

Scuola di dottorato in ICT

Research project for a PhD curriculum in ICT – Computer Engineering and Science

Tutor: Michele Colajanni

Title of the research:

Innovation and applications of blockchain technologies

Keywords: (3)

- _ Cyber security
- _ Distributed systems
- _ Trust
- _ Performance and availability

Research objectives: --(max 10 rows)

The research project encompasses several topics related to cyber security so that the student can choose the objective more suitable to his/her interests and competences:

- Infrastructure security
- Application security
- Blockchain performance
- Trust
- Smart contracts
- Consensus algorithms

Specific research activity and scheduled courses --(max 10 rows)

The prospective student must have competences in distributed systems, networking, open source software, cybersecurity, blockchain essentials.

A typical research program starts from models and algorithms, and then includes design and experimental evaluations on real datasets and environments. Besides research activities, we expect that the PhD student will attend classes and summer schools on cyber topics, blockchain, security and cryptography. Periods of activities in foreign labs of at least six months are strongly recommended.

Supporting research projects (and Department)

- Dipartimento di Ingegneria “Enzo Ferrari”
- Centro di Ricerca Interdipartimentale sulla Sicurezza e Prevenzione dei Rischi (CRIS), Università di Modena e Reggio Emilia
- EU projects
- Projects with Ministries interested to cyber topics
- Regional project

Possible connections with research groups, companies, universities.

- Cornell University, US
- King’s College, London, UK
- Tel Aviv University, IL
- Finance-related projects: Unicredit, Assicurazioni Generali, BPER