

Tokenomics 2020

on Blockchain Economics, Security & Protocols

(2nd International Conference)

Toulouse, October 26 & 27, 2020

HYBRID CONFERENCE

Toulouse School of Economics (TSE)
1, Esplanade de l'Université – 31000 Toulouse, France
Auditorium 3 – Ground floor & On-line

CONFERENCE SECRETARIAT

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MONDAY, OCTOBER 26

9:30 – 10:00: *Registration & Welcome*

10:00 – 10:15: **Introduction**

10:15 – 12:00: **Session 1** Chair: Emmanuelle Anceaume (CNRS, IRISA)

- **10:15 – 10:45:** **Yackolley Amoussou-Guenou** (CEA & Sorbonne University), Bruno Biais (HEC Paris), Maria Potop-Butucaru (Sorbonne University), and Sara Tucci-Piergiovanni (CEA)
"Rational vs Byzantine Players in Consensus-based Blockchains"
- **10:45 – 11:15:** Andrea Bracciali (University of Stirling), **Davide Grossi** (University of Groningen & University of Amsterdam), and Ronald de Haan (University of Amsterdam)
"Decentralization in Open Quorum Systems"
- **11:15 – 11:45:** Yackolley Amoussou-Guenou (CEA & Sorbonne University), Antonella Del Pozzo (CEA), **Maria Potop-Butucaru** (Sorbonne University), and Sara Tucci-Piergiovanni (CEA)
"On Fairness in Committee-based Blockchains"
- **11:45 – 12:00:** **Vincent Danos** (CNRS, Ecole Normale Supérieure), Jean Krivine (CNRS, Paris University), and Julien Prat (CNRS, Ecole Polytechnique)
"Reversible and Composable Financial Contracts"

12:00 – 12:45: *Lunch Break*

12:45 – 13:30: **Invited talk: Ittai Abraham** (VMware Research)

"When Nakamoto meets Nash: the Blockchain breakthrough through the lens of Game Theory "

Moderator: Emmanuelle Anceaume (CNRS, IRISA)

13:30 – 15:00: **Session 2** Chair: Catherine Casamatta (TSE)

- **13:30 – 13:45:** Pascal Lafourcade (University of Clermont Auvergne), Paper presented by **Kevin Atighehchi** (University of Clermont Auvergne)
"Proof of Behavior: Design of LEMobiCoin"
- **13:45 – 14:00:** **Marianna Belotti** (Caisse des Dépôts), Stefano Moretti (University of Paris Dauphine), Maria Potop-Butucaru (CNRS, Sorbonne University), and Stefano Secci (CNAM, Paris)
"Game theoretical analysis of Atomic Cross-Chain Swaps"
- **14:00 – 14:30:** **Amin Shams** (The Ohio State University)
"The Structure of Cryptocurrency Returns"
- **14:30 – 15:00:** Pierpaolo Benigno (University of Bern, CEPR), Linda Schilling (Ecole Polytechnique CREST), and **Harald Uhlig** (University of Chicago)
"Cryptocurrencies, Currency Competition, and the Impossible Trinity"

15:00 – 15:30:

Coffee Break

15:30 – 17:00:

Session 3 Chair: Christophe Bisière (*TSE*)

- **15:30 – 16:00:** Andrea Canidio (*IMT, Lucca & INSEAD, France*), **Gabriele Costa** (*IMT, Lucca*), and Letterio Galletta (*IMT, Lucca*)
"VeriOSS: using the Blockchain to Foster Bug Bounty Programs"
- **16:00 – 16:30:** Rodney J. Garratt (*University of California Santa Barbara*), and **Maarten van Oordt** (*Bank of Canada*)
"Why Fixed Costs Matter for Proof-of-Work Based Cryptocurrencies"
- **16:30 – 17:00:** Zahra Ebrahimi (*Carnegie Mellon University*), Bryan Routledge (*Carnegie Mellon University*), and **Ariel Zetlin-Jones** (*Carnegie Mellon University*)
"Getting Blockchain Incentives Right"

