Course Introduction

Leonardo Regano

leonardo.regano@unica.it

PhD Course on Software Security and Protection

University Of Cagliari, Italy

whoami

- Leonardo Regano
  - Assistant Professor of Computer Engineering
  - email: leonardo.regano@unica.it
  - Office: 3rd floor - Bd. M - Dept. Electrical and Electronic Eng.
- Research topics
  - Software security and IP protection
  - Machine Learning for Cybersecurity
  - Network security
- Academic Curriculum
  - 2015 MSc degree in Computer Engineering (Turin Polytechnic)
  - 2015 Research Assistant (Turin Polytechnic)
  - 2019 PhD in Computer Engineering (Turin Polytechnic)
  - 2019 Post-doc Research Assistant (Turin Polytechnic)
  - 2022 International patent granted: DL-based analysis of software binaries for reverse engineering
  - 2023 Invited researcher at Gent University (Belgium)
  - 2023 Assistant Professor at the University of Cagliari

Course outline and calendar

- 2 weeks - 12 hours/week (24 hours)
  - 3 ECTS for PhD students, 2 ECTS for Master students
- All classes from 14:30 to 18:30 in Room B0 – Building M
  - 12 July in Room B1 – Building M
- First week: Secure programming
  - 8 July - Secure programming: principles and guidelines
  - 10 July - Security evaluation of software
  - 12 July - Lab: software testing with automatic tools
- Second week: Software protection
  - 16 July - Techniques for protection of software and Intellectual Property
  - 17 July - Static analysis of software
  - 19 July - Lab: software obfuscation
- Exam: group project
  - group of 3-4 students
  - find a FOSS application, test for vulnerabilities, find assets and protect them
  - prepare and submit a detailed report of your activities