Speakers

Abstracts

Tutorials

(13 to 14 April 2023)

1 Barnabé Monnot

Ethereum Foundation, Germany
Tutorial on Blockchain Mechanism Design

Abstract

The blockchain mechanism design tutorial will present recent results on market structures and mechanisms for the operation of decentralised blockchain networks. Blockchain networks follow protocols, which must incentivise their clients to follow some honest protocol behaviour. When the protocol is followed, the blockchain network provides secure and valuable blockspace, a novel economic good aggregating multiple resources such as data or computation. Allocating scarce blockspace to user demand motivates novel market design questions, as any such market must navigate constraints unique to both the decentralised blockchain environment and the nature of blockspace itself. We offer an introduction to participants of the tutorial, along with a review of current questions and results from practitioners and academics.

2   Antonios Varvitsiotis

Singapore University of Technology & Design, Singapore
Tutorial on Quantum Games

Abstract

Quantum computing, a technology that relies on various exotic properties of quantum mechanics for information processing is quickly reaching maturity. Game theory is a powerful mathematical framework for modeling and predicting the outcome of strategic interactions. A natural extension of the classical game theory framework are quantum games, where players have access to quantum resources. In this tutorial, we will review various attempts proposed in the literature to quantize classical game theory and understand whether playing quantum strategies can provide (in some sense) any advantage.