

ISOLDE VIII

VIIIth International Symposium on Locational Decisions

Coimbra & Estoril, Portugal
June 23-29, 1999

Schedule of Events
Schedule of Sessions
Paper Abstracts
List of Participants

Organizing Committee

<i>António Antunes</i>	University of Coimbra, Portugal
<i>Ehran Erkut</i>	University of Alberta, Canada
<i>João Coutinho</i>	University of Coimbra, Portugal
<i>John Current</i>	The Ohio State University, USA
<i>Susan Neuman</i>	University of Alberta, Canada



Civil Engineering Department
Faculty of Science and Technology
University of Coimbra

Schedule of Events

Day	Hours	Participants	Accompanying Persons
June/23/99	18:00-22:00	Welcome Reception	
June/24/99	09:00-12:30	Sessions 1 & 2. Coffee-Break at 10:50	Guided Tour to Coimbra
	12:30-13:30	Lunch	
	13:30-14:30	Visit to the Old University Buildings. Conference photo	
	14:30-18:20	Sessions 3 & 4 & 5. Coffee-Break at 16:30	Visit to Conimbriga
	18:20-22:00	Dinner. Coimbra Fado at the Old Cathedral Cloisters	
June/25/99	09:00-12:00	Sessions 6 & 7. Coffee-Break at 10:20	Guided Tour of Downtown
	12:00-14:00	Lunch	
	14:00-16:00	Sessions 8 & 9	Visit to the Botanical Gardens
	14:00-22:00	Visit to Porto and Port Wine Cellar <i>Porto is one of the most peculiar Portuguese towns, recently classified by UNESCO as World Heritage</i>	
June/26/99	09:00-12:00	Sessions 10 & 11. Coffee-Break at 10:20	Free Time (Choice of Paid Programs)
	12:00-13:00	Lunch	
	13:00-14:00	Visit to Museu Machado de Castro	
	14:00-17:50	Sessions 12 & 13 & 14. Coffee-Break at 16:10	Free Time (Choice of Paid Programs)
	18:30-20:00	Dinner	
June/27/99	09:00-12:30	Trip Coimbra - Castelo de Vide	
	12:30-14:30	Lunch at Castelo de Vide	
	14:30-18:30	Trip Castelo de Vide - Estoril with a 2-hour stop at Évora <i>Évora is also a very peculiar town, also classified by UNESCO as World Heritage</i>	
June/28/99	09:00-12:50	Sessions 15 & 16 & 17. Coffee-Break at 11:10	Beach and Swimming-Pool
	12:50-14:30	Interval for Lunch	
	14:30-18:30	Visit to the Estoril Area (Cabo da Roca, Sintra, Estoril)	
June/29/99	09:00-12:30	Sessions 18 & 19 & 20. Coffee-Break at 11:00	Beach and Swimming-Pool
	12:30-18:30	Free Time (Choice of Paid Programs)	
	18:30-22:00	Farewell Dinner	

Important note: Meals provided by the organization in Coimbra will take place at the university restaurants. Value tickets (500 PTE) will be distributed to the participants and accompanying persons.

Schedule of Sessions

Hours	Thursday	Friday	Saturday	Sunday	Monday	Tuesday			
8					Travel to Estoril				
9									
9	Opening Session	Sess. 6A	Sess. 6B	Sess. 10A		Sess. 10B	Session 15	Session 18	
10	Session 1	Cont Loc III (4)	Net. Loc. II (3)	Comp Loc I (4)		Usf Tools I (4)	Comp. Loc. II (3)	Cont. Loc. VI (3)	
10	Disc. Loc. I (4)	Session 7		Sess. 11A		Sess. 11B	Session 16	Session 19	
11		Disc./Cont. Loc. (1)		Hub Loc. II (4)		Disc Loc III (4)	Comp. Loc. III (3)	Cont. Loc. VII (2)	
11	Sess. 2A	Sess. 2B					Session 17	Session 20	
12	Cont. Loc. I (4)	Undes Fac. (3)					Net. Loc. IV (4)	Hier. Loc. II (2)	
12									
13									
13									
14									
14									
14									
15	Sess. 3A	Sess. 3B	Sess. 8A	Sess. 8B		Sess. 12A	Sess. 12B		
15	Disc. Loc. II (3)	Hier. Loc. I (3)	Loc. Ind. I (3)	Ser.Un. Loc.(3)		Cont Loc IV (3)	Logist. (3)		
15									
16	Sess. 4A	Sess. 4B	Sess. 9A	Sess. 9B		Sess. 13A	Sess. 13B		
16	Cont. Loc. II (3)	Loc.-Rout. I (3)	Hub Loc. I (2)	Loc-Rout II (2)		Cont Loc V (3)	Usf Tools II (3)		
16									
17									
17	Sess. 5A	Sess. 5B	Visit to Oporto		Sess. 14A	Sess. 14B			
17	Net. Loc. I (4)	Trans. Syst. (2)			Net. Loc III (4)	Loc. Ind. II (3)			
18									
18									
19									
19									
19									
20							Farewell Dinner		

