	Wu, Baolin	Yu, Xinghuo	Zalzala, Ali
Zambonelli, Franco	Zebulum, Ricardo	Zell, Andreas	Zhang, Qingfu

Table of Contents

Volume 1

Preface	i
Sponsors	iii
Program Review Committee	v
Table of Contents	vii
Multi-objective and MGG evolutionary algorithm for constrained optimization	1-5
Yuren Zhou	
Adding a diversity mechanism to a simple evolution strategy to solve constrained optimization problems	6-13
Efren Mezura-Montes and Carlos A. Coello Coello	
A self-adaptive neighborhood-based multi-parent crossover operator for real-coded genetic algorithms	14-21
Jingzhi Li, Lishan Kang and Zhijian Wu	
The effect of introducing a tag node in solving scheduling problems using edge histogram based sampling algorithms	22-29
Shigeyoshi Tsutsui, Tomoyuki Hiroyasu and Mitsunori Miki	
Sequential versus parallel cooperative coevolutionary (1+1) EAs	30-37
Thomas Jansen and R. Paul Wiegand	
A coevolutionary approach for optimization of image enhancement filters	38-45
M. Mohideen Anver and Russel J. Stonier	
A note on general adaptation in populations of painting robots	46-53
Dan Ashlock, Elizabeth Blankenship and Jonathan D. Gandrud	
Transcription and evolution of a virtual bacteria culture	54-61
Ricardo Hoar, Joanne Penner and Christian Jacob	
Developmental mappings and phenotypic complexity	62-68
Per Kristian Lehre and Pauline C. Haddow	
Genetic network programming with learning and evolution for adapting to dynamical environments	69-76
Shingo Mabu, Kotaro Hirasawa and Jinglu Hu	
Design and implementation of a distributed evolutionary computing package	77-84
K. C. Tan, W. Peng, T. H. Lee and J. Cai	
Genetic algorithm based test data generator	85-91
Irman Hermadi and Moataz Ahmed	
MEH: Modular evolvable hardware for designing complex circuits	92-99
Jin-Hyuk Hong and Sung-Bae Cho	
Tuning a neuro-fuzzy controller by an immune-based algorithm	100-106
Xingquan Zuo	

An evolutionary approach for reducing the switching activity in address buses Giuseppe Ascia, Vincenzo Catania, Maurizio Palesi and Antonio Parlato	107-114
VLSI circuit design using an object-oriented framework of evolutionary graph generation system Naofumi Homma, Masanori Natsui, Takafumi Aoki and Tatsuo Higuchi	115-122
Artificial immune system (AIS) research in the last five years Dipankar Dasgupta, Zhou Ji and F. Gonzalez	123-130
AISEC: An artificial immune system for e-mail classification Andrew Secker, Alex A. Freitas and Jon Timmis	131-138
Novel steganography detection using an artificial immune system approach Jacob T. Jackson, Gregg H. Gunsch, Roger L. Claypoole, Jr. and Gary B. Lamont	139-145
The immune response of an artificial immune network (AINet) Leandro Nunes de Castro	146-153
On the computational power of constant-depth quantum circuits with gates for addition Yasuhiro Takahashi, Yasuhito Kawano and Masahiro Kitagawa	154-161
Stochastic neural network models for gene regulatory networks Tianhai Tian and Kevin Burrage	162-169
Exploring the search space of quantum programs Andre Leier and Wolfgang Banzhaf	170-177
On setting the parameters of quantum-inspired evolutionary algorithm for practical applications Kuk-Hyun Han and Jong-Hwan Kim	178-184
Dynamic of gene regulatory networks from structure in an artificial genome Kai Willadsen and Janet Wiles	185-190
Genome-physics interaction as a new concept to reduce the number of genetic parameters in artificial evolution Peter Eggenberger Hotz	191-198
Structure and dynamics of a gene network model Nicholas Geard and Janet Wiles	199-206
Estimation of gene regulatory network by genetic algorithm and pairwise correlation analysis Shin Ando, Hitoshi Iba	207-214
Data clustering using particle swarm optimization D. W. Van der Merwe and A. P. Engelbrecht	215-220
Empirical study of particle swarm optimizer with an increasing inertia weight Yong-ling Zheng, Long-hua Ma, Li-yan Zhang and Ji-xin Qian	221-226
A new particle swarm optimiser for linearly constrained optimisation U. Paquet and Ap Engelbrecht	227-233
Comparing PSO structures to learn the game of checkers from zero knowledge N. Franken and Ap Engelbrecht	234-241
A genetic algorithm for energy efficient device scheduling in real-time systems Lirong Tian and Tughrul Arslan	242-247
Evolving data classification programs using genetic parallel programming Sin Man Cheang, Kin Hong Lee and Kwong Sak Leung	248-255

A genetic algorithm with multiple crossover operators for optimal frequency assignment problem Adnan Acan, Hakan Altincay, Yuce Tekol and Ahmet Unveren	256-263
An evolutionary approach to behavioral-level synthesis G. Grewal, M. O.'Cleirigh and M. Wineberg	264-272
Where are bottleneck in NK fitness landscapes? Sebastien Verel, Philippe Collard and Manuel Clergue	273-280
Homology gives size control in genetic programming Michael Defoin Platel, Manuel Clergue and Philippe Collard	281-288
Fitness distance correlation in genetic programming: A constructive counterexample L. Vanneschi, M. Tomassini, P. Collard and M. Clergue	289-296
An epistasis measure based on the analysis of variance for the real-coded representation in genetic algorithms K. Y. Chan, M. E. Aydin and T. C. Fogarty	297-304
Diversity analysis in cellular and multipopulation genetic programming G. Folino, C. Pizzuti, G. Spezzano, L. Vanneschi and M. Tomassini	305-311
Improvement of clustal-derived sequence alignments with evolutionary algorithms René Thomsen, Gary B. Fogel and Thiemo Krink	312-319
Phylogenetic trees using evolutionary search: Initial progress in extending gaphyl to work with genetic data Congdon and Septor	320-326
Physical mapping using simulated annealing and evolutionary algorithms Jakob Vesterstrøm	327-334
Permutation based RNA secondary structure prediction via a genetic algorithm - new results Kay C. Wiese, Alain Deschenes and Edward Glen	335-342
A distributed genetic algorithm for RNA secondary structure prediction Andrew Hendriks, Kay C. Wiese, Edward Glen and Alain Deschenes	343-350
Learning DFA: Evolution versus evidence driven state merging Simon M. Lucas and T. Jeff Reynolds	351-358
Anytime coevolution of form and function Magdalena D. Bugajska and Alan C. Schultz	359-366
Evolutionary exploration of dynamic swarm behaviour Henry Kwong and Christian Jacob	367-374
Digital circuit design through simulated evolution (SimE) Sadiq M. Sait, Mostafa Abd-El-Barr, Uthman Al-Saiari and Bambang A. B. Sarif	375-381
On the impact of modelling, robustness, and diversity to the performance of a multi-objective evolutionary algorithm for digital VLSI system design Robert Thomson and Tughrul Arslan	382-389
Detecting spam using an artificial immune system Terri Oda and Tony White	390-396
An evolutionary algorithm with population immunity and its application on autonomous robot control Lei Wang and Beat Hirsbrunner	397-404
Design of an artificial immune system as a novel anomaly detector for combating financial fraud	405-412

in retail sector	
Jungwon Kim, Arlene Ong, Richard Overill	
Chasing chaos	413-419
J. Kelsey, J.Timmis, A.Hone	
An evolutionary immune network for autonomous navigation	420-426
Patricia A. Vargas, Leandro N. de Castro, Roberto Michelan and Fernando J. Von Zuben	
Critical dynamics in evolutionary algorithms	427-434
Yaniv Bernstein and Xiaodong Li	
The discrete gradient evolutionary strategy method for global optimization	435-442
H. A. Abbass, A. M. Bagirov and J. Zhang	
Playing in continuous spaces: Some analysis and extension of population-based incremental learning	443-450
Bo Yuan and Marcus Gallagher	
On building a principled framework for evaluating and testing evolutionary algorithms: A continuous landscape generator	451-458
Bo Yuan and Marcus Gallagher	
Adaptive temperature schedule determined by genetic algorithm for parallel simulated annealing	459-466
Mitsunori Miki, Tomoyuki Hiroyasu, Jun'ya Wako and Takeshi Yoshida	
Co-evolutionary learning and hierarchical fuzzy control for the inverted	467-473
N. Young and R. J. Stonier	
Pseudo-coevolutionary genetic algorithms for power electronic circuits optimization	474-481
J. Zhang, Henry S. H. Chung, W. L. Lo, Eugene P. W. Tam, J. J. Lee and Angus K. M. Wu	
A coevolutionary multi-objective evolutionary algorithm	482-489
Carlos A. Coello Coello and Margarita Reyes Sierra	
Adaptivity in cell based optimization for information ecosystems	490-497
Joseph A. Rothermich, Fang Wang and Julian F. Miller	
Coevolving memetic algorithms: A learning approach to robust scalable optimisation	498-505
Jim Smith	
Real-time adaptation technique to real robots: An experiment with a humanoid robot	506-513
Shotaro Kamio and Hitoshi Iba	
Evolving recurrent neural controllers for sequential tasks- a parallel implementation	514-519
Genci Capi and Kenji Doya	
Evolutionary multi-agent system for object recognition in satellite image	520-527
Hoi Shun Miu, Kwong Sak Leung and Yee Leung	
Evolution of optimal server clusters for dynamic load-balancing systems	528-535
Leland Hovey, Dimitri Volper and Jae C. Oh	
Comparison of sampling sizes for the co-evolution of cooperative agents	536-543
Gary B. Parker and H. Joseph Blumenthal	
Genetic algorithms applied to airport ground traffic optimization	544-551
Gotteland and Durand	
Reducing execution time on genetic algorithm in real-world applications using fitness prediction - parameter optimization of SRM control--	552-559

