

ISOLDE X – PROGRAM

The **duration** of each presentation is **15 minutes**.

Thursday, June 2

Registration: 8:30 – 9:30

Opening Session : 9:30 – 10:00

Opening Talk: 10:00 --11:00

Francis, R.L.

*Demand Point Aggregation Error for Location Models: Survey & Analysis
(Part I)*

Coffee Break: 11:00 – 11:30

Opening Talk (Contd): 11:30 – 12:30

Lowe, T.J.

*Demand Point Aggregation Error for Location Models: Survey & Analysis
(Part II)*

Session 1: 12:30 – 13:30

Equitable Location Models

Chairman: W. Ogryczak

I. Lari, J. Puerto, F. Ricca, A. Scozzari

Extensive facility location on networks with equality measures

W. Ogryczak,

Inequality Measures and Equitable Locations

Y. Ohsawa, N. Ozaki, F. Plastria

Equity-Efficiency Location Models with Squared Euclidean Distances

Lunch: 13:30 – 15:00

Session 2: 15:00 – 17:00 **Center and Related Problems**

Chairman: G.Y. Handler

R. Arriola, J.A. Mesa, F.A. Ortega
The Center Problem in a Gravitational Dense Grid Network

P.M. Dearing
An algebraic exchange rule for a dual approach to the min-max Euclidean distance location problem

G.Y. Handler
A relaxed approach to the center

M.J. Canós, M. Martínez, M. Mocholí
Optimal and near-optimal λ -p-cent-dians on a general network

K. Klamroth, M. Wonsyld
Maximin location problems with rectilinear distances

B. Pfeiffer, K. Klamroth
Location problems with varying environments

Coffee Break: 17:00 – 17:20

Session 3: 17:20 – 19:00 **Location of Public Facilities**

Chairman: H.A. Eiselt

A. Antunes, O. Berman, J. Bigotte, D. Krass
A modelling framework for comprehensive public facility location

H.A. Eiselt, S. Peng, J. Bhadury
Subsidy Design for Facility Location Under Price-Sensitive Demands

M.P. Johnson
Flexible Affordable Housing Policy Design using Facility Location Models

F.A. Ortega, T. Cáceres, J.A. Mesa, J.L. Pino
Assessment of Embedding Diagonal Corridors in an Urban Street Grid

J. Teixeira, A.P. Antunes
The public facility planning problem: valid inequalities and computational experience

Visit to “Reales Alcázares” and Welcoming Dinner: 21:00

Friday, June 3

Session 4-A: 9:00 – 11:00 **Hub and Network Design Problems**

Chairman: V. Marianov

A. Lisec, M. Bogataj
Multiple allocation of postal Hubs

A. Lisec, M. Bogataj
The capacitated hierarchical 4-level hub location problem with time constraints in Postal networks

M. Kalaycılar, B.Y. Kara
The Hub Covering Problem: Incomplete Hub Networks

C. Obreque, V. Marianov
An Optimal Procedure for Solving the Hierarchical Network Design Problem

M. Sasaki, S. Umetani
Airline network design model

E. Domínguez, J. Muñoz
Neural Approaches to the p -Hub Problem

Session 4-B: 9:00 – 11:00 **Supply Chain Management I**

Chairman: E. Fernández

O.H. Akcan, U.S. Palekar, D. Vandenvussche
Combined Safety Stock and Graph Location Problem in Three-Echelon Distribution System Design

M. Albareda-Sambola, E. Fernández
Location-Routing Problem: Exact solution using Branch Price

S. Barreto, C. Ferreira, J. Paixão
Discarding chain constraints in a location-routing problem

R.L. Church, M.P. Scaparra
Mathematical models for critical infrastructure protection planning

