

عنوان مقاله:

Fuzzy Modeling Application in Hazardous Material Transportation

محل انتشار:

اولین کنفرانس حمل و نقل مواد خطرناک و اثرات زیست محیطی آن (سال: 1387)

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نویسندگان:

Amir Mohammad Yadghar

Arash Nasser

خلاصه مقاله:

Telegeomonitoring system development combines two heterogeneous technologies: the geographical information systems technology (GIS) and telecommunications technology. In this paper, we give the system components for telegeomonitoring transportation of hazardous materials. The telegeomonitoring system uses GIS to capture civil infrastructure (urban network, land use, industries, etc.) and decision support systems technology to allow risks analysis and evaluate routing strategies that minimize transportation risk. Routing algorithms are to this effect adapted to graphs of the fuzzy risk. A new algebraic structure is proposed to solve a path-finding problem in a fuzzy graph. This algebraic structure is adapted precisely to solve the problem of the K-best fuzzy shortest paths. The approach that we proposed, consists of defining generic structures of operator's traversal problem in fuzzy graphs. The principal contribution of our approach is to build adequate structures of path algebra to solve the problem of graph traversal in a fuzzy graph without negative circuits. Foundations of the system studied in this work will be able to be transposed to other fields of transportation

کلمات کلیدی:

Fuzzy logic; Transportation; Risk analysis; Decision support systems; Telegeomatic; Hazardous materials

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