



The 3rd IEEE International Conference on Blockchain (Blockchain - 2020)

Rhodes Island, Greece

November 02 - 06, 2020

AlChain 2020 Workshop

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Thursday Nov 5, 2020

Welcome



Olivia Choudhury
Amazon



Justin D. Harris
Microsoft



Oshani Seneviratne
Rensselaer Polytechnic
Institute

About the workshop

- Second installment after a successful workshop at last year's IEEE Blockchain Conference
- Focus: Explore synergies between AI and blockchain and vice versa
- Topics:
 - AI-based consensus mechanisms for blockchain
 - AI for decentralized applications
 - AI for the analysis of smart contracts and data stored on the blockchain
 - AI-assisted smart oracles
 - AI-assisted smart contract generation for blockchain
 - Anomaly detection in smart contracts using AI
 - Federated and distributed learning using blockchain frameworks
 - Blockchain for data privacy and AI model integrity
 - Challenges of adopting blockchain technology to assist AI

About the workshop

- Call for Papers:
 - Received a lot of interest despite the ongoing pandemic
- Review:
 - Each paper received **4-5 reviews**
 - We selected **4 high-quality papers**
- Program Committee:
 - Asnee Fernando (Shoptaki Inc, USA)
 - Geeth De Mel (IBM Research, UK)
 - Heather Leigh Flannery (ConsenSys Health)
 - Sarada Prasad Gochhayat (Old Dominion University, USA)
 - Andrey Kuehlkamp (University of Notre Dame, USA)
 - Tsung-Ting Kuo (University of California San Diego, USA)
 - Jonathan Passerat-Palmbach (ConsenSys and Imperial College London, UK)
 - Serguei Popov (IOTA and University of Porto)

Invited Speakers



Ciarán McGonagle

Assistant General Counsel

International Swaps and
Derivatives Association, Inc.
(ISDA)



Heather Flannery

Founder & CEO, ConsenSys
Health; Co-Chair, HIMSS
Blockchain Task Force; Chair,
IEEE SA Open P2418.6; Chair,
EEA Healthcare Interest Group



Serguei Popov

University of Porto, Portugal

Co-founder and Board of
Directors, IOTA Foundation

Program - <https://ai4blockchain.github.io/#program>

Time (AST)	Topic	Presenter(s)	Chair
16:00	Invited Talk: A Digital Future of Financial Markets	Ciarán McGonagle	Oshani Seneviratne
16:30	Paper: BlockConfess: Towards an Architecture for Blockchain Constraints and Forensics	Sabrina Kirrane and Claudio Di Ciccio	
16:55	Invited Talk: Introduction to IOTA -- a feeless cryptocurrency	Serguei Popov	Olivia Choudhury
17:25	Paper: 2CP: Decentralized Protocols to Transparently Evaluate Contributivity in Blockchain Federated Learning Environments	Harry Cai, Daniel Rueckert, Jonathan Passerat-Palmbach	
17:50	Break		
18:00	Invited Talk: Convergence of Blockchain and AI for a Health Utility Grid	Heather Flannery	Justin Harris
18:30	Paper: Blockchain-Orchestrated Machine Learning for Privacy Preserving Federated Learning in Electronic Health Data	Sean T. Manion and Justin D. Harris	
18:55	Paper: Implicit Authentication in Neural Key Exchange Based on the Randomization of the Public Blockchain	Siwan Noh and Kyung Hyune Rhee	
19:20	Open Discussion		

Workflow during the Workshop Session

1. Session Chair starts the session
2. Session Chair asks the zoom manager to play the presentation file
3. During the presentation file playing, audience can type their questions in Chat
4. After the presentation, Session Chair selects the questions from the Chat and asks the author/presenter on behalf of the audience.

Enjoy the workshop!