Atsuko Mutoh, Tsuyoshi Nakamura, Shohei Kato and Hidenori Itoh	
Evolutionary estimation of assignment-ordering function for CSP-modeled combinatorial optimization	560-565
Adnan Acan, Ahmet Unveren and Yuce Tekol	
Independent constraint satisfaction and its application to sewerage system control	566-573
Kokolo Ikeda, Kei Aoki, Akihiro Nagaiwa and Sigenobu Kobayashi	
A classifier system in real applications for robot navigation	574-580
R. R. Cazangi, F. J. Von Zuben and M. F. Figueiredo	
The application of genetic algorithm in robot location recognition	581-586
Jianxiong Wang and Tom Downs	
Optimal dispatch of spinning reserve in an competitive electricity market using genetic algorithms	587-592
Z. Xu, Z. Y. Dong and K. P. Wong	
Application of differential evolution for harmonic worst-case identification of mass rapid transit power supply system	593-599
C. S. Chang, L. R. Lu and F. Wang	
Parallel hierarchical adaptive genetic algorithm for fragment assembly	600-607
Kieun Kim and Chilukuri K. Mohan	
A learning approach for performance evaluation of local network	608-614
Yanan Zhang, W. Q. Liu and Z. Y. Dong	
Finding multiple solutions based on an evolutionary algorithm for inference of genetic networks by s-system	615-622
Ryohei Morishita, Hiroaki Imade, Isao Ono, Norihiko Ono and Masahiro Okamoto	
A framework of grid-oriented genetic algorithms for large-scale optimization in bioinformatics	623-630
Hiroaki Imade, Ryohei Morishita, Isao Ono, Norihiko Ono and Masahiro Okamoto	
Inference of S-system models of genetic networks using a genetic local search	631-638
Shuhei Kimura, Mariko Hatakeyama and Akihiko Konagaya	
Chemical genetic algorithms - coevolutionary genotype-phenotype mapping by modeling of metabolism in cell	639-646
Hidefumi Sawai and Hideaki Suzuki	
Comparative studies on micro heat exchanger optimisation	647-654
Tatsuya Okabe, Kwasi Foli, Markus Olhofer, Yaochu Jin and Bernhard Sendhoff	
Development and testing of a morphological geometric representation scheme for topology design optimization using a genetic algorithm	655-662
Kang Tai and Shamim Akhtar	
Comparing neural networks and kriging for fitness approximation in evolutionary optimization	663-670
Lars Willmes, Thomas Bäck, Yaochu Jin and Bernhard Sendhoff	
A bit-array representation GA for structural topology optimization	671-677
Sheng Yin Wang and Kang Tai	
An evolutionary approach to bandwidth minimization	678-683
A. Lim, B. Rodrigues and F. Xiao	
Group selection and its application to constrained evolutionary optimization	684-691
M. Chang, K. Ohkura, K. Ueda and M. Sugiyama	
Evolution strategies assisted by Gaussian processes with improved pre-selection criterion	692-699

Holger Ulmer, Felix Streichert and Andreas Zell	
Improving migration by diversity	700-707
Jörg Denzinger and Jordan Kidney	
A modified ant colony algorithm for evolutionary design of digital circuits	708-715
Mostafa Abd-El-Barr, Sadiq M. Sait, Bambang A. B. Sarif and Uthman Al-Saiari	
Evolution of hierarchical neural networks for time-dependent cognitive processes: Key recognition for musical compositions	716-722
Jaime J. Davila	
An evolutionary approach to microstructure optimisation of stereolithographic models.	723-730
Siavash Haroun Mahdavi and Sean Hanna	
Insertion of functionality into development on an hardware sblock platform	731-738
Gunnar Tufte and Pauline C. Haddow	
Authors Index	

Volume 2

Preface	i
Sponsors	iii
Program Review Committee	v
Table of Contents	vii
Symbiotic evolutionary models in multiagent systems Toru Eguchi, Kotaro Hirasawa and Jinglu Hu	739-746
Combining genes and memes to speed up evolution Diego Federici	747-754
Elucidating the benefits of a self-adaptive Pareto EMO approach for evolving legged locomotion in artificial creatures Jason Teo and Hussein Abbass	755-762
A nonlinear control system design based on HJB/HJI/FBI equations via a differential genetic programming approach Joe Imae, Yoshiteru Kikuchi, Nobuyuki Ohtsuki and Tomoaki Kobayashi	763-769
A hierarchical particle swarm optimizer Stefan Janson and Martin Middendorf	770-776
Swarm optimization with instinct-driven particles Ashraf M. Abdelbar and Suzan Abdelshahid	777-782
Adaptive particle swarm optimisation for high-dimensional highly convex search spaces Dean Tsou and Cara MacNish	783-789
Parameter identification of induction motors using differential evolution Rasmus K. Ursem and Pierre Vadstrup	790-796
Towards effective subspace clustering with an evolutionary algorithm Ioannis A. Sarafis, Phil W. Trinder and Ali M. S. Zalzal	797-806
Predicting biochemical interactions -- human P450 2D6 enzyme inhibition W. B. Langdon, S. J. Barrett and B. F. Buxton	807-814
Genetic algorithms in stochastic optimisation L. A. Sanabria, B. Soh, T. S. Dillon and L. Chang	815-822
DIWA: Device independent wafermap analysis Emilio Miguelañez, Ali M. S. Zalzal and Paul Tabor	823-829
Evolving turing complete representations John Woodward	830-837
Finite population models of dynamic optimization with stochastically alternating fitness functions Anthony M. L. Liekens, Huub M. M. ten Eikelder and Peter A. J. Hilbers	838-845
Quotient evolutionary space: Abstraction of evolutionary process w.R.T macroscopic properties Ambedkar Dukkipati, M. Narasimha Murty and Shalabh Bhatnagar	846-853
Comparing representations and recombination operators for the multi-objective 0/1 knapsack	854-861

problem	
Christine L. Mumford	
Pareto-based multi-objective differential evolution	862-869
Feng Xue, Arthur C. Sanderson and Robert J. Graves	
Hybridization of the multi-objective evolutionary algorithms and the gradient-based algorithms	870-877
Xiaolin Hu, Zhangcan Huang and Zhongfan Wang	
A critical survey of performance indices for multi-objective optimisation	878-885
Tatsuya Okabe, Yaochu Jin and Bernhard Sendhoff	
Faster evolution and evolvability control of genetic algorithms using a softmax mutation method	886-891
Yuya Sasaki and Hugo de Garis	
Putting the user in the loop: On-line user adaption of genetic algorithms	892-897
Simon P. Hammond	
A new multiobjective evolutionary algorithm: OMOEA	898-905
SanYou Zeng, LiXin Ding and LiShan Kang	
An evolutionary algorithm for magic squares	906-913
Tao Xie and Lishan Kang	
An efficient evolutionary multi-objective optimization algorithm	914-920
Shengjing Mu, Hongye Su, Yuexuan Wang and Jian Chu	
Symbiotic networks	921-927
C. P. Pieters	
Applying sample weighting methods to genetic parallel programming	928-935
Sin Man Cheang, Kin Hong Lee and Kwong Sak Leung	
Pyramid search: Finding solutions for deceptive problems quickly in genetic programming	936-943
Vic Ciesielski and Xiang Li	
Truck backing up neural network controller optimized by genetic algorithm	944-950
M. L. Ho, P. T. Chan, A. B. Rad and C. H. Mak	
Solving dynamic TSP with evolutionary approach in real time	951-957
Aimin Zhou, Lishan Kang and Zhenyu Yan	
Application of neuro-fuzzy technique to the bandwidth reservation for sectorized cellular communications	958-965
Chenn-Jung Huang and Wei-Kuang Lai	
Scheduling a specific type of batch process with evolutionary computation	966-970
Jukka Heinonen and Frank Pettersson	
A Taguchi method-based crossover operator for the parametrical problems	971-977
K. Y. Chan, M. E. Aydin and T. C. Fogarty	
Trying to evolve sorting networks in echo	978-982
Lee Graham and Franz Oppacher	
Efficient evolutionary algorithms for the clustering problem in directed graphs	983-990
Carlos Rodrigo Dias and Luiz Satoru Ochi	
A neural learning classifier system with self-adaptive constructivism	991-997
Larry Bull and Jacob Hurst	

Unsupervised hierarchical clustering via a genetic algorithm William A. Greene	998-1005
A kernighan-lin local improvement heuristic that softens several hard problems in genetic algorithms William A. Greene	1006-1013
Using genetic programming with negative parsimony pressure on exons for portfolio optimization Nils Svängård, Peter Nordin and Stefan Lloyd	1014-1017
How does noise propagate in genetic networks Tetsuya Kobayashi and Kazuyuki Aihara	1018-1025
A fast and elitist parallel evolutionary algorithm for solving systems of non-linear equations Zhijian Wu and Lishan kang	1026-1028
Adapting the genetic algorithm to the travelling salesman problem Wayne Pullan	1029-1035
Virtual stylist project - examination of adapting clothing search system to user's subjectivity with interactive genetic algorithms - Masataka Tokumaru, Noriaki Muranaka and Shigeru Imanishi	1036-1043
A new design of genetic algorithm for bin packing Hitoshi Iima and Tetsuya Yakawa	1044-1049
Learning single-machine scheduling heuristics subject to machine breakdowns with genetic programming Wen-Jun Yin, Min Liu and Cheng Wu	1050-1055
GA or GP? That is not the question. John Woodward	1056-1063
Application of genetic algorithm on robotic swarm simulation Kai Wing Tang and Raymond A. Jarvis	1064-1071
Self adaptive island GA Eiichi Takashima, Yoshihiro Murata, Naoaki Shibata and Minoru Ito	1072-1079
A genetic algorithm for machine scheduling problem under shared resource constraints Yanzhi Li, Fan Wang and Andrew Lim	1080-1085
Discussion on searching capability of distributed genetic algorithm on the grid Yusuke Tanimura, Tomoyuki Hiroyasu and Mitsunori Miki	1086-1094
Multi-objective structure selection for radial basis function networks based on genetic algorithm Toshiharu Hatanaka, Nobuhiko Kondo and Katsuji Uosaki	1095-1100
Bayesian optimization algorithm for multi-objective solutions: Application to electric equipment configuration problems in a power plant Yuji Katsumata and Terano Takao	1101-1107
Elitist multiobjective evolutionary algorithm for environmental/economic dispatch Robert T. F. Ah King and Harry C. S. Rughooputh	1108-1114
Multi-agent learning by evolutionary subsumption Hongwei Liu	1115-1122
A comparison of relative accuracy and raw accuracy in XCS Pier Luca Lanzi	1123-1129

