



# SILVIO MICALI

May 10, 2019

12:00

Aula Magna, DIAG - Department of Computer, Control, and Management  
Engineering Antonio Ruberti

Via Ariosto 25, Sapienza Università di Roma

## ALGORAND THE TRULY DISTRIBUTED LEDGER



BY  
**SILVIO MICALI**  
MIT

A *distributed ledger* is a tamperproof sequence of data that can be read and augmented by everyone. Distributed ledgers stand to revolutionize the way a democratic society operates. They secure all kinds of traditional transactions - such as payments, asset transfers, titling - in the exact order in which they occur; and enable totally new transactions - such as cryptocurrencies and smart contracts. They can remove intermediaries and usher in a new paradigm for trust. As currently implemented, however, distributed ledgers cannot achieve their enormous potential.

*Algorand* is an alternative, democratic, and efficient distributed ledger. Unlike prior ledgers based on 'proof of work', it dispenses with 'miners'. Indeed, *Algorand* requires only a negligible amount of computation. Moreover, its transaction history does not 'fork' with overwhelming probability: i.e., *Algorand* guarantees the finality of all transactions.

Finally, *Algorand* enjoys *flexible self-governance*. A successful society must be able to evolve, and a cryptocurrency cannot be an ocean liner on autopilot. By using its hallmark propose-and-agree process, *Algorand* can correct its course as necessary or desirable, without any 'hard forks'. Thanks to this core process, *Algorand* can routinely summon the contribution of each single 'token' for reaching any future decision.



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## PROGRAM

### 12.00 **OPENING**

**Eugenio Gaudio**

Rector, Sapienza Università di Roma

**Tiziana Catarci**

Director of DIAG, Sapienza Università di Roma

**Stefano Leonardi**

Chair of Doctoral Program in Data Science, Sapienza Università di Roma

**Luigi Vincenzo Mancini,**

Chair of Master Degree in Cybersecurity, Sapienza Università di Roma

**Antonio Sassano**

President of Fondazione Ugo Bordoni

### 12.15 **KEYNOTE**

**Silvio Micali**, Founder of Algorand

*Silvio Micali is professor of computer science at MIT and one of the world's authorities on cryptography, zero knowledge and distributed ledgers. He is the recipient of the Turing Award in computer science, the Gödel Prize in theoretical computer science, and the RSA prize in cryptography.*

### 13.15 **Q&A**

Free entrance, registration required