

SEAL 2014 Presentation Schedule

Tuesday December 16 10:30 - 12:35 (Stream A), CO2.20, Commerce Building

Chair: Aaron Chen

Special Session: Evolutionary Machine Learning (I)

10:30 - 10:55	Classification of Lumbar Ultrasound Images with Machine Learning	Shuang Yu and Kok Kiong Tan
10:55 - 11:20	Genetic Programming for Multiclass Texture Classification Using a Small Number of Instances	Harith Al-Sahaf, Mengjie Zhang and Mark Johnston
11:20 - 11:45	A Stepwise Multi-centroid Classification Learning Algorithm with GPU Implementation	Cain Cresswell-Miley and Kourosh Neshatian
11:45 - 12:10	Dynamic Selection of Evolutionary Algorithm Operators Based on Online Learning and Fitness Landscape Metrics	Pietro A. Consoli, Leandro L. Minku and Xin Yao
12:10 - 12:35	Learning Patterns of States in Time Series by Genetic Programming	Feng Xie, Andy Song and Vic Ciesielski

Tuesday December 16 10:30 - 12:35 (Stream B), CO2.21, Commerce Building

Chair: Peter Whigham

Special Session: Evolutionary Scheduling & Combinatorial Optimization (I)

10:30 - 10:55	Improving Efficiency of Heuristics for the Large Scale Traveling Thief Problem	Yi Mei, Xiaodong Li and Xin Yao
10:55 - 11:20	Selection Schemes in Surrogate-Assisted Genetic Programming for Job Shop Scheduling	Su Nguyen, Mengjie Zhang, Mark Johnston and Kay Chen Tan
11:20 - 11:45	A Comparison between Two Evolutionary Hyper-Heuristics for Combinatorial Optimisation	Richard Marshall, Mark Johnston and Mengjie Zhang
11:45 - 12:10	Developing a Hyper-Heuristic Using Grammatical Evolution and the Capacitated Vehicle Routing Problem	Richard Marshall, Mark Johnston and Mengjie Zhang
12:10 - 12:35	An Organizational Cooperative Coevolutionary Algorithm for Multimode Resource-Constrained Project Scheduling Problems	Lixia Wang, Jing Liu and Mingxing Zhou

Tuesday December 16 13:30 - 15:30 (Stream A), CO2.20, Commerce Building

Chair: Kourosh Neshatian

Special Session: Evolutionary Feature Reduction (I)

13:30 - 13:55	Improved PSO for Feature Selection on High-Dimensional Datasets	Binh Tran, Bing Xue and Mengjie Zhang
13:55 - 14:20	Multi-objective Feature Selection in Classification: A Differential Evolution Approach	Bing Xue, Wenlong Fu and Mengjie Zhang
14:20 - 14:45	PSO and Statistical Clustering for Feature Selection: A New Representation	Hoai Bach Nguyen, Bing Xue, Ivy Liu and Mengjie Zhang
14:45 - 15:00	A Multi-objective Optimization Method for Product Feature Fatigue Problem	Jinze Chai, Ming Li, Yu Zheng, Liya Wang and Fan Yu
15:00 - 15:15	Genetic Programming for Channel Selection from Multi-stream Sensor Data with Application on Learning Risky Driving Behaviours	Hoang Anh Dau, Feng Xie, Andy Song, Flora Salim and Vic Ciesielski
15:15 - 15:30	Variable Neighbourhood Iterated Improvement Search Algorithm for Attribute Reduction Problems	Yahya Z. Arajy, Salwani Abdullah and Saif Kifah

Tuesday December 16 13:30 - 15:30 (Stream B), CO2.21, Commerce Building**Chair: Mengjie Zhang****Special Session: Evolutionary Scheduling & Combinatorial Optimization (II)**

13:30 - 13:55	A Probabilistic Evolutionary Optimization Approach to Compute Quasiparticle Braids	Roberto Santana, Ross B. McDonald and Helmut Katzgraber
13:55 - 14:20	Adaptive System Design by a Simultaneous Evolution of Morphology and Information Processing	Olga Smalikhov and Markus Olhofer
14:20 - 14:45	Enhancing Heuristics for Order Acceptance and Scheduling Using Genetic Programming	John Park, Su Nguyen, Mengjie Zhang and Mark Johnston
14:45 - 15:00	Load Balance Aware Genetic Algorithm for Task Scheduling in Cloud Computing	Zhi-Hui Zhan, Ge-Yi Zhang and Jun Zhang
15:00 - 15:15	Scaling Up Solutions to Storage Location Assignment Problems by Genetic Programming	Jing Xie, Yi Mei, Andreas Ernst, Xiaodong Li and Andy Song
15:15 - 15:30	Dual Population Genetic Algorithm for the Cardinality Constrained Portfolio Selection Problem	Nasser Sabar and Andy Song

Tuesday December 16 16:00 - 17:20 (Stream A), CO2.20, Commerce Building**Chair: Will Browne****Special Session: Evolutionary Machine Learning (II)**

