

Building Trust in the information Age

Cagliari 29 August- 09 September 2022



School Program

First week



	Monday 29/08/2022	Tuesday 30/08/2022	Wednesday 31/08/2022	Thursday 01/09/2022	Friday 02/09/2022	Saturday 03/09/2022	Sunday 04/09/2022
9:00 - 10:30	WELCOME	Machine Learning Security: the basics Battista Biggio (UniCa)	Secure Biometric Authentication Gian Luca Marcialis (UniCa)	Technical visit to the regional research center CRS4, Pula	Usable Security Agáta Kružíková (Uni Masaryk)	Bike Tour of Molentargius Park (optional)	
10:30 - 11:00	Break	Break	Break		Break		
11:00 - 12:30	Introduction to Cybersecurity and Machine Learning Giorgio Giacinto (UniCa)	Machine Learning Security: the basics Battista Biggio (UniCa)	Secure Biometric Authentication Gian Luca Marcialis (UniCa)		Usable Security Agáta Kružíková (Uni Masaryk)		
12:30 - 14:00	Lunch	Lunch	Lunch		Lunch	FREE	
14:00 - 15:30	Machine Learning for malware detection on x86 platfroms Davide Maiorca (UniCa)	Machine Learning Security lab MLSec group (UniCa)	Biometric Authentication: Liveness Detection Biometric Group (UniCa)	Picnic at Nora beach			
15:30 - 16:00	Cagliari: the history, the town, the city life Marcello Schirru (UniCa)	Break	Break				
16:00 - 16:45		Introduction and set-up of workgroups		Visit of the archeological site in Nora	Workgroups	FREE	
16:45 - 17:30	City tour	Short research talk On Fast and Secure Communications for IoT Networks Marco Martalò (UniCa)	Biometric Authentication: Liveness Detection Biometric Group (UniCa)				
17:30-18:15							
18:15-19:30							
20:00-23:00	Welcome dinner						

Second week



	Monday 05/09/2022	Tuesday 06/09/2022	Wednesday 07/09/2022	Thursday 08/09/2022	Friday 09/09/2022	Saturday 10/09/2023	
9:00 - 10:30	Cryptographic smartcards and secure hardware	Cryptographic smartcards and secure hardware	Technical Visit at Tiscali server farm	Unikernel	Final test, workgroups presentations and closing ceremony	Departure	
	Petr Svenda (Uni Masaryk)	Petr Svenda (Uni Masaryk)		Pierre Alain (Enssat)			
10:30 - 11:00	Break	Break		Break			
11:00 - 12:30	Cryptographic smartcards and secure hardware	Cryptographic smartcards and secure hardware		Unikernel			
	Petr Svenda (Uni Masaryk)	Petr Svenda (Uni Masaryk)	Pierre Alain (Enssat)				
12:30 - 14:00	Lunch	Lunch	Lunch	Lunch	Farewell buffet lunch		
14:00 - 15:30	Cryptographic smartcards and secure hardware	Workgroups		Unikernel			
	Petr Svenda (Uni Masaryk)			Pierre Alain (Enssat)			
15:30 - 16:00	Break	Break	Break	Break			
16:00 - 16:45	Workgroups	Short Research Seminar: Security in Control Systems	Short Research Seminar: Precision Clock Synchronization Protocol: principles and security issues	Workgroups			
		Mauro Franceschelli (UniCa)	Paolo Attilio Pegoraro (UniCa)				
16:45 - 17:30		Workgroups	Workgroups				

Coordinator of the Summer School

Giorgio Giacinto
University of Cagliari



Full Professor of **Computer Engineering** at the University of Cagliari, Italy. His research interests are in the field of machine learning for cybersecurity, such as **malware analysis and detection, web application security, malicious behaviour detection, phishing detection**. Coordinator of the MSc Programme in Computer Engineering, Cybersecurity and Artificial Intelligence at the University of Cagliari. He also serves as the International student mobility coordinator for the Faculty of Engineering and Architecture.

Within the National Consortium of Universities for Informatics (CINI), he is a member of management board of the Cybersecurity National Lab, and a member of management board of the Artificial Intelligence and Intelligent Systems Lab. He is also an active member of the Working Groups WG5 (Education, Training, Awareness, Cyber Ranges) and WG6 (Scientific, Research and Innovation Agenda Working Group) of the European Cybersecurity Organization (ECISO), as a representative of the CINI consortium.