Session 1	Discrete Location I	Thursday, 24-06-99	09:30
Protecting the Roman Empire Does the Permeability of the Border Between Two Regional Economies Influence the Optimal Location of Activities? Hard Networks: Network Distance Characteristics that Affect Computational Effort in p-Median Location Problems Partial Covering P-Center and Set Covering Problems: Motivation, Formulation and Solution		C. ReVelle ; K. Rosing D. Peeters ; J. Thisse ; I. Thomas D. Schilling ; K. Rosing ; C. ReVelle M. Daskin ; S. Owen	
Session 2 A	Continuous Location I	Thursday, 24-06-99	11:10
Size-density Hypothesis in p-Median Problems: A Numerical Example A Best Possible Coincidence Test for Minisum Multifacility Location Problems Eliminating Demand Point Aggregation Error in the p-Median Problem A Cartographic Analysis of a Location - Allocation Heuristic's Failure: The Case for Heuristic Concentration		T. Suzuki F. Plastria ; J. Fliege ; C. Michelot M. Hodgson ; S. Salhi K. Rosing ; M. Hodgson	
Session 2 B	Undesirable Facilities	Thursday, 24-06-99	11:10
Obnoxious Facility Location on Networks The Euclidean Anti-K-Center Problem Locating a Semidesirable Facility in a Continuous Space. Biobjective Methods		D. Pérez Brito ; J. Moreno Pérez A. Lozano ; J. Mesa ; F. Plastria E. Carrizosa ; F. Plastria	
Session 3 A	Discrete Location II	Thursday, 24-06-99	14:30
A Branch-and-Bound Algorithm for the Capacitated Plant Location Problem Based on Add/Drop Procedures Analysing Two Solution Procedures for the Capacitated Dynamic Location Problem A New Heuristic for Capacitated Location Problems		C. Bornstein ; D. Valiati F. Saldanha da Gama ; M. Captivo H. Lourenço ; D. Serra	
Session 3 B	Hierarchical Location I	Thursday, 24-06-99	14:30
On the Collection Depots Location Problem A Hierarchical Model for the Location of Health Care Facilities An Algorithm to Locate Perinatal Facilities in the Municipality of Rio de Janeiro		Z. Drezner ; G. Wesolowsky R. Galvão ; B. Boffey ; J. Ferreira Filho ; M. Vasconcellos B. Boffey ; R. Galvão	
Session 4 A	Continuous Location II	Thursday, 24-06-99	15:40
Line and Hyperplane Location Problems in Computational Geometry Linear Facility Location in Three Dimensions - Models and Solutions Methods Geometrical Solution to the Fermat Problem with Arbitrary Weights		A. Schobel J. Brimberg ; H. Juel ; A. Schobel G. Jalal ; J. Krarup	
Session 4 B	Location - Routing I	Thursday, 24-06-99	15:40
A HAZMAT Location Problem - Discussion on an Interactive Multicriteria Approach An approach to Facility Location and Routing of Hazardous Materials An Interactive Bicriteria Approach for Location-Routing Models of Unwelcome Facilities		J. Clímaco ; M. Alves B. Boffey ; J. Mesa ; F. Ortega Riejós C. Ferreira ; M. Captivo ; J. Clímaco	

