Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

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über das Thema

Insights on Efficient Evacuation Planning Issues

Zeit: Dienstag, 27. Juni 2023, 13.00 Uhr, G02-210 oder
per Zoom Meeting ID 971 4945 5855, passcode 490213

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Prof. Dr. Alexander Pott

Abstract: Among the large number of mathematical models, we consider the network flow models and their solution techniques that are crucial in addressing evacuation planning issues. These models deal with the minimization of evacuation time and maximization of the flow value that has to be evacuated. Moreover, such solution strategies are equally applicable for the reduction of traffic congestion at special events and rush office hours as well.
This presentation will discuss on various techniques and objectives that are relevant to evacuation planning strategies. For example, the maximization of flow value and minimization of clearance time, maximization of excess flows at intermediate nodes, and flow improvement with budget constraints, higher level policy and facility location, and reduction of merging and crossing conflicts are crucial. We will propose a number of models and algorithms with case illustration and tiny examples to explain how our approaches are meaningfull in solving the evacuation planning problems.

Keywords: Evacuation planning, network flow models, quickest flow, maximum flow, abstract flow, intermediate storage, location planning.