On the use of particle swarm optimization with multimodal functions Susana C. Esquivel and Carlos A. Coello Coello	1130-1136
Evolving towers in a 3-dimensional simulated environment Gary B. Parker, Andrey S. Anev and Dejan Duzevik	1137-1144
Multi-chromosomal representations and chromosome shuffling in evolutionary algorithms Helmut A. Mayer and Markus Spitzlinger	1145-1149
An evolutionary algorithm to solve the short-term electrical generation scheduling problems Jorge Maturana and Maria Cristina Riff	1150-1156
Estimating genome reversal distance by genetic algorithm Andy Auyeung and Ajith Abraham	1157-1161
IS-PAES: Switching constraints on and off for multiobjective optimization Arturo Hernandez-Aguirre, Salvador Botello, Giovanni Lizarraga and Carlos Coello Coello	1162-1169
Use of case injection to bias genetic algorithm solutions of similar problems Rich Drewes, Sushil J. Louis, Chris Miles, John McDonnell and Nick Gizzi	1170-1177
System modeling using GA and control for nonlinear system Kota Yuasa, Kenji Takao, Toru Yamamoto and Takao Hinamoto	1178-1185
XCS with stack-based genetic programming Pier Luca Lanzi	1186-1191
GA based optimisation of a multi-agent soft computing model for segmentation and classification of unstained mammalian cell images Chris Lai, Rajiv Khosla and Yasue Mitsukura	1192-1198
Parallel evolutionary optimized pitching motion control for f-16 aircraft Kang-Hee Lee and Jong-Hwan Kim	1199-1205
Neural vs. Statistical classifier in conjunction with genetic algorithm feature selection in digital mammography Ping Zhang, Brijesh Verma and Kuldeep Kumar	1206-1213
Hyperheuristics for managing a large collection of low level heuristics to schedule personnel Peter Cowling and Konstantin Chakhlevitch	1214-1221
Handling integrated quantitative and qualitative search space in a real world optimisation problem Victor Oduguwa, Ashutosh Tiwari and Rajkumar Roy	1222-1229
Global optimization of continuous problems using stochastic genetic algorithm Zhenguo Tu and Yong Lu	1230-1236
Single and multi-objective design of yagi-uda antennas using computational intelligence Neelakantam V. Venkatarayalu and Tapabrata Ray	1237-1242
A distributed parallel genetic local search in distributed computing environments Yiyuan Gong, Morikazu Nakamura and Takashi Matsumura	1243-1250
A genetic hill climbing method for function optimization using a neighborhood based on interactions among parameters Hiroshi Takeichi, Naoaki Mizuguchi, Isao Ono and Norihiko Ono	1251-1258
A mating strategy for multi-parent genetic algorithms by integrating tabu search Chuan-Kang Ting and Hans Kleine Buening	1259-1266
Evolving binary constraint satisfaction problem instances that are difficult to solve	1267-1273

J. I. van Hemert	
Using self-adaptive operator scheduling on problem domains with an operator manifold: Applications to the travelling salesman problem Wouter Boomsma	1274-1279
Coast control of train movement with genetic algorithm	1280-1287
K. K. Wong and T. K. Ho	
Searching Oligo sets of human chromosome 12 using evolutionary strategies	1288-1293
YenYen Joe, Huan Xu, ZhaoYang Dong, HuckHui Ng and Arthur Tay	
Hybrid genetic algorithm based fuel restricted real power optimization for utility system	1294-1301
N. Kumarappan and M. R. Mohan	
Lateral acceleration control design of a non-linear homing missile using multi-objective evolutionary optimisation	1302-1309
T. Sreenuch, A. Tsourdos, B. A. White and E. J. Hughes	
Using constructive evolutionary programming to optimise multi-storage electrical power supply systems operation	1310-1314
Thai D. H. Cau and John R. Kaye	
Parallel training for neural networks using PVM with shared memory	1315-1322
Marcelo Antonio Adad de Araújo	
Proposal of probabilistically and dynamically separating GA	1323-1330
Koichi Nakayama, Katsunori Shimohara and Osamu Katai	
A simplified artificial life model for multiobjective optimisation: A preliminary report	1331-1339
Adam Berry and Peter Vamplew	
Thermal agents: An application of genetic programming to virtual engineering	1340-1347
Dan Ashlock and Kenneth M. Bryden	
Ants can play prisoner's dilemma	1348-1354
Yuce Tekol and Adnan Acan	
Improving the performance of ACO algorithms by adaptive control of candidate set	1355-1362
Isamu Watanabe and Shouichi Matsui	
A chromosome-based evaluation model for CDIS	1363-1369
Zejun Wu, Hongbin Dong, YiWen Liang and R. I. McKay	
Swarms on continuous data	1370-1375
Vitorino Ramos and Ajith Abraham	
Interactive evolution of ant paintings	1376-1383
S. Aupetit, V. Bordeau, N. Monmarché, M. Slimane and G. Venturini	
Web usage mining using artificial ant colony clustering	1384-1391
Ajith Abraham and Vitorino Ramos	
Adapting mutations in genetic algorithms using gene flow principles	1392-1397
Garrison W. Greenwood	
Is increased diversity in genetic programming beneficial? An analysis of the effects on performance	1398-1405
Edmund K. Burke, Steven Gustafson, Graham Kendall and Natalio Krasnogor	
A study on allelic recombination	1406-1413
Carlos Cotta	

Evolutionary search and constraint violations Thomas Philip Runarsson and Xin Yao	1414-1419
Pair-wise test coverage using genetic algorithms Syed A. Ghazi and Moataz Ahmed	1420-1424
Particle swarm optimization with mutation A. Stacey, M. Jancic and I. Grundy	1425-1430
Do ants paint trucks better than chickens? Markets versus response thresholds for distributed dynamic scheduling Oran Kittithreerapronchai and Carl Anderson	1431-1439
A first study of fuzzy cognitive maps learning using particle swarm optimization K. E. Parsopoulos, E. I. Papageorgiou, P. P. Groumpos and M. N. Vrahatis	1440-1447
Investigating the existence of function roots using particle swarm optimization K. E. Parsopoulos and M. N. Vrahatis	1448-1455
Scalable distributed discovery of resource paths in telecommunication networks using cooperative ant-like agents Otto Wittner, Poul E. Heegaard and Bjarne E. Helvik	1456-1465
A genetic algorithm to sequence DNA using sequencing by hybridisation experimental data J. Dylan Spalding and Cara MacNish	1466-1471
A modified genetic algorithm for optimal electrical distribution network reconfiguration Bhoomesh Radha, Robert T. F. Ah King and Harry C. S. Rughooputh	1472-1479
Support vector clustering for multiclass classification problems Bing-Yu Sun	1480-1485
Mining interesting patterns from hardware-software codesign data with the learning classifier system XCS Fabrizio Ferrandi, Pier Luca Lanzi and Donatella Sciuto	1486-1492
Parameter identification of an airship model using evolution strategies Bruno Guedes Faria and Leandro Nunes de Castro	1493-1499

Authors Index

Volume 3

Preface	i
Sponsors	iii
Program Review Committee	v
Table of Contents	vii
A new hybrid structure genetic programming in symbolic regression Xiong Shengwu and Wang Weiwu	1500-1506
A grouping-based evolutionary algorithm for constrained optimization problem Ming Yuchi and Jong-Hwan Kim	1507-1512
Guiding genetic operators with immunology principle: A case study in TSP Hui Yang, Lishan Kang, Zhanyu Yan and xiufen zou	1513-1519
A framework for optimization using approximate functions Kok Sung Won, Tapabrata Ray and Kang Tai	1520-1527
GA-based generic method for protein structure comparison Sung-Joon Park and Masayuki Yamamura	1528-1535
A simple and highly efficient multi-objective optimal evolutionary algorithm Chuan Shi, Yan Li and Li-shan Kang	1536-1542
Multi-objectives genetic algorithms for courses of action planning Lamia Belfares and Adel Guitouni	1543-1551
Data mining rules using multi-objective evolutionary algorithms Beatriz de la Iglesia, Mark S. Philpott, Anthony J. Bagnall and Vic J. Rayward-Smith	1552-1559
Constrained optimization based on a multiobjective evolutionary algorithm Anders Angantyr, Johan Andersson and Jan-Olov Aidanpaa	1560-1567
Multi-criteria evaluation of interesting dependencies according to a data mining approach Dominique Francisci and Martine Collard	1568-1574
Morphometric grayscale texture analysis using foot patterns Dan Ashlock, Dean C. Adams and David Doty	1575-1581
Simulation-based optimization of a controller for multi-car elevators using a genetic algorithm for noisy fitness function Satoshi Takahashi, Hajime Kita, Hiromichi Suzuki, Takeshi Sudo and Sandor Markon	1582-1587
Optimization heuristics for the combinatorial auction Michael Schwind, Tim Stockheim and Franz Rothlauf	1588-1595
Motif discovery in upstream sequences of coordinately expressed genes Matt Stine, Dipankar Dasgupta and Suraj Mukatira	1596-1603
In-situ bioremediation of perchlorate-contaminated groundwater using a multi-objective parallel evolutionary algorithm Mark R. Knarr, Mark N. Goltz, Gary B. Lamont and Junqi Huang	1604-1611
Using singular value decomposition to improve a genetic algorithm's performance	1612-1617