Program or Organizing Committee member in many international conferences and workshops on cybersecurity and machine learning. Author of more than 180 scientific papers in international journals and conferences.

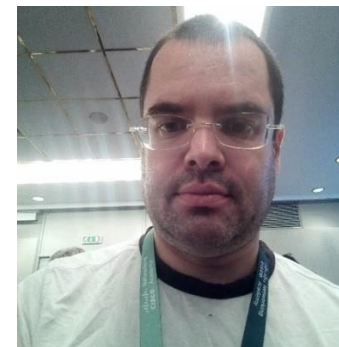
Fellow of the IAPR and a senior member of both the IEEE and ACM.

Lecturers from EDUC partner universities



Pierre Alain from ENSSAT, Rennes 1

Pierre Alain is an associate researcher in the Expression and Shaman teams of IRISA and has been responsible for more than 10 years for the apprenticeship degree in Computer Science at Enssat. He is now responsible for the Engineer Enssat/M2 EUR CyberSchool double degree at Enssat. He recently joined the core team of the mirageOS library operating system.



Agáta Kružíková from University of Masaryk

Agáta Kružíková is a PhD candidate in the Centre for Research on Cryptography and Security at the Faculty of Informatics at Masaryk University. She researches authentication from the usable security point of view. She focuses on both end-users and IT professionals in the context of usable and secure authentication.



Petr Svenda from University of Masaryk

Computer security researcher, lecturer and active member of the Centre for Research on Cryptography and Security at Masaryk University in Brno, Czech Republic. Main research areas are cryptographic protocols for limited devices, analysis and use of secure hardware and randomness assessment and entropy extraction. Enjoing programming, especially in area of security-sensitive applications.





Information about your staying



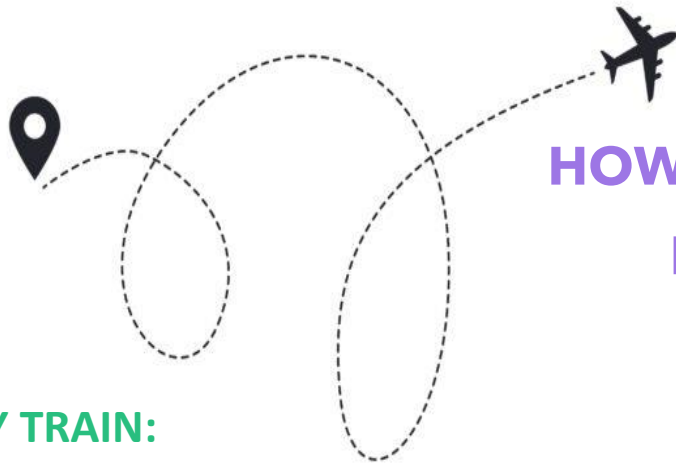
Essentials

- **Laptop**
- **Smartphone + earphones**
- **FFP2 masks**

but also...

- **Swimsuit**
- **Beach towel**
- **Sun cream**

**DON'T
FORGET!**



HOW TO ARRIVE IN CAGLIARI FROM THE AIRPORT

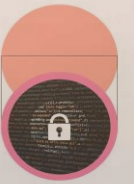
BY TRAIN:

Cagliari-Elmas Airport is located very close to the city and is very well connected to the city centre (**Piazza Matteotti, close to your hotel**) by a regular train service. Trip from/to the airport takes less than 10 minutes. Timetables are available online on [Trenitalia website](#) and on the Trenitalia app.

Tickets cost 1.30 € each and can be purchased at one of the ticket machines inside the airport or right at the **station**, on the app (Trenitalia), online via the Omio app and in some authorised tobacco shops.

BY TAXI:

There is a taxi stand right outside the terminal at the airport and the cost is up to 20 € for the journey Airport-Hotel Italia.



