



6th Distributed Ledger Technologies Workshop (DLT2024)

Workshop Program

Day 1 - Tuesday 14 May

08:15 Registration

08:45 Welcome

09:00 Session 1 - Blockchain for good

- Alberto Butera, Noemi Romani and Valentina Gatteschi
"Improving driving behavior: a blockchain-based gamification system"
- Gavina Baralla, Luisanna Cocco, Roberto Tonelli and Marco Di Francesco
"A Blockchain-Based System Proposal for management and monitoring Historical Heritage" (Oral communication)
- Giovanni Miri
"Blockchain Enabling Project-Focused Public Debt: A DApp to Help Public Entities Raise Funds" (Oral communication)
- Ivan Homoliak
"Towards Secure, Scalable, and Flexible E-Voting in Blockchains" (Oral communication)

09:42 Session 2 - DAOs

- Irene Domenicale, Flavia Fredda and Claudio Schifanella
"Tokenomics in Civic Blockchain: Implementing Community and SoulBound Tokens in a Game-Theoretical Framework for Collaborative Economies"
- Sowelu Avanzo, Alex Norta, Julio Linares, Claudio Schifanella and Marie Hattingh
"DAO-ML: A Modelling Language for the specification of Decentralized Autonomous Organization governance"
- Stefan Kitzler, Stefano Baliotti, Pietro Saggese, Bernhard Haslhofer and Markus Strohmaier
"The Involvement of Contributors in Decentralized Autonomous Organizations' (DAOs) Governance" (Oral communication)
- Alberto Leporati
"Certification of Business Processes and Workflows via Blockchain"
- Stefano Ferretti, Gabriele D'Angelo, Angelo Furfaro and Paolo Giaccone
"How Blockchain Technologies can Promote the Creation of Smart Services in Smart Shires" (Oral communication)

10:45 Coffee break

11:15 Invited speaker



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- Stefan Schulte
"Blockchain Interoperability: Current State and Future Trends"

12:15 Sponsor

- Links Foundation

12:30 Session 3 - AI

- Fadi Barbara, Emanuele Antonio Napoli, Valentina Gatteschi and Claudio Schifanella
"Automatic Smart Contract Generation Through LLMs: When The Stochastic Parrot Fails"
- Jahan Zeb Shahid and Stelvio Cimato
"Sharded Blockchain for the Scalability and Privacy of Healthcare Data in Federated Learning" (Oral communication)
- Giovanni De Gasperis and Sante Dino Facchini
"MAS, DAO and DLT: a 3 Legs Architecture for Intelligent Services" (Oral communication)

13:05 Lunch

14:18 Session 4 - Applied Crypto

- Diego Pennino and Maurizio Pizzonia
"Virtual Private Blockchains for GDPR: Cheap Private Blockchains out of Public Ones"
- Domenico Tortola, Andrea Pelosi, Giuseppe Gabriele Russo, Paolo Mori and Laura Ricci
"zkSNARKs Libraries for Blockchains: a Comparative Study"
- Abhimanyu Rawat, Tarun Kumar Vangani, Hanno Cornelius and Vanesa Daza
"Accelerating Prolly Trees: Simplified Chunking for Rapid Updates"
- Gennaro Avitabile, Vincenzo Botta, Daniele Friolo and Ivan Visconti
"Data Redaction in Smart-Contract-Enabled Permissioned Blockchains"
- Pierpaolo Della Monica, Ivan Visconti, Andrea Vitaletti and Marco Zecchini
"Non-Fungible Tokens for Confidential Assets" (Oral communication)

15:27 Session 5 - Supply Chain

- Carmelo Felicetti, Domenico Saccà, Antonella Guzzo and Francesco Pasqua
"Innovative Distributed Ledger Technologies for Local Product Traceability in Agro-Touristic Economies"
- Giulia Rafaiani, Giacomo Zonneveld, Paolo Santini, Massimo Battaglioni, Franco Chiaraluce and Marco Baldi
"A Blockchain-based Architecture for Data Certification and Notarization" (Oral communication)
- Albero Amico, Vincenzo Apicella, Alberto Bufera, Devis Bianchini, Matteo Cesana, Gabriele Digregorio, Massimiliano Garda, Valentina Gatteschi, Corrado Innamorati, Francesco Leotta, Stefano Longari, Pierluigi Plebani, Mariarosa Pizzo, Giovanni Quattrocchi, Noemi Romano, Letizia Tanca, Andrea Vitaletti and Stefano Zanero