Jacob G. Martin and Khaled Rasheed	
Estimation of distribution programming based on Bayesian network	1618-1625
Kohsuke Yanai and Hitoshi Iba	
Adaptation to a dynamical environment by means of the environment identifying genetic algorithm	1626-1631
Naoki Mori and Keinosuke Matsumoto	
An investigation on piece differential information in co-evolution on games using kalah	1632-1638
Wee-Chong Oon and Yew-Jin Lim	
Program evolution with explicit learning	1639-1646
Y. Shan, R. I. McKay, H. A. Abbass and D. Essam	
Invited paper. Nature-inspired cryptography: Past, present and future	1647-1654
John A Clark	
Evolutionary generation of bent functions for cryptography	1655-1661
Joanne Fuller, Ed Dawson and William Millan	
A pseudo-random number generator based on evolutionary algorithms	1662-1668
Yong Zeng and JianFeng Ma	
Weighted feature extraction using a genetic algorithm for intrusion detection	1669-1675
M. Middlemiss and G. Dick	
Design of montgomery multiplication architecture based on programmable cellular automata	1676-1679
Jun-Cheol Jeon, Hye-Young Park and Kee-Young Yoo	
Genetic design of biologically inspired discrete dynamical basis networks to approximate data sequences	1680-1687
Kent L. Jones and David L. Olmsted	
A java-based parallel platform for the implementation of evolutionary computation for engineering applications	1688-1694
Chun Che Fung, Ja Bin Li, Kok Wai Wong and Kit Po Wong	
An implementation of genetic algorithms as a basis for a trading system on the foreign exchange market	1695-1701
Andrei Hryshko and Tom Downs	
A minimax control design for nonlinear systems based on genetic programming: Jung's collective unconscious approach	1702-1707
Joe Imae, Nobuyuki Ohtsuki, Yoshiteru Kikuchi and Tomoaki Kobayashi	
An enhanced evolutionary approach to spatial partitioning for reconfigurable environments	1708-1715
Pratibha P., Siva Nageswara Rao Borra, A. Muthukaruppan, S. Suresh and V. Kamakoti	
Core-based soc test scheduling using evolutionary algorithm	1716-1723
Yu Xia, Malgorzata Chrzanowska-Jeske and Benyi Wang	
Minimizing the number of one-paths in bdds by an evolutionary algorithm	1724-1731
Mario Hilgemeier, Nicole Drechsler and Rolf Drechsler	
Design optimization for a novel class of high power microwave sources	1732-1739
Laurence D. Merkle and John W. Luginsland	
Synthesizing passive networks by applying genetic programming and evolution strategies	1740-1747
Christian Reinhold, Peter Kralicek and Jürgen Teich	
The design of segmental-transmission-line for high-speed digital signals using genetic algorithms	1748-1755

Moritoshi Yasunaga, Ikuo Yoshihara and Jung H. Kim DNA fragment assembly using an ant colony system algorithm	1756-1763
Prakit Meksangsouy and Nachol Chaiyaratana The role of e-dominance in multi objective particle swarm optimization methods	1764-1771
Sanaz Mostaghim and Juergen Teich Comparing particle swarms for tracking extrema in dynamic environments	1772-1779
Xiaodong Li and Khanh Hoa Dam Particle swarm optimizers for Pareto optimization with enhanced archiving techniques	1780-1787
Thomas Bartz-Beielstein, Philipp Limbourg, Jörn Mehnen, Karlheinz Schmitt, Konstantinos E. Parsopoulos, Michael N. Vrahatis A control framework for ant-based routing algorithms	1788-1795
Chris Leith and Glen Takahara Memetic algorithms for timetabling	1796-1802
Ender Özcan and Alpay Alkan Distributed processor allocation for discrete event simulation and digital signal processing using a multiobjective evolutionary algorithm	1803-1810
David J. Caswell and Gary B. Lamont A new algorithm for exploring and optimising optical fibre designs using a two dimensional genome with latent, redundant and master genes	1811-1818
Leon Poladian An evolutionary approach for modeling the equivalent circuit for electrochemical impedance spectroscopy	1819-1825
Hongqing Cao, Jingxian Yu and Lishan Kang Improved GA-based method for multiple protein sequence alignment	1826-1832
Hung Dinh Nguyen, Ikuo Yoshihara, Kunihito Yamamori and Moritoshi Yasunaga Function estimation of protein using finite state automaton based on accumulated amino acid residue scores	1833-1839
Shinji Chiba and Ken Sugawara 3-d visualization of a gene regulatory network: Stochastic search for layouts	1840-1847
Naoki Hosoyama and Hitoshi Iba Clustering gene expression data with memetic algorithms based on minimum spanning trees	1848-1855
Nora Speer, Peter Merz, Christian Spieth and Andreas Zell Global convergence of unconstrained and bound constrained surrogate-assisted evolutionary search in aerodynamic shape design	1856-1863
Y. S. Ong, K. Y. Lum, P. B. Nair, D. M. Shi and Z. K. Zhang Target shape design optimization with evolutionary computation	1864-1870
Wei-Wen Chang Chan-Jin Chung Bernhard Sendhoff Parameter optimization for b-spline curve fitting using genetic algorithms	1871-1878
G. Saravana Kumar, P. K. Kalra and S. G. Dhande DAFHEA: A dynamic approximate fitness-based hybrid EA for optimisation problems	1879-1886
Maumita Bhattacharya and Guojun Lu Invited Talk: Neighborhood Search Techniques for the Resource-Constrained Scheduling Problem	
Jacques A. Ferland	

Developing GA-based hybrid approaches for a real-world mixed-integer scheduling problem Keshav P. Dahal, Stuart J. Galloway and Chris J. Aldridge	1887-1894
A parallel hybrid GA for combinatorial optimization using grid technology Tang Jing, Meng Hiot Lim and Yew Soon Ong	1895-1902
Evolving aesthetic images using multiobjective optimization Gary R. Greenfield	1903-1909
Connectedness, regularity and the success of local search in evolutionary multi-objective optimization Yaochu Jin and Bernhard Sendhoff	1910-1917
Expected runtimes of a simple multi-objective evolutionary algorithm Oliver Giel	1918-1925
An evolutionary programming algorithm for multi-objective optimisation Andrew Lewis and David Abramson	1926-1932
Energy minimization of protein tertiary structures by local search algorithm based on the characteristic of alpha-helix and parallel simulated annealing using genetic crossover Shinya Ogura, Keiko Aoi, Tomoyuki Hiroyasu, Mitsunori Miki and Yuko Okamoto	1933-1940
Comparison of pulling back and penalty methods for constraints in BGA Hisashi Shimosaka, Tomoyuki Hiroyasu and Mitsunori Miki	1941-1948
Two-phase optimization of fuzzy controller by evolutionary programming Chi-Ho Lee, Ming Yuchi and Jong-Hwan Kim	1949-1956
An evolution strategies approach to the simultaneous discretization of numeric attributes in data mining Julio J. Valdes, Luis C. Molina and Natan Peris	1957-1964
Cultural swarms Bin Peng, Robert G. Reynolds, Jon Brewster	1965-1971
Cultural swarms II: Virtual algorithm emergence Robert G. Reynolds, Bin Peng, and Jon Brewster	1972-1979
Evolution based approaches to the preservation of endangered natural languages Robert G. Reynolds, Jeffrey M. Stefan	1980-1987
A multi-agent simulation using cultural algorithms: The effect of culture on the resilience of social systems Ziad Kobti, Robert G. Reynolds, Tim Kohler	1988-1995
Population size vs. Runtime of a simple EA Carsten Witt	1996-2003
An analysis of evolutionary algorithms for finding approximation solutions to EA-hard optimisation problems Jun He	2004-2010
Population size, search space and quality of solution: An experimental study R. Sarker and F. M. A. Kazi	2011-2018
A comparison of the performance of classical methods and genetic algorithms for optimization problems involving numerical models T. T. Hang Luong and Q. Tuan Pham	2019-2025
Exploring regenerative mechanisms found in flatworms by artificial evolutionary techniques using genetic	2026-2033

