

Introduction to Blockchain and Fintech

Marinos Themistocleous
University of Piraeus, Greece
mthemist@unipi.gr

Vincenzo Morabito
Bocconi University, Italy
vincenzo.morabito@unibocconi.it

Paulo Rupino da Cunha
University of Coimbra, Portugal
rupino@dei.uc.pt

Back in 2008, Satoshi Nakamoto introduced bitcoin, a new idea for a peer-to-peer electronic cash system and a new kind of digital currency. At the time, however, few realized that one of its enabling technologies – the blockchain – would have a disruptive effect in several domains, challenging long-established ways of doing business.

A blockchain is a decentralized digital ledger that saves transactions on thousands of computers around the globe. These are registered in a way that inhibits their subsequent modification. Blockchain technology increases the security and speeds up the exchange of information in a way that is cost-effective and more transparent. It also dispenses with third parties whose main role was to provide a trust and certification element in transactions (such as notaries and banks).

The high importance of blockchain has attracted the attention of organizations in different sectors, with banking sector being the most active at this stage. Blockchain has resulted in the development of thousands of new job positions and new startups ranging from mobile payment applications to health care solutions. We are still in the early days of this new disruptive technology and there is still a need for research in this area. The future belongs to blockchain and this minitrack seeks to serve as an annual venue that will enable the discussion on the trends, challenges and developments of blockchain across multiple domains. This minitrack runs for first time at HICSS and seeks to explore issues both academic and organizational, surrounding the area of blockchain and fintech.

In this edition, four papers were initially accepted for presentation but one of them was withdrawn by its authors. The three papers that finally make it focus on: (a) a systematic literature review on blockchain, (b) new forms of governance that emerge from the adoption of blockchain and (c) the application of blockchain technology in automobile and the electronic vehicle battery refueling.

The first paper is entitled “*Blockchain Technology in Business Organizations: A Scoping Review*” and was written by Yang Li, Thierry Marier-Bienvenue, Alexis Perron-Brault, Xinyi Wang and Guy Paré. The paper systematically reviews and critically analyzes the normative literature as its goal is to offer a better understanding of the nature and scope of blockchain technology in business organizations. The authors run a scoping review using the guidelines of Arksey and O’Malley’s [1] and Levac et al.’s [2]. The findings reveal that most of the literature examines “*how*” the blockchain technology works and “*what*” potential applications do business organizations consider. The paper reports that the “*why*” question which, is associate with the motivations for adopting blockchain technology, remains unexplored. Based on these findings the paper proposes promising ideas that shall guide future research efforts.

The second paper was written by Gianluca Miscione, Rafael Ziolkowski, Liudmila Zavolokina and Gerhard Schwabe and it is entitled “Tribal Governance: The Business of Blockchain Authentication”. This paper investigates governance modes in the era of blockchain technology. In doing so, it identifies differences that lead the authors of this paper to identify a new mode of governance that emerge from the adoption of blockchain technology and it is called “Tribal-governance”. The authors believe that Tribal governance will improve the understanding of this area.

The last paper disseminates research outcomes from Fujitsu corporation and it is entitled “Apply Blockchain Technology to Electric Vehicle Battery Refueling”. The paper was written by Song Hua, Ence Zhou, Bingfeng Pi, Jun Sun, Yoshihide Nomura and Hidetoshi Kurihara who investigate a big challenge in Electronic Vehicles (EV) development. This challenge deals with the lack of trust among the EV owners and the swapping station. In an attempt to solve the trust lacking issue the authors propose the adoption of a blockchain solution using smart contracts.