

SESSION INDEX

Monday, 8:00 AM - 9:30 AM

| | |
|--|---|
| MA-01: Some Models of Combinatorial Optimisation (Convention Centre: Ballroom 1) | 1 |
| MA-02: Optimization Under Uncertainty (Convention Centre: Ballroom 2) | 1 |
| MA-03: Railway Network Design (Convention Centre: Ballroom 3) | 1 |
| MA-05: Lessons from OR Consultancy Practice 1 (Convention Centre: Boardroom 1) | 2 |
| MA-08: Decision Analysis (Convention Centre: Boardroom 4) | 2 |
| MA-09: Simulation 1 (Convention Centre: Boardroom 5) | 2 |
| MA-11: Berth Allocation in Container Ports (Convention Centre: Committee Room 2) | 3 |
| MA-12: Finance: Dynamic models (Convention Centre: Committee Room 4) | 3 |
| MA-15: DEA Tutorial and Software Demo (Sandton Sun: Maroela South) | 4 |
| MA-16: Production and Inventory Management (Sandton Sun: Jacaranda) | 4 |
| MA-19: Condition Based Maintenance and Prognostics (Sandton Sun: Acacia) | 4 |

Monday, 9:45 AM - 11:15 AM

| | |
|--|---|
| MB-01: Official opening of IFORS 2008 Triennial Conference (Convention Centre: Ballroom 1) | 5 |
|--|---|

Monday, 11:45 AM - 1:15 PM

| | |
|--|----|
| MC-01: Combinatorial Optimization: Vehicle Routing 1 (Convention Centre: Ballroom 1) | 5 |
| MC-02: Optimization: Gradients and Constraints (Convention Centre: Ballroom 2) | 6 |
| MC-03: Robust and On-line Problems in Railways (Convention Centre: Ballroom 3) | 6 |
| MC-04: Applications of OR in Mining (Convention Centre: Ballroom 4) | 6 |
| MC-05: Lessons from OR Consultancy Practice 2 (Convention Centre: Boardroom 1) | 6 |
| MC-07: OR-in-Development 1 (Convention Centre: Boardroom 3) | 7 |
| MC-08: Facilitated Multi-Criteria Decision Analysis (Convention Centre: Boardroom 4) | 7 |
| MC-09: Discrete Event Simulation (Convention Centre: Boardroom 5) | 8 |
| MC-11: Container Port Design and Optimization (Convention Centre: Committee Room 2) | 8 |
| MC-12: Finance: Optimisation models (Convention Centre: Committee Room 4) | 9 |
| MC-13: Finance: Applications (Convention Centre: Committee Room 5) | 9 |
| MC-14: DEA: Applications 1 (Sandton Sun: Maroela North) | 9 |
| MC-15: DEA Theory: New developments 1 (Sandton Sun: Maroela South) | 10 |
| MC-16: Production Lines (Sandton Sun: Jacaranda) | 10 |
| MC-17: OR Software Applications (Sandton Sun: Oleander) | 10 |
| MC-18: Graphs and Networks 1 (Sandton Sun: Syringa) | 11 |
| MC-19: Reliability (Sandton Sun: Acacia) | 11 |

Monday, 2:00 PM - 3:30 PM

| | |
|---|----|
| MD-01: Combinatorial Optimization: Vehicle Routing 2 (Convention Centre: Ballroom 1) | 12 |
| MD-03: Optimisation and Railroad Scheduling Problems (Convention Centre: Ballroom 3) | 12 |
| MD-07: OR-in-Development 2 (Convention Centre: Boardroom 3) | 12 |
| MD-08: Multiobjective Optimization Methods (Convention Centre: Boardroom 4) | 13 |
| MD-09: Simulation 2 (Convention Centre: Boardroom 5) | 13 |
| MD-11: Resource Scheduling and Dispatching in Container Ports (Convention Centre: Committee Room 2) | 13 |
| MD-12: Finance: Financial modelling (Convention Centre: Committee Room 4) | 14 |
| MD-13: Finance: Stocks and bonds (Convention Centre: Committee Room 5) | 14 |
| MD-14: DEA: Applications 2 (Sandton Sun: Maroela North) | 14 |
| MD-16: Military Optimization Models (Sandton Sun: Jacaranda) | 15 |
| MD-17: Optimization Software (Sandton Sun: Oleander) | 15 |
| MD-18: Graphs and Networks 2 (Sandton Sun: Syringa) | 15 |
| MD-19: Maintenance: Spare parts and logistics (Sandton Sun: Acacia) | 16 |

