

AFROS 2018 Conference Program

2th – 4th July, 2018, Tunis, Tunisia

Monday 02/07/2018

8:00 - 8:40	Registration
8:40 - 9:20	Opening Ceremony
9:20 - 10:00	Plenary 1 - Michael Trick <i>Business Analytics: Combining Predictive and Prescriptive Analytics to Have Broad Impact</i>
10:00 - 10:40	Panel Discussion - Securing the future of OR in Africa Session Moderator - Sue Merchant Members: Mohamed Limam, Charles Malack Oloo, James J. Cochran, Hatem Masri and Serigne Gueye.
10:40 - 11:00	Coffee Break
11:00 - 11:40	Plenary 2 - Samir Elhedhli <i>Data-Driven Modelling and Optimization for Warehouse Analytics</i>
11:40 - 13:00	Parallel Sessions A
	A1 - Health Care Management 1 Chair: <i>Malek Masmoudi</i>
11:40 - 12:00	A new generalized approach for surgeries scheduling <i>Dalel Amami and Abdelaziz Dammak</i>
12:00 - 12:20	Several meta-heuristics for home care routing problems <i>Malek Masmoudi, Bassem Jarboui and Sana Frifita</i>
12:20 - 12:40	Management Approach of tensions in emergency services <i>Mouna Berquedich, Oulaid Kamach, Malek Masmoudi and Laurent Deshayes</i>
12:40 - 13:00	Chemotherapy outpatient scheduling case study from Tunisia <i>Asma Bouras, Malek Masmoudi, Houda Saadani and Zied Bahroun</i>
	A2 - Simulation Chair: <i>James J. Cochran</i>
11:40 - 12:00	Improving patient flow at a Tunisian outpatient department using simulation modelling approach <i>Hana Ben Mbarek, Amel Jaoua, Najla Aissaoui Omrane, Safa Bhar Layeb and Atidel Hadj Alouane</i>
12:00 - 12:20	Combining Monte Carlo Simulation with Exact Method to Solve a Random Problem of Collect Infectious Healthcare Waste: The Case of Tunisia <i>Rim Daoud, Mahdi Khemakhem and Wafik Hachicha</i>
12:20 - 12:40	Simulation and Multiple Linear Regression to model patient flow at an outpatient clinic <i>Hadhemi Saadouli and Abdelmoneem Ltaif</i>
12:40 - 13:00	Optimization of Robotized Tasks for the UV Treatment of Diseases in Horticulture <i>Merouane Mazar, M'Hammed Sahnoun, Belgacem Bettayeb and Nathalie Klement</i>
	A3 - Financial Markets Chair: Hans-Jörg von Mettenheim
11:40 - 12:00	Nonlinear dynamics in stock returns: Do risk aversion, investor sentiment and monetary policy shocks matter? <i>Meriam Dahmene, Adel Bouhrara and Skander Slim</i>
12:00 - 12:20	Switching regime risk spillover in global financial markets <i>Ahmed Bensaida, Houda Litimi and Oussama Abdallah</i>
12:20 - 12:40	The Vietnamese Stock Market: An Analysis with Linear and Non-Linear Methods <i>Hans-Jörg von Mettenheim, Dinh Tri Vo and Duc Khuong Nguyen</i>
12:40 - 13:00	Lobbying Expenditures and Sin Stocks' Market Performance <i>Hatem Ghouma and Carissa Hewitt</i>