D. Cobos, J.A. Díaz, E. Fernández, J.L.González-Velarde
Location Models for Reverse Logistics

P. Dejax, N. Bostel, Z. Lu
Facility Location Problem for Remanufacturing Network: Models and Algorithm

Coffee Break: 11:00 – 11:30

Session 5-A: 11:30 – 13:30 Transportation

Chair: A. Schöbel

A.M. Campbell, T.J. Lowe, L. Zhang

Upgrading Arcs to Minimize the Maximum Travel Time in a Network

A. Marín, R. García

Two multimodal approaches to the location of transit rapid lines

T. Ohyama

Highway Location Problem Considering demand

A. Schöbel

Locating lines in public transportation networks

A.T. Murray, D. Tong

Threshold coverage optimization

Session 5-B: 11:30 – 13:30 Supply Chain Management II

Chairman: V. Verter

S. Nickel, S. Velten, G. Weimerskirch

Strategic supply chain decisions - A case study -

L.V. Snyder, H-M. Jeon

Joint Location-Inventory optimization with unreliable facilities

V. Verter, N. Aras, T. Boyaci

Designing Distribution Systems with Reverse Flows

L. Ozsen, M. Daskin

An Analytical Location-Inventory Model

F.R. Fernández, J. Puerto

Cost allocation schemes in several location problems

J. Mihelič, B. Robič

The Flexible-Attributes Problem

Lunch: 13:30 – 15:00

Session 6: 15:00 – 17:00

Covering Models

Chairman: I. Giannikos

J.M. Bourjolly, J.A. Mesa, F.A. Ortega
Conditional Covering Problem on a Line

M. Dimopoulou, I. Giannikos
A methodology for approximating the demand space in continuous demand covering models

B. Hamaide, J.C. Williams, C.S. ReVelle
The Covering Species Problem Favoring Rare Species Persistence

J.R. O'Hanley, R.L. Church
Planning for facility loss: Formulation and solution of the maximum covering location problem with interdiction

Y. Ohsawa, F. Plastria, K. Tamura
Euclidean Push-Pull Partial Covering Problems

M. Sher, A. Ben-nun, A.S. Hakkert
The police patrol vehicle allocation problem

Coffee Break: 17:00 – 17:20

Session 7: 17:20 – 19:00

Reliable and Queuing Location Models

Chairman: B. Boffey

R. Abolian, O. Berman, Z. Drezner
The Multiple Server Location-Allocation Problem with Fixed Cost

O. Berman, D. Krass, M. Menezes, S. Huang
Reliability and Facility location: Modelling frameworks and results

B. Boffey, R.D. Galvão
Location of facilities modelled as $M/Er/1/N$ queueing systems

J. Santiváñez, E. Melachrinoudis
Facility Location of Reliable Centers on Networks Using Pre-designated Routes

F. Silva, D. Serra
The Queue Length Capacitated Facility Location Problem

Saturday, June 4

Plenary Talk: 8:30 – 9:30

H.W. Hamacher

Session 8-A: 9:30 – 11:00

Applications I

Chairman: R.L. Church

M.R. Akella, R. Batta, E.M. Delmelle, P. Rogerson

Using Geostatistical Methods to Decide an Additional Facility Location

J. Bigotte, A. Antunes, O. Berman, D. Krass

On the relationship between demographic dynamics and urban hierarchies: empirical evidence from Portugal

R.L. Church, M.P. Scaparra, J.R. O'Hanley

Optimizing passive protection in facility systems

M.C. Cunha, L. Pinheiro, P. Alfonso, J. Sousa

Decision-aid models for the implementation of the Water Framework Directive

Session 8-B: 9:30 – 11:00

Heuristics in Location I

Chairman: B. Gendron

M. Bischoff, K. Klamroth

Using Genetic Algorithms to solve Weber Problems with Barriers

M.J. Canós, C. Iborra, V. Liern

Heuristic procedures for the fuzzy p -median problem

B. Gendron, F. Semet, I. Temimi

A Combined Dual Ascent/Variable Neighbourhood Heuristic for a Multi-Echelon Location-Distribution Problem