17:00 – 17:45:

Invited talk: **Tim Zakian** (*Novi, Facebook*)

"Digital Currencies as Types"

Moderator: Quentin Bramas (*ICUBE*)

TUESDAY, OCTOBER 27

09:45 – 11:30: **Session 4** Chair: Quentin Bramas (*ICUBE*)

- **09:45 – 10:15:** **Julien Prat** (*CNRS, CREST & Ecole Polytechnique*), Vincent Danos (*CNRS, ENS*), and Stefania Marcassa (*University of Cergy-Pontoise*)
"Fundamental Pricing of Utility Tokens"
- **10:15 – 10:45:** **Chad Nester** (*Tallinn University of Technology*)
"A Foundation for Ledger Structures"
- **10:45 – 11:15:** **Andreas Penzkofer** (*IOTA Foundation*), Bartosz Kusmierz (*IOTA Foundation*), Angelo Capossele (*IOTA Foundation*), William Sanders (*IOTA Foundation*), and Olivia Saa (*IOTA Foundation*)
"Parasite Chain Detection in the IOTA Protocol"
- **11:15 – 11:30:** **Julien Hatin** (*Orange Labs*), Emmanuel Bertin (*Orange Labs*), Baptiste Hemery (*Orange Labs*), and Nour El Madhoun (*ISEP*)
"Welcome to the jungle: A reference Model for Blockchain, DLT and Smart-Contracts"

11:30 – 12:15: *Lunch Break*

JOINT WITH THE CONFERENCE "DIGITAL PLATFORMS: OPPORTUNITIES AND CHALLENGES"

12:15 – 13:00: **Invited talk :** **Long Chen** (*Luohan Academy, ANT Financial*)
"On Inclusive Open Finance in the Digital Age"
Moderator: Sophie Moinas (*TSE*)

13:00 – 14:30: **Session 5** Chair: Matthieu Bouvard (*TSE*)

- **13:00 – 13:30** Lin William Cong (*Cornell University*), **Ye Li** (*Ohio State University*), and Neng Wang (*Colombia Business School & NBER*)
"Token-Based Platform Finance"
- **13:30 – 14:00** Yannis Bakos (*NYU Stern*), and **Hanna Halaburda** (*NYU Stern*)
"When Do Smart Contracts and IoT Improve Efficiency? Automated Execution vs. Increased Information"
- **14:00 – 14:30** **Evgeny Lyandres** (*Boston University*)
"Product Market Competition with Crypto Tokens and Smart Contracts"

14:30 – 15:00: *Coffee Break*

15:00 – 15:45: **Jean Tirole** (*TSE*)
"Some Economics of Fintech"
Moderator: Renato Gomes (*TSE*)

15:45 – 17:30: **Session 6** Chair: Catherine Casamatta (*TSE*)

- **15:45 – 16:15:** **Vidal Attias** (*IOTA Foundation*), Luigi Vigneri (*IOTA Foundation*), and Vassil Dimitrov (*IOTA Foundation*)
“Implementation Study of Two Verifiable Delay Functions”
- **16:15 – 16:45:** Min Dai (*National University of Singapore*), **Wei Jiang** (*The Hong Kong University of Science and Technology*), Steven Kou (*Boston University*), and Cong Qin (*Soochow University*)
“From Hotelling to Nakamoto: The Economic Meaning of Bitcoin Mining”
- **16:45 – 17:15:** Franz J. Hinzen (*NYU Stern*), Kose John (*NYU Stern*), and **Fahad Saleh** (*Wake Forest University*)
“Bitcoin's Fatal Flaw: The Limited Adoption Problem”
- **17:15 – 17:30:** Shishir Rai (*Kent State University*), **Kendric Hood** (*Kent State University*), Mikhail Nesterenko (*Kent State University*), and Gokarna Sharma (*Kent State University*)
“Blockguard: Adaptative Blockchain Security”

17:30 – 17:45: **Ethereum France – Kaiko Prize for Research in Cryptoeconomics**