

# Ph.D. Position on Post-Quantum Crypto-Biometrics with Hardware Security for Digital Identity Wallets

at University of Seville (IMSE-CNM), Spain

- **Project: HighLoAWallet:** Crypto-biometric techniques and hardware-enabled solutions for self-sovereign identity wallets with high level of assurance.

- **Related projects:**

**Hard-ID-wallet:** Proof of concept of hardware security solutions required by the cryptography and biometrics of digital identity wallet.

**VIPS-ID:** Verifiable, Private, Distributed, and Secure Identification of People and Things.

**LICORICE:** reLLable and sCalable tOols foR self-sovereign identity and data proteCtion framework.

- **Period:** 4 years, to apply until 20 October 2024, to start on December 2024.
- **Conditions:** Funded by the Spanish “Agencia Estatal de Investigación” under the program “Ayudas para contratos predoctorales para la formación de doctores/as 2023”, with economic support for equipments, training programs, publications, conferences and research stays.
- **Key words:** Cybersecurity, electronic transactions, digital identity, digital identity wallets, self-sovereign identities, privacy, crypto-biometrics, PUFs, hardware security, post-quantum cryptography, trusted execution, and mobile devices.
- **Objectives:** Design of post-quantum crypto-biometric and hardware-enabled solutions to manage people identities with high level of assurance in the context of digital identity wallets. Technology transfer and research publications.
- **Profile:** University Degree with Master (at least 300 ECTS) or University Degree with at least 300 ECTS credits in the area of Computer Science, Electronics, Telecommunications, Cybersecurity, Physics, Mathematics or similar. Strong interest in Cybersecurity from a hardware and crypto-biometric point of view. Programming skills. Good knowledge of mathematics (for cryptography), and signal and image processing (for biometrics). High-level in English. Self-motivation and commitment to do a Ph.D.



If interested, please submit your application (CV and motivations) or contact to:  
[lumi@us.es](mailto:lumi@us.es) (Prof. Iluminada Baturone) and [arjona@imse-cnm.csic.es](mailto:arjona@imse-cnm.csic.es) (Prof. Rosario Arjona)

