Monday

Time	9.00	Registration, Quinn School of Business		
	9.30 **Keynote**	*From green networking to network virtualization: some interesting problems arising from telecommunication applications.*		
		Prof Bernardetta Addis		
		Chair: Luis Gouveia, Room Q014		
	10.30	Coffee, Quinn School of Business		
	Session 1	1A Q011	1B Q012	1C Q013
	Topic	Telecommunication Networks	Robust Optimization	P-Median
	Chair	Maria Teresa Godinho	Bernard Fortz	Cristina Requejo
11.00	1	Enhancing the resilience of telecommunication networks through geodiversification	Robust optimization for the Segment Routing Traffic Engineering Problem	On the nested p-center problem
		José Alves, Maria Teresa Godinho and Marta Pascoal	Hugo Callebaut, Jérôme De Boeck and Bernard Fortz	Christof Brandstetter and Markus Sinnl
11.30	2	Survivable Traffic Grooming with Practical Constraints in Large-Scale Optical Network	Two-Stage Robust b-matchings under uncertain capacities	Revisiting a Cornuéjols-Nemhauser-Wolsey formulation for the p-median problem
		Jianwei Niu, Junyan Liu, Fan Zhang, Fabo Sun, Kerong Yan and Junqi Ma	Jenny Segschneider and Arie M. C.A. Koster	Cristina Requejo and Agostinho Agra
12.00	3	Feasibility of Near Term Quantum Optimisation of Communication Networks	Mixed-integer linearity in nonlinear optimization: a trust region approach	Extensions of Node-Depot Assignment Formulations for the Hamiltonian p-Median Problem
		Catherine White	Alberto De Marchi	Francisco Canas and Luis Gouveia
	12.30	Lunch and cultural activities, Quinn School of Business		
	14.00 **Tutorial**	*Buildings as Smart Grid Network Components*		
		Dr.s Scott McDonald and Kanika Sharma		
		Chair: Deepak Ajwani, Room Q014		
	15.00	Coffee, Quinn School of Business		
	Session 2	2A Q011	2B Q012	2C Q013
	Topic	Smart Grids	Fairness and decision trees	Sustainable Mobility and Transportation
	Chair	Cristian Aguayo	Edoardo Amaldi	Lukas Dijkstra
15.30	1	Unit Commitment problem with uncertain demand and renewable energy availability	Resource Planning and Equitable Work Assignment for On-site Services	Digraphs and k-Domination Models for Facility Location Problems in Road Networks: Greedy Heuristics
		Cristian Aguayo and Bernard Fortz	Yash Kumar, Anantaram Balakrishnan and Prakash Mirchandani	Lukas Dijkstra, Andrei Gagarin, Padraig Corcoran and Rhyd Lewis
16.00	2	A Model for Local Energy Community Management in the Presence of Distribution Network Time-of-use Tariffs	Cardinality and fairness constrained clustering using k-means	Heuristics for improving bicycle networks
		James Fitzpatrick, Juan Sepúlveda, Hélène Le Cadre, Luce Brotcorne, Victor Astapov, Paula Carroll and Anna Mutule	Antoine Obled and Marta Pascoal	Félix Repusseau, Tifenn Rault and Emmanuel Néron
16.30	3	Risk Measures in Equilibrium Energy Markets	Soft regression trees: a model variant and a decomposition training algorithm	A Guided Insertion Mechanism for Solving the Dynamic Large-Scale Dial-a-Ride Problem
		Dáire Byrne and Mel T. Devine	Edoardo Amaldi, Antonio Consolo and Andrea Manno	Chijia Liu, Alain Quilliot, Hélène Toussaint and Dominique Feillet
17.30		Welcome Event, Quinn School of Business		

