AI-OPT 2022

LOCATION: Level 7 Melbourne Connect, 700 Swanston St, Carlton, VIC

Day One Thursday 17th November

08:30 - 13:00 Level 8 - Kitchen

13:00 - 18:00 Level 7 Manhari Room (walk straight through shared kitchen space to the back of the floor)

08:30 – 09:00	**Registration tea/coffee**	
09:00 – 09:10	Welcome and Introduction (acknowledgement of country)	
SESSION ONE		
09:10 – 10:00	Spotlight Talks	
	Yuxuan Yang	Cluster-Based Diversity Over-Sampling: A Density And Diversity Oriented Synthetic Over-Sampling For Imbalanced Data
	Qian Wan	The Splittable Agricultural Spraying Vehicle Routing Problem
	Markus Wagner	Collaborative Sensing And Learning For Maritime Situational Awareness
	Hirad Assimi and Ali Pourmousavi Kani	Underground Mining Truck Electrification: Optimisation Challenges
	Yue Xie, Aneta Neumann, Ty Stanford, Charlotte Lund Rasmussen, Dorothea Dumuid and Frank Neumann	Evolutionary Time-Use Optimization For Improving Children's Health Outcomes
	Hung Du, Srikanth Thudumu, Irini Logothetis, Scott Barnett, Rajesh Vasa and Kon Mouzakis	Context-Aware Optimisation Approach For Resource Allocation
	Amir Hosein Fardi, Zahra Mehraban, Rammohan Mallipeddi and Ali Jamali	A Modified Decomposition Based Many-Objective Particle Swarm Optimization With Alpha-Stable Mutation And Binary Additive Indicator
10:00 – 10:40	Talks	
	Manou Rosenberg	A multi-objective genetic algorithm for the Euclidean Steiner tree problem with obstacles
	Shizhe Zhao, Daniel Harabor and Peter J. Stuckey	Reducing Redundant Work in Jump Point Search
	Discussion Session	
10:30 – 11:10	**Morning Tea**	
SESSION TWO		
11:10 – 12:40	Spotlight Talks	
	Frank Neumann	Bio-inspired computing for problems with chance constraints

	Kokila Perera, Aneta Neumann and Frank Neumann	Multi Objective Evolutionary Algorithms for Chance Constrained Optimization Problems
	Saba Sadeghi Ahouei	Benchmarking for Chance-constrained Submodular Optimization Problems
	Xiankun Yan	Runtime analysis of Evolutionary Algorithms for Makespan Scheduling Problem with Chance Constraints
11:40 – 12:25	Talks	
	Mohsen Bagheri, Simon Bowly and Andreas Ernst	A Mixed Integer Programming model for multimodal public transport network design problem
	Jeremy Vollen, Mashbat Suzuki, Haris Aziz, Sujit Gujar and Manisha Padala	Coordinating Monetary Contributions in Participatory Budgeting
	Helani Chathurika Wickramaarachchi Wickramaarachchilage, Michael Kirley and Nicholas Geard	Impact of Reward Shaping in Decision Making
12:25 - 12:40	Discussion Session	
12:40 – 14:00	**Lunch**	
SESSION THREE		
14:00 – 15:30	Haris Aziz, Alexander Lam, Barton Lee and Toby Walsh	Strategyproof and Proportionally Fair Facility Location
	Linnea Ingmar, Maria Garcia de la Banda, Peter J. Stuckey and Guido Tack	Modelling Diversity of Solutions
	Adel Nikfarjam, Aneta Neumann and Frank Neumann	On the Use of Quality Diversity Algorithms for The Traveling Thief Problem
	Bing Wang, Hemant Singh and Tapabrata Ray	Adjusting normalization bounds to improve hypervolume based search for expensive multi-objective optimization
	Aneta Neumann	Advanced Mine Optimisation under Uncertainty
15:30 - 16:00	**Afternoon Tea**	
SESSION FOUR		
16:00 - 17:30	Serge Gaspers, Abdallah Saffidine and Tiankuang Zhang	4-Coloring in time O(1.7148^n)
	Mingyu Guo, Max Ward-Graham, Aneta Neumann, Frank Neumann and Hung Nguyen	Scalable Edge Blocking Algorithms for Defending Active Directory Style Attack Graphs
	Zahra Namazian, John Betts and Peter Stuckey	Predict then optimise for inventory management
	Yunzhuang Shen, Yuan Sun, Xiaodong Li and Andrew Eberhard	Enhancing Column Generation by a Machine-Learning-Based Pricing Heuristic for Graph Coloring
	Yige Song, Michael Kirley and Vanessa Ferdinand	Biases in Bayesian Decision-making for Repeated Games

