

Research Profile

RESEARCH PHILOSOPHY

My research philosophy is that of being problem motivated—that is, given a relevant, interesting, real-world application, develop and analyze mathematical models for the related problem. Of particular interest is the creation of novel, innovative application areas for Operations Research techniques. My solid Engineering background coupled with an excellent, in-depth knowledge of a broad range of Operations Research techniques give me the tools that are necessary for effectively performing this type of research activity.

Current Research Summary

I am active in the following research areas:

- Satellite Scheduling for Reconnaissance Tasks
- Hazardous Materials Routing/Logistics
- Routing/Scheduling for Search Missions
- Electric Vehicle Routing and Location of Charging Stations

Overall Statistics for Published (or Accepted) Journal Papers

Total count = 159

Accident Analysis and Prevention: 2

Annals of Operations Research: 8

Central European Journal of Operations Research: 1

Computers and Industrial Engineering: 3

Computers and Operations Research: 20

Decision Sciences: 1

EURO Journal of Transportation and Logistics: 1

European Journal of Operational Research: 21

Geographical Analysis: 2

Human Factors and Ergonomics in Manufacturing: 1

IIE Transactions: 5

Information Systems and Operational Research: 1

INFORMS Journal on Computing: 1

Interfaces: 2

International Journal of Mathematics of Operations Research: 1

International Journal of Operational Research: 3

International Journal of Production Research: 4

Journal of Defense Modeling and Simulation: 2

Journal of Geographical Systems: 1

Journal of Simulation: 2

Journal of Intelligent Transportation Systems: 1

Journal of the Operational Research Society: 4

Journal of Transportation Security: 2

Management Science: 3

Military Operations Research: 9

Naval Research Logistics: 2

Networks: 4

Networks and Spatial Economics: 2

Operations Research: 8

OR Insight: 4

OR Letters: 1

OR Spectrum: 2

Risk Analysis: 1

SIAM Journal on Applied Mathematics: 1

Socio-Economic Planning Sciences: 12

Sustainability: 1

Theoretical Issues in Ergonomics Science: 1

TOP: An Official Journal of the Spanish Society of Statistics and Operations Research: 2

Transport Policy: 1

Transportation Research B: 1

Transportation Research C: 3

Transportation Research Record: 1

Transportation Science: 11

JOURNAL PAPERS UNDER REVIEW

1. M. Sabbaghtrokan, R. Batta and Q. He, "Adding Servers to Reinforce Facilities in a Spatially Distributed Queueing System," revision submitted to *Computers & Operations Research*. FACILITY LOCATION
2. E. Dasdemir, E. Jose and R. Batta, "Scheduling and Routing with Degradation-Triggered Arrivals: An Application to Forest Fighting with an Unmanned Aerial Vehicle Fleet," submitted to *European Journal of Operational Research*. JOB SCHEDULING
3. H. Caceres, M. Duran, H. Lespay, P. Juan and R. Batta, "School Bus Routing Problems with Open Offer Policy: Incentive Pricing Strategy for Students that Opt Out Using School Bus," submitted to *Transportation Research Part A: Policy and Practice*. SCHOOL BUS ROUTING
4. N. Oladzad, "Using Prize-Collection Concepts to Solve Time-Limited Search Problems: A Military and Security Case Study," submitted to *Military Operations Research*. SEARCH PROBLEMS

JOURNAL PAPERS UNDER REVISION

1. F. Mousapour, R. Batta and J. L. Walteros, "On the Development and Analysis of a Comprehensive Police Patrolling Model," revision to be submitted to *European Journal of Transportation and Logistics*. POLICE PATROLLING
2. N. Oladzad, E. Jose, R. Batta and M. Lejeune, "UAV Search and Routing Planning in a Disaster Area," revision to be submitted to *Operations Research*. SEARCH PROBLEMS
3. E. Jose, N. Oladzad, D. Sudit, M. Sudit and R. Batta, "Kriging-Based Optimization of Satellite-Sensor Coverage for Enhanced Information Collection," revision to be submitted to *Computers & Operations Research*. SATELLITE RECONNAISSANCE