Monday, 4:00 PM - 5:30 PM

| | |
|--|----|
| ME-01: Combinatorial Optimization: Routing Problems (Convention Centre: Ballroom 1) | 17 |
| ME-02: Linear Programming (Convention Centre: Ballroom 2) | 18 |
| ME-03: Timetabling and Scheduling in Railways (Convention Centre: Ballroom 3) | 18 |
| ME-04: Applications of OR in Agriculture (Convention Centre: Ballroom 4) | 18 |
| ME-07: OR-in-Development 3 (Convention Centre: Boardroom 3) | 19 |
| ME-08: Multiple Criteria Decision Aiding: Sorting problems (Convention Centre: Boardroom 4) | 19 |
| ME-09: Simulation 3 (Convention Centre: Boardroom 5) | 19 |
| ME-11: Container Shipping Flow (Convention Centre: Committee Room 2) | 20 |
| ME-12: Finance: Portfolio optimisation (Convention Centre: Committee Room 4) | 20 |
| ME-14: DEA: AHP / MCDM (Sandton Sun: Maroela North) | 20 |
| ME-16: Operations Management: Inventory risk, assortment, and pricing (Sandton Sun: Jacaranda) | 21 |
| ME-17: Modeling Languages and Solver Interfaces (Sandton Sun: Oleander) | 21 |
| ME-18: Survivable Telecommunications Network Design (Sandton Sun: Syringa) | 21 |
| ME-19: Maintenance 1 (Sandton Sun: Acacia) | 22 |

Tuesday, 8:00 AM - 9:30 AM

| | |
|--|----|
| TA-01: Combinatorial Optimization: Recent Advances in Scheduling (Convention Centre: Ballroom 1) | 23 |
| TA-02: Integer Programming (Convention Centre: Ballroom 2) | 23 |
| TA-03: Optimization Modeling for the Public Sector (Convention Centre: Ballroom 3) | 23 |
| TA-04: Sports and OR (Convention Centre: Ballroom 4) | 24 |
| TA-05: OR Education 1 (Convention Centre: Boardroom 1) | 24 |
| TA-07: Economic Development: Modelling and Finance (Convention Centre: Boardroom 3) | 25 |
| TA-08: Multicriteria Applications (Convention Centre: Boardroom 4) | 25 |
| TA-09: Facility Location and Routing (Convention Centre: Boardroom 5) | 25 |
| TA-10: Project Scheduling: Resource Allocation (Convention Centre: Boardroom 6) | 26 |
| TA-11: Operations Management: Health Care (Convention Centre: Committee Room 2) | 26 |
| TA-12: Finance: Revenue management and pricing (Convention Centre: Committee Room 4) | 27 |
| TA-13: Finance: Auctions (Convention Centre: Committee Room 5) | 27 |
| TA-14: DEA: Applications in transport (Sandton Sun: Maroela North) | 27 |
| TA-15: DEA: Applications in industry (Sandton Sun: Maroela South) | 28 |
| TA-16: Container Storage Planning (Sandton Sun: Jacaranda) | 28 |
| TA-17: Software Demos I (GAMS/AMPL) (Sandton Sun: Oleander) | 28 |
| TA-18: Telecommunications Trees and Flows (Sandton Sun: Syringa) | 29 |
| TA-19: Maintenance 2 (Sandton Sun: Acacia) | 29 |

Tuesday, 10:00 AM - 11:00 AM

| | |
|--|----|
| TB-01: Supply Chain Management (Convention Centre: Ballroom 1) | 30 |
|--|----|

Tuesday, 11:30 AM - 1:00 PM

| | |
|---|----|
| TC-01: Combinatorial Optimization: Data mining and clustering (Convention Centre: Ballroom 1) | 30 |
| TC-02: Discrete Optimization (Convention Centre: Ballroom 2) | 31 |
| TC-03: Multicriteria Public Sector Decision-Making (Convention Centre: Ballroom 3) | 31 |
| TC-04: Applications of OR in Forestry I (Convention Centre: Ballroom 4) | 31 |
| TC-05: OR Education 2 (Convention Centre: Boardroom 1) | 31 |
| TC-07: Healthcare policy analysis using simulation (Convention Centre: Boardroom 3) | 32 |
| TC-08: MCDA and Performance Assessment (Convention Centre: Boardroom 4) | 32 |
| TC-09: Urban Transportation (Convention Centre: Boardroom 5) | 33 |
| TC-10: Project Scheduling: Scheduling of Activities (Convention Centre: Boardroom 6) | 33 |
| TC-11: Operations Management: Supply Chains (Convention Centre: Committee Room 2) | 34 |
| TC-12: Finance: Option pricing (Convention Centre: Committee Room 4) | 34 |
| TC-13: Finance: Portfolio management (Convention Centre: Committee Room 5) | 35 |
| TC-14: DEA Theory: New developments 2 (Sandton Sun: Maroela North) | 35 |