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"Blockchain-based solutions for trusted and quality-aware data sharing" (Oral communication)

16:00 Session 6 - Software Engineering

- Andrea Pinna, Ilaria Lunesu and Roberto Tonelli
"Blockchain Technologies for Managing Ephemeral Teams for Agile Software Development." (Oral communication)
- Francesco Salzano, Lodovica Marchesi, Remo Pareschi, Roberto Tonelli, Simone Scalabrino and Rocco Oliveto
"How are Smart Contracts Vulnerabilities Fixed? Bridging the Gap between Theory and Practice" (Oral communication)

16:18 Coffee Break

16:48 Session 7 - Formal Methods

- Adele Veschetti, Richard Bubel and Reiner Hähnle
"SmartML: Enhancing Security and Reliability in Smart Contract Development"
- Silvia Crafa, Giacomo Dal Sasso, Alvise Spanò, Sabina Rossi and Michele Buglesi
"Linear typing for asset-aware programming: the case of Sui Move" (Oral communication)
- Joao Afonso, Elvis Gerardin Konjoh Selabi, Maurizio Murgia, Emilio Tuosto and António Ravara
"TRAC: a tool for data-aware coordination (with an application to smart contracts)" (Oral communication)
- Samia Guesmi, Carla Piazza and Sabina Rossi
"Noninterference Analysis for Smart Contracts: Would you Bet on it?"
- Chiara Braghin, Elvinia Riccobene and Simone Valentini
"A Formal Framework for security assessment of Ethereum Smart Contracts" (Oral communication)
- Massimo Bartoletti, Fabio Fioravanti, Giulia Matricardi, Roberto Pettinau and Franco Sainas
"Towards benchmarking of Solidity verification tools" (Oral communication)
- António Ravara
"Towards a Solider Solidity: Taming Type Casts" (Oral communication)
- Dario Maddaloni, Riccardo Marchesin and Roberto Zunino
"How To Save Fees in Bitcoin Smart Contracts: a Simple Optimistic Off-chain Protocol"
- Giulia Matricardi, Fabio Fioravanti and Marco Di Ianni
"Visualizing CHC Verification Conditions for Smart Contracts Auditing" (Oral communication)
- Massimo Bartoletti, Angelo Ferrando, Enrico Lipparini and Vadim Malvone
"Solvent: liveness verification of smart contracts" (Oral communication)



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18:40 Meeting DLT Group

20:30 Social Dinner

- Restaurant of the Esperia club, Corso Moncalieri 2, Torino

Day 2 - Wednesday 15 May

08:30 Session 8 - Integrating Tech

- Stefano Bistarelli, Chiara Luchini and Francesco Santini
"Policy-based Credential Disclosure in SSI by Using ORCON-based Access Control"
- Ivan Homoliak
"Secure Logging with Blockchains and its Utilization for Central Bank Digital Currency"
(Oral communication)
- Mohammad Rowhani Sistani, Pierluigi Gallo and Maria Timoshina
"Integrating Computer Vision & Blockchain for Enhanced Saffron Evaluation: A Focus on Filament Curvature Assessment"
- Hasret Ozan Sevim
"A Survey on Trustless Cross-chain Interoperability Solutions in On-chain Finance" (Oral communication)
- George Giamouridis, Boojoong Kang and Leonardo Aniello
"Blockchain-based DNS: Current Solutions and Challenges to Adoption"
- Luigi Bellomarini, Marco Favorito, Eleonora Laurenza, Markus Nissl and Emanuel Sallinger
"Towards FATEful Smart Contracts"

09:48 Session 9 - DeFi

- Alberto Arrigoni, Matthias Hafner, Benedetto Biondi and Nicolas Greber
"Understanding Liquidity Risk in DeFi Lending Platforms" (Oral communication)
- Margherita Renieri, Letterio Galletta, Alberto Lluch Lafuente and James Chiang
"A Netting Protocol for Liquidity-saving Automated Market Makers"
- Federico Calandra, Francesco Pio Rossi, Francesco Fabris and Marco Bernardo
"Making Algorithmic Stablecoins More Stable: The Terra-Luna Case Study"
- Margherita Renieri and Letterio Galletta
"Detection of De-Fi Profitable Scenarios through History-Based Policies" (Oral communication)

10:36 Coffee break

11:06 Session 10 - Consensus

- Angelo Murano, Bruna Bruno and Vincenzo Vespri
"Incentives compatibility constraints for vote-based consensus protocols"