Tuesday

Time	9.00	Registration, Quinn School of Business			
	9.30	**Keynote**	Self-adjusting networks Prof Stefan Schmid Chair: Bernard Fortz, Room Q014		
	10.30	Coffee, Quinn School of Business			
		Session 3	3A Q011	3B Q012	3C Q013	3D - Q010 (TBC)
		Topic	Combinatorial Optimization	Network Optimization	Exact Approaches	Network Optimisation
		Chair	Seán McGarraghy	Heletjé van Staden	Cole Smith	Mirko Mucciarini
	11.00	1	Ensemble pruning via an integer programming approach with diversity constraints	Optimizing K-level facility location problem:a bipartite boolean quadratic programming model solved by tabu Search with random-key sequence	Cutting-plane algorithms for the stochastic diversion path problem	Multi-depot split delivery of batches
			Marcelo Antônio Mendes Bastos, Humberto Brandão and Cristiano Arbex Valle	Bahram Alidaee, Haibo Wang, Jun Huang and Lutfu Sua	Cole Smith, Orkun Baycik and Di Nguyen	Críston Souza and Andréa Santos
	11.30	2	Learning to Prune Instances of Steiner Tree Problem in Graphs	Bayesian Optimisation for Facility Location Problems	A cutting-plane-based method for solving fixed-charge transportation problems using new valid inequalities for single-node flow polytope	Identification of reaction chains in metabolic and genomic networks for species comparison
			Jiwei Zhang, Dena Tayebi, Saurabh Ray and Deepak Ajwani	Niyati Seth and Michael Fop	Guneshwar Anand, Sachin Jayaswal and B Srirangacharyulu	Florent Cabret, Ronan Bocquillon and Emmanuel Néron
	12.00	3	Utilizing Graph Sparsification for Pre-processing in Max Cut QUBO Solver	Optimizing Charging Station Locations for Electric Vehicles: Catering to Diverse Driver Profiles	Valid Inequalities to Solve the Train Stop Scheduling Problem	Integer Linear Programming for energy-efficient scheduling with time-dependent consumption functions
			Vorapong Suppakitpaisarn and Jin-Kao Hao	Jingyu Xiang, Paula Carroll and Annunziata Esposito Amideo	Faiz Hamid and Yogesh Agarwal	Mirko Mucciarini, Giulia Caselli, Daniele De Santis, Manuel Iori and Juan José Miranda Bront
	12.30	Lunch and cultural activities, Quinn School of Business			
	14.00	**Tutorial**	*Optimization Methods for Large-scale Cell-free Massive MIMO* Dr Nam Tran Chair Paula carroll, Room Q014		
	15.00	Coffee, Quinn School of Business			
		Session 4	4A Q011	4B Q012	4C Q013	4D Q010 (TBC)
		Topic	Routing Algorithms	Telecommunication Networks	Routing	Network and Flow Optimisation
		Chair	Debayjoti Biswas	Adam Ouorou	Antonio Frangioni	José Valério de Carvalho
	15.30	1	A Triple Bottom Line optimization model for assignment and routing of on-demand home services	In-Band Network Telemetry for Efficient Congestion Mitigation	A nested Benders-Lagrange Approach to Delay Constrained Routing	Instantaneous and limiting behavior of an n-node blockchain under cyber attacks from multiple hackers
			Debajyoti Biswas, Laurent Alfandari and Claudia Archetti	Youcef Magnouche, Sébastien Martin, Jeremie Leguay and Paolo Medagliani	Antonio Frangioni, Laura Galli and Enrico Sorbera	Liang Hong and Xiufeng Xu
	16.00	2	Exploring varied average speeds to assess energy consumption and charging profiles in EVRP benchmark instances	Exploring quantum optimization for solving the PCI planning problem in 5G networks	Addressing demand uncertainty in the pickup and delivery problem with time windows via robust optimisation	A combinatorial flow-based formulation for temporal bin packing problems
			Clíodhna Ní Shé, Damian Flynn and Paula Carroll	Erico Teixeira, Adriano Borges and Pamela Bezerra	Alex Abreu, Maria Battarra and Pedro Munari	John Martinovic, Nico Strasdat, José Valério de Carvalho and Fabio Furini
	16.30	3	An Improved Single-Commodity Flow Formulation for the Vehicle Routing Problem with a Heterogeneous Fleet	Generation of Industrial Protocol Traffic via Enhanced Wasserstein GAN	Addressing nurse preference in nurse assignment and routing problem in dynamic environment	Multi-Objective Multi-Commodity Flow Optimization for Wartime Planning with Cyber-Effects
			Devanand Devanand	Mikel Moreno Moreno, Lander Segurola, Francesco Zola, Arantza Del Pozo and Iker Pastor López	Md Samiullah Ansari and Avijit Khanra	Alex Hoffendahl, Chancellor Johnstone, Alex Stephens, Richard Dill and Lance Champagne
	17.30	Social Event (room Q043) and conference dinner (University Club)			