Peter Eggenberger Hotz	
Dynamic prediction of web requests	2034-2041
Dario Bonino, Fulvio Corno and Giovanni Squillero	
Saving computational effort in genetic programming by means of plagues	2042-2049
F. Fernandez, M. Tomassini and L. Vanneschi	
Exploring models of development for evolutionary circuit design	2050-2057
Timothy G. W. Gordon	
Multiobjective motion planning for a nonholonomic vehicle	2058-2065
Vasilios A. Spais and Loukas P. Petrou	
Evolutionary many-objective optimisation: An exploratory analysis	2066-2073
Robin C. Purshouse and Peter J. Fleming	
Pareto neuro-evolution: Constructing ensemble of neural networks using multiobjective optimization	2074-2080
Hussein A. Abbass	
Computationally effective search and optimization procedure using coarse to fine approximations using coarse to fine grained modeling	2081-2088
P. K. S. Nain and Kalyanmoy Deb	
Novel fibre bragg grating design using multiobjective evolutionary algorithms	2089-2095
Steven Manos and Leon Poladian	
Automatic adjustments of a fem to second-pulses laser using genetic algorithms	2096-2101
Hirokazu Nosato, Yuji Kasai, Masahiro Murakawa, Taro Itatani and Tetsuya Higuchi	
Nonlinear state estimation by evolution strategies based particle filters	2102-2109
Katsuji Uosaki, Yuuya Kimura and Toshiharu Hatanaka	
Full beam configuration for coplanar radiotherapy inverse planning: A genetic algorithm-based framework	2110-2117
Vitoantonio Bevilacqua	
Genetic learning from experience	2118-2125
Sushil J. Louis	
Fast texture segmentation using genetic programming	2126-2133
Andy Song and Vic Ciesielski	
A hybrid multiobjective evolutionary algorithm for solving truck and trailer vehicle routing problems	2134-2141
K. C. Tan, T. H. Lee, Y. H. Chew and L. H. Lee	
A co-evolutionary algorithm for train timetabling	2142-2148
Raymond S. K. Kwan and Paavan Mistry	
A Bayesian optimization algorithm for the nurse scheduling problem	2149-2156
Jingpeng Li and Uwe Aickelin	
New concepts in evolutionary search for boolean functions in cryptology	2157-2164
William Millan, Joanne Fuller and Ed Dawson	
Detecting new forms of network intrusion using genetic programming	2165-2172
Wei Lu and Issa Traore	
Almost boolean functions: The design of boolean functions by spectral inversion	2173-2180
John A Clark, Jeremy L Jacob, Subhamoy Maitra and Pantelimon Stanica	

Automated design of security protocols	2181-2188
Hao Chen, John A. Clark and Jeremy L. Jacob	
Finding efficient distinguishers for cryptographic mappings, with an application to the block cipher TEA	2189-2193
Julio C. Hernandez, Pedro Isasi	
Neuroevolution for adaptive teams	2194-2201
Bobby D. Bryant and Risto Miikkulainen	
Coevolutionary learning in the tragedy of commons	2202-2209
Julian Garcia and Fernando Nino	
Towards staged evolution of an artificial player for hex by enlarging the board size during training	2210-2216
Stephan K. Chalup	
Exploiting co-evolution and a modified island model to climb the core war hill	2217-2221
F. Corno, E. Sanchez and G. Squillero	
Evolved neural networks learning othello strategies	2222-2229
S. Y. Chong, D. C. Ku, H. S. Lim, M. K. Tan and J. D. White	
Investigation of a tabu assisted hyper-heuristic genetic algorithm	2230-2237
Limin Han and Graham Kendall	
GA-based selection of components for heterogeneous ensembles of support vector machines	2238-2245
André L. V. Coelho, Clodoaldo A. M. Lima and Fernando J. Von Zuben	
Non-stationary problem optimization using the primal-dual genetic algorithm	2246-2253
Shengxiang Yang	

Authors Index

Volume 4

Preface	i
Sponsors	iii
Program Review Committee	v
Table of Contents	vii
Effects of repair procedures on the performance of EMO algorithms for multiobjective 0/1 knapsack problems Hisao Ishibuchi and Shiori Kaige	2254-2261
Evolutionary multi-objective optimisation with a hybrid representation Tatsuya Okabe, Yaochu Jin and Bernhard Sendhoff	2262-2269
DNA sequence optimization using constrained multi-objective evolutionary algorithm In-Hee Lee, Soo-Yong Shin and Byoung-Tak Zhang	2270-2276
Solving the multi-objective quadratic assignment Richard O. Day, Mark P. Kleeman and Gary B. Lamont	2277-2283
An evolution strategy with probabilistic mutation for multi-objective optimisation Simon Huband, Phil Hingston, Lyndon While and Luigi Barone	2284-2291
Particle swarm inspired evolutionary algorithm (PS-EA) for multiobjective optimization problems Dipti Srinivasan and Tian Hou Seow	2292-2297
A multi-agent based simulated stock market - testing on different types of stocks Graham Kendall and Yan Su	2298-2305
A co-evolutionary approach to the tacit collusion of generators in oligopolistic electricity markets: Piecewise linear bidding structure case Thai D. H. Cau and Edward J. Anderson	2306-2313
Financial forecasting through unsupervised clustering and evolutionary trained neural networks N. G. Pavlidis, D. K. Tasoulis and M. N. Vrahatis	2314-2321
The simple supply chain model and evolutionary computation Timothy Gosling	2322-2329
Is sophisticated hierarchical thinking useful? Chia-Hsuan Yeh	2330-2337
Study of fitness landscapes for the HP model of protein structure prediction Susana Duarte Flores and Jim Smith	2338-2345
Protein structure prediction with co-evolving memetic algorithms J. E. Smith	2346-2353
Flexible ligand docking using differential evolution René Thomsen	2354-2361
Critical biodiversity and connectivity P. A. Whigham	2362-2369
Evolving artificial neural network for DNA Microarray Technology	2370-2377

Kyung-Joong Kim and Sung-Bae Cho	
Evolutionary Ensemble Classifier to Classify Lymphoma and Colon Cancers	2378-2385
Chanho Park and Sung-Bae Cho	
CIRG@UP optibench: A statistically sound framework for benchmarking optimisation algorithms	2386-2392
Es Peer, Ap Engelbrecht and F. van den Bergh	
Hybrid evolutionary algorithms based on PSO and GA	2393-2399
X. H. Shi, Y. H. Lu, C. G. Zhou, H. P. Lee, W. Z. Lin and Y. C. Liang	
Solving multi objective optimization problems using particle swarm optimization	2400-2405
L. B. Zhang, C. G. Zhou, X. H. Liu, Z. Q. Ma, M. Ma and Y. C. Liang	
A new class of operators to accelerate particle swarm optimization	2406-2410
Tiew-On Ting, M. V. C. Rao, C. K. Loo and Sze-San Ngu	
Optimisation of valve timing events of internal combustion engines with particle swarm optimisation	2411-2418
Asanga Ratanweera, Harry .Watson, Saman K. Halgamuge	
A comparison of constraint-handling methods for the application of particle swarm optimization to constrained nonlinear optimization problems	2419-2425
Genevieve Coath and Saman K. Halgamuge	
Evolutionary search in inductive equational logic programming	2426-2433
Lutz H. Hamel	
Hierarchical fuzzy control in robot soccer using evolving algorithms	2434-2440
P. J. Thomas and R. J. Stonier	
Learning evolution and generalisation	2441-2448
Ibrahim Kushchu	
Two mode q-learning	2449-2454
Kui-Hong Park and Jong-Hwan Kim	
The spatially-dispersed genetic algorithm: An explicit spatial population structure for gas	2455-2461
Grant Dick	
Learning to play pac-man: An evolutionary, rule-based approach	2462-2469
Marcus Gallagher and Amanda Ryan	
Piece difference: Simple to evolve?	2470-2473
Evan J Hughes	
The evolution of blackjack strategies	2474-2481
Kendall G and Smith C	
Using simulated annealing to calculate the trembles of trembling hand perfection	2482-2489
Stuart McDonald and Liam Wagner	
Bounded archiving using the lebesgue measure	
Joshua Knowles, David Corne and Mark Fleischer	
Adaptive diversity maintenance and convergence guarantee in multiobjective evolutionary algorithms	2498-2505
Huidong Jin and Man-Leung Wong	
Some multiobjective optimizers are better than others	2506-2512

David Corne and Joshua Knowles	
Designing a distributed cooperative coevolutionary algorithm for multiobjective optimization	2513-2520
K. C. Tan, Y. J. Yang and T. H. Lee	
Enhanced distribution and exploration for multiobjective evolutionary algorithms	2521-2528
K. C. Tan, Y. J. Yang, C. K. Goh and T. H. Lee	
Invited Talk: Structural DNA Nanotechnology	
Nadrian Seeman	
Finite field arithmetic using self-assembly of DNA tilings	2529-2536
Rana Barua and Shantanu Das	
Flows in microfluidic networks: From theory to simulation	2537-2541
Danny van Noort and John S. McCaskill	
Branching DNA machines based on transitions of hairpin structures	2542-2548
Mitsuhiro Kubota, Kazumasa Ohtake, Ken Komiya, Kensaku Sakamoto and Masami Hagiya	
Molecular immunocomputing with application to alphabetial pattern recognition mimics the characterization of ABO blood types	2549-2556
Su Dong Kim, Ki-Roo Shin and Byoung-Tak Zhang	
Evolving adaptive neural networks with and without adaptive synapses	2557-2564
Kenneth O. Stanley, Bobby D. Bryant and Risto Miikkulainen	
A fast algorithm on finding the non-dominated set in multi-objective optimization	2565-2571
Linxin Ding, Yuping Chen and Lishan Kang	
Emergence of adaptive behaviors by redundant robots	2572-2579
Kazuyuki Ito and Akio Gofuku	
Epigenetic programming: An approach of embedding epigenetic learning via modification of histones in genetic programming	2580-2587
Ivan Tanev and Kikuo Yuta	
Neuroevolution for reinforcement learning using evolution strategies	2588-2595
Christian Igel	
Improving genetic classifiers with a boosting algorithm	2596-2602
Bo Liu, Bob McKay and Hussein A. Abbass	
Asynchronous distributed parallel GA using elite server	2603-2610
Kojima Kazunori, Matsuo Hiroshi and Ishigame Masaaki	
On the connection between the no free lunch theorem and the trivial property for RE languages	2611-2618
Eugene Eberbach	
An heuristic-based self-adapting crossover method: Additional flexibility in the evolutionary process	2619-2626
Raphael Regis Cremonezi and Myriam Regattieri Delgado	
A convergence model for asynchronous parallel genetic algorithms	2627-2634
Johan Berntsson and Maolin Tang	
A k-elitist MAX-MIN ant system approach to cost-based abduction	2635-2641
Ashraf M. Abdelbar and Mohamed Mokhtar	
Anttree: A new model for clustering with artificial ants	2642-2647
H. Azzag, N. Monmarche, M. Slimane, G. Venturini and C. Guinot	

