UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

DOTTORATO DI RICERCA / PHD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Ad hoc course announcement

Title: **Digital Forensics' methods, practices and tools**

Lecturer: **Dr. Giovanni Cozzolino**

University of Naples Federico II
Department of Electrical Engineering and Information Technology (DIETI)

Giovanni Cozzolino is a fixed term assistant professor at the Department of Electrical Engineering and Information Technology (DIETI) of the University of Naples Federico II. He received the Ph.D. in Information Technology and Electrical Engineering from the University of Naples Federico II, in 2019. His main research interests include in the areas of Digital Forensics, data integration, knowledge management and embedded systems.

Credits: **3**

Overview

As Information Technology systems are involved in almost all daily activities (related to business and industrial purposes, safety systems, education or entertainment, etc.), humans continuously generate digital traces that may be deemed to be of value, for industrial or legal purposes, or even as a resource for cyber-criminals. Whatever the motivation, the examination of digital evidences falls within the realm of Digital Forensics (DFs).

The goal of this module is to present an overview of DFs practices, with particular regards on Computer, Network and Mobile Forensics. More in detail, the course will cover the regulatory aspects to be compliant with, the methodology to identify, collect and analyse evidences, the different hardware and software tools used to collect the data, the challenges to face for correlation of data coming from different devices and to avoid antiforensic techniques.

There will be a final assessment, where students are requested to provide a good quality presentation about the potential application of DFs methodology and techniques in the context of their research field. Student's presentations will take place in the last lesson. Details about the presentation will be given during the course.

Lectures' schedule

Lecture	Date	Time	Topics
1	03/11	17:00/19:00	Intro to DFs, regulation and standards, Digital Evidence definition, methodology for a DFs investigation, ethics concerns.
2	05/11	17:00/19:00	Static Digital Forensics. imaging, file system analysis, collecting evidence. Data Carving, Data Recovery, Data Analysis. Tools.
3	06/11	17:00/19:00	Live Digital Forensics: memory analysis, network traffic, cloud providers. Tools
4	09/11	17:00/19:00	Mobile Forensics: logical and physical acquisition of a mobile devices, app analysis, rooted devices. Tools.
5	10/11	17:00/19:00	Correlation and reporting of evidence, Incident response, documentation. Antiforensics tecniques, data protection and password cracking.
	TBD	TBD	Assessment test

Microsoft Teams – Team code: **rjjjn6i**

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To register to the course, send an email to giovanni.cozzolino@unina.it