PROJECT ACRONYM AND TITLE: *SERICS*

FUNDING PROGRAMME *PNRR M4C2 Inv.1.3 PE- Partenariati Estesi*

HOST DEPARTMENT or CENTER: Department of Environmental Science, Informatics and Statistics

SCIENTIFIC RESPONSIBLE: prof. Riccardo Focardi

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
€ 116.358.090,00	€ 6.894.260,00

ABSTRACT:

The initiative is aimed at creating a distributed research centre, based on the hub and spoke model. A central hub and 10 thematic spokes will be set up, each with specific expertise on a cybersecurity topic. The spokes will be made up of different groupings of universities and companies. Ca' Foscari will take care of Spoke 06 which will deal with software and platform security by investigating both the formal basis of secure programming, to facilitate the construction of secure software systems "by-design", and the security of the supply chain software, exploring innovative solutions to secure the software development and management process. Test scenarios will also be developed to validate and experimentally evaluate the proposed techniques.

OBJECTIVES and EXPECTED RESULTS:

The objectives that the Spoke aims to achieve will be pursued through two complementary projects, which will address the theme of software and platform security from both a foundational and a practical point of view. The "Securing softWare frOm first PrincipleS" (SWOPS) project will investigate the formal basis of secure programming to facilitate the construction of secure-by-design software systems. The research will focus on the fundamental elements to support the testing, implementation, verification, and certification of secure software systems and will address aspects related to the secure implementation of the proposed techniques. The "Supply Chain Attack Avoidance" (SCAI) project will deal with the security of the software supply chain, whose fragility has been demonstrated by recent major attacks such as, for example, SolarWind and Log4Shell. The project will explore innovative solutions for the certification of the software development process, providing mechanisms for dynamic analysis and continuous validation of program behavior, which will enable the production of more secure software without requiring an excessive investment in terms of time and resources. We expect a strong synergy between the two projects that will allow, on the one hand, to tackle real case studies in a precise and rigorous way and, on the other, to implement analysis and verification techniques that have solid formal foundations.

PARTNERSHIP:

	SPOKE Coordinator
UNIBA - Università degli Studi di Bari Aldo Moro	**Affiliated**
UNIFI - Università degli Studi di Firenze	**Affiliated**
UNICA - Università degli Studi di Cagliari	**Affiliated**

UNIROMA1 - Sapienza Università di Roma	**Affiliated**
UNISA - Università degli Studi di Salerno	**Affiliated**
IMT - Scuola IMT Alti Studi Lucca	**Affiliated**
Deloitte	**Affiliated**