



# Bitcoin & Blockchain

## Cryptographic Fundamentals and Working Principles (English)



Bitcoin is the most dominant cryptocurrency in use today. Using distributed ledger technology (DLT), Bitcoin processes transactions in a fully decentralized way and does not require the existence of a trusted third party (e.g., bank). As such, Bitcoin is the payment system of choice for many Internet users.

The blockchain technology underlies and enables Bitcoin and most other cryptocurrencies in use today. A blockchain is a data structure that represents a public ledger to store all transactions made in the past in a cryptographically secure way (using cryptographic hash functions, hash trees, and digital signatures based on elliptic curves).

On behalf of the eSECURITY Academy, Prof. Dr. Rolf Oppliger organizes and puts into practice a 2-day seminar to explain the cryptographic fundamentals and working principles of Bitcoin and the blockchain technology.

More specifically, the seminar explains in detail

- the cryptographic fundamentals and working principles of the blockchain technology,
- how the technology is used in Bitcoin,
- what cryptographic primitives are employed, and
- what the advantages and disadvantages are with respect to other technologies.

The seminar will be held in English and take place on March 14 - 15, 2019 in Zürich (location and exact time will be announced later).

The registration fee is CHF 1720.00 (including VAT, documentation, and catering).

Please, register until February 14, 2019 with e-mail to [registration@esecurity.academy](mailto:registration@esecurity.academy).

We are pleased to answer any question on the phone 079 654 84 37 or with e-mail ([info@esecurity.academy](mailto:info@esecurity.academy) or [rolf.oppliger@esecurity.ch](mailto:rolf.oppliger@esecurity.ch)).