Session 5 A	Network Location I	Thursday, 24-06-99	17:00
Voting Location, Centre and Median on Networks Covering Edges with Small Subgraphs The Median Cycle Problem Location in Intelligent Networks		C. Campos Rodriguez ; J. Moreno Pérez O. Goldschmidt ; D. Hochbaum ; E. Olinick M. Labbé ; G. Laporte ; I. Rodriguez Martin ; J. Salazar S. Hakimi	
Session 5 B	Transit Systems	Thursday, 24-06-99	17:00
Maximising Trip Coverage in the Planning of Rapid Transit Systems A Heuristic for the Location of a Rapid Transit Line		G. Laporte ; F. Ortega Riejós ; J. Mesa G. Bruno ; M. Gendreau ; G. Laporte	
Session 6 A	Continuous Location III	Friday, 25-06-99	09:00
A Reduction Result for Location Problems with Polyhedral Barriers On Bisectors for Different Distance Functions Approximative Solutions of Location Problems with a Priori Error Bounds Finite Dominating Sets for Rectilinear Center Problems with Polyhedral Barriers		K. Klamroth C. Icking ; R. Klein ; L. Ma ; S. Nickel ; A. Weissler E. Carrizosa ; H. Hamacher ; R. Klein ; S. Nickel P. Dearing ; H. Hamacher ; K. Klamroth	
Session 6 B	Network Location II	Friday, 25-06-99	09:00
The Server Location-Assignment Problem on a Tree Minimizing the Mean Absolute Deviation for the Location of Two Facilities on a Tree Network The Maximum Absolute Deviation Problem in a Network		T. Zeng ; J. Ward M. Cáceres ; M. López de los Mozos ; J. Mesa ; J. Pino M. López de los Mozos ; J. Mesa	
Session 7	Discrete/Continuous Location	Friday, 25-06-99	10:40
Exact Solution of Large p-Median and Multisource Weber Problems by Stabilized Column Generation and Related Techniq		P. Hansen	
Session 8 A	Location for Industry I	Friday, 25-06-99	14:00
Mathematical Programming Approaches to the Deployment of Resources for Forest Fire Detection and Suppression Sensor and Actuator Placement Problems A Finite-Size Barrier Location Approach to Facility Design		I. Giannikos ; M. Dimopoulou R. Kincaid ; S. Padula S. Savas ; R. Batta ; R. Nagi	
Session 8 B	Service Units Location	Friday, 25-06-99	14:00
A Note on Robust Positioning of Services Units A Loss Queueing-Location Problem with Rejection A Parallel Tabu Search Heuristic to Assist Real-Time Ambulance Relocation Decision		J. Puerto ; A. Rodríguez-Chía J. Puerto ; Y. Hinojosa F. Semet ; M. Gendreau ; G. Laporte	

Session 9 A	Hub Location I	Friday, 25-06-99	15:10
<p>Location Models for Airlines Hubs Behaving as <i>M/D/c</i> Queues New Formulations for the <i>p</i>-Hub Median Problem</p>		<p>V. Marianov ; D. Serra S. Melkote</p>	
Session 9 B	Location - Routing II	Friday, 25-06-99	15:10
<p>A Branch-and-Cut Algorithm for a Class of Location-Routing Problems The <i>p</i>-Dead-Mileage Problem on a Line</p>		<p>P. Avella ; M. Boccia ; A. Sforza L. Muyldermans ; D. Cattrysse ; D. Oudheusden</p>	
Session 10 A	Competitive Location I	Saturday, 26-06-99	09:00
<p>Competitive Location Models with Random Utilities: Problem Formulations and Algorithms Cannibalism in Competitive Location The Optimal Location of an Intermodal Terminal Generalized Spatial Interaction Location Models: A New Paradigm for Competitive Facility Location</p>		<p>S. Benati ; P. Hansen P. Peeters C. Macharis O. Berman ; D. Krass</p>	
Session 10 B	Useful Tools I	Saturday, 26-06-99	09:00
<p>LOLA - Library of Location Algorithms. A Toolkit for Solving Location Problems Using GIS in Facility Location Analysis PLACE, a General Planar Single Facility Location Modeling Language PLACE, a General Planar Single Facility Location Model Solving Software Tool</p>		<p>H. Hamacher ; H. Hennes ; K. Klamroth ; S. Nickel A. Ribeiro ; A. Antunes P. Peeters ; F. Plastria P. Peeters ; F. Plastria</p>	
Session 11 A	Hub Location II	Saturday, 26-06-99	10:40
<p>The <i>p</i>-Median Repulsive Problem on a Graph: A Heuristic Approach Locating Hub Arcs and Isolated Hubs Locating Multi-type Protection Devices on Electrical Tree Networks: A tabu Search Implementation Applying the Gravity Rule to the Airline Hub Problem</p>		<p>M. Ndiaye ; S. Salhi J. Campbell ; A. Ernst ; M. Krishnamoorthy C. James ; S. Salhi T. Drezner ; Z. Drezner</p>	
Session 11 B	Discrete Location III	Saturday, 26-06-99	10:40
<p>A Modular Capacitated Plant Location Problem - Models and Methods The Uncapacitated Facility Location Problem and the Polynomials in (0,1) - variables Maximum Accessibility Facility Location Bounds of Fast Approximation Algorithm for Solving the Maximum Simple Plant Location Problem on Random Inputs</p>		<p>I. Correia ; M. Captivo V. Beresnev A. Antunes ; A. Ribeiro E. Gimadi</p>	
Session 12 A	Continuous Location IV	Saturday, 26-06-99	14:00
<p>Fast Heuristics for Large Scale Covering-Location Problems Minimising Total Travel Time in a Gravitational Dense Grid Network Advances in Continuous Multicriteria Location Problems</p>		<p>L. Brotcorne ; G. Laporte ; F. Semet R. Arriola Hernández ; F. Ortega Riejós ; J. Mesa J. Puerto ; A. Rodríguez-Chía</p>	

