Open Position: Research Associate (PhD Student)

Topic: Modelling blockchain and DLT consensus

Starting date: upon common agreement (preferably, 2021 Q4)

Duration: Up to three years (on a yearly basis)

Responsibilities

Develop and manage research projects with focus on the modelling and analysis of consensus in blockchain and other distributed ledger technologies. This will be performed by adopting methodologies from complex systems and game theory. The goal is to study consensus dynamics’ differences among platforms, analyse finality and the effect of strategic agent behaviour. The student will also analyse the economic mechanisms behind value exchange between agents in these systems.

The candidate should be able to conduct and complete highly innovative research. She/he will be working in collaboration with the Swiss Blockchain Observatory at the University of Zurich and DLT foundations, which will provide unique datasets of transactions/interactions on blockchain-based platforms.

The appointed candidate will support teaching activities of the Blockchain and Distributed Ledger Technologies group and mentor Bachelor and Master students in topics in her/his area of competence.

Qualifications

The candidate should have an excellent degree (MA/Msc/diploma) in economics or computer science (with knowledge on game theory) or related field. Background in data science, big data analysis and experience in network science will be positively assessed. She/he should also have experience in data management, statistics, quantitative empirical data analysis, and large-scale networks. Preferably, she/he should have knowledge on blockchain technologies (or interest to rapidly acquire it).

Other requirements are: (i) Good command of programming languages such as Python/R for data analysis; (ii) Very good command of English (oral and written) and excellent communication skills. Our group prioritises developing exciting new research and creating real world applications in cooperation with organisations. Candidates who demonstrate a track record of completing high quality and innovative research will be privileged. Curiosity and discipline, self-reliance, integrity, and creativity are mandatory attributes.

The Blockchain and Distributed Ledger Technologies Group

The group is at the core of the UZH Blockchain Center, focusing on an interdisciplinary approach to Blockchain and DLT systems. We stand that these systems are paramount examples of complex socio-economic-technical systems. The large-scale properties they evince (consensus at the technical level, trust at the social level, wealth, and power accumulation at the economic level) are non-trivial properties that can only be understood by comprehending the link between micro-level behaviour of the multiple, heterogeneous agents that compose them, and their continuous interactions and rules they must abide. To achieve these goals, we perform large-scale data analysis, minimalistic modelling aimed at uncovering mechanisms behind regularities observed.

The core research lines of the group include: Blockchain Analytics, Cryptoeconomics and Incentive Design, Consensus modelling and analysis. We do so by following complex systems approaches which allow us to understand the mechanisms that drive the emergence of large-scale properties in the systems under study.

As such, we are a leading research groups for interdisciplinary approaches to the field, with multiple collaborations with leading platforms in the space.
Offer
- A team with strong emphasis on quantitative yet applied research.
- The opportunity to complete a PhD in Blockchain
- The opportunity to work at the frontier of a disruptive interdisciplinary research field.
- A broad-range, independent work as part of a dynamic team in a positive working atmosphere.
- A thorough career development programme (management by objectives, participation in summer schools, conferences, etc.).
- A well-equipped workspace in an excellent university with international reputation.
- A competitive salary.
- A good work-life balance.

How to apply

Further enquires can be sent to Prof. Dr Claudio J. Tessone (address below). To be considered, applications must be sent by email, enclosing the following: (i) a current CV, (ii) University degrees, (iii) a statement of interests and ideas (one page, max), (iii) The name and contact details of two referees. Address your correspondence with subject “[Application] UZH-BCC - PhD Incentives” to the address below before 20th September:

- Prof. Dr Claudio J. Tessone (tessone@ifi.uzh.ch)