17:30 – 18:30	**Networking and drinks**

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Day Two Friday 18th November

08:30 - 18:00 Level 7 Manhari Room (walk straight through shared kitchen space to the back of the floor)

08:30 – 09:00	**Arrival tea/coffee**	
SESSION ONE		
09:00 – 10:30	Talks	
	Winton Nathan-Roberts, Uwe Aickelin, Yuan Sun and Ling Luo	Hybrid Multi-Task Gaussian Process Model for Multi-Fidelity Modelling
	Kamrul Rahi, Hemant Singh and Tapabrata Ray	Partial Evaluation Strategies for Expensive Evolutionary Constrained Optimization
	Sara Hajari and Marcus Gallagher	Generating Interesting and Useful Clustering Problem Instances for Benchmarking
	Jeffrey Christiansen and Kate Smith-Miles	Instance Space Analysis for the Quadratic Assignment Problem
	Mario Andrés Muñoz	Behavioural spaces: A visual representation combining landscape and recurrence analyses
	Winton Nathan-Roberts, Uwe Aickelin, Yuan Sun and Ling Luo	Hybrid Multi-Task Gaussian Process Model for Multi-Fidelity Modelling
10:30 – 11:10	**Morning Tea**	
SESSION TWO		
11:00 – 12:45	Talks	
	Jakub Vincalek, Sean Walton and Ben J. Evans	Optimising a novel winglet for use on a wind turbine blade
	Jordan Bishop and Marcus Gallagher	Solving Realistic Portfolio Optimisation Problems Using Interactive Multi-objective Evolutionary Algorithms
	Hanan Alsouly, Michael Kirley and Mario Andres Munoz	An Instance Space Analysis of Constrained Multi-Objective Optimization Problems
	Sergey Polyakovskiy	A CP-SAT Exact Approach to the Two-Dimensional Orthogonal Guillotine Bin Packing Problem
	Denis Antipov	A lazy way to dynamically choose parameters of EAs
	David Howard, Josh Pinskier, Hansi Weeratunge and Xing Wang	Optimising robots with AI
12:45 – 14:00	**Lunch**	

SESSION THREE		
14:00 – 15:00	Discussion session	ECRs, Grants, Opportunites
15:00 - 15:30	**Afternoon Tea**	
SESSION FOUR		
15:30 - 17:00	Talks	
	Bach Long Nguyen, Duong Nguyen, Hung Nguyen, Duy Ngo and Markus Wagner	Multi-Agent Task Assignment in Vehicular Edge Computing: A Regret-Matching Learning-Based Approach
	Michelle Blom, Adrian Pearce, Daniel Angley and Leon Clark	Mobile Sensor Teaming -- Comparing and Integrating Distributed Constraint Optimisation and Multi-Agent Reinforcement Learning
	Angus Kenny, Tapabrata Ray and Hemant Singh	An Iterative Two-stage Multi-fidelity Optimization Algorithm for Computationally Expensive Problems
	Ilankaikone Senthooran, Matthias Klapperstueck, Gleb Belov, Tobias Czauderna, Kevin Leo, Mark Wallace, Michael Wybrow and Maria Garcia De La Banda	Human-Centred Feasibility Restoration in Practice
	Venkat Munagala, Srikanth Thudumu, Rajesh Vasa, Kon Mouzakis and Sushil Bhandari	AI-based optimisation is the way forward: A tool for optimal drill and blast design
17:00 – 17:10	Wrap up	