Accommodation

5 minutes walking from the railway station

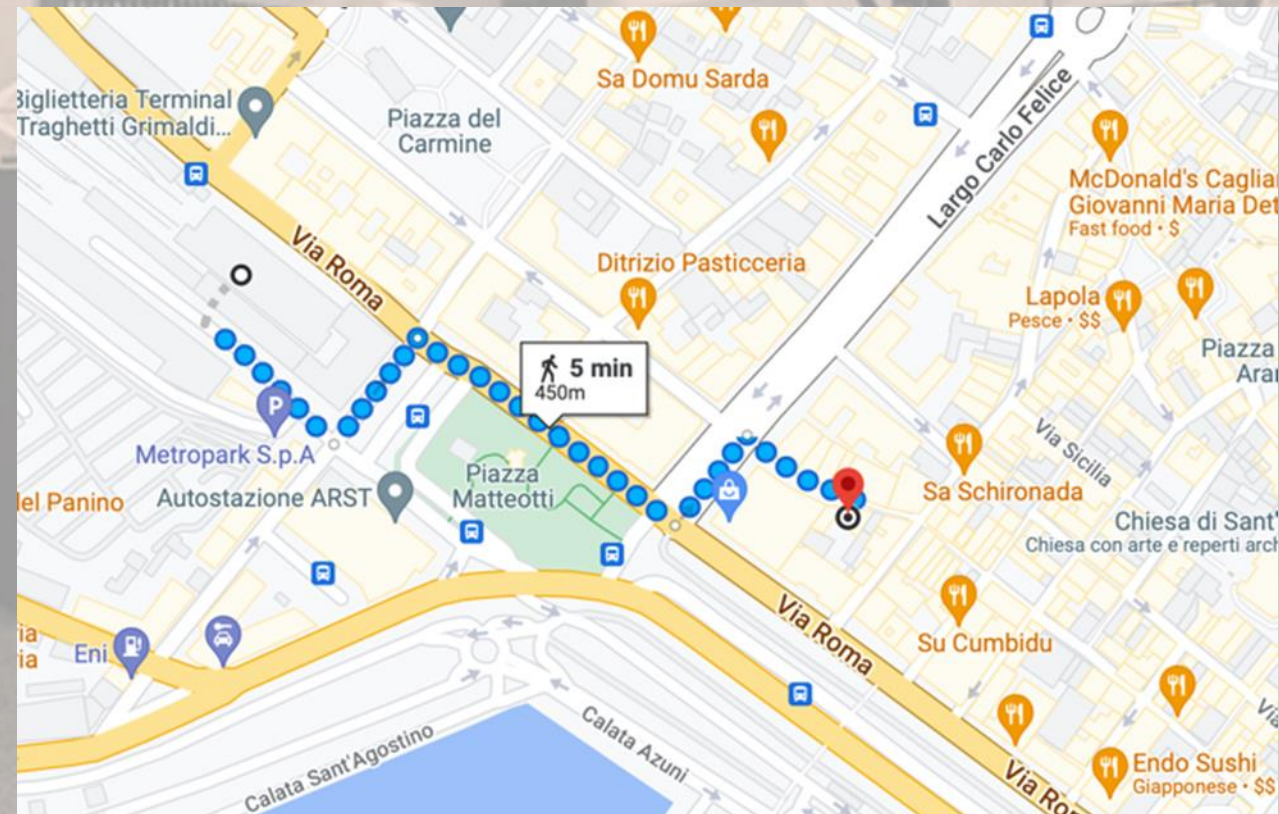
Hotel Italia

Via Sardegna, 31 - 09124 Cagliari

T +39 070 660410 / +39 070 660510

F +39 070 650240

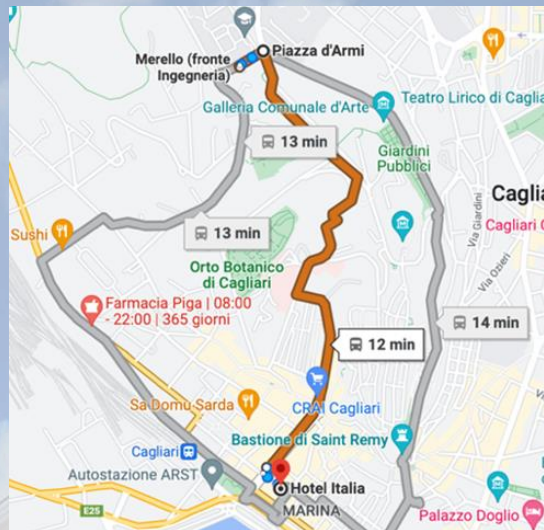
info@hotelitaliacagliari.com