A4 - Decision Sciences and Optimization	
Chair: <i>Alexis Tsoukias</i>	
11:40 - 12:00	Generating Alternatives for Policy Design <i>Alexis Tsoukias, Alberto Colorni and Irene Pluchinotta</i>
12:00 - 12:20	The Transition from outsourcing to R&D : the case of information technology (IT) Tunisian companies <i>Meriem Youssef and Fouad Ben Abdelaziz</i>
12:20 - 12:40	Algorithm for asymptotically exact minimizations in Karush-Kuhn-Tucker methods <i>Jean Koudi, Babacar Mbaye Ndiaye, Guy Degla and Mamadou Traoré</i>
12:40 - 13:00	A primal-dual interior point algorithm for convex quadratic programming based on a new kernel function <i>Hayet Roumili, Nawel Boudjellal and Benterki Djamel</i>
13:00 - 14:20	Lunch
14:20 - 15:00	Plenary 3 - Imed Kacem <i>Polynomial approximation schemes: when the standard techniques become unavoidable</i>
15:00 - 16:20	Parallel Sessions B
B1- Health Care Management 2	
Chair: <i>Khaoula Besbes</i>	
15:00 - 15:20	Firm's adaptation to low consumer sensitivity to nutritional health considerations: What public corrective strategy? <i>Manel Zahra Boutouis and Abdelhakim Hammoudi</i>
15:20 - 15:40	A Two-Stage Stochastic Home Healthcare routing and scheduling Problem <i>Khaoula Besbes and Issam Nouaouri</i>
15:40 - 16:00	Optimizing the Between-Class Variance using the VNS Metaheuristic for Brain MRI Segmentation <i>Mariam Miledi and Souhail Dhouib</i>
16:00 - 16:20	Applying "lean management » to hospital logistics <i>Dorra Dridi and Younes Boujelbene</i>
B2 - Logistics	
Chair: <i>Mohamed Dia</i>	
15:00 - 15:20	A Mixed Integer Programming Model for Cargo Composition Problem Including Containers with Dangerous Goods <i>Kiros Gebrearegawi Kebedow and Johan Oppen</i>
15:20 - 15:40	Aligning Reliability Improvement Strategies in an Assembly System <i>Amirmohsen Golmohammadi, Alireza Tajbakhsh, Mohamed Dia and Matthias P. Takouda</i>
15:40 - 16:00	Port Efficiency and Competitiveness: the Case of European Ports <i>Rabeb Kammoun, Chokri Abdenadher and Souhir Abbes</i>
16:00 - 16:20	Benchmarking Canadian Oil and Gas Companies <i>Mohamed Dia, Pawoumodom M. Takouda and Amirmohsen Golmohammadi</i>
B3 - Scheduling 1	
Chair: <i>Imed Kacem</i>	
15:00 - 15:20	Exact and Approximate Temporal Partitioning Methods for Dynamic Reconfigurable Architecture <i>Fadel Abdallah, Camel Tanougast, Imed Kacem, Camille Diou and Daniel Singer</i>
15:20 - 15:40	A PTAS for Minimizing the Maximum Lateness and Makespan on Two-Parallel Machine <i>Gais Alhadi, Imed Kacem, Pierre Laroche and Izzeldin Osman</i>
15:40 - 16:00	Approximation Schemes for Minimizing the Maximum Lateness on a Single Machine with Release Times under Non-Availability or Deadline Constraints <i>Imed Kacem and Hans Kellerer</i>
16:00 - 16:20	2-Dimensional packing algorithm on a variable size rectangular interface <i>Imed Kacem, Ilyes Kadri, Benoit Martin and Isabelle Pecci</i>

