



UNIVERSITÀ DI PISA  
**DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE**  
**Dottorato di Ricerca in Ingegneria dell'Informazione**

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Doctoral Course

**“Ethics of AI”**

Loretta Latronico

*European Space Agency, ESA-ESRIN*

**Short Abstract:**

Artificial Intelligence (AI) is already happening today and it is pervasive, often invisibly embedded in our day-to-day tools. As AI evolves, so do the many controversies that surround the use of this advanced technology. From military drones to shopping recommendations, AI is powering a wide array of smart products and services across nearly every industry—and with it, creating new ethical dilemmas for which there are no easy answers. As technology continues to develop at an unprecedented rate, those involved with AI often lack the tools and knowledge to expertly navigate ethical challenges.

This course examines today's most pressing ethical issues related to AI and explores ways to leverage technology to benefit mankind. It provides insights into how to achieve responsible innovation of technology, in order to contribute to the quality of human life, sustainability and fair allocation of risks and benefits.

**Course Contents in brief:**

- Explore the foundations of Philosophy of Technology and Responsible Innovation for the benefit of mankind
- Understand the technological basis of ethics in AI
- Analyze machine bias and other ethical risks
- Assess the individual and corporate responsibilities related to AI deployment
- Examine what it means to be human, and what differentiates humans from machines
- Explore issues of AI in safety and progress, human rights, economics of happiness and deep ecology
- Exploit AI and Business Models Innovation in the space industry through the lenses of ethical challenges

**Total # of hours of lecture:** 16 hours

**References:**

[1] M. Coeckelbergh (2020), AI Ethics, The MIT Press, <http://mitpress.mit.edu>.

[2] B. Christian (2020), The alignment problem. Machine Learning and Human Values, First Edition, New York, NY: W.W. Norton & Company.

[3] Ethics I.1-7, Aristotle Physics II.1-3.

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## **CV of the Teacher**

Loretta Latronico is an experienced Business Controller at the ESA Centre for Earth Observation (ESRIN) located in Italy.

Her current research centers around AI and Business Models Innovation in the space industry with a focus on Ethics of AI.

She holds a Bachelor and Master Degree in Economics and Value Creation at the University “La Sapienza” of Rome. After graduation and a research experience in an ICT spin-off company of La Sapienza University, in 2010 she joined ESA-ESTEC in The Netherlands as Young Graduate in the Advanced Concepts Team. She then moved back to Italy in 2019. During these 11 years at ESA she has gained experience in various Space Missions and Programmes (Navigation, ATV, EarthCARE, Copernicus).

Since 2011 she promotes development projects in Madagascar, where she has been several times in the past years as volunteer and partner with direct involvement in the field work.

She is passionate about Permaculture, Ecology, Education, Performative Arts, Music, Photography, Astronomy and Economics of Happiness.

## **Room and Schedule**

Room: *Aula Riunioni del Dipartimento di Ingegneria dell'Informazione, Via G. Caruso 16, Pisa – Ground Floor*

Schedule:

- Day 1: 9.00-13.00
- Day 2: 9.00-13.00
- Day 3: 9.00-13.00
- Day 4: 9.00-13.00