# Blockchain Kaigi 2023 (BCK23) Program (Final version for Oct 23)

The Integrated Innovation Building (IIB) at the RIKEN Kobe Campus. October 28th -29th, 2023

# October 28th (Sat) Morning

### Opening Remarks, including Announcement of Proceedings (9:00-9:10)

Yuichi Ikeda (Kyoto University)

### Keynote Speech (9:10-9:50) SC: Yuichi Ikeda (Kyoto University)

(K1) Aanchal Malhotra (Ripple Lab Inc.) [30 min Talk, 10 min Q&A] "The Future Outlook of the XRPL"

### Invited Talks (9:50-11:10) SC: Tetsuo Hatsuda (RIKEN iTHEMS)

- (I1) Victor Fang (AnChain.AI) [30 min Talk, 10 min O&A]
- "How Artificial Intelligence Disrupts Status Quo of Web3 Security"
- (I2) Tsuyoshi Ide (IBM Thomas J. Watson Research Center) [30 min Talk, 10 min Q&A]
- "Decentralized Collaborative Machine Learning Framework with Democracy, Diversity, and Privacy"

### General Talks (11:10-12:00) SC: Tetsuo Hatsuda (RIKEN iTHEMS)

- (G1) Claudio J. Tessone (University of Zurich) [15 min Talk, 10 min Q&A]
- "Deceptive Trading in Decentralised Finance and NFT Markets: A blockchain analytics approach"
- (G2) Hideaki Aoyama (Kyoto University) [15 min Talk, 10 min Q&A]
- "Where are the Cryptoasset nodes located? -Eye-Map identification of the longitude of nodes-"

Lunch break (12:00-13:40)

#### October 28th (Sat) Afternoon

#### General Talks (13:40-14:55) SC: Akihiro Fujihara (Chiba Institute of Technology)

- (G3) Masaki Sakurai (Chiba Institute of Technology) [15 min Talk, 10 min Q&A]
- "Proposal of Fact-Checking Registry using Bitcoin SV"
- (G4) Yu Kimura (Interoperability Labs Ltd.) [15 min Talk, 10 min Q&A]

"Theory of EDISON-X order automation using several machine learning approaches"

(G5) Ryosuke Nakazawa (Chiba Institute of Technology) [15 min Talk, 10 min Q&A]

"Proposal of fact-checking DAO and its experimental trials"

### Break (14:55-15:15)

### General Talks (15:15-16:30) SC: Claudio J. Tessone (Univ. of Zurich)

(G6) Shinya Hirata (Kyushu University) [15 min Talk, 10 min Q&A]

"Bitcoin Transactions Stochastic Model Simulation"

(G7) Zheng Nan (Yamanashi Gakuin University) [15 min Talk, 10 min Q&A]

"How did bitcoin markets evolve: A comparison with the USD/EUR foreign exchange spot market?"

(G8) Abhijit Chakraborty (Kyoto University) [15 min Talk, 10 min Q&A]

"Dynamic relationship between XRP price and correlation tensor spectra of the transaction network"

### October 29th (Sun) Morning

# Keynote Speech (9:00-9:40) (Online, West Coast: 28th 17:00, East Coast: 28th 20:00) SC: Tomoyuki Shirai (Kyushu University)

(K2) Wakefield Scott Stornetta (Creative Destruction Lab) [30 min Talk, 10 min Q&A] "The Blockchain: Past, Present, and Future"

### Invited Talks (9:40-10:20) SC: Tomoyuki Shirai (Kyushu University)

(I3) Hiroyoshi Miwa (Kwansei Gakuin University) [30 min Talk, 10 min Q&A]

"Developing human resources capable of using blockchain technology"

### General Talks (10:20-11:35) SC: Yoshimasa Hidaka (KEK Theory Center)

(G9) Taishi Nakai (Kyoto University) [15 min Talk, 10 min Q&A]

"Towards Mathematical Formulation of the Blockchain Trilemma"

(G10) Gopikrishnan Muraleedharan (Macquarie University) [15 min Talk, 10 min Q&A]

"Proof-of-work consensus by quantum sampling"

(G11) Tsuyoshi Hirayama (IBM Japan, Ltd.) [15 min Talk, 10 min Q&A]

"Breakthrough of Crypto Currency Derivatives and Quantum Finance Utilization"

### Lunch break (11:35-13:15)

## October 29th (Sun) Afternoon

### Invited Talk (13:15-15:15) SC: Abhijit Chakraborty (Kyoto University)

- (I4) Shoji Kasahara (Nara Institute of Science and Technology) [30 min Talk, 10 min Q&A]
- "Modeling and Analysis of Bitcoin Mining Mechanism -A Queueing Theoretical Approach-"
- (I5) Wang Qin (CSIRO) [30 min Talk, 10 min Q&A]
- "Tokenomics and Beyond"
- (I6) Shingo Fujimoto (Data & Security Research laboratory, Fujitsu Limited.) [30 min Talk, 10 min Q&A]
- "Smart contract-based automated token economy"

### Break (15:15-15:35)

## General Talks (15:35-16:00) SC: Yuichi Ikeda (Kyoto University)

(G12) Akihiro Fujihara (Chiba Institute of Technology) [15 min Talk, 10 min Q&A]

"Investigating the probability distribution of average block time in proof-of-stake consensus algorithm using extreme value theory"

# Invited Talk (Company Session in Japanese) (16:00-17:00) SC: Yuichi Ikeda (Kyoto University)

- (I7) Syuga Yamamoto (Gaiax Co.Ltd) [20 min Talk, 10 min Q&A] 「日本に馴染む DAO の形」
- (I8) Mayu Yokoyama (Nippon Yusen Kabushiki Kaisha) [20 min Talk, 10 min Q&A] 「日本郵船 社内有志 DAO 活動の紹介」

### Closing Remark, including Announcement of Proceedings (17:00-17:10)

Tetsuo Hatsuda (RIKEN iTHEMS)