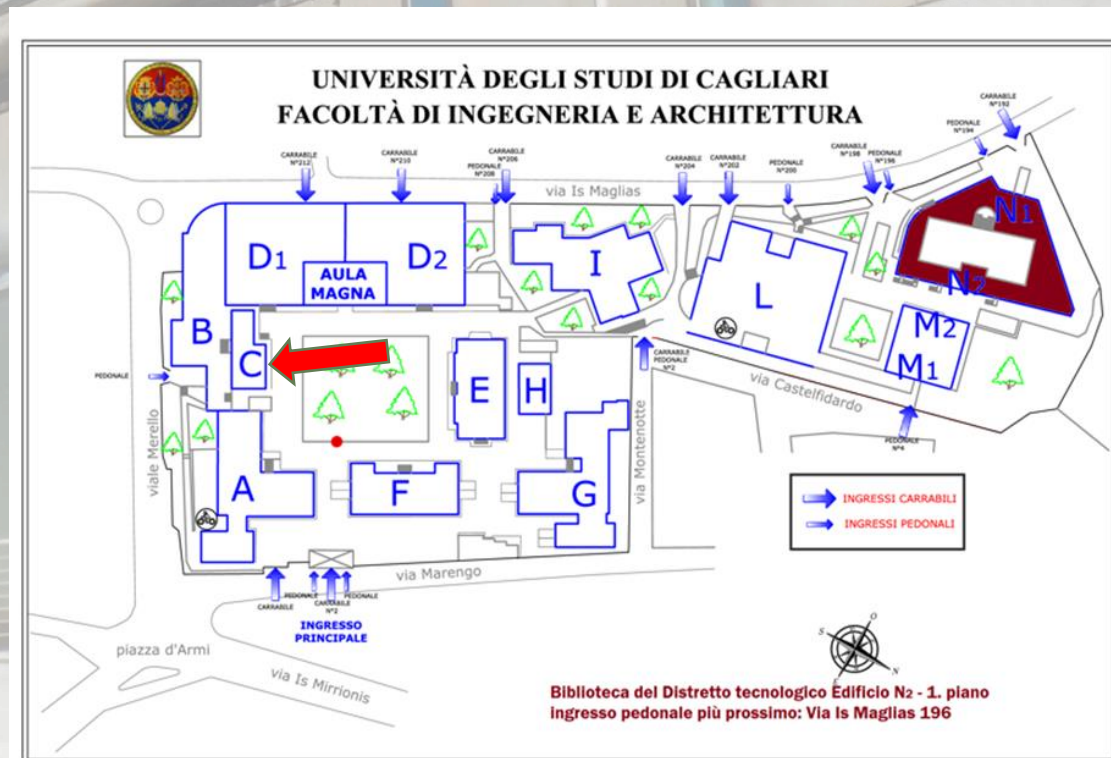
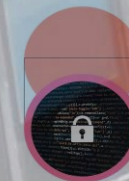
Venue

Aula (classroom) Alfa

Faculty of Engineering and Architecture,
Building C
Via Marengo, 2
Cagliari



From Hotel Italia
take the **bus n. 8**
7 stops - 12 min.
From Carlo Felice to
Merello
Or by walking (22
minutes)