SESSION INDEX

IFORS 2008 - Sandton

| | |
|---|----|
| TC-15: Economic Development: Strategic Planning and Management (Sandton Sun: Maroela South) | 35 |
| TC-16: Air Transportation (Sandton Sun: Jacaranda) | 36 |
| TC-17: Software Demos II (AIMMS/MPL) (Sandton Sun: Oleander) | 36 |
| TC-18: Meta-heuristics for optimizing telecommunications networks (Sandton Sun: Syringa) | 36 |
| TC-19: Quality and Reliability (Sandton Sun: Acacia) | 37 |

Tuesday, 2:00 PM - 3:30 PM

| | |
|--|----|
| TD-01: Advanced Topics in Combinatorial Optimization (Convention Centre: Ballroom 1) | 38 |
| TD-02: Optimization Heuristics and Applications (Convention Centre: Ballroom 2) | 38 |
| TD-03: Complex Public Sector Social Problems (Convention Centre: Ballroom 3) | 38 |
| TD-04: Wine Supply Chain (Convention Centre: Ballroom 4) | 39 |
| TD-05: Bringing the real world of OR into the classroom 1 (Convention Centre: Boardroom 1) | 39 |
| TD-07: Efficient use of core hospital resources (Convention Centre: Boardroom 3) | 39 |
| TD-08: MCDA/SMAA (Convention Centre: Boardroom 4) | 40 |
| TD-09: Heuristic Approaches to Routing (Convention Centre: Boardroom 5) | 40 |
| TD-11: Supply Chain Optimization (Convention Centre: Committee Room 2) | 41 |
| TD-13: Finance: Risk analysis and management (Convention Centre: Committee Room 5) | 41 |
| TD-14: DEA Theory: New developments 3 (Sandton Sun: Maroela North) | 41 |
| TD-15: Economic Development: General Topics (Sandton Sun: Maroela South) | 42 |
| TD-16: Maritime logistics (Sandton Sun: Jacaranda) | 42 |
| TD-19: Quality and Availability (Sandton Sun: Acacia) | 43 |

Tuesday, 4:00 PM - 5:30 PM

| | |
|--|----|
| TE-01: Minimax Stochastic Optimization with Applications (Convention Centre: Ballroom 1) | 43 |
| TE-03: Public Sector Transport and Management (Convention Centre: Ballroom 3) | 43 |
| TE-04: Agribusiness Supply Chain (Convention Centre: Ballroom 4) | 44 |
| TE-05: Bringing the real world of OR into the classroom 2 (Convention Centre: Boardroom 1) | 44 |
| TE-07: Advanced Modeling Methods in Health Care (Convention Centre: Boardroom 3) | 45 |
| TE-08: Multiple Criteria Decision Analysis (Convention Centre: Boardroom 4) | 45 |
| TE-09: Routing Applications (Convention Centre: Boardroom 5) | 45 |
| TE-10: Scheduling Applications 1 (Convention Centre: Boardroom 6) | 46 |
| TE-13: Finance: Markov models and Valuation modelling (Convention Centre: Committee Room 5) | 46 |
| TE-14: DEA Theory: Recent developments in nonparametric frontier estimation (Sandton Sun: Maroela North) | 47 |
| TE-16: Information technology in logistics (Sandton Sun: Jacaranda) | 47 |
| TE-18: Wireless Telecommunications Networks (Sandton Sun: Syringa) | 47 |