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- Stefano Bistarelli, Cosimo Laneve, Ivan Mercanti and Adele Veschetti
"Analyzing the Fairness of Proof of Stake Ethereum"
- Alked Ejupi, Stefano De Angelis and Vladimiro Sassone
"Performance and scalability testing for blockchain consensus protocols: a systematic framework"
- Ivan Malakhov, Andrea Marin, Sabina Rossi, Carla Piazza and Daria Smuseva
"Under the space threat: Verifier's Dilemma in Cosmos blockchain" (Oral communication)
- António Ravara
"Modular Blockchain Simulator" (Oral communication)
- Ivan Visconti, Andrea Vitaletti and Marco Zecchini
"Do your readers need a blockchain?" (Oral communication)

12:09 Session 11 - Layer 2

- Marco Benedetti, Francesco De Sclavis, Giuseppe Galano, Sara Giammusso, Antonio Muci and Matteo Nardelli
"Impact of Layer-1 Characteristics on Scalability of Layer-2 Semi-Hierarchical Payment Channel Networks"
- Ivan Gallo, Marina Ribauda and Matteo Dell'Amico
"Network Analysis of the Lightning Network" (Oral communication)

12:42 Lunch

13:57 Session 12 - Analytics and Measurements

- Antonio Pierro, Luisanna Cocco and Roberto Tonelli
"Besu vs. Quorum: Comparative Analysis in the Context of Energy Communities"
- Alvaro Revuelta, Sergei Tikhomirov, Aaryamann Challani, Hanno Cornelius and Simon Pierre Vivier
"Message Latency in Waku Relay with Rate Limiting Nullifiers"
- Flavio Corradini, Alessandro Marcelletti, Andrea Morichetta and Barbara Re
"A Data Extraction Methodology for Ethereum Smart Contracts" (Oral Communication)
- Stefano Bistarelli, Francesco Santini and Luca Maria Tutino
"A Short Survey on Bitcoin Price Prediction"
- Stefano Bistarelli, Gianlorenzo Giuliani, Ivan Mercanti and Francesco Santini
"An In-depth Analysis of Mining Pools Revenue"
- Nicola Elia, Francesco Barchi, Alessia Pisu, Livio Pompianu and Andrea Acquaviva
"Estimating Smart Contracts Performance" (Oral communication)
- Nawaz Abdullah Malla, Alessandro Marcelletti, Andrea Morichetta and Francesco Tiezzi
"Unveiling Algorand Storage Peculiarities"
- Stefano Bistarelli, Marco Fiore, Antonio Ignazio Lazzizzera, Ivan Mercanti and Marina Mongiello



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"Analysis of Blockchain Sustainability through the Comparison of Different Smart Contracts Programming Languages"

15:45 Session 13 - Law

- Alessandro Billi
"The Future of Food Law in the Blockchain Era: Disintermediation, Algocracy, and Rights Protection" (Oral communication)
- Luca Olivieri, Luca Pasetto, Luca Negrini and Pietro Ferrara
"European Union Data Act and Blockchain Technology: Challenges and New Directions"
- Ludovico Papalia and Chantal Bomprezzi
"The Use of Blockchain for Legislative Simplification Tracking"(Oral communication)

16:18 Session 14 - Energy and IoT

- Matteo Vaccargiu, Giacomo Ibba and Roberto Tonelli
"Is it possible to create a decentralized free energy market? An automatic literature review approach"
- Alessia Pisu, Livio Pompianu, Salvatore Castello, Daniele Riboni and Salvatore Carta
"Personalized Smart Contracts for IoT Data Certification" (Oral communication)
- Silvio Meneguzzo, Alessandro Mozzato, Alfredo Favenza, Valentina Gatteschi and Lucio Rocco Inglese
"Distributed ledger technologies for electric vehicles charging and payment operations" (Oral communication)
- Daniele Orrù, Andrea Pinna and Roberto Tonelli
"Low-Cost Tamper-Proof IoT Devices to Improve Data Origin Verification and Privacy in Blockchain-Based Energy Consumption Records"
- Giuseppe Spadavecchia, Marco Fiore, Daniela De Venuto and Marina Mongiello
"Using Blockchain and Smart Contracts as a Centralized Cloud Alternative for IoT" (Oral communication)
- Lodovica Marchesi, Maria Ilaria Lunesu and Roberto Tonelli
"Integrating Blockchain, IoT and Robotics into a Reliable Production System" (Oral communication)

17:25 Closing

17:40 Coffee break and greetings

The workshop program is
also available online



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