R.S. Middleton, R.L. Church

Heuristic Distillation

Coffee Break: 11:00 – 11:30

Session 9-A: 11:30 – 13:30

Applications II

Chairman: M.S. Daskin

M. Kuby, S. Lim, C. Upchurch, K. Wang

Using the Added-Node dispersion problem to generate candidate sites for the Flow-Refueling location problem with location on links

N.A. Nechval, K.N. Nechval, K. Rozite

Statistical Inference Equivalence Principle and its Applications to Optimal Allocation of Aircraft to Routes Under Uncertainty

J.L. Pino, T. Cáceres, P. Luque, J.A. Mesa

Evolution of the publications in Location Analysis

M. Ruffolo, M.S. Daskin

Locating Large Repositories of Radiological Image Data

J.C. Williams

A Zero-One programming model for land allocation with convexity requirements

S.A. Sirigos, Y.N. Photis

A prototype planning support system for scenario location analysis

Session 9-B: 11:30 – 13:30

Competitive Location I

Chairman: B. Pelegrín

M. Dimopoulou, G. Alexandris

Bank branch location in a competitive environment: A methodology

P. Dorta-González, D.R. Santos-Peñate, R. Suárez-Vega

Market and location equilibrium for Cournot oligopoly

P. Fernández, B. Pelegrín, J. Fernández, D. García

Location of new facilities under delivered pricing on discrete space

J. Fernández, B. Tóth, B. Pelegrín, F. Plastria

On the location of two new competitive facilities in the plane

J. Fernández, B. Tóth, B. Pelegrín, F. Plastria

Sensitivity analysis of a planar competitive location problem

R. Suárez-Vega, D.R. Santos-Peñate, P. Dorta-González

Hypermarkets location under different customers' choice rules

Lunch: 13:30 – 15:00

Spanish Location Thematic Network: 15:00 – 17:00

Sunday, June 5: Visit to *Doñana* and group transfer to *Islantilla*

Monday, June 6

Plenary Talk: 8:30 – 9:30

M. Gendreau

An Introduction to Local Search Techniques in Location

Session 10: 9:30 – 11:00

Competitive Location II

Chairman: A. Suzuki

B. Pelegrín, P. Fernández, J.L. Redondo, I. García, P.M. Ortigosa

Solving a competitive facility location problem by stochastic algorithms

B. Pelegrín, P. Fernández, R. Suárez, D. García

Facilities location on a network under mill and delivered pricing

C. ReVelle, A.T. Murray, D. Serra

Location models for ceding market share and shrinking services

A. Suzuki, T. Furuta, M. Uchida

Locating Multiple Facilities in a Network Competitive Environment

Coffee Break: 11:00 – 11:30

Session 11: 11:30 – 13:30

Flexible Location Models

Chairman: S. Nickel

S. Nickel, J. Puerto

The Ordered Median Problem --- A Unified Approach to Location Theory

S. Nickel, J. Puerto

The Ordered Median Problem --- New Results and Extensions

J. Kalcsics, S. Nickel, J. Puerto

Extensions to the Ordered Median Problem on networks: Conditional and semi-obnoxious problems

A.J. Lozano, J.A. Mesa, F. Plastria

The ordered median straight-line problem

A. Marín, S. Nickel, J. Puerto, S. Velten
A Flexible model and efficient solution strategies for discrete location problems

