# BIOMETRIC RECOGNITION TECHNOLOGIES AND APPLICATIONS

A course for PhD students, Alma Mater Studiorum, Università di Bologna
**February 2020, DISI, via dell'Università 50, Cesena**

## Instructor

Annalisa Franco
Dipartimento di Informatica – Scienza e Ingegneria (DISI)
Email: annalisa.franco@unibo.it
Web: https://www.unibo.it/sitoweb/annalisa.franco/

## About the course

Biometric systems are automated methods of verifying or recognizing the identity of a living person based on some physiological characteristics, like a fingerprint or iris pattern, or some behavioral aspects, such as handwriting or keystroke patterns. The course provides the fundamentals of the biometric systems technology and presents their overall architecture. Then, the main components (acquisition device, feature extraction, and matching) are discussed in detail with particular focus on fingerprint, face and iris recognition systems. State-of-the-art approaches are presented and compared, and the most critical aspects in biometric recognition are pointed out. Hot topics related to specific applications and security issues are finally presented.

## Topics

- Introduction to biometric recognition
- Biometric systems architecture
- Performance evaluation
- Fingerprint recognition techniques
- Face detection and recognition
- Iris recognition and multimodal systems
- Biometric systems security

## Teaching material

The instructor will provide slides, and a list of bibliographical references and additional material. All the course material is in English.

## Location & Schedule

Campus di Cesena - Via Dell'Università, 50 Cesena (FC)

- Feb 05, 2020, 14:30 – 17:00, aula 2.7
- Feb 12, 2020, 14:30 – 17:00, aula 2.7
- Feb 18, 2020, 14:30 – 17:00, aula 2.7
- Feb 25, 2020, 14:30 – 17:00, sala riunioni 4011

## Learning and assessment modalities

The course will be taught in either Italian or English at the preference of the attendees.
The final assessment consists of a technical report on a recent paper on one of the course topics.