NEWS RELEASE

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ACM PUBLISHES INAUGURAL ISSUE OF *TRANSACTIONS ON DISTRIBUTED LEDGER TECHNOLOGIES*

Blockchain, Cryptocurrency, and Smart Contracts Among Topics to Be Covered

New York, NY, October 6, 2022 – ACM, the Association for Computing Machinery, today announced the inaugural issue of *ACM Distributed Ledger Technologies: Research and Practice* (DLT), a new peer-reviewed journal. Issued quarterly, DLT publishes high quality, interdisciplinary scholarship on the research and development, real-world deployment, and/or evaluation of distributed ledger technologies, including blockchain, cryptocurrency, and smart contracts. DLT offers 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.

In their introduction letter for the journal, Co-Editors-in-Chief Kim-Kwang Raymond Choo and Mohammad Hammoudeh underscore that their vision for DLT is "a venue where the research and practitioner communities, as well as government agencies, can get together, discuss, and present DLT and related advances, challenges, and opportunities."

Articles featured in the inaugural issue include:
"Byzantine Fault Tolerance for Distributed Ledgers Revisited," by Yonggee Wang
Byzantine Fault Tolerance (BFT) refers to a computer system's ability to continue operating even when some of its nodes fail or act erratically. BFT plays an important role in making distributed ledger technologies work. Due to the popularity of Proof of Stake (PoS) blockchains in recent years, several BFT protocols have been deployed in the large scale of internet environment. In her paper, Wang analyzes several BFT protocols and proposes her own more efficient variation.

"Incentivizing Data Quality in Blockchain-Based Systems—The Case of the Digital Cardossier," by Florian Spychiger, Claudio J. Tessone, Liudmila Zavolokina, and Gerhard Schwabe
The authors investigate how incentives for a permissioned blockchain-based system in the automobile ecosystem can be designed to ensure high-quality data storage and use by different stakeholders.

"A Hybrid Incentive Mechanism for Decentralized Federated Learning," by Minfeng Qi, Ziyuan Wang, Shiping Chen, and Yang Xiang
Federated Learning (FL) is a machine learning technique that allows multiple data owners to build a common robust machine learning model without sharing data—thus protecting privacy and security. However, motivating data owners to participate in (and stay within) an FL ecosystem by continuously contributing their data to the FL model remains a hurdle in implementing these techniques. In this article, the authors propose a hybrid incentive mechanism based on blockchain to address the above challenge.

"Reinshard: An Optimally Sharded Dual-Blockchain for Concurrency Resolution," by Vishal Sharma, Zengpeng Li, Paweł Szałachowski, Teik Guan Tan, and Jianying Zhou
Decentralized control, low-complexity, flexible, and efficient communications are the requirements of an architecture that aims to scale blockchains beyond the current state. The authors propose Reinshard, a new blockchain that scales more efficiently than current state-of-the-art techniques.

"A Scalable Trustworthy Infrastructure for Collaborative Container Repositories," by Franklin Wei, Stephen Tate, Mahalingam Ramkumar, and Somya Mohanty
Within-cloud computing containerization has become ubiquitous. As the availability of pre-built containers increases, there is a need for methods capable of efficiently securing large repositories of software containers. The authors present a Trustworthy Container Repository (TCR) system which provides security assurances (confidentiality, integrity, and authenticity) regarding such a repository in a scalable manner.

In addition to Co-EiCs Choo and Hammoudeh, the DLT editorial team is drawn from countries around the world including Austria, Australia, Canada, China, Denmark, Dubai, Finland, France, Italy, Norway, Panama, Portugal, Spain, Switzerland, South Korea, the United Kingdom, and the United States. The editorial board also includes three Senior Associate Editors, and 31 Associate Editors.

Current call for papers: https://dl.acm.org/journal/dlt/calls-for-papers
Special Issue on Thriving Amidst Disruptive Technologies, Submissions Deadline: December 1, 2022
Special Issue on Mathematical Research for Blockchain Economy, Submissions Deadline: December 1, 2022
Special Issue on Recent Advances of Blockchain Evolution, Architecture, and Performance, Submissions Deadline: December 15, 2022

About ACM
ACM, the Association for Computing Machinery is the world's largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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