Thursday, 8:00 AM - 9:30 AM

| | |
|---|----|
| RA-02: Optimization Methods (Convention Centre: Ballroom 2) | 48 |
| RA-03: Transportation Systems: Traffic Assignment Modelling (Convention Centre: Ballroom 3) | 49 |
| RA-04: Applications of OR in Forestry II (Convention Centre: Ballroom 4) | 49 |
| RA-07: Health Care for the Community (Convention Centre: Boardroom 3) | 49 |
| RA-08: Visual Aspects of MCDA (Convention Centre: Boardroom 4) | 49 |
| RA-09: Game Theory and Applications 1 (Convention Centre: Boardroom 5) | 50 |
| RA-10: Creating and Building IFORS (Convention Centre: Boardroom 6) | 50 |
| RA-11: Supply Chain Risk, Pricing, and Coordination (Convention Centre: Committee Room 2) | 50 |
| RA-12: Finance: Finance and banking (Convention Centre: Committee Room 4) | 51 |
| RA-14: DEA: Applications in education (Sandton Sun: Maroela North) | 51 |
| RA-16: Location and Layout (Sandton Sun: Jacaranda) | 52 |
| RA-19: Queues 1 (Sandton Sun: Acacia) | 52 |

Thursday, 10:00 AM - 11:00 AM

| | |
|---|----|
| RB-01: Humanitarian Logistics (Convention Centre: Ballroom 1) | 53 |
|---|----|

Thursday, 11:30 AM - 1:00 PM

| | |
|---|----|
| RC-02: Dynamic Programming (Convention Centre: Ballroom 2) | 53 |
| RC-03: Transportation Systems: Supply and Demand (Convention Centre: Ballroom 3) | 53 |
| RC-04: Optimization for sustainable production 1 (Convention Centre: Ballroom 4) | 54 |
| RC-07: Humanitarian Logistics (Convention Centre: Boardroom 3) | 54 |
| RC-08: Decision support systems for economic or environmental issues (Convention Centre: Boardroom 4) | 54 |
| RC-09: Game Theory and Applications 2 (Convention Centre: Boardroom 5) | 54 |
| RC-10: The Present State of IFORS (Convention Centre: Boardroom 6) | 55 |
| RC-11: Supply Chain Applications (Convention Centre: Committee Room 2) | 55 |
| RC-12: Finance: Financial modelling (Convention Centre: Committee Room 4) | 56 |
| RC-13: Scheduling Applications 2 (Convention Centre: Committee Room 5) | 56 |
| RC-14: DEA Theory: New developments 4 (Sandton Sun: Maroela North) | 56 |
| RC-15: OR for Sustainable Development 1 (Sandton Sun: Maroela South) | 57 |
| RC-16: Locational Planning (Sandton Sun: Jacaranda) | 57 |
| RC-18: Cutting and Packing 1 (Sandton Sun: Syringa) | 57 |
| RC-19: Queues 2 (Sandton Sun: Acacia) | 58 |

Thursday, 2:00 PM - 3:30 PM

| | |
|--|----|
| RD-02: Convex Optimization (Convention Centre: Ballroom 2) | 59 |
| RD-03: Arc Routing (Convention Centre: Ballroom 3) | 59 |
| RD-04: Optimization for sustainable production 2 (Convention Centre: Ballroom 4) | 59 |
| RD-05: OR Applications to Education (Convention Centre: Boardroom 1) | 59 |
| RD-06: Data Mining 1 (Convention Centre: Boardroom 2) | 60 |
| RD-07: Humanitarian Logistics (Convention Centre: Boardroom 3) | 60 |
| RD-09: Game Theory and Applications 3 (Convention Centre: Boardroom 5) | 61 |
| RD-10: The Future of IFORS (Convention Centre: Boardroom 6) | 61 |
| RD-13: Multicriteria Scheduling (Convention Centre: Committee Room 5) | 61 |
| RD-14: DEA: Applications in farms and agricultural (Sandton Sun: Maroela North) | 61 |
| RD-15: OR for Sustainable Development 2 (Sandton Sun: Maroela South) | 62 |
| RD-16: Pickup and Delivery Routing (Sandton Sun: Jacaranda) | 62 |
| RD-17: Energy: General (Sandton Sun: Oleander) | 63 |
| RD-18: Cutting and Packing 2 (Sandton Sun: Syringa) | 63 |

