In one paper we see family of Snow leaderless BFT protocols which is different than conventional PoW based consensus protocols. There are similarities and differences that make this family more scalable and secure. Snow is greener because it does not use PoW and no energy consumed when no decisions/transactions are made in the case of Bitcoin miners always have to be online, tolerates discrepancies in knowledge in peer nodes in Bitcoin every node has to be on the same page, liveness is achieved randomized subsampling, system repeatedly samples network and sample's mini-consensus in Snow, in conventional consensus we wait some number of responses. However, when safety threshold is exceeded system immediately fails, in Bitcoin it increase by number of faulty nodes increases. Faulty node can see current state of honest nodes and they are computationally bounded which prevents forging signatures. The family has three types of protocols: Slush, Snowflake and Snowball. They all based on majority-based metastable voting mechanism. Slush is less advanced and only CFT. Snowflake adds BFT on top of Slush. Snowball is most advanced protocol in the family and adds confidence, in other words how accurate is current state of each node.

In the other paper we read about Algorand which uses Byzantian Agreement protocol, it reaches to consensus with low latency so that there is no possibility for forks. Key features: users are assigned weights (money amount) to avoid Sybil attacks, consensus by committee is similar to electing leader node, committee members have option to be chosen and committee participants have one vote. Weighting users also provides ability not be dependent on fixed number of users to reach the consensus.