

EINLADUNG

Zeit: Freitag, 24. Februar 2012, 14.00 Uhr

Ort: Hörsaal AH 1, Ahornstr. 55

Referent: Dipl.-Inform. Frank Radmacher

Thema: Games on Dynamic Networks:
Routing and Connectivity

In this talk we present three models of two-player games that capture the behavior of dynamic networks, in particular routing and connectivity problems.

In the first part we study *sabotage games* (van Benthem, 2002), where a *Runner* traverses a graph towards a given target, while a *Blocker* removes edges. In the second part we present a new *routing game* in which a *routing agent* has to deliver packets to their destinations, while a *demand agent* generates packets and moreover blocks connections for a certain amount of time. In the third part we discuss a *connectivity game* between a *Constructor* and a *Destructor*. While Destructor deletes nodes, Constructor can restore or even create new nodes under certain conditions. Constructor either has a reachability or a safety objective, i.e., Constructor has to either establish a connected network or guarantee that the network always stays connected.

For the solvability of these games we obtain results on (un-) decidability as well as computational complexity bounds. In some cases also routing algorithms can be generated by computing winning strategies.

Es laden ein: Die Dozenten der Informatik