

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II  
**DOTTORATO DI RICERCA / PHD PROGRAM IN  
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING**

***PhD School & Workshop announcement***

**Title:** **AIRO PhD School 2021 and 5th AIRO-Young Workshop,  
«Optimization and Data Science: Trends and Applications»**

**PhD School Lecturers:**

	<p><b>Prof. Maria Grazia Speranza</b></p> <p><i>University of Brescia - Department of Economics and Management, C.da S. Chiara n. 50 - 25122, Brescia, Italy Email: <a href="mailto:grazia.speranza@unibs.it">grazia.speranza@unibs.it</a></i></p>
	<p><b>Prof. Antonio Frangioni</b></p> <p><i>University of Pisa - Department of Computer Science Largo B. Pontecorvo, 3 - 56127 Pisa, Italy Email: <a href="mailto:frangio@di.unipi.it">frangio@di.unipi.it</a></i></p>
	<p><b>Prof. Michele Monaci</b></p> <p><i>University of Bologna - Department of Electrical, Electronic and Information Engineering, Viale del Risorgimento 2 - 40136, Bologna Email: <a href="mailto:michele.monaci@unibo.it">michele.monaci@unibo.it</a></i></p>
	<p><b>Prof. Stefano Lucidi</b></p> <p><i>University "La Sapienza" of Roma - Department of Computer, Control and Management Engineering, Via Ariosto 25 - 00185, Rome, Italy Email: <a href="mailto:lucidi@dis.uniroma1.it">lucidi@dis.uniroma1.it</a></i></p>



### **Prof. Manlio Gaudio**

*University of Calabria - ICAR-CNR - Department of Computer Engineering, Modeling, Electronics and Systems, Via P. Bucci Edificio 42C - 87036, Arcavacata di Rende (CS), Italy*  
Email: [manlio.gaudio@unical.it](mailto:manlio.gaudio@unical.it)

### **Workshop Lecturers:**



### **Prof. Alberto Ceselli**

*University of Milan, Department of Computer Science  
Via Celoria, 18 - 20133 Milano, Italy*  
Email: [alberto.ceselli@unimi.it](mailto:alberto.ceselli@unimi.it)



### **Prof. Ivana Ljubic**

*Department of Information Systems, Decision Sciences and Statistics  
ESSEC Business School, Paris, France*  
Email: [ljubic@essec.edu](mailto:ljubic@essec.edu)

**Credits: 3.6 ECTS (32 hrs)**

### **Overview**

The aim of the joint event is twofold. The AIRO PhD School 2021 provides a stimulating learning environment where participants get opportunities to develop research skills, increase their knowledge base, collaborate with others in their own and complementary research areas, engage in debate, have access to experts in the field.

The 5th AIRO Young Workshop promotes the sharing of knowledge about advanced methodologies and applications through the interactions between OR and other research communities from various sectors (applied mathematics, computer science, engineering, economics, etc.).

The general topic of the event is “*Optimization and Data Science: Trends and Applications*”. The details about the schedule of the lecturers are reported below and can be found at the following website:

<http://opslab.dieti.unina.it/index.php/en/>

[Participants have to register through the event web site](#)

## Schedule

Lecture	Date	Time	Topics	Lecturer
PhD School Lecture 1	08/02/2021	14:00-18:00	- Optimization and computational complexity - Vehicle routing problems - PhD thesis: what you should know	Maria Grazia Speranza
PhD School Lecture 2	09/02/2021	09:00-13:00	- The long road to practical decomposition methods	Antonio Frangioni
PhD School Lecture 3	09/02/2021	14:00-18:00	- A gentle introduction to approximation algorithms	Michele Monaci
PhD School Lecture 4	10/02/2021	09:00-11:00	- Derivative-free methods for black-box optimization problems	Stefano Lucidi
PhD School Lecture 5	10/02/2021	11:00-13:00	- Optimization Models and Classification	Manlio Gaudio
Workshop Lecture 1	10/02/2021	14:00-15:00	- Integrated methods for prescriptive analytics	Alberto Ceselli
Workshop Lecture 2	12/02/2021	12:00-13:00	- New integer and Bilevel Formulations for the k- Vertex Cut Problem	Ivana Ljubic

For information: [opslab.dieti@gmail.com](mailto:opslab.dieti@gmail.com)

(Organizers: Sterle C., Sforza A., Boccia M., Masone A. )