

Doctorado en Ciencias de la Ingeniería, mención Ingeniería Industrial
Propuesta de Tesis

Título: Optimizing drones coverage under disaster scenarios

Resumen:

Optimizing drone coverage in disaster scenarios involves strategically deploying drones to effectively monitor, survey, or deliver aid to affected areas. During disasters, ground transportation can be hindered by road blockages, flooding, or other obstacles, so drones offer a flexible and rapid way to cover vast or inaccessible areas. Here are the main concepts and challenges involved in the proposal work: 1) Coverage Area and Task Optimization, 2) Battery and Range Constraints, 3) Communication and Network Constraints. Overall, optimizing drone coverage in disaster scenarios blends multiple aspects of mathematical optimization, graph theory, machine learning, and communication network design to create effective, adaptive, and responsive solutions.

Palabras Claves:

Drones, optimization, disaster scenarios.

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