Thursday, 4:00 PM - 5:30 PM

| | |
|--|----|
| RE-02: Knapsack Problems and Extensions (Convention Centre: Ballroom 2) | 64 |
| RE-03: Military Simulation and Stochastic Models (Convention Centre: Ballroom 3) | 64 |
| RE-04: Job Shops and Assembly Lines (Convention Centre: Ballroom 4) | 65 |
| RE-05: Human Resources Management (Convention Centre: Boardroom 1) | 65 |
| RE-06: Data Mining 2 (Convention Centre: Boardroom 2) | 65 |
| RE-07: Improving policy in healthcare (Convention Centre: Boardroom 3) | 65 |
| RE-09: Decision Analysis: Methods and Processes (Convention Centre: Boardroom 5) | 66 |
| RE-11: Production Planning & Control (Convention Centre: Committee Room 2) | 66 |
| RE-13: Logistic Scheduling (Convention Centre: Committee Room 5) | 67 |
| RE-14: DEA Theory: New developments 5 (Sandton Sun: Maroela North) | 67 |
| RE-15: DEA and the Public Sector (Sandton Sun: Maroela South) | 67 |
| RE-16: Applications in logistics (Sandton Sun: Jacaranda) | 68 |
| RE-18: Cutting and Packing 3 (Sandton Sun: Syringa) | 68 |

Friday, 8:00 AM - 9:30 AM

| | |
|---|----|
| FA-01: Stochastic Models (Convention Centre: Ballroom 1) | 69 |
| FA-02: Nonlinear Optimization (Convention Centre: Ballroom 2) | 69 |

| | |
|---|----|
| FA-03: Military Threat Evaluation / DSS (Convention Centre: Ballroom 3) | 70 |
| FA-05: OR and Ethics (Convention Centre: Boardroom 1) | 70 |
| FA-06: Data Mining and Knowledge Management (Convention Centre: Boardroom 2) | 71 |
| FA-08: Decision Support Systems (Convention Centre: Boardroom 4) | 71 |
| FA-09: Group decision making and voting (Convention Centre: Boardroom 5) | 72 |
| FA-10: Regulatory Networks, Inhibitors and Drug Design (Convention Centre: Boardroom 6) | 72 |
| FA-11: Production Lot Sizing (Convention Centre: Committee Room 2) | 72 |
| FA-12: Finance: Emissions trading and power markets (Convention Centre: Committee Room 4) | 72 |
| FA-13: Just-in-Time Scheduling (Convention Centre: Committee Room 5) | 73 |
| FA-14: DEA: Applications in finance and banking (Sandton Sun: Maroela North) | 73 |
| FA-16: Urban transportation: planning and modeling (Sandton Sun: Jacaranda) | 74 |
| FA-17: Energy: Policy and Planning (Sandton Sun: Oleander) | 74 |
| FA-18: Cutting and Packing 4 (Sandton Sun: Syringa) | 75 |
| FA-19: Fuzzy Computing and Its Applications (Sandton Sun: Acacia) | 75 |

Friday, 10:00 AM - 11:30 AM

| | |
|---|----|
| FB-01: Markov Models and Brownian Motion (Convention Centre: Ballroom 1) | 76 |
| FB-02: Optimization and Local Search (Convention Centre: Ballroom 2) | 76 |
| FB-03: Military Metrics (Convention Centre: Ballroom 3) | 76 |
| FB-06: E-Commerce (Convention Centre: Boardroom 2) | 77 |
| FB-08: Problem Structuring and Solving (Convention Centre: Boardroom 4) | 77 |
| FB-09: Multi-objective decision-making (Convention Centre: Boardroom 5) | 77 |
| FB-10: Modelling and Prediction of Genes, Proteins and Their Structure (Convention Centre: Boardroom 6) | 78 |
| FB-11: Combinatorial optimization: models and algorithms (Convention Centre: Committee Room 2) | 78 |
| FB-12: Finance: Risk management in commodity markets (Convention Centre: Committee Room 4) | 78 |
| FB-13: Scheduling Independent tasks (Convention Centre: Committee Room 5) | 79 |
| FB-15: Economic Modeling (Sandton Sun: Maroela South) | 79 |
| FB-16: Urban Transit Planning and Operations (Sandton Sun: Jacaranda) | 80 |
| FB-17: Energy: Optimization (Sandton Sun: Oleander) | 80 |
| FB-18: Optimization and Metaheuristics (Sandton Sun: Syringa) | 80 |
| FB-19: Fuzzy Decision Analysis and Preference Structures (Sandton Sun: Acacia) | 81 |

Friday, 12:00 PM - 1:00 PM

| | |
|--|----|
| FC-01: Bringing Computers to the World (Convention Centre: Ballroom 1) | 81 |
|--|----|