Session 12 B	Logistics	Saturday, 26-06-99	14:00
<p>The Maximum Assembly Flow Problem Facility Location and Supply Chain Management A Dynamic Programming Based Heuristic Algorithm for the Container Fleet Management</p>		<p>C. Mauckner ; H. Noltemeier J. Kalcsics ; M. Melo ; S. Nickel A. Imai ; E. Nishimura ; J. Current</p>	
Session 13 A	Continuous Location V	Saturday, 26-06-99	15:10
<p>Robust Facility Location D. C. Optimization Methods in Continuous Location Problems Duality in Constrained Location Models with Weighted Sums of Order p</p>		<p>E. Carrizosa ; S. Nickel R. Blanquero ; E. Carrizosa H. Uster ; R. Love</p>	
Session 13 B	Useful Tools II	Saturday, 26-06-99	15:10
<p>A Multi-Attribute GIS Tool for Site Selection Analysing Alternative Location Solutions with POLYHEDRA - a Discrete Multicriteria Interactive Decision Support System A Generic Framework to Model and Analyse Spatial Decision Problems Using GIS</p>		<p>A. Rocha Simao ; J. Coutinho Rodrigues L. Alçada Almeida ; J. Coutinho Rodrigues L. Alçada Almeida ; J. Coutinho Rodrigues ; J. Costa</p>	
Session 14 A	Network Location III	Saturday, 26-06-99	16:30
<p>On a Finite Dominating Set for Location of Crossing Points for the Crossing Postman Problem Ordered Weber Problems on Networks - Some New Results Polynomial Time Approximation Schemes for the Median Tour Problem and the Newspaper Delivery Problem in the Euclidean Plane A Multi-Attribute GA for a Class of p-Capacitated and Single Source Location Problems</p>		<p>R. Garfinkel ; E. Fernandez S. Nickel ; J. Puerto ; J. Kalcsics H. Noltemeier ; C. Mauckner ; A. Kaubner S. Salhi ; M. Agar</p>	
Session 14 B	Location for Industry II	Saturday, 26-06-99	16:30
<p>The Progressive Piecewise Linear Underestimation Techniques for Location Problem with Concave Costs The Plant Location and Flexible Technology Acquisition Problem Location Strategies to Reduce Exchange Rate Risk</p>		<p>A. Dasci ; V. Verter V. Verter ; A. Dasci T. Lowe ; R. Wendell ; G. Hu</p>	
Session 15	Competitive Location II	Monday, 28-06-99	09:00
<p>Optimal Locations for a New Firm Under Price Competition on a Discrete Linear Market Proportional Customers' Preferences for a Nonessential Demand Competitive Location Problem Market and Location Equilibrium for Two Competitors: The Non-Zero Conjectural Variations Case</p>		<p>M. García ; B. Pélégri R. Suárez Vega ; D. Santos-Penate ; P. Dorta González P. Dorta González ; D. Santos-Penate ; R. Suárez Vega</p>	
Session 16	Competitive Location III	Monday, 28-06-99	10:10
<p>Fair Cost-Allocations in a Continuous Location Problem Maximizing Capture by Competing Facilities in the Presence of Weights Assessing the Attractiveness of Retail Facilities</p>		<p>I. García-Jurado ; F. Fernández ; J. Puerto H. Eiselt ; G. Laporte T. Drezner ; Z. Drezner</p>	

Session 17	Network Location IV	Monday, 28-06-99	11:30
Locating Cycles on Grid Graphs Genetic Algorithms and Network Location Problems Location of Bicriterion Paths with Minimal Superior Section The Rooted Forest Location Problem		L. Foulds ; H. Hamacher ; A. Schobel ; T. Yamagouchi S. Chaudhry P. Fernández Hernández ; B. Pélégryn É. Gourdin ; M. Labbé	
Session 18	Continuous Location VI	Tuesday, 29-06-99	09:00
A Quick Algorithm for Decomposing a Polygon with Holes into Convex Polygons Solving Continuous Location Problems via Interval Analysis: New Discarding Tests An Efficient Algorithm for Solving the Dual Euclidean Multifacility Location Problem		J. Fernández Hernández ; L. Cánovas ; B. Pélégryn J. Fernández Hernández ; B. Pélégryn J. Fliege	
Session 19	Continuous Location VII	Tuesday, 29-06-99	10:10
Continuous Location and Goal Programming: Polynomial Time Algorithms Convex Continuous Location, Goal Programming and the Like. Duality		E. Carrizosa ; J. Fliege E. Carrizosa ; J. Fliege	
Session 20	Hierarchical Location II	Tuesday, 29-06-99	11:30
The Hospital System of Trás-os-Montes and Alto Douro Hierarchical Location - Allocation Models for Congested Systems		J. Pereira ; A. Antunes V. Marianov ; D. Serra	