Hybrid ant colony algorithm for texture classification Hong Zheng	2648-2652
Making the most of two heuristics: Breaking transposition ciphers with ants Matthew D. Russell, John A. Clark and Susan Stepney	2653-2658
Genetic algorithm based distance spectrum technique for performance union bound of space-time trellis coded OFDM Y. Hong, Z. Y. Dong and J. Yuan	2659-2664
Optimal design of a regenerative dynamic dynamometer using genetic algorithms L. Weng and Z. Y. Dong	2665-2672
Self-optimizing fuzzy controller based on extreme evolution algorithm Hu Jing-Song and Zheng Qi Lun	2673-2677
Multiple single objective Pareto sampling Evan J Hughes	2678-2684
Explicit building-block multiobjective evolutionary algorithms for NPC problems Jesse B. Zydallis and Gary B. Lamont	2685-2695
Differential evolution for multi-objective optimization B. V. Babu and M. Mathew Leenus Jehan	2696-2703
Diversity control in a multi-objective genetic algorithm Nuntapon Sangkawelert and Nachol Chaiyaratana	2704-2711
Parallel strength Pareto multi-objective evolutionary algorithm for optimization problems Shengwu Xiong and Feng Li	2712-2718
Molecular dynamics simulation using coarse-grained model to study protein function and beyond M. Takano, J. Higo, H. K. Nakamura and M. Sasai	2719-2726
Patterned surface as a template for DNA-based nanotechnology W.C. Moon, A. Nishikawa, T. Yoshinobu and H. Iwasaki	2727-2732
Efficiency and reliability of genomic information storage and retrieval in DNA based memories with compaction A.J. Neel and M.H. Garzon	2733-2739
The fidelity of the tag-antitag system 2: Identifying the regime of stringency John A. Rose, Masami Hagiya and Akira Suyama	2740-2747
An imanishian genetic algorithm for the optimum design of surface acoustic wave filter Kiyoharu Tagawa, Tetsuya Yamamoto, Tsutomu Igaki and Syunichi Seki	2748-2755
Shortest path problem with cache dependent path lengths Zhaohui Fu, Andy Kurnia, Andrew Lim and Brian Rodrigues	2756-2761
A hybrid genetic algorithm for three-index assignment problem Gaofeng Huang and Andrew Lim	2762-2768
A genetic off-line tuner for robotic humanoid visual perception Shahram Jafari and Ray Jarvis	2769-2776
A story of the artificial ant: Discovering the correct bias for learning Ibrahim Kushchu	2777-2784
Visualizing evolvability with price's equation	2785-2790

Mitchell A. Potter, Jeffrey K. Bassett and Kenneth A. De Jong	
Avoiding syntactically incorrect individuals via parameterized operators applied on derivation trees	2791-2798
R.óbert V.ányi and Szilvia Zvada	
Exploration of RNA editing and design of robust genetic algorithms	2799-2806
Chien-Feng Huang and Luis M. Rocha	
The role of crossover in an immunity based genetic algorithm for multimodal function optimization	2807-2814
Chien-Feng Huang	
Application of immunological memory to the color classification of tiles	2815-2820
Liu Di and Zhu Xuefeng	
Using evolutionary noise to improve prediction of rapidly evolving targeting peptides	2821-2828
Mikael Boden	
Future view: Web navigation based on learning user's browsing patterns by classifier systems	2829-2836
Norikatsu Nagino and Seiji Yamada	
Optimization model for opportunistic replacement policy using GA with fuzzy logic controller	2837-2843
S. A. Haque, Z. Kabir and R. A. Sarker	
Using soft computing for a prototype collagen plate inspection system	2844-2850
M. Koeppen, A. Soria-Frisch and Th. Sy	

Authors Index

Authors Index

Author	Paper Page Number	Author	Paper Page Number
--------	----------------------	--------	----------------------

A

Abbass, Hussein	435, 1639, 755, 2596, 2074	Abd-El-Barr, Mostafa	708, 375
Abdelbar, Ashraf M.	2635, 777	Abdelshahid, Suzan	777
Abraham, Ajith	1157, 1384, 1370	Abramson, David	1926
Acan, Adnan	256, 1348, 560	Adams, Dean C.	1575
Ahmed, Moataz	1420, 85	Aickelin, Uwe	2149
Aidanpaa, Jan-Olov	1560	Aihara, Kazuyuki	1018
Akhtar, Shamim	655	Al-Saiari, Uthman	708, 375
Aldridge, Chris J.	1887	Alkan, Alpay	1796
Altincay, Hakan	256	Anderson, Carl	1431
Anderson, Edward J.	2306	Andersson, Johan	1560
Anev, Andrey S.	1137	Angantyr, Anders	1560
Anver, M. Mohideen	38	Aoi, Keiko	1933
Aoki, Kei	566	Aoki, Takafumi	115
Araújo, Marcelo Antonio	1315	Arslan, Tughrul	242, 382
Adad de			
Ascia, Giuseppe	107	Ashlock, Dan	1575, 46, 1340
Aupetit, S.	1376	Auyeung, Andy	1157
Aydin, M. E.	297, 971	Azzag, H.	2642

B

B.äck, Thomas	663	Babu, B. V.	2696
Bagirov, A. M.	435	Bagnall, Anthony J.	1552
Banzhaf, Wolfgang	170	Barone, Luigi	2284
Barrett, S. J.	807	Barua, Rana	2529
Bassett, Jeffrey K.	2785	Belfares, Lamia	1543
Bergh, F. van den	2386	Bernstein, Yaniv	427
Berntsson, Johan	2627	Berry, Adam	1331
Bevilacqua, Vitoantonio	2110	Bhatnagar, Shalabh	846
Bhattacharya, Maumita	1879	Blankenship, Elizabeth	46
Blumenthal, H. Joseph	536	Boden, Mikael	2821
Bonino, Dario	2034	Boomsma, Wouter	1274
Bordeau, V.	1376	Borra, Siva Nageswara Rao	1708
Botello, Salvador	1162	Bryant, Bobby D.	2557, 2194
Bryden, Kenneth M.	1340	Buening, Hans Kleine	1259
Bugajska, Magdalena D.	359	Bull, Larry	991
Burke, Edmund K.	1398	Burrage, Kevin	162
Buxton, B. F.	807		

C

Cai, J.	77	Cao, Hongqing	1819
Capi, Genci	514	Castro, Leandro N. de	420
Castro, Leandro Nunes de	1493, 146	Caswell, David J.	1803
Catania, Vincenzo	107	Cau, Thai D. H.	1310, 2306
Cazangi, R. R.	574	Chaiyaratana, Nachol	2704, 1756
Chakhlevitch, Konstantin	1214	Chalup, Stephan K.	2210
Chan, K. Y.	297, 971	Chan, P. T.	944
Chang, Chan-Jin	1864	Chang, L.	815
Chang, M.	684	Cheang, Sin Man	248, 928
Chen, Yuping	2565	Chew, Y. H.	2134
Chiba, Shinji	1833	Cho, Sung-Bae	92
Chong, S. Y.	2222	Chrzanowska-Jeske, Malgorzata	1716
Chu, Jian	914	Chung, Henry S. H.	474
Chung, Bernhard	1864	Ciesielski, Vic	936, 2126
Claypoole, Roger L.	139	Clergue, M.	289
Clergue, Manuel	273, 281	Coelho, André L. V.	2238
Coello, Carlos A. Coello	6, 1130, 482, 1162	Collard, Martine	1568
Collard, P.	289	Collard, Philippe	273, 281
Congdon	320	Corne, David	2490, 2506
Corno, Fulvio	2034, 2217	Cotta, Carlos	1406
Cowling, Peter	1214	Cremonesi, Raphael	2619
		Regis	

D

Dahal, Keshav P.	1887	Dam, Khanh Hoa	1772
Das, Shantanu	2529	Dasgupta, Dipankar	1596, 123
Davila, Jaime J.	716	Dawson, Ed	2157, 1655
Day, Richard O.	2277	Deb, Kalyanmoy	2081
Delgado, Myriam	2619	Denzinger, Jörg	700
Regattieri		Dhande, S. G.	1871
Deschenes, Alain	343, 335	Dias, Carlos Rodrigo	983
Di, Liu	2815	Dillon, T. S.	815
Dick, Grant	2455, 1669	Dong, Hongbin	1363
Ding, LiXin	898, 2565	Doty, David	1575
Dong, ZhaoYang	2659, 1288, 587, 2665, 608	Drechsler, Nicole	1724
Downs, Tom	1695, 581	Drewes, Rich	1170
Drechsler, Rolf	1724	Durand	544
Dukkipati, Ambedkar	846		
Duzevik, Dejan	1137		

E

Eberbach, Eugene	2611	Eguchi, Toru	739
Eikelder, Huub M. M. ten	838	Engelbrecht, A. P.	215, 227, 234, 2386
Esquivel, Susana C.	1130	Essam, D.	1639

F

Faria, Bruno Guedes	1493	Federici, Diego	747
Fernandez, F.	2042	Ferrandi, Fabrizio	1486
Figueiredo, M. F.	574	Fleischer, Mark	2490
Fleming, Peter J.	2066	Flores, Susana Duarte	2338
Fogarty, T. C.	297, 971	Fogel, Gary B.	312
Foli, Kwasi	647	Folino, G.	305
Francisci, Dominique	1568	Franken, N.	234
Freitas, Alex A.	131	Fu, Zhaohui	2756
Fuller, Joanne	2157, 1655	Fung, Chun Che	1688