S. Nickel, J. Puerto, A.M. Rodríguez-Chía
Multicriteria Location Problems

Lunch: 13:30 – 15:00

Session 12: 15:00 – 17:00

Heuristics in Location II

Chairman: G. Nagy

D. Pérez-Brito, C.G. García
Variable Neighborhood Search for the Capacitated p -Median Problem

S. Salhi, Z. Zainuddin, G. Nagy, N. Wassan
A TS-based heuristic for the capacitated multisource Weber problem

M.P. Scaparra
VLSN Search Algorithms for Capacitated Facility Location Problems

H. Venables, H. Chen, A. Moscardini
The Fixed Charge Capacitated Location Problem – an Ant Colony Optimization Approach

V. Marianov, M. Mizumori, C. ReVelle
Solving the Maximal Availability Location Problem with Heuristic Concentration 1-2

Coffee Break: 17:00 – 17:20

Session 13: 17:20 – 19:00

Multiperiod Location Problems

Chairman: F. Saldanha-da-Gama

M. Albareda, E. Fernández, Y. Hinojosa, J. Puerto
A finite time planing horizon location-allocation model

M.T. Melo, F. Saldanha-da-Gama, M. Silva
A Cross Decomposition Scheme for a Multi-period Phase-in/Phase-out Capacitated Location Problem

R. Velásquez, M.T. Melo, F. Saldanha-da-Gama
A two-stage heuristic approach for a dynamic multi-commodity facility location problem

J. Wollenweber
A multi-stage facility location model with staircase costs

L. Gouveia, F. Saldanha-da-Gama

Concentrator location problems using a reformulation by discretization: some multi-period cases

Tuesday, June 7

Session 14: 9:00 – 11:00

Management of Undesirable Materials

Chairman: M.J. Kuby

F.J. André, L. González, F. Velasco

Transportation-Location problem for landfills with optimal capacity and recycling

I. Giannikos, P. Mitropoulos, I. Mitropoulos

Location Analysis in a Regional Solid Waste Management System

M.J. Kuby, W.F. Fagan, C.S. ReVelle, W.L. Graf

Multiobjective Optimization for Dam Removal

K. Zhou, A. Kondo, T. Wada

Allocation Problem of Garbage Containers Based on Residential Awareness – The Case Study in Tokushima •Japan –

S. Alumur, B.Y. Kara

A New Model for the Hazardous Waste Location-Routing Problem

R.A. Garrido, A. Bronfman

Simultaneous Location and Distribution of Hazardous Waste in Urban Areas: A Multi Objective Approach

Coffee Break: 11:00 – 11:30

Session 15: 11:30 – 13:30

Extensive Facility Location

Chairman: A. Tamir

J. Brimberg, H. Juel, A. Schöbel
Locating a circle in the plane

J. Brimberg, H. Juel, A. Schöbel
Locating a circle on a sphere

J.M. Díaz-Báñez, F. Hurtado, D. Rappaport, C. Seara, I. Ventura
Locating obnoxious facilities with minimum interaction

J. Puerto, A.M. Rodríguez-Chía, A. Tamir, D. Pérez
The Pareto Set For The Doubly Weighted Center-Median Path Problem on a Tree

T. Suzuki
Optimal Location of Orbital Routes in a Circular City

P. Mirchandani, A. Pacifici, M. Meconi, A. Agnetis
Covering Trees with Discs

Lunch: 13:30 – 15:00

Visit to “*Lugares Colombinos*” and Congress Dinner

Wednesday, June 8

Session 16: 9:00 – 11:00

Discrete Location

Chairman: G. Laporte

M. Albareda, E. Fernández, G. Laporte
Capacitated and Distance Constrained Plant Location Problem

L. Cánovas, S. García, M. Labbé, A. Marín
Properties of the Simple Plant Location Problem with Order

A. Ceselli, F. Liberatore, G. Righini

A branch-and-price framework for single-source capacitated location problems

I. Correia, M.E. Captivo

Lagrangian based heuristics for the Single Source Modular Capacitated Location Problem

J. Dias, M.E. Captivo, J. Clímaco

A Solid Urban Waste Treatment System: Models and Heuristics

J.A. Díaz, E. Fernández

A Solution Approach for the Capacitated Vertex p -center problem

Coffee Break: 11:00 – 11:30

Closing Talk: 11:30 – 12:30

A. Tamir

Recent Algorithmic Results on Center Location Problems on Networks

CLOSURE: 12:30 – 13:30