

**Prof. Roger Wattenhofer**

phone +41 1 632 6312

fax +41 1 632 1172

wattenhofer@tik.ee.ethz.ch

## Semester Thesis “Reverse Engineering of eMule”

eMule is a popular peer-to-peer (p2p) client which builds upon the sever-based eDonkey2000 (ed2k) platform. In newer versions of eMule, lookups can also be performed over the serverless Kad-network, an implementation of a distributed hash table (DHT) called Kademlia.



Unfortunately, only little is known about the techniques and algorithms used by eMule. In this semester thesis, you will investigate the following questions in detail: How fast are the lookups in eMule when using the Kad-network compared to the server-based lookups? How are the lookups performed? How and how well do keyword searches work?

Your work includes reading background information about current p2p systems, playing with the current eMule client, and possibly reading (or even adapting!) the code of eMule.

**Skills** Interest in p2p computing, creativity, scientific curiosity, programming, basic knowledge of algorithm development.

### Contacts

- Thomas Locher: lochert@tik.ee.ethz.ch
- Stefan Schmid: schmiste@tik.ee.ethz.ch
- Roger Wattenhofer: wattenhofer@tik.ee.ethz.ch