

## **PUBLISHED PAPERS**

### **2022**

M. Moskal, E. Dasdemir and R. Batta, "Unmanned Aerial Vehicle Information Collection Missions with Uncertain Characteristics," to appear in *INFORMS Journal on Computing*. UAV ROUTING

E. Dasdemir, R. Batta, M. Koksalan and D. Ozturk, "UAV Routing for Reconnaissance Mission: A Multi-Objective Orienteering Problem with Time-dependent Prizes and Multiple Connections," to appear in *Computers & Operations Research*. UAV ROUTING

M. Sabbaghtorkan, R. Batta and Q. He, "Managing Gas Supplies in a Short-notice Hurricane Evacuation," to *OR Spectrum*, (2022), Vol. 44, No. 3, pp. 911-945. HUMANITARIAN LOGISTICS

J. Becker and R. Batta, "Canadian Prize Collection Problem: Assessing the Impact of a Disaster Event," to appear in *Military Operations Research*. DISASTER ESTIMATION

### **2021**

S. Jotrao and R. Batta, "Time-Constrained UAV Path Planning in 3D Network for Maximum Information Gain," *Military Operations Research*, (2021), Vol. 25, No. 3, pp. 5-25. UAV ROUTING

P. Cho and R. Batta, "UAV Search Path Optimization for Recording Emerging Targets," *Military Operations Research*, (2021), Vol. 25, No. 3, pp. 27-48. UAV ROUTING

A. Khare, R. Batta and J.E. Kang, "On the Analysis of Last-Mile Relief Delivery on a Tree Network: Application to the 2015 Nepal Earthquake," *Journal of the Operational Research Society*, (2021), Vol. 72, pp. 727-743. HUMANITARIAN LOGISTICS

A. Madani, R. Batta and M. Karwan, "The Balancing Traveling Salesman Problem: Application to Warehouse Order Picking," *TOP*, Vol. 29, (2021), Vol. 29, pp. 442-469. WAREHOUSE ORDER PICKING

### **2020**

F. Aarabi and R. Batta, "A Mixed Integer Programming Approach for Scheduling Spatially Distributed Jobs with Degradation Rate: Application to Pothole Repair," *Socio-Economic Planning Sciences*, (2020), Vol. 72, December. JOB SCHEDULING

M. Taslimi, R. Batta and C. Kwon, "Medical Waste Collection Considering Transportation and Storage Risk," *Computers and Operations Research*, (2020), Vol. 120, August. HAZMAT ROUTING

N. Wei, J. Walteros and R. Batta, "On the Distance between Random Events on a Network," *Networks*, (2020), Vol. 75, pp. 203–231. URBAN OPERATIONS RESEARCH

A. Khare, Q. He and R. Batta, "Predicting Gasoline Shortage During Disasters Using Social Media," *OR Spectrum*, (2020), Vol. 42, pp. 693-726. HUMANITARIAN LOGISTICS

M. Sabbaghtorkan, R. Batta and Q. He, "Prepositioning of Resources and Supplies in Disaster Operations Management: Review and Research Gap Identification," *European Journal of Operational Research*, (2020), Vol. 284, pp. 1-19. HUMANITARIAN LOGISTICS

B. Bhattacharya, L. Lin, R. Batta and P. Ram, "Stock-out Severity Index: Tool for Evaluating Inequity in Drug Stock-outs," *Central European Journal of Operations Research*, (2020), Vol. 28, pp. 1243-1263. HEALTH CARE DELIVERY

## 2019

M. Moskal and R. Batta, "Adaptive UAV Surveillance Using a Prize-Collecting Vertex Routing Model," *Military Operations Research*, (2019), Vol. 24. UAV ROUTING

H. Cacaes, R. Batta and Q. He, "Special Need Students School Bus Routing: Consideration for Mixed Load and Heterogeneous Fleet," *Socio-Economic Planning Sciences*, (2019), Vol. 65, pp. 10-19. SCHOOL BUS ROUTING

## 2018

J. Fetzer, H. Cacaes, Q. He and R. Batta, "A Multi-Objective Optimization Approach to the Location of Road Weather Information System in New York State," *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, (2018), pp. 503-516. LOCATION MODELING

Y. C. Hsu, J. Walteros and R. Batta, "Solving the Petroleum Replenishment and Routing Problem with Variable Demands and Time Windows," *Annals of Operations Research*, (2018), pp. 1-38. PETROLEUM REPLENISHMENT

## 2017

T. Esfandeh, R. Batta and C. Kwon, "Time Dependent Hazardous Network Design Problem," *Transportation Science*, Vol. 52, (2017), pp. 454-473. HAZMAT ROUTING

R. Swamy, J. E. Kang, R. Batta and Y. Chung, "Hurricane Evacuation Planning using Public Transportation," *Socio-Economic Planning Sciences*, Vol. 59, (2017), pp. 43-55. HUMANITARIAN LOGISTICS

H. Caceres, R. Batta and Q. He, "School Bus Routing with Stochastic Demand and Duration Constraints," *Transportation Science*, Vol. 51, No. 4, (2017), pp. 1349-1364. SCHOOL BUS ROUTING