G

Gallagher, Marcus	443, 451, 2462	Galloway, Stuart J.	1887
Gandrud, Jonathan D.	46	Garcia, Julian	2202
Garis, Hugo de	886	Geard, Nicholas	199
Ghazi, Syed A.	1420	Giel, Oliver	1918
Gizzi, Nick	1170	Glen, Edward	343, 335
Gofuku, Akio	2572	Goh, C. K.	2521
Goltz, Mark N.	1604	Gong, Yiyuan	1243
Gonzalez, F.	123	Gordon, Timothy G. W.	2050
Gosling, Timothy	2322	Gotteland	544
Graham, Lee	978	Graves, Robert J.	862
Greene, William A.	998, 1006	Greenfield, Gary R.	1903
Greenwood, Garrison W.	1392	Grewal, G.	264
Groumpos, P. P.	1440	Grundy, I.	1425
Guinot, C.	2642	Guitouni, Adel	1543
Gunsch, Gregg H.	139	Gustafson, Steven	1398

H

Haddow, Pauline C.	731, 62	Hagiya, Masami	2740, 2542
Hamel, Lutz H.	2426	Hammond, Simon P.	892
Han, Kuk-Hyun	178	Han, Limin	2230
Hanna, Sean	723	Haque, S. A.	2837
Hatakeyama, Mariko	631	Hatanaka, Toshiharu	2102, 1095
He, Jun	2004	Heegaard, Poul E.	1456
Heinonen, Jukka	966	Helvik, Bjarne E.	1456
Hemert, J. I. van	1267	Hendriks, Andrew	343
Hermadi, Irman	85	Hernandez-Aguirre, Arturo	1162
Higo, J.	2719	Higuchi, Tatsuo	115
Higuchi, Tetsuya	2096	Hilbers, Peter A. J.	838
Hilgemeier, Mario	1724	Hinamoto, Takao	1178
Hingston, Phil	2284	Hirasawa, Kotaro	739, 69
Hiroshi, Matsuo	2603	Hiroyasu, Tomoyuki	459, 1086, 22, 1933, 1941
Hirsbrunner, Beat	397	Ho, M. L.	944
Ho, T. K.	1280	Hoar, Ricardo	54
Homma, Naofumi	115	Hong, Jin-Hyuk	92
Hong, Y.	2659	Hosoyama, Naoki	1840

Hotz, Peter Eggenberger	191, 2026	Hovey, Leland	528
Hryshko, Andrei	1695	Hu, Jinglu	739, 69
Hu, Xiaolin	870	Huang, Chenn-Jung	958
Huang, Chien-Feng	2807, 2799	Huang, Gaofeng	2762
Huang, Junqi	1604	Huang, Zhangcan	870
Huband, Simon	2284	Hughes, E. J.	1302
Hurst, Jacob	991		

I

Iba, Hitoshi	506, 1618, 1840	Igaki, Tsutomu	2748
Igel, Christian	2588	Iglesia, Beatriz de la	1552
Iima, Hitoshi	1044	Ikeda, Kokolo	566
Imade, Hiroaki	623, 615	Imae, Joe	763, 1702
Imanishi, Shigeru	1036	Ishibuchi, Hisao	2254
Itatani, Taro	2096	Ito, Kazuyuki	2572
Ito, Minoru	1072	Itoh, Hidenori	552

J

Jackson, Jacob T.	139	Jacob, Christian	367, 54
Jafari, Shahram	2769	Jancic, M.	1425
Jansen, Thomas	30	Janson, Stefan	770
Jarvis, Kai	1064	Jarvis, Ray	2769
Jehan, M. Mathew	2696	Jeon, Jun-Cheol	1676
Leenus			
Ji, Zhou	123	Jin, Huidong	2498
Jin, Yaochu	878, 1910, 2262, 647, 663	Jing, Tang	1895
Jing-Song, Hu	2673		
Jones, Kent L.	1680	Joe, YenYen	1288
Jr.	139	Jong, Kenneth A. De	2785

K

Kabir, Z.	2837	Kaige, Shiori	2254
Kalra, P. K.	1871	Kamakoti, V.	1708
Kamio, Shotaro	506	Kang, Lishan	1819, 898, 906, 2565, 14, 951, 1026, 1536, 1513
			1323
Kasai, Yuji	2096	Katai, Osamu	1101
Kato, Shohei	552	Katsumata, Yuji	1310
Kawano, Yasuhito	154	Kaye, John R.	2603
Kazi, F. M. A.	2011	Kazunori, Kojima	1192
Kendall, Graham	2230, 1398, 2298	Khosla, Rajiv	763, 1702
Kidney, Jordan	700	Kikuchi, Yoshiteru	1748
Kim, Jong-Hwan	1507, 178, 2449, 1199, 1949	Kim, Jung H.	
Kim, Su Dong	2549	Kimura, Shuhei	631
Kimura, Yuuya	2102	King, Robert T. F. Ah	1472, 1108
Kita, Hajime	1582	Kitagawa, Masahiro	154
Kittithreerapronchai,	1431	Kleeman, Mark P.	2277

Oran			
Knarr, Mark R.	1604	Knowles, Joshua	2490, 2506
Kobayashi, Sigenobu	566	Kobayashi, Tetsuya	1018
Kobayashi, Tomoaki	763, 1702	Koeppen, M.	2844
Komiya, Ken	2542	Konagaya, Akihiko	631
Kondo, Nobuhiko	1095	Kralicek, Peter	1740
Krasnogor, Natalio	1398	Krink, Thiemo	312
Ku, D. C.	2222	Kubota, Mitsuhiro	2542
Kumar, G. Saravana	1871	Kumar, kuldeep	1206
Kumarappan, N.	1294	Kurnia, Andy	2756
Kushchu, Ibrahim	2777, 2441	Kwan, Raymond S. K.	2142
Kwong, Henry	367		

L

Lai, Chris	1192	Lai, Wei-Kuang	958
Lamont, Gary B.	1604, 1803, 2277, 139	Langdon, W. B.	807
Lanzi, Pier Luca	1486, 1123, 1186	Lee, Chi-Ho	1949
Lee, H. P.	2393	Lee, In-Hee	2270
Lee, J. J.	474	Lee, Kang-Hee	1199
Lee, Kin Hong	248, 928	Lee, L. H.	2134
Lee, T. H.	77, 2134, 2513, 2521	Lehre, Per Kristian	62
Leier, Andre	170	Leith, Chris	1788
Leung, Kwong Sak	248, 928, 520	Leung, Yee	520
Lewis, Andrew	1926	Li, Feng	2712
Li, Ja Bin	1688	Li, Jingpeng	2149
Li, Jingzhi	14	Li, Xiang	936
Li, Xiaodong	427, 1772	Li, Yan	1536
Li, Yanzhi	1080	Liang, Y. C.	2393, 2400
Liang, YiWen	1363	Liekens, Anthony M. L.	838
Lim, Andrew	678, 2762, 1080, 2756	Lim, H. S.	2222
Lim, Meng Hiot	1895	Lim, Yew-Jin	1632
Lima, Clodoaldo A. M.	2238	Lin, W. Z.	2393
Liu, Bo	2596	Liu, Hongwei	1115
Liu, Min	1050	Liu, W. Q.	608
Liu, X. H.	2400	Lizarraga, Giovanni	1162
Lloyd, Stefan	1014	Lo, W. L.	474
Loo, C. K.	2406	Louis, Sushil J.	2118, 1170
Lu, Guojun	1879	Lu, Y. H.	2393
Lu, Yong	1230	Lucas, Simon M.	351
Luginsland, John W.	1732	Lum, K. Y.	1856
Lun, Zheng Qi	2673	Luong, T. T. Hang	2019

M

Ma, JianFeng	1662	Ma, Long-hua	221
Ma, M.	2400	Ma, Z. Q.	2400
Mabu, Shingo	69	MacNish, Cara	1466, 783
Mahdavi, Siavash	723	Mak, C. H.	944
Haroun			
Manos, Steven	2089	Markon, Sandor	1582
Martin, Jacob G.	1612	Masaaki, Ishigame	2603
Matsui, Shouichi	1355	Matsumoto, Keinosuke	1626

Matsumura, Takashi	1243	Maturana, Jorge	1150
Mayer, Helmut A.	1145	McCaskill, John S.	2537
McDonnell, John	1170	McKay, R. I.	1639, 2596, 1363
Meksangsouy, Prakrit	1756	Merkle, Laurence D.	1732
Merwe, D. W. Van der	215	Merz, Peter	1848
Mezura-Montes, Efren	6	Michelan, Roberto	420
Middendorf, Martin	770	Middlemiss, M.	1669
Miguelañez, Emilio	823	Miikkulainen, Risto	2557, 2194
Miki, Mitsunori	459, 1086, 22, 1933, 1941	Miles, Chris	1170
Millan, William	2157, 1655	Miller, Julian F.	490
Mistry, Paavan	2142	Mitsukura, Yasue	1192
Miu, Hoi Shun	520	Mizuguchi, Naoaki	1251
Mohan, M. R.	1294	Mokhtar, Mohamed	2635
Molina, Luis C.	1957	Monmarché, N.	2642, 1376
Mori, Naoki	1626	Morishita, Ryohei	623, 615
Mostaghim, Sanaz	1764	Mu, Shengjing	914
Mukatira, Suraj	1596	Mumford, Christine L.	854
Murakawa, Masahiro	2096	Muranaka, Noriaki	1036
Murata, Yoshihiro	1072	Murty, M. Narasimha	846
Muthukaruppan, A.	1708	Mutoh, Atsuko	552

N

Nagaiwa, Akihiro	566	Nagino, Norikatsu	2829
Nain, P. K. S.	2081	Nair, P. B.	1856
Nakamura, H. K.	2719	Nakamura, Morikazu	1243
Nakamura, Tsuyoshi	552	Nakayama, Koichi	1323
Natsui, Masanori	115	Ng, HuckHui	1288
Ngu, Sze-San	2406	Nguyen, Hung Dinh	1826
Nino, Fernando	2202	Noort, Danny van	2537
Nordin, Peter	1014	Nosato, Hirokazu	2096

