

# International Summer School on **Artificial Intelligence and Criminal Justice**

**13-17 July 2020**

Luiss Guido Carli University, Rome  
and Goethe University, Frankfurt



# Programme Overview

**Location:** Rome

**Duration:** 5 days

**Language:** English

**Dates:** July 13th-17th, 2020

**Academic Directors:**

Prof. Dr. Christoph Burchard,

Prof. Dr. Antonio Gullo,

Prof. Dr. Giuseppe F. Italiano

**Contact Hours:** 36 hours –

including lectures (31 hours) and complementary activities/visits (5 hours)

**Credits:** 3 ECTS

## Course information:

The International Summer School on “AI and Criminal Justice”, organized by **Luiss School of Law** and **Goethe University Frankfurt am Main** is an advanced course which gives a comprehensive and up-to-date overview of the interrelations between AI and criminal justice. The course is one-of-a-kind, as it will bring together internationally recognized academics and practitioners who will co-teach during the interdisciplinary modules of the course. Participants will visit leading AI companies as well as institutions and interact with prominent experts from the private and public sectors.

## Course objectives:

The International Summer School on “AI and Criminal Justice” aims at providing participants with a comprehensive knowledge, as well as conceptual and normative tools to understand and manage opportunities and threats brought by the latest AI developments in the different areas of criminal justice. To this purpose, the course will primarily give a solid background on how algorithms work, essential in order to gain a full expertise to combine the related advantages and disadvantages. Afterwards, lessons will be focused on AI applications in the criminal justice

area, exploring the use of AI as a supportive tool in the public and private sectors and training participants’ skills to frame and solve the criminal liability issues related to these new agents coming on to stage.

**Target:** The International Summer School on “AI and Criminal Justice” is an advanced course open to **graduates, PhD students, post-doctoral researchers** as well as to **practitioners** from public and private sectors who intend to acquire an interdisciplinary and in-depth knowledge in the cutting-edge area of AI and criminal justice in its most recent developments at the international level.

**Course grading:** 80% final exam and 20% class participation.

The final exam consists in writing a short paper on a specific topic addressed during the course and approved by the coordinator/tutor.

## Academic Programme

### MONDAY

**Presentation of The Course**

**Morning 9:30 am - 12:30 am**

**Afternoon 2:00 pm - 6:00 pm**

Module 1:

Artificial Intelligence and Algorithms

1.1. Introduction to Algorithms

1.2. Fundamental Data Structures

1.3. Classical Algorithms: Sorting, Searching

1.4. Machine Learning: Logistic Regression and Regression Trees

### TUESDAY

**Morning 9:30 am - 12:30 am**

**Afternoon 2:00 pm - 6:00 pm**

Module 2: Agency and Responsibility for and of Harmful Artificial Intelligence

2.1. AI Agents’ Criminal Liability: Framework of The Issue and Sectors Involved

2.2. The Criminal Liability of Self-Driving Cars

2.3. The Implications of Artificial Intelligence on The Financial Sector. Market Manipulation by High Frequency Traders

### WEDNESDAY

**Morning 9:30 am - 12:30 am**

**Afternoon 1:30 pm - 3:30 pm**

Module 3: The Use of Algorithms to Prevent Crimes

3.1. Predictive Policing Algorithms: General Introduction and Concrete Applications

3.2. AI and Cybersecurity

**3:30 pm - 6:00 pm**

VISIT (public sector)

### THURSDAY

**Morning 9:30 am - 12:30 am**

**Afternoon 1:30 pm - 3:30 pm**

Module 4: Artificial Intelligence and Criminal Compliance

4.1. AI Software as A Compliance Strategy: Corporate Crime Prevention and Implementation of Compliance Programs

4.2. (Possible) Liability of The Corporation for Software Errors and Risk of Violation of Individuals’ Fundamental Rights

**3:30 pm - 6:00 pm**

VISIT (private sector)

### FRIDAY

**Morning 9:00 am - 1:00 pm**

**Afternoon 3:00 pm - 6:00 pm**

Module 5: The Use of Risk Assessment Algorithms in The Decision-Making Processes

5.1. Algorithmic Risk Assessment in Pre-Trial and Sentencing Phases: Features and Differences

5.2. Costs and Benefits of Implementing Algorithms in Sentencing: The US Experience in Loomis Case

Roundtable

Evening Farewell Party

# Practical Information

## How to Apply and Selection Procedure

Admission is based on the assessment of CV of the candidate and a short cover letter.

A good command of written and spoken English is required. In order to take part to the admission procedures, the applicant is required to have a Master's Degree, or an equivalent degree from a foreign University.

Applicants are required to:

- l Fill the online application form;
- l upload a copy of an identity document (passport or National ID Card where applicable);
- l upload a detailed academic and professional CV;
- l upload a short cover letter (1-page maximum).

Successful candidates will be informed of admission by email.

## Tuition Fees and Deadlines

€1200 (non residential)

€1600 (residential)

Luiss students and graduates will receive a 10% tuition fee reduction.

- l Deadline applications:  
30 June 2020
- l Early bird applications:  
30 March 2020

Early bird applications will receive a 10% tuition fee reduction.

Fees include:

- l Reading materials
- l Internet access
- l Visits and social activities
- l Free shuttle bus among Luiss Campuses
- l Access to Luiss facilities (cafeteria, library, Loft, Language Café)
- l Discount for eating at the canteen

The Summer School could be able to offer a very limited number of merit-based scholarships. More information will be provided following admission to the course.

## Accommodation

Luiss can offer various accommodation facilities (University residences and private housing options).

Further information will be shared with participants interested in the residential formula.

## About Luiss University

The Summer School will take place at Viale Pola campus, Luiss University, in the heart of Rome. Luiss – Libera Università Internazionale degli Studi Sociali Guido Carli – is an independent university. It was created out of a pre-existing Roman institution, Pro Deo, between 1974 and 1978. Luiss offers an innovative educational approach at its four Departments: Economics and Finance, Business and Management,



Law, and Political Science.

Its goal is not simply to convey knowledge but to instill flexibility in young people, giving them a sense of mastery over their future. Furthermore, Luiss has four Schools for graduate and professional studies: the Luiss Business School, the School of Government, the School of Law, and the School of European Political Economy.

## About Rome

Rome is the capital of Italy, a large cosmopolitan city with an artistic, architectural and cultural history that has been influencing the whole world for almost 3000 years.

The ancient ruins, such as the Forum and the Colosseum, testify the glorious past of the ancient Roman Empire.

In the Vatican City, ecclesiastical state seat of the Roman Catholic Church, it is possible to admire St. Peter's Basilica and the Vatican Museums' masterpieces, such as the Sistine Chapel frescoed by Michelangelo.

For general information, please visit the Tourism Office website: <http://www.turismoroma.it/?lang=en#>.



LUISS



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