Open Position: Research Associate (PhD Student)

Topic: Blockchain Analytics of UTXO-based platforms

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 creation of an efficient, versatile, and user-friendly data processing platform for UTXO blockchain systems. The core use of the platform is the transformation of binary data from UTXO-standard blockchains (Bitcoin, Litecoin, Cardano, etc.) into readable database structures for analysis, with a modular design enhancing versatility for use on multiple platforms and future extensions.

The candidate should be able to conduct and complete highly innovative research. He/she will be working in collaboration with the Swiss Blockchain Observatory at the University of Zurich and DLT foundations, which will provide unique insight of their inner workings.

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 computer science, computer engineering or related disciplines, with strong programming, data management and data science background, with studies on some of the following topics: big data, data management systems, parallel and high-performance computing, cryptographic protocols, blockchain and distributed systems.

Other requirements are: (i) Excellent command of Python for data analysis and C++ or equivalent for database access and storage; (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) Current CV; (ii) University degrees; (iii) Statement of interests and ideas (one page, max), (iv) Name and contact details of two referees. Address your correspondence with subject “[Application] BDLT - PhD - Blockchain Analytics” to the two addresses below before 20th September:

- Prof. Dr Claudio J. Tessone (tessone@ifi.uzh.ch)
- Samantha O’Farrell (bdlt.admin@ifi.uzh.ch)