



## Roger Wattenhofer

wattenhofer@ethz.ch  
www.disco.ethz.ch

# Consensus

*Monday, May 30 2016, 14-15:30*

Distributed systems have many benefits, such as increased storage, computational power, or even the possibility to connect spatially separated locations. One of the main reasons for building distributed systems is fault-tolerance. When building fault-tolerant systems, challenging *coordination* problems may appear. Coordination problems and solutions are so prevalent, they come with various flavors and names: Consistency, agreement, ledger, state replication, byzantine generals, event sourcing, and *consensus*. In my talk I will present an overview of the consensus history, a history that has its roots decades before Bitcoin's blockchain was introduced. I will introduce basic techniques to build fault-tolerant distributed systems, and discuss practical consensus protocols such as Paxos or Zyzzyva.

### Reading:

- Roger Wattenhofer, The Science of the Blockchain, <http://www.amazon.com/dp/1522751831>, I will provide copies of the chapters I will survey.

