

**FILECOIN: FROM PROOF-OF-SPACE BLOCKCHAIN  
TO DECENTRALIZED STORAGE**

Irene Giacomelli

*Protocol Labs*

Filecoin is a decentralized storage network that turns cloud storage into an algorithmic market. The market runs on a blockchain with a native protocol token (also called “Filecoin”), which miners earn by providing storage to clients and mining blocks. This talk will first give a brief overview of the blockchain backbone of Filecoin, and will then focus on the underlying cryptographic primitive that guarantees that the provided storage is reliable through time. In particular, I will explain what a Proof of Space (PoS) is, as a green alternative to the famous Proof of Work, and I will talk about the challenges raised by the application of a PoS for “useful space” (i.e., storage of real word data).