16:00 - 16:25	Reusing Learned Functionality to Address Complex Boolean Functions	Isidro Alvarez, Will Browne and Mengjie Zhang
16:25 - 16:50	Multi-objective Multiagent Credit Assignment Through Difference Rewards in Reinforcement Learning	Logan Yliniemi and Kagan Tumer
16:50 - 17:05	Analysis of Online Signature Based Learning Classifier Systems for Noisy Environments: A Feedback Control Theoretic Approach	Kamran Shafi and Hussein Abbass
17:05 - 17:20	Anomaly Detection Using Replicator Neural Networks Trained on Examples of One Class	Hoang Anh Dau, Vic Ciesielski and Andy Song

Tuesday December 16 16:00 - 17:20 (Stream B), CO2.21, Commerce Building**Chair: Bing Xue****Special Session: Evolutionary Feature Reduction (II)**

16:00 - 16:25	Feature Selection Method with Proportionate Fitness Based Binary Particle Swarm Optimization	Zhe Zhou, Xing Liu, Ping Li and Lin Shang
16:25 - 16:50	Overview of Particle Swarm Optimisation for Feature Selection in Classification	Binh Tran, Bing Xue and Mengjie Zhang
16:50 - 17:05	Genetic Programming for Measuring Peptide Detectability	Soha Ahmed, Mengjie Zhang, Lifeng Peng and Bing Xue
17:05 - 17:20	An Evolutionary Algorithm for TD-LTE Resource Allocation Based on Adaptive Fairness Threshold	Qiang Wang, Hai-Lin Liu, Zhen-Hua Li, Yiu-Ming Cheung and Jun Zhang

Wednesday December 17 10:30 - 12:35 (Stream A), CO2.20, Commerce Building

- 10:30 - 10:55 Evolving Hard and Easy Traveling Salesman Problem Instances: A Multi-objective Approach
- 10:55 - 11:20 A Multi-Objective A* Search Based on Non-dominated Sorting
- 11:20 - 11:45 Multi-objective Optimisation, Software Effort Estimation and Linear Models
- 11:45 - 12:10 Adaptive Update Range of Solutions in MOEA/D for Multi and Many-Objective Optimization
- 12:10 - 12:35 A Steady-State Genetic Algorithm for the Dominating Tree Problem

Chair: Xiaodong Li

He Jiang, Wencheng Sun, Zhilei Ren, Xiaochen Lai and Yong Piao

Mohammad Haqqani, Xiaodong Li and Xinghuo Yu

Peter Whigham and Caitlin Owen

Hiroyuki Sato

Shyam Sundar

Wednesday December 17 10:30 - 12:35 (Stream B), CO2.21, Commerce Building

- 10:30 - 10:55 On the Impact of Utility Functions in Interactive Evolutionary Multi-objective Optimization
- 10:55 - 11:20 Beyond the Edge of Feasibility: Analysis of Bottlenecks
- 11:20 - 11:45 Adaptive Risk Aversion in Social Dilemmas
- 11:45 - 12:10 Fitness Landscape Analysis of Circles in a Square Packing Problems
- 12:10 - 12:35 The Introduction of Asymmetry on Traditional 2-Parent Crossover Operators for Crowding and Its Effects

Chair: Kevin Korb

Frank Neumann and Anh Quang Nguyen

Mohammad Reza Bonyadi, Zbigniew Michalewicz and Markus Wagner

Michael Kirley and Friedrich Burkhard von der Osten

Rachael Morgan and Marcus Gallagher

Shigeyoshi Tsutsui

Wednesday December 17 13:30 - 15:30 (Stream A), CO2.20, Commerce Building

- 13:30 - 13:55 Automated Design of Architectural Layouts Using a Multi-Objective Evolutionary Algorithm
- 13:55 - 14:20 Automatic Resolution Selection for Edge Detection Using Genetic Programming
- 14:20 - 14:45 Evolutionary Feature Combination Based Seed Learning for Diffusion-Based Saliency
- 14:45 - 15:00 Real World Applications and Evolutionary Image Analysis Application of Adaptive Streaming Technology in Remotely Driven Electric Vehicles
- 15:00 - 15:15 Optimising Wi-Fi Installations Using a Multi-Objective Evolutionary Algorithm
- 15:15 - 15:30 An Approach for Real-Time Frame Size Adaptation in M-JPEG Streams

