



### **NEW ACM JOURNAL ANNOUNCEMENT**

#### **ACM Distributed Ledger Technologies: Research and Practice (DLT)**

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Distributed Ledger Technologies: Research and Practice (DLT) is a peer-reviewed journal that seeks to publish high quality, interdisciplinary research on the research and development, real-world deployment, and/or evaluation of distributed ledger technologies; e.g., blockchain, cryptocurrency, and smart contract. DLT will offer a blend of original research work and innovative practice-driven advancements by internationally distinguished DLT experts and researchers from academia, and public and private sector organizations.

Topics of relevance include, but are not limited to, the following:

##### **Innovation and advances in DLT**

- Distributed ledger theory
- Performance analysis and optimization
- Distributed ledger scalability and reliability
- Interoperability or cross-chain interactions
- Consistency, availability and partition tolerance
- Mathematical modeling and stability analysis
- Language-based security and formal verification
- Blockchain and alternative distributed ledger technologies
- Green distributed ledger computing
- Sustainability of distributed ledgers
- Hardware-level security
- Security, privacy, attacks and forensics of distributed ledger
- Anonymity, privacy and network forensics
- Simulation tools and platforms

##### **Smart Contracts**

- Smart contract programming languages and tools
- Transaction monitoring and analysis
- Transactional privacy/anonymity
- Mining pools and swarms
- Workflows using smart contracts
- Proof-of-work, -stake, -burn and alternatives
- Smart contract security and attacks
- Formal analysis, verification and correct by design principles
- Governance, accountability, automation and safety

##### **DLT Building Blocks**

- Consensus protocols, including PoW, -stake, -burn and alternatives
- Cryptoeconomic mechanisms to reach consensus

- Economic incentive and payoff mechanisms
- Consensus mechanism of DAG
- Security risks and attack vectors

#### Fintech

- Cryptocurrency and cashless society
- Payment and exchange
- Cryptocurrency integration
- Business opportunities in blockchain
- Derivative contracts/transactions
- Tokens and value creation
- Token economies and governance
- Interfacing fiat and cryptocurrencies
- Machine learning in crypto-markets
- Distributed ledger-based financial market
- Prediction marketplace systems
- Fraud detection and management
- Regulation and taxation
- Policy issues associated with digital currencies
- Fintech adoption, use and impact

#### Blockchain Engineering

- User studies, real-world measurements and metrics
- Design methodologies for distributed applications
- Certification and audits
- Implications for existing business models
- Identity management, user services and integrity verification
- The Internet of Agreements
- Healthcare management
- Supply chain management
- Business and industrial applications
- Education, legal and smart infrastructure applications
- Distributed ledger and cryptocurrency impact on consumers and regulatory responses

#### Enabling Technologies

- Internet of things (IoT) and blockchain technology
- Distributed ledger in next generation communications and networks
- Artificial intelligence and blockchain
- Distributed ledger in big data analytics
- High-performance for transaction processing
- Quantum-resistant cryptography

For questions and further information, write to [dlt-eics@acm.org](mailto:dlt-eics@acm.org).

## **Distributed Ledger Technologies: Research and Practice (DLT)**

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