Wednesday

Time				
	9.00	Registration, Quinn School of Business		
	9.30	**Keynote**	Benders Adaptive-Cuts Method Applied to Network Design and Facility Location Problems Under Uncertainty Prof Ivana Ljubic Chair: Arie Koster, Room Q014	
	10.30	Coffee, Quinn School of Business		
		Session 5	5A Q011	5B Q012	5C Q013
		Topic	Network Interdiction	Heuristics	Graph Theory
		Chair	Di Nguyen	Peter Keenan	Walid Ben-Ameur
	11.00	1	Adaptive Partition-based Methods in an Asymmetric Shortest-path Network Interdiction Problem	Solving the Team Orienteering Arc Routing Problem: A Biased-Randomised Iterated Local Search Approach	On the k-slow Burning Conjecture
			Di Nguyen and Yongjia Song	Xabier A. Martin, Peter Keenan, Javier Panadero, Sean McGarraghy and Angel A. Juan	Arie Koster, Michaela Hiller, Jonas Kreyer and Philipp Pabst
	11.30	2	Assessing the Robustness of Projects via Longest-Path Network Interdiction with Failure Groups	A Multi-Swap Heuristic for Rolling Stock Rotation Planning with Predictive Maintenance	Solving the multi-color Travelling Salesman Problem
			Fei Wu, Jannik Matuschke and Erik Demeulemeester	Felix Prause	Juan Jose Salazar Gonzalez and Roberto Wolfler-Calvo
	12.00	3	An all-pairs shortest path coloring model to optimize network intrusion detection systems	An improved variant of the Iterated Inside Out algorithm for solving the optimal transport DOTmark Instances	Compact and non-compact formulations for the Dominated Coloring Problem
			Edoardo Scalzo, Floriano De Rango, Francesca Guerriero, Antonio Iera and Mattia Giovanni Spina	Roberto Bargetto, Federico Della Croce and Rosario Scatamacchia	Dilson Lucas Pereira, Abilio Lucena and Alexandre Salles da Cunha
					When will the first collision occur?
					Walid Ben-Ameur and Alessandro Maddaloni
	12.30	Closing Session, Chair Walid Ben Ameur, Room Q014, followed by lunch and cultural activities, Quinn School of Business			
		Session 6	6A Q011	6B Q012	6C Q013
		Topic	Integer Programming	Flow Applications	Network Applications
		Chair	Mirko Mucciarini	José Valério de Carvalho	Florent Cabret
	14.00	1	Multi-depot split delivery of batches	Multi-Objective Multi-Commodity Flow Optimization for Wartime Planning with Cyber-Effects	Instantaneous and limiting behavior of an n-node blockchain under cyber attacks from multiple hackers
			Críston Souza and Andréa Santos	Alex Hoffendahl, Chancellor Johnstone, Alex Stephens, Richard Dill and Lance Champagne	Liang Hong and Xiufeng Xu
	14.30	2	Integer Linear Programming for energy-efficient scheduling with time-dependent consumption functions	A combinatorial flow-based formulation for temporal bin packing problems	Identification of reaction chains in metabolic and genomic networks for species comparison
			Mirko Mucciarini, Giulia Caselli, Daniele De Santis, Manuel Iori and Juan José Miranda Bront	John Martinovic, Nico Strasdat, José Valério de Carvalho and Fabio Furini	Florent Cabret, Ronan Bocquillon and Emmanuel Néron
	15.00	Closing Session, Chair Walid Ben Ameur, Room Q014			