

[PROFILE]

Calogero Turco is a PhD Student in Computer Science at the University of Pisa. His research focuses on identity management and trust supported by Distributed Ledger Technologies, with particular attention to Self-Sovereign Identity, verifiable credentials, online social networks, non-human digital identities, and on-chain betting and prediction markets.

He works with the Pisa DLT Laboratory and previously collaborated with the group on Self-Sovereign Identity for both his Master's and Bachelor's theses.

[EDUCATION AND TRAINING]

NOVEMBER 2024 - PRESENT | PISA, ITALY

PhD in Computer Science

University of Pisa

Research on Self-Sovereign Identity, trust, blockchain, Internet of Things, online social networks, and real-world decentralized identity applications. EQF level 8.

NOVEMBER 2021 - OCTOBER 2024 | PISA, ITALY

Master's Degree in Computer Science - ICT Solutions Architect

University of Pisa

Final grade: 110/110 cum laude. Thesis: *Assessing the Trustworthiness of Social Content Through Self-Sovereign Identity*. Coursework included blockchain, peer-to-peer systems, smart contracts, microservices, distributed systems, parallel programming, and embedded systems. EQF level 7.

2017 - 2021 | PISA, ITALY

Bachelor's Degree in Computer Science

University of Pisa

Thesis: *Privacy-preserving delivery with Self-Sovereign Identity - An implementation with Hyperledger Indy*. Developed a privacy-preserving package-shipping system using SSI and Hyperledger Indy. EQF level 6.

[RESEARCH INTERESTS]

Self-Sovereign Identity | Trust and authorization | Verifiable credentials | Distributed ledger technologies | Blockchain systems | Internet of Things | Online social networks | On-chain betting and prediction markets

[SELECTED PUBLICATIONS]

2027 | **Computer Science Review**, volume 63, article 101048

A Survey Charting Trust Models and Systems in Self-Sovereign Identity

C. Turco, A. De Salve, D. Di Francesco Maesa, P. Mori, and L. Ricci

2026 | **31st IEEE Symposium on Computers and Communications**

Orchestrating Multi-Issuer Credentials in Self-Sovereign Identity: An Implementation with Proof of Ownership

C. Turco, A. De Salve, P. Mori, and L. Ricci

2026 | **IEEE 103rd Vehicular Technology Conference**

CERBERUS: A Self-Sovereign Identity-Based Authorization Framework for Autonomous Vehicles

C. Turco, M. De Vincenzi, A. De Salve, I. Matteucci, P. Mori, and L. Ricci

2026 | **41st ACM/SIGAPP Symposium on Applied Computing**, pp. 503-505

From Solo Issuing to an Orchestra: Design and Seamless Augmentation of Self-Sovereign Identity for Multi-Signature Verifiable Credentials

C. Turco, A. De Salve, P. Mori, and L. Ricci

2026 | **8th Distributed Ledger Technology Workshop**

When Bitcoin Rolls the Dice: An Analysis of Gambling Patterns in SatoshiDice

C. Turco, G. Trudu, D. Di Francesco Maesa, and L. Ricci

2025 | **7th IEEE Conference on Blockchain Computing and Applications**, pp. 169-177

An Aid to Mitigate Online Misinformation with Self-Sovereign Identity and Artificial Intelligence

C. Turco, A. De Salve, D. Di Francesco Maesa, P. Mori, and L. Ricci

2022 | **5th International Conference on Blockchain Technology and Applications**, pp. 147-157

Self-Sovereign Identity for Privacy-Preserving Shipping Verification System

A. De Salve, A. Lisi, P. Mori, L. Ricci, and C. Turco

[EXPERIENCE]

2-6 JUNE 2025 | PISA, ITALY

Local Organizing Committee Volunteer

IEEE International Conference on Blockchain and Cryptocurrency

Supported registration, presentation setup, participant assistance, and on-site problem solving.

[TECHNICAL SKILLS]

PROGRAMMING

Java | C++ | JavaScript / Node.js / Express | C | Python | SQL | Haskell

TOOLS AND LIBRARIES

Git | Linux | LaTeX / Overleaf | Keras | scikit-learn | TensorFlow | Microsoft Office

DISTRIBUTED SYSTEMS

DIDs | Hyperledger Indy | Veramo | Bitcoin | Solidity | Ethereum | Self-Sovereign Identity | POSIX threads | OpenMP | FastFlow

[LANGUAGES]

Italian: native | English: B2 overall, C1 reading