B4 - Manufacturing and Service Management	
Chair: <i>David Moroz</i>	
15:00 -15:20	Disassembly Scheduling with Capacity Constraints, Safety stocks and Lost Component <i>Ilhem Slama, Mounir Benaissa and Faouzi Masmoudi</i>
15:20 -15:40	Planning, exploitation and management of stocks in the cashew nut sector in Senegal <i>Amadou Saikou Diallo, Babacar Mbaye Ndiaye and Daouda Niang Diatta</i>
15:40 -16:00	From the World's Manufacturing Factory to the World's Innovation Lab: New Business Trends in China and Implications for Scholarship <i>Amy Zeng</i>
16:00 - 16:20	The Hedonic Price for Whisky: Distiller's Reputation, Age and Vintage <i>David Moroz and Bruno Pecchioli</i>
16:20 - 16:40	Coffee Break
16:40 - 18:00	Parallel Session C
C1 - Health Care Management 3	
Chair: <i>Phillips Obasohan</i>	
16:40 - 17:00	Case Studies in Hospital Ward and Bed Management: Decision Support by Simulation and Optimization under Flexibility <i>Thomas Stoeck, Taieb Mellouli and Karsten Schwarz</i>
17:00 - 17:20	Process mining in healthcare domain <i>Neyla Guennichi and Kamel Barkaoui</i>
17:20 - 17:40	Women Autonomy, Wealth Status and Maternal Healthcare Utilization among Nigerian Women: Factor Analysis and Score Approach <i>Phillips Obasohan, Paul Gana, Mustapha A Mahmud, Ahmed Egbako Umar and Makada Abdullah</i>
17:40 - 18:00	Cultural Impediments and Antenatal Care Utilization among Reproductive Age Women in Wushishi and Zungeru Communities in Niger State, Nigeria <i>Phillips Obasohan, Audu Makada, Mahmud A. Mustapha, Egbako Umar Ahmed, Paul Gana and Dorcas Nike Obasohan</i>
C2 - Supply Chain Management	
Chair: <i>Taïcir Moalla Loukil</i>	
16:40 - 17:00	Bi-level Multi-objective programming in Supply Chain Management: A review <i>Maroua Abed, Taïcir Moalla Loukil and Fouad Ben Abdelaziz</i>
17:00 - 17:20	Supply Chain Risk Models <i>Arij Lahmar</i>
17:20 - 17:40	Group Decision Support for the Selection and Evaluation of 3PLs Suppliers: Literature Review <i>Hichem Brahmi, Zaki Brahmi and Khaled Jabeur</i>
17:40 - 18:00	A Bi-Objective Stochastic Programming Model for the Household Waste Collection and Transportation Problem: Case of the City of Sousse <i>Haifa Jammeli, Hatem Masri and Mejdi Argoubi</i>
C3 - Scheduling 2	
Chair: <i>Berndt Lindner</i>	
16:40 - 17:00	A linear programming model to solve the minimax multi-period substitutable resources production-allocation problem <i>Mohamed Essalah Salah and Younes Boujelben</i>
17:00 - 17:20	Bi-objective Generator Maintenance Scheduling for a National Power Utility <i>Berndt Lindner and Jan Harm van Vuuren</i>
17:20 - 17:40	Upper bounds for minimizing the total completion time in a two-machine Flow shop under release dates and blocking constraint <i>Ines Agrebi and Talel Ladhari</i>
17:40 - 18:00	A Guided Tabu Search for the Vector Bin Packing Problem <i>Farida Mannai and Mongi Boulehami</i>

C4 - Data Finance Chair: <i>Sabri Boubaker</i>	
16:40 - 17:00	Predictability of Bitcoin Price- Evidence from Variance Ratio Tests <i>Khaled Guesmi, Stephane Goutte, Fathi Jouini and Samir Saadi</i>
17:00 - 17:20	Decision-making support by cognitive maps to understand the effects of crowdfunding finance on entrepreneurial self-efficacy <i>Imen Abdennadher Gdoura, Karim Trabelsi and Anis Jarboui</i>
17:20 - 17:40	The Difficult Apprehension of Blockchains by Law <i>Olivier Lasmoles</i>
17:40 - 18:00	Do Good As Others are Doing Well : An Evidence from Corporate Employee Welfare Policy <i>Asad Ali-Rind, Souad Lajili Jarjir and Sabri Boubaker</i>
18:00 - 19:00	AFROS Council Meeting
20:00 - 22:30	Conference Dinner