D. Sun, J. Kang, R. Batta and Y. Song, "Optimization of Evacuation Warnings Prior to a Hurricane Disaster," *Sustainability*, Vol. 9, No. 11, (2017), pp. 2152. HUMANITARIAN LOGISTICS

M. Moskal and R. Batta, "Macrogrid Approach for Routing UAVs in Support of Information Gathering," *Military Operations Research*, Vol. 22, No. 4, (2017), pp. 35-54. UAV ROUTING

R. Auad and R. Batta, "Location-Coverage Models for Preventing Attacks to Interurban Transportation Networks," *Annals of Operations Research*, Vol. 258, No. 2, (2017), pp. 679-717. HOMELAND SECURITY APPLICATION

Y. Xia, R. Batta and R. Nagi, "Routing a fleet of vehicles for decentralized reconnaissance with shared workload among regions with uncertain information," *Operations Research*, Vol. 65, No. 3, (2017), pp. 674-692. UAV ROUTING

X. Li, R. Batta and C. Kwon, "Effective and Equitable Supply of Gasoline to Impacted Areas in the Aftermath of a Natural Disaster," *Socio-Economic Planning Sciences*, Vol. 57, (2017), pp. 25-34. HUMANITARIAN LOGISTICS

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M. Taslimi, R. Batta and C. Kwon, "A Comprehensive Modeling Framework for Hazmat Network Design, Hazmat Response Team Location, and Equity of Risk," *Computers & Operations Research*, Vol. 79, (2017), pp. 119-130. HAZMAT ROUTING

## 2016

T. Geetla, R. Batta, A. Blatt, M. Flanigan and K. Majka, "Clustering Intelligent Transportation Sensors using Public Transportation," *TOP: An Official Journal of the Spanish Society of Statistics and Operations Research*, Vol. 24, No. 3, (2016), pp. 594-611. INTELLIGENT TRANSPORTATION SYSTEMS

D. Myers, R. Batta and M. Karwan, "A Real-Time Network Approach for Including Obstacles and Flight Dynamics in UAV Route Planning," *Journal of Defense Modeling and Simulation*, Vol. 13, No. 3, (2016), pp. 291-306. UAV ROUTING

M. Kim, R. Batta and Q. He, "Optimal Routing of Infiltration Operations," *Journal of Transportation Security*, Vol. 9, (2016), pp. 87-104. MILITARY APPLICATION

T. Esfandeh, C. Kwon and R. Batta, "Regulating Hazardous Materials Transportation by Dual Toll Pricing," *Transportation Research Part B.*, Vol. 83, (2016), 20-35. HAZMAT ROUTING

G. Galindo and R. Batta, "Forecast-Driven Model for Prepositioning Supplies in Preparation for a Foreseen Hurricane," *Journal of the Operational Research Society*, Vol. 67, No. 1, (2016), pp. 98-113. HUMANITARIAN LOGISTICS

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S. Huang, Q. Wang, R. Batta and R. Nagi, "An Integrated Model for Site Selection and Space Determination of Distribution Centers," *Computers and Operations Research*, Vol. 62, (2015), pp. 169-176. WAREHOUSE LOCATION

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R. Batta, M. Lejeune and S. Prasad, "Public Facility Location Using Dispersion, Population, and Equity Criteria," *European Journal of Operational Research*, Vol. 234, No. 3, (2014) pp. 819-829. PUBLIC FACILITY LOCATION

Y. Kang, R. Batta and C. Kwon, "Value-at-Risk Model for Hazardous Material Transportation," *Annals of Operations Research*, Vol. 222, (2014), pp. 361-387. HAZMAT ROUTING

Y. Kang, R. Batta and C. Kwon, "Generalized Route Planning Model for Hazardous Material Transportation with VaR and Equity Considerations," *Computers and Operations Research*, Vol. 43, (2014), pp. 237-247. HAZMAT ROUTING

N. Bednowitz, R. Batta and R. Nagi, "Dispatching and Loitering Policies for Unmanned Aerial Vehicles under Dynamically Arriving Multiple Priority Targets," *Journal of Simulation*, Vol. 8, (2014) pp. 9-24. UAV ROUTING

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G. Galindo and R. Batta, "Prepositioning of Supplies for Hurricanes under Demand Uncertainty," *Socio-Economic Planning Sciences*, Vol. 47, No. 1, (2013), pp. 20-37. HUMANITARIAN LOGISTICS

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E. Tokar Erdermir, R. Batta, P. Rogerson, A. Blatt and M. Flanigan, "Joint Ground/Air EMS Coverage Models," *European Journal of Operational Research*, 2072, (2010), 736-749. EMERGENCY RESPONSE

M. A. Akella, E. Delmelle, R. Batta, P. Rogerson and A. Blatt, "Adaptive Cell Tower Location Using Geostatistics," *Geographical Analysis*, 42:3, (2010), 227-244. CELL TOWER LOCATION

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A. Sarkar, R. Batta and R. Nagi, "Finding Rectilinear Least Cost Paths in the Presence of Convex Polygonal Congested Regions," *Computers & Operations Research*, 36, 3, (2009), 737-754. LAYOUT PATH PLANNING

M. Zhang, S. Savas, R. Batta and R. Nagi, "Facility Placement with Sub-Aisle Design in an Existing Layout," *European Journal of Operational Research*, 197, 1 (2009), 154-206. FACILITY LAYOUT

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