Chair: Andy Song

Darcy Chia and Lyndon While

Wenlong Fu, Mark Johnston and Mengjie Zhang

Syed S. Naqvi, Will N. Browne and Christopher Hollitt

Kyaw Htet, Arun Narayanan, Tan Kiong and Chandran Nair

Lyndon While and Chris McDonald

Kyaw Htet and Tan Kiong

Wednesday December 17 13:30 - 15:30 (Stream B), CO2.21, Commerce Building

- 13:30 - 13:55 Local Landscape Patterns for Fitness Landscape Analysis
- 13:55 - 14:20 Why Advanced Population Initialization Techniques Perform Poorly in High Dimension?
- 14:20 - 14:45 Bloat and Generalisation in Symbolic Regression
- 14:45 - 15:00 Solving Dynamic Optimisation Problem with Variable Dimensions
- 15:00 - 15:15 Generating Software Test Data by Particle Swarm Optimization
- 15:15 - 15:30 Evolution of Developmental Timing for Solving Hierarchically Dependent Deceptive Problems

Chair: David Balduzzi

Shinichi Shirakawa and Tomoharu Nagao

Borhan Kazimipour, Xiaodong Li and A.K. Qin

Grant Dick

Abdelmonaem Abdallah, Daryl Essam and Ruhul Sarker

Ya-Hui Jia, Wei-Neng Chen, Jun Zhang and Jing-Jing Li

Kouta Hamano, Kei Ohnishi and Mario Koeppen

Wednesday December 17 16:00 - 17:20 (Stream A), CO2.20, Commerce Building

- 16:00 - 16:25 Customized Selection in Estimation of Distribution Algorithms
- 16:25 - 16:50 A Hybrid GP-Tabu Approach to QoS-Aware Data Intensive Web Service Composition
- 16:50 - 17:05 The Performance Effects of Interaction Frequency in Parallel Cooperative Coevolution
- 17:05 - 17:20 Fuzzy Clustering with Fitness Predator Optimizer for Multivariate Data Problems

Chair: Grant Dick

Roberto Santana, Alexander Mendiburu and Jose A. Lozano

Yang Yu, Hui Ma and Mengjie Zhang

Xiaofen Lu, Stefan Menzel, Ke Tang and Xin Yao

Shiqin Yang and Yuji Sato

Wednesday December 17 16:00 - 17:20 (Stream B), CO2.21, Commerce Building

- 16:00 - 16:25 A Modified Screening Estimation of Distribution Algorithm for Large-Scale Continuous Optimization
- 16:25 - 16:50 Clustering Problems for More Useful Benchmarking of Optimization Algorithms
- 16:50 - 17:05 Walking Motion Learning of Quadrupedal Walking Robot by Profit Sharing That Can Learn Deterministic Policy for POMDPs Environments
- 17:05 - 17:20 Schemata Bandits for Binary Encoded Combinatorial Optimisation Problems

Chair: Jun Zhang

Krishna Mishra and Marcus Gallagher

Marcus Gallagher

Yuya Morino and Yuko Osana

Madalina Drugan, Pedro Isasi and Bernard Manderick

Thursday December 18 10:00 - 11:40 (Stream A), CO2.20, Commerce Building

- 10:00 - 10:25 An Analysis of Differential Evolution Parameters on Rotated Bi-objective Optimization Functions
- 10:25 - 10:40 Evolutionary Multi-objective Optimization A Novel Hybrid Multi-objective Optimization Framework: Rotating the Objective Space
- 10:40 - 10:55 PaCcET: An Objective Space Transformation to Iteratively Convexify the Pareto Front
- 10:55 - 11:10 A GP Approach to QoS-Aware Web Service Composition and Selection
- 11:10 - 11:25 Extending AeSeH from Many-objective to Multi-objective Optimization
- 11:25 - 11:40 User Preferences for Approximation-Guided Multi-objective Evolution

Chair: Hui Ma

Martin Drozdik, Kiyoshi Tanaka, Hernan Aguirre, Sebastien Verel, Arnaud Liefooghe and Bilel Derbel

Xin Qiu, Ye Huang, Jian-Xin Xu and Kay Chen Tan

Logan Yliniemi and Kagan Tumer

Alexandre Sawczuk Da Silva, Hui Ma and Mengjie Zhang

Hernán Aguirre, Yuki Yazawa, Akira Oyama and Kiyoshi Tanaka

Anh Quang Nguyen, Markus Wagner and Frank Neumann

Thursday December 18 10:00 - 11:25 (Stream B), CO2.21, Commerce Building

- 10:00 - 10:25 Effects of Mutation and Crossover Operators in the Optimization of Traffic Signal Parameters
- 10:25 - 10:40 Automatic Melody Generation Considering User's Evaluation Using Interactive Genetic Algorithm
- 10:40 - 10:55 Object Recognition by Stochastic Metric Learning
- 10:55 - 11:10 Analysis of Hybrid Classification Approach to Differentiate Dense and Non-dense Grass Regions
- 11:10 - 11:25 Image Segmentation: A Survey of Methods Based on Evolutionary Computation

Chair: Vic Ciesielski

Rolando Armas, Hernan Aguirre and Kiyoshi Tanaka

Mio Takano and Yuko Osana

Oliver Batchelor and Richard Green

Sujan Chowdhury, Brijesh Verma and David Stockwell

Yuyu Liang, Mengjie Zhang and Will Browne