

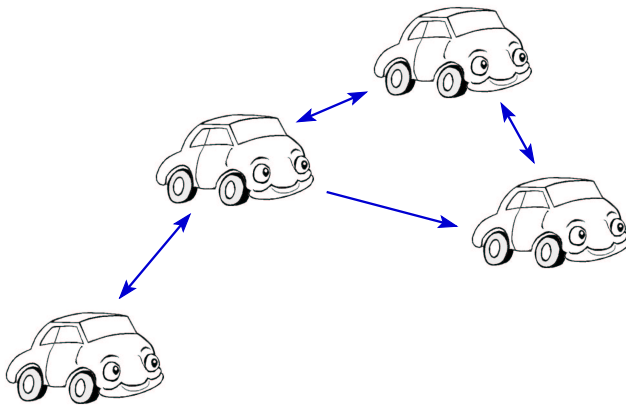
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Semester/Diploma/Master Thesis “Routing in Dynamic Networks” and “Mobility Models”



When the age of computing began, computers were bulky and nobody dreamed of carrying one around with them. Once a network was set up, only few updates were made over long periods of time. With the advent of small personal computing devices (be it a PDA, a mobile phone or whatnot), networks have become much more dynamic and ad hoc. But mobility is not the only cause of dynamic networks. If we have a large network of small, cheap, unre-

reliable devices, many of them might fail (and recover again); link stability can be affected by a plethora of factors, usually outside of human control, such as weather conditions. In this case we also have a very dynamic network, even if the nodes themselves are stationary.

One outstanding research challenge is to model and understand dynamic networks. This thesis can either be done as two separate semester theses or both parts as one diploma/master thesis. In one part, we will look at the many models for mobility and try to find a unifying framework. In the other part, we consider the task of routing in a dynamic network and study various algorithms and tradeoffs that occur.

Skills

- Interest in designing and analyzing algorithms, possibly simulating them.

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