Zentrum für Hochleistungsrechnen

TECHNISCHE
UNIVERSITÄT
DRESDEN

EINLADUNG
zum
ZHR - KOLLOQUIUM

Titel: **The minimum power broadcast problem in wireless networks: a simulated annealing approach**

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Kurzfassung:

Broadcasting in wireless networks, unlike wired networks, inherently reaches several nodes with a single transmission. For omnidirectional wireless broadcast to a node, all nodes closer will also be reached. When a message has to be sent from a designated node to all the others, this property can be used to regulate transmission powers in such a way that the total power consumption over the network is minimized, while a broadcasting tree still exists.

After having formally described the problem, we propose a simulated annealing algorithm. It is compared with the state-of-the-art approach, which is represented by a cluster-merge algorithm based on an ant colony system. The simulated annealing algorithm is capable of improving the results of the cluster-merge approach for most of the problems considered.

Ort: **Willers-Bau C 207**
Zeit: **Dienstag, den 16. März 2004, 11.00 Uhr**

gez. Prof. Dr. Wolfgang E. Nagel