

# Fault Tolerance

Permissioned/Closed

Permissionless/Open

Crash/Consensus

Byz/Agreement

“Blockchain”

Paxos  
Impossibility  
Rand Ben-Or

$n > 3f$   
King  
Rand Ben-Or  
Shared Coin  
PBFT

Bitcoin  
Smart Contracts  
Selfish Mining

Game Theory

Quorum

Storage

Crypto

Time: Logical & Physical