Tuesday 03/07/2018	
8:00 - 8:40	Registration
8:40 - 9:20	Plenary 4 - James J. Cochran <i>Are p-Values the Problem?</i>
9:20 - 10:40	Parallel Session D
	D1 - Electric Vehicle Routing Problem Chair: Hatem Masri
9:20 - 9:40	The Electric Vehicle Routing Problem: Literature Review <i>Najeh Dammak and Souhail Dhouib</i>
9:40 - 10:00	A stochastic model for the design of electric vehicle charging infrastructure <i>Mouna Kchaou Boujelben and Celine Gicquel</i>
10:00 - 10:20	A skewed general variable neighborhood search for solving the battery swap station location-routing problem with capacitated electric vehicles <i>Mannoubia Affi, Houda Derbel and Bassem Jarboui</i>
10:20 - 10:40	A Hybrid Approach of Analytic Hierarchy Process-TOPSIS and Goal Programming for Electric Automobile Selection <i>Mustafa Hamurcu and Tamer Eren</i>
	D2 - Fuzziness and Uncertainty Chair: Mehdi Mili
9:20 - 9:40	A Fuzzy Analytical Hierarchical Processing Model for Customers' Bank Selection Decision <i>Minwir Alshamari and Mehdi Mili</i>
9:40 - 10:00	Aspects of fuzzy logic decision making in crowdfunding: a review of literature <i>Imen Abdennadher Gdoura and Anis Jarboui</i>
10:00 - 10:20	Analyst Forecast Accuracy and Policy Uncertainty throughout the Electoral and Economic Cycles <i>Lamia Chourou, Lynnette Purda and Samir Saadi</i>
10:20 - 10:40	A Real Option Approach to Irreversible Investment in Petroleum Refinery under Revenue Uncertainty <i>Esosa Enoyoze and Sunday Omosigho</i>
	D3 - Stochastic Models Chair: Safa Bhar Layeb
9:20 - 9:40	New Hierarchical Clustering Method in Interval Data <i>Roumaissa Kerbouï and Moncef Abbas</i>
9:40 - 10:00	European option pricing by simulation based on the retrograde stochastic differential equations <i>Rania Bouzid and Yacin Jerbi</i>
10:00 - 10:20	The Generalized Discrete Cost Multicommodity Network Design Problem with Stochastic Demands <i>Imen Mejri, Safa Bhar Layeb, Farah Zeghal Mansour and Mohamed Haouari</i>
10:20 - 10:40	Monopoly pricing in an M/M/1 unreliable queue with strategic customers <i>Fazia Rahmoune, Kamel Meziani and Mohammed Said Radjef</i>

D4 - Efficiency and Performance Analysis	
Chair: <i>Meryem Masmoudi</i>	
9:20 - 9:40	School's academic performance determinants: A two-stage analysis <i>Fatma Ben Yahia, Hédi Essid and Sonia Rebai</i>
9:40 - 10:00	Efficiency analysis of terminal containers in the Port of Dakar using Data Envelopment Analysis (DEA) and Bootstrap approach <i>Karamoko Sita Diallo, Babacar Mbaye Ndiaye and Guy Degla</i>
10:00 - 10:20	Environmental productivity in the Mediterranean countries: A decomposition analysis based on the Malmquist-Luenberger index <i>Eya Jebali and Hédi Essid</i>
10:20 - 10:40	Measuring technical efficiency and productive slacks of Tunisian manufacturing industry: A comparative analysis between the traditional and the bootstrap Data Envelopment Analysis <i>Rim Slimani and Maha Kalai</i>
10:40 - 11:00	Coffee Break
11:00 - 11:40	Plenary 5 - El-ghazali Talbi <i>Synergy between metaheuristics and machine learning</i>
11:40 - 13:00	Parallel Session E
E1 - Data Analytics	
Chair: <i>Hans W. Ittmann</i>	
11:40 - 12:00	The Evolution of an Election Forecasting Model over 20 Years <i>Hans W. Ittmann</i>
12:00 - 12:20	Application of the Choquet Integral in Clustering Method: K-Means <i>Roumaïssa Kerbouï and Moncef Abbas</i>
12:20 - 12:40	Forecasting Financial Distress: A Comparative Study of Statistical and Artificially Intelligent Models with and without Financial Theory <i>Saban Celik, Bora Aktan and Berna Tektaş Sivrikaya</i>
12:40 - 13:00	Implementation of WT and Neural Networks Algorithms for Speech Signal Denoising Optimization <i>Said Ouznadj, Djamel Chaabane and Messaoud Thameri</i>
E2 - Multiple Criteria Decision Aid	
Chair: <i>Sarah Ben Amor</i>	
11:40 - 12:00	The SISINA Method: A Distance-Based Multi-Attribute Ranking Approach with Superiority and Inferiority Indexes <i>Moufida Hidouri and Abdelwaheb Rebaï</i>
12:00 - 12:20	Using Multicriteria Decision Making Approach for Metro Projects Selection in Ankara <i>Mustafa Hamurcu and Tamer Eren</i>
12:20 - 12:40	Using Principal component analysis to resolve interactive criteria decision making problems <i>Olfa Meddeb and Fouad Ben Abdelaziz</i>
12:40 - 13:00	A Multiple-Criteria Decision Sorting Model for pharmaceutical suppliers' selection under mixed imperfect data <i>Sarah Ben Amor, Renata Pelissari and Maria Celia de Oliveira</i>

