

# PhD in INGEGNERIA GESTIONALE / MANAGEMENT ENGINEERING - 39th cycle

# THEMATIC Research Field: BLOCKCHAIN: THE IMPACT OF TOKENS, CREDENTIALS AND ON-CHAIN ASSETS

#### Monthly net income of PhDscholarship (max 36 months)

**€ 1930.0** 

In case of a change of the welfare rates during the three-year period, the amount could be modified.

## Context of the research activity Blockchain technology and decentralized networks have captured significant attention from various stakeholders, including researchers, industry professionals, and the general public. However, a dearth of comprehensive scientific research persists, leaving us with a limited understanding of the potential impacts that Blockchain technology holds. This research delves more specifically into the business implications of tokens, credentials, and on-chain assets, seeking to enhance our comprehension Motivation and objectives of the research of value chains transformations and the challenges linked in this field to tokenization. More specifically, the research aims to better understand how asset tokenization will transform markets and peculiarly asset holders, allowing these last one to reap several of the benefits associate to blockchain, including 24/7 operations, faster transaction settlement, higher degree of automation, access democratization, enhanced transparency and data availability. The following methodologies will be applied in the research project: - Case studies, in order to analyse the impacts and identify the challenges of some Blockchain and Methods and techniques that will be developed and used to carry out the Tokenization use cases; research - Analytical models, in order to detect changes in value chains and appreciate the various benefits associated to the exploitation of blockchain and tokens for several actors (with an emphasis on assets owners);

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|                                   | actors (with an emphasis on assets owners); - Interviews, in order to gather qualitative, interpretative evidence of the impact of these transformations in selected industries.  A deep knowledge of firms and networks of firms leveraging on blockchain in general and tokenization in particular will be required to sustain the research? independently by the specific method employed.  Experience in not only conducting research but also effectively disseminate in practitioners? domain is appreciated since it will pursued through the PhD. |
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| Educational objectives            | The main educational objectives of the research project are the following:  - Improving the ability to describe through both qualitative and quantitative models the impacts of new technologies;  - Improving the ability to support companies in detecting opportunities for the adoption of Blockchain technology;  - Developing a comprehensive understanding of the adoption's challenges of new technologies and more specifically.   |
| Job opportunities                 | The opportunities for a PhD graduate in this research area are: - Academic career in the field of digital innovation; - Advisory for organizations that aim to understand how to implement Blockchain and Web3; - Career as a Blockchain Project Manager.   |
| Composition of the research group | 2 Full Professors<br>2 Associated Professors<br>1 Assistant Professors<br>3 PhD Students  |
| Name of the research directors    | Luca Gastaldi   |

| Contacts                |
|-------------------------|
| luca.gastaldi@polimi.it |
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| Additional support - Financial aid per PhD student per year (gross amount) |  |  |
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| Housing - Foreign Students   |  |  |

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| Housing - Out-of-town residents (more than 80Km out of Milano) |  |
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| Scholarship Increase for a period abroad |         |  |
|--|---------|--|
| Amount monthly                           | 965.0 € |  |
| By number of months                      | 6       |  |

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

There are various forms of financial aid for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.