O

O'Cleirigh, M.	264	Ochi, Luiz Satoru	983
Oda, Terri	390	Oduguwa, Victor	1222
Ogura, Shinya	1933	Oh, Jae C.	528
Ohkura, K.	684	Ohtake, Kazumasa	2542
Ohtsuki, Nobuyuki	763, 1702	Okabe, Tatsuya	878, 2262, 647
Okamoto, Masahiro	623, 615	Okamoto, Yuko	1933
Olhofer, Markus	647	Olmsted, David L.	1680
Ong, Yew Soon	1895, 1856	Ono, Isao	1251, 623, 615
Ono, Norihiko	1251, 623, 615	Oon, Wee-Chong	1632
Oppacher, Franz	978	Özcan, Ender	1796

Q

Qian, Ji-xin	221
--------------	-----

P

Pratibha, P.	1708	Palesi, Maurizio	107
Papageorgiou, E. I.	1440	Paquet, U.	227
Park, Hye-Young	1676	Park, Kui-Hong	2449
Park, Sung-Joon	1528	Parker, Gary B.	536, 1137
Parlato, Antonio	107	Parsopoulos, K. E.	1440, 1448
Pavlidis, N. G.	2314	Peer, Es	2386
Peng, W.	77	Penner, Joanne	54
Peris, Natan	1957	Petrou, Loukas P.	2058
Pettersson, Frank	966	Pham, Q. Tuan	2019
Philpott, Mark S.	1552	Pieters, C. P.	921
Pizzuti, C.	305	Platel, Michael Defoin	281
Poladian, Leon	1811, 2089	Potter, Mitchell A.	2785
Pullan, Wayne	1029	Purshouse, Robin C.	2066

R

Rad, A. B.	944	Radha, Bhoomesh	1472
Ramos, Vitorino	1384, 1370	Rao, M. V. C.	2406
Rasheed, Khaled	1612	Ray, Tapabrata	1520, 1237
Raymond, A.	1064	Rayward-Smith, Vic J.	1552
Reinhold, Christian	1740	Reynolds, T. Jeff	351
Riff, Maria Cristina	1150	Rocha, Luis M.	2799
Rodrigues, Brian	678, 2756	Rose, John A.	2740
Rothermich, Joseph A.	490	Rothlauf, Franz	1588
Roy, Rajkumar	1222	Rughooputh, Harry C. S.	1472, 1108
Runarsson, Thomas Philip	1414	Ryan, Amanda	2462

S

Sait, Sadiq M.	708, 375	Sakamoto, Kensaku	2542
Sanabria, L. A.	815	Sanchez, E.	2217
Sanderson, Arthur C.	862	Sangkawelert, Nuntapon	2704
Sarafis, Ioannis A.	797	Sarif, Bambang A. B.	708, 375
Sarker, R. A.	2837, 2011	Sasai, M.	2719
Sasaki, Yuya	886	Schultz, Alan C.	359
Schwind, Michael	1588	Sciuto, Donatella	1486
Secker, Andrew	131	Seki, Syunichi	2748
Sendhoff, Bernhard	878, 1910, 2262, 647, 663	Sendhoff, Wei-Wen	1864
Seow, Tian Hou	2292	Septor	320
Shan, Y.	1639	Shengwu, Xiong	1500
Shi, Chuan	1536	Shi, D. M.	1856
Shi, X. H.	2393	Shibata, Naoaki	1072
Shimohara, Katsunori	1323	Shimosaka, Hisashi	1941
Shin, Ki-Roo	2549	Shin, Soo-Yong	2270
Sierra, Margarita Reyes	482	Slimane, M.	2642, 1376
Smith, Jim	498, 2338, 2346	Soh, B.	815
Song, Andy	2126	Soria-Frisch, A.	2844
Spais, Vasilios A.	2058	Spalding, J. Dylan	1466

Speer, Nora	1848	Spezzano, G.	305
Spieth, Christian	1848	Spitzlinger, Markus	1145
Squillero, Giovanni	2034, 2217	Sreenuch, T.	1302
Srinivasan, Dipti	2292	Stacey, A.	1425
Stanley, Kenneth O.	2557	Stine, Matt	1596
Stockheim, Tim	1588	Stonier, Russel J.	38, 2434, 467
Streichert, Felix	692	Su, Hongye	914
Su, Yan	2298	Sudo, Takeshi	1582
Sugawara, Ken	1833	Sugiyama, M.	684
Sun, Bing-Yu	1480	Suresh, S.	1708
Suyama, Akira	2740	Suzuki, Hiromichi	1582
Svangård, Nils	1014	Sy, Th.	2844

T

Tabor, Paul	823	Tagawa, Kiyoharu	2748
Tai, Kang	1520, 671, 655	Takahara, Glen	1788
Takahashi, Satoshi	1582	Takahashi, Yasuhiro	154
Takano, M.	2719	Takao, Kenji	1178
Takao, Terano	1101	Takashima, Eiichi	1072
Takeichi, Hiroshi	1251	Tam, Eugene P. W.	474
Tan, K. C.	77, 2134, 2513, 2521	Tan, M. K.	2222
Tanev, Ivan	2580	Tang, Maolin	2627
Tanimura, Yusuke	1086	Tasoulis, D. K.	2314
Tay, Arthur	1288	Teich, Juergen	1764, 1740
Tekol, Yuce	256, 1348, 560	Teo, Jason	755
Thomas, P. J.	2434	Thomsen, René	2354, 312
Thomson, Robert	382	Tian, Lirong	242
Tian, Tianhai	162	Timmis, Jon	131
Ting, Chuan-Kang	1259	Ting, Tiew-On	2406
Tiwari, Ashutosh	1222	Tokumaru, Masataka	1036
Tomassini, M.	2042, 289, 305	Trinder, PhilW.	797
Tsou, Dean	783	Tsourdos, A.	1302
Tsutsui, Shigeyoshi	22	Tu, Zhenguo	1230
Tufte, Gunnar	731		

U

Ueda, K.	684	Ulmer, Holger	692
Unveren, Ahmet	256, 560	Uosaki, Katsuji	2102, 1095
Ursem, Rasmus K.	790		

V

V.ányi, R.óbert	2791	Vadstrup, Pierre	790
Valdes, Julio J.	1957	Vamplew, Peter	1331
Vanneschi, L.	2042, 289, 305	Vargas, Patrícia A.	420
Venkatarayalu,	1237	Venturini, G.	2642, 1376
Neelakantam V.			
Verel, Sebastien	273	Verma, brijesh	1206
Vesterstrøm, Jakob	327	Volper, Dimitri	528

Vrahatis, M. N. 1440, 1448, 2314

W

Wako, Jun'ya 459
Wang, Fan 1080
Wang, Jianxiong 581
Wang, Sheng Yin 671
Wang, Zhongfan 870
Weiwu, Wang 1500
Whigham, P. A. 2362
White, B. A. 1302
White, Tony 390
Wiese, Kay C. 343, 335
Willadsen, Kai 185
Wineberg, M. 264
Witt, Carsten 1996
Won, Kok Sung 1520
Wong, Kit Po 1688, 587
Wong, Man-Leung 2498
Wu, Angus K. M. 474
Wu, Zejun 1363

Wang, Benyi 1716
Wang, Fang 490
Wang, Lei 397
Wang, Yuexuan 914
Watanabe, Isamu 1355
Weng, L. 2665
While, Lyndon 2284
White, J. D. 2222
Wiegand, R. Paul 30
Wiles, Janet 185, 199
Willmes, Lars 663
Wing, Tang 1064
Wittner, Otto 1456
Wong, K. K. 1280
Wong, Kok Wai 1688
Woodward, John 830, 1056
Wu, Cheng 1050
Wu, Zhijian 14, 1026

X

Xia, Yu 1716
Xie, Tao 906
Xu, Huan 1288
Xue, Feng 862

Xiao, F. 678
Xiong, Shengwu 2712
Xu, Z. 587
Xuefeng, Zhu 2815

Y

Yakawa, Tetsuya 1044
Yamamori, Kunihiro 1826
Yamamoto, Toru 1178
Yan, Zhanyu 1513
Yanai, Kohsuke 1618
Yang, Shengxiang 2246
Yao, Xin 1414
Yin, Wen-Jun 1050
Yoshida, Takeshi 459
Young, N. 467
Yuan, Bo 443, 451
Yuasa, Kota 1178
Yuta, Kikuo 2580

Yamada, Seiji 2829
Yamamoto, Tetsuya 2748
Yamamura, Masayuki 1528
Yan, Zhenyu 951
Yang, Hui 1513
Yang, Y. J. 2513, 2521
Yasunaga, Moritoshi 1748, 1826
Yoo, Kee-Young 1676
Yoshihara, Ikuo 1748, 1826
Yu, Jingxian 1819
Yuan, J. 2659
Yuchi, Ming 1507, 1949

Z

Zalzala, Ali M. S. 823, 797
Zeng, SanYou 898

Zell, Andreas 692, 1848
Zeng, Yong 1662

Zhang, Byoung-Tak	2270, 2549	Zhang, J.	435, 474
Zhang, L. B.	2400	Zhang, Li-yan	221
Zhang, ping	1206	Zhang, Yanan	608
Zhang, Z. K.	1856	Zheng, Hong	2648
Zheng, Yong-ling	221	Zhou, Aimin	951
Zhou, C. G.	2393, 2400	Zhou, Yuren	1
Zou, xiufen	1513	Zuben, F. J. Von	574
Zuben, Fernando J. Von	2238, 420	Zuo, Xingquan	100
Zvada, Szilvia	2791		