E3 - Vehicle Routing Chair: <i>Taieb Mellouli</i>	
11:40 - 12:00	From Vehicle Scheduling to Vehicle Routing: Problem structures, (dis-)similarities, complexities, practical issues, and efficient solution by “Merged Network Flows” Math Models, Part A: Problem Classes and Research Road Map <i>Taieb Mellouli</i>
12:00 - 12:20	From Vehicle Scheduling to Vehicle Routing: Problem structures, (dis-)similarities, complexities, practical issues, and efficient solution by “Merged Network Flows” Math Models, Part B: Modelling towards Large Scale Optimization <i>Taieb Mellouli</i>
12:20 - 12:40	Improved Biogeography-Based Optimization for the Selective Vehicle Routing Problem in a Collaborative Environment <i>Olfa Chebbi, Safa Bhar Layeb and Jouhaina Chaouachi</i>
12:40 - 13:00	Minimizing Fuel Consumption in Capacitated Vehicle Routing Problem <i>Dalila Tayachi and Cheima Jendoubi</i>
13:00 - 14:20	Lunch
14:30 - 19:30	Sightseeing Tour of Carthage and Sidi Bou Said

Wednesday 04/07/2018	
8:00 - 9:00	Registration
9:00 - 10:20	Parallel Sessions F
	F1 - Multiple Objective Programming 1 Chair: <i>Sahnoun M'Hammed</i>
9:00 - 9:20	Non-efficient points approach for solving multiobjective linear problems <i>Houda Alaya, Fouad Ben Abdelaziz and Tarak Joulak</i>
9:20 - 9:40	Multi-objective Flexible Job Shop Scheduling Problem: Simulation Approach <i>Yiyi Xu, Sahnoun M'Hammed, Fouad Ben Abdelaziz, David Baudry and Anne Louis</i>
9:40 - 10:00	Solving the Bi-Objective Portfolio Optimization Problem with Uncertain Market Parameters: A Comparative Study <i>Meziane Aider, Mhand Hifi and Samira Bokhari</i>
10:00 - 10:20	SWVP method (Surrogate Worth Value Path) for selecting Goal Programming variant <i>Lahmar Arij, François Galasso, Jacques Lamothe and Habib Chabchoub</i>
	F2 - Metaheuristics Chair: <i>El-ghazali Talbi</i>
9:00 - 9:20	Multi-objective chicken swarm optimization for continuous optimization <i>Djaafar Zouache and Fouad Ben Abdelaziz</i>
9:20 - 9:40	A Hybrid approach for zero-one Multiple-Choice Knapsack Problem with Setup <i>Yassine Adouani, Malek Masmoudi, Iyad Alghoul and Bassem Jarboui</i>
9:40 - 10:00	A greedy-based simulated annealing algorithm for the clustering problem in ad hoc networks <i>Khalil Amine</i>
10:00 - 10:20	Meta-heuristics for surgical scheduling problem with hospitalization <i>Manel Belkhamza, Malek Masmoudi, Iyad Alghoul and Bassem Jarboui</i>
	F3- Finance and Business Models Chair: <i>Imen Derouiche</i>
9:00 - 9:20	Accruals Quality, Financial Constraints and Corporate Cash Holdings <i>Imen Derouiche, Karima Jemai and Hatem Mansali</i>
9:20 - 9:40	Risk Adjusted Credit Pricing: Application to the state's guarantee funds for Moroccan enterprises <i>Oussouadi Kamal</i>
9:40 - 10:00	NeuroEvolution of Augmenting Topologies for predicting financial distress: Evidence from Tunisia <i>Senda Belhaj Slimene and Chokri Mamoghli</i>
10:00 - 10:20	Indications and guarantees of cooperation in strategic alliances: Evidence of fsQCA on a business model innovation <i>Sahar Ayadi, Younes Boujelben and Lotfi Khreifich</i>
	F4 - Transportation 1 Chair: <i>Serigne Gueye</i>
9:00 - 9:20	A genetic algorithm for the Multi-vehicle Covering Tour Problem <i>Manel Kamoun, Houda Derbel and Bassem Jarboui</i>
9:20 - 9:40	A Genetic Algorithm for Rich Vehicle Routing Problems Optimization <i>Bohra Rabbouch, Foued Saâdaoui and Rafea Mraïhi</i>
9:40 - 10:00	A greedy evolutionary hybridization algorithm for the Optimal Network and Quadratic Assignment Problem <i>Mouhamadou Aliou Moutaga Tall Baldé, Babacar Mbaye Ndiaye and Serigne Gueye</i>
10:00 - 10:20	Senegaulois Algorithm for Transportation Network and Land Use Problem <i>Mamadou Kone and Babacar Mbaye Ndiaye</i>
10:20 - 10:40	Coffee Break
10:40 - 12:00	Parallel Session G

