

### **Abstract**

According to routing in ordinary graphs (wired networks), it could already be proven that there are routing protocols with runtime  $O(C + D)$  (Congestion + Dilation), and buffer size 3 for offline routing and  $O(C + D + \log n)$  with a buffer size of  $C$  for online routing, respectively. In this thesis, efficient offline and online routing will be introduced according to runtime and buffer size. Afterwards, it will be attempted to transfer the protocols to apply on hypergraphs. A hypergraph is a generalisation of an ordinary graph, where a hyperedge can include an arbitrary amount of nodes. In this way, a wireless network can be modeled. Currently, it is not clarified if routing is as efficient in wireless networks as in wired networks. Therefore it will be examined, if hypergraphs are applicable on efficient offline and online routing protocols, especially to check the runtime when using hypergraphs.