	G1 - Multiple Objective Programming 2 Chair: <i>Chaabane Djamal</i>
10:40 - 11:00	Bi-objective scheduling of multi-processor tasks on two dedicated processors <i>Adel Kacem and Abdelaziz Dammak</i>
11:00 - 11:20	An Integrated Approach of Analytic Network Process and Goal Programming Model for Effective Usage of resources in the Higher Education <i>Mustafa Hamurcu and Tamer Eren</i>
11:20 - 11:40	Optimizing over the efficient set of the binary bicriteria knapsack problem <i>Nadia Lachemi and Djamal Chaabane</i>
11:40 - 12:00	A multi-objective approach for cell formation problem <i>Soukaina Triki, Malek Masmoudi and Hichem Kamoun</i>
	G2 - Health Care Management 4 Chair: Salah Ben Abdallah
10:40 - 11:00	VMI and demand pooling effect in pharmaceutical supply chain <i>Mouna Elarbi, Malek Masmoudi, Omar Ayadi and Faouzi Masmoudi</i>
11:00 - 11:20	Medical equipment maintenance optimization: Mixed-Integer Linear Programming <i>Zeineb Ben Houria, Malek Masmoudi and Ahmad Al Hanbali</i>
11:20 - 11:40	A HVNS algorithm for solving multistage operating room scheduling integrating building surgical team constraints <i>Marwa Khalfalli and Hichem Kamoun</i>
11:40 - 12:00	An improved tabu search algorithm for surgery scheduling problem with maximal time lags <i>Marwa Khalfalli</i>
	G3 - Transportation 2 Chair: <i>Mohamed Ayman Boujelben</i>
10:40 - 11:00	Worldwide Passenger Flows Estimation <i>Rodrigo Acuna-Agost, Ezequiel Geremia, Thiago Gouveia, Serigne Gueye, Micheli Knechtel and Philippe Michelin</i>
11:00 - 11:20	GVNS algorithm to solve the Technician Routing and Scheduling Problem <i>Sana Frifita, Ines Mathlouthi, Malek Masmoudi and Abdelaziz Dammak</i>
11:20 - 11:40	The Crew pairing problem for the Tunisian airline company based on Hybrid approach <i>Hela Jedidi, Ons Abdelkhalek, Hela Masri and Saoussen Krichen</i>
11:40 - 12:00	A new model for the green tourist trip design problem <i>Rami Jouirou, Hela Masri, Ons Abdelkhalek and Saoussen Krichen</i>
	G4 - OR and Education Chair: <i>Sue Merchant</i>
10:40 - 11:00	The Current Status of OR in Africa Hans W. Ittmann
11:00 - 11:20	Designing an Undergraduate Honours Programme in Operations Research Philimon Nyamugure and James Cochran
11:20 - 11:40	The Development of OR in Africa Maseka Lesaoana
11:40 - 12:00	Visualizing the knowledge domain of Operations Research and Management Science in Africa: a bibliometric analysis Emna Ammari and Mejdj Argoubi
12:00 - 12:20	TDAS Awards Ceremony
12:20 - 12:40	Closing Ceremony
12:40 - 14:00	Lunch
14:00 - 17:00	Doctoral Workshop
17:00 - 18:00	TDAS Council Meeting