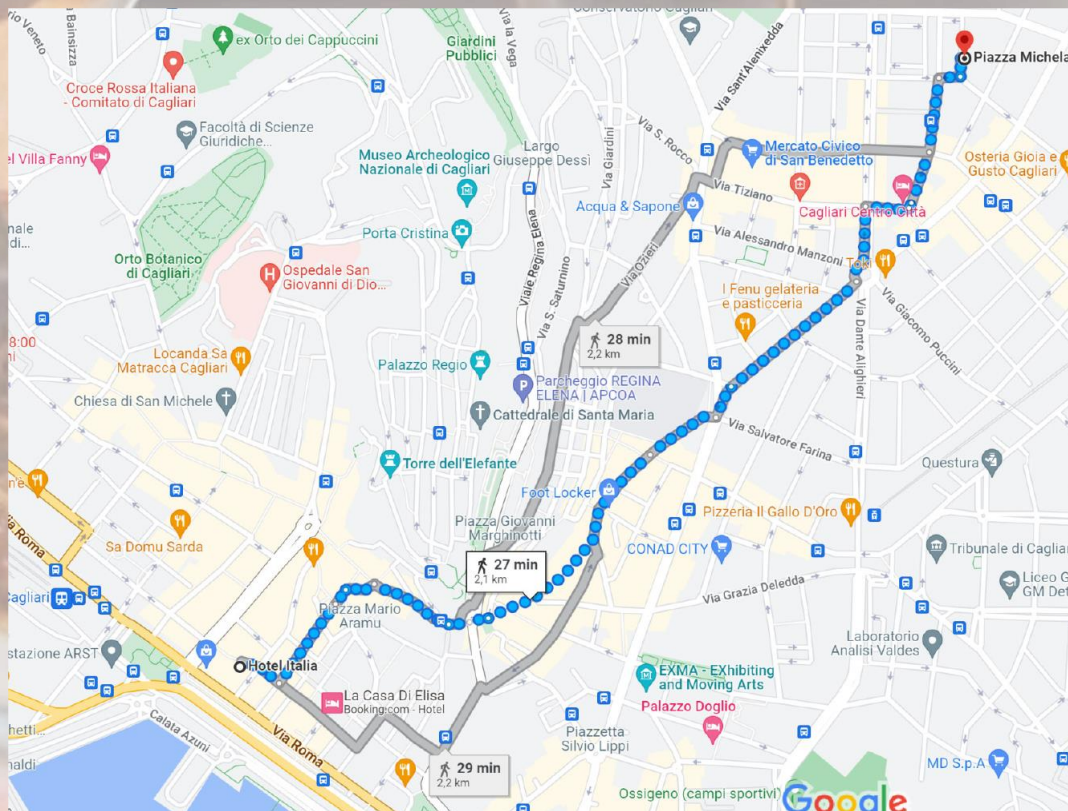


Eating

UNICA canteens location

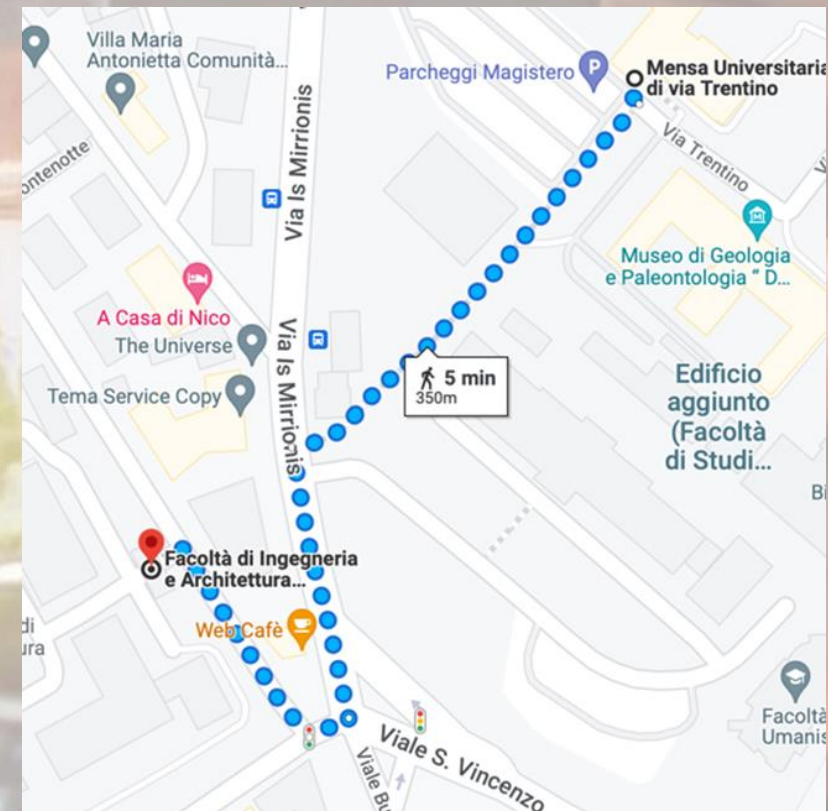
- **Via Trentino, "Sa Duchessa" campus**
- **Piazza Michelangelo n. 24**

From Hotel Italia to Piazza Michelangelo
~20 minutes by bus (N. 1, 30, 31), or 28 minutes walking



Follow the instructions to access UNICA catering service received by mail

From Aula Alfa to Via Trentino
5 minutes walking



Moving in Cagliari



- **Walking**
- **Bus CTM:** from 4:00 am to 00:50 am - **weekly ticket** (highly suggested) or 1,30 €/90 min and Linea Blu Notte from 23:00 pm to 3:50 am*
- **By Metro** from 5:54 am to 22:30 pm - **weekly ticket** (the same as above) or 1,30 €/90 min
- **Bike sharing**
Visit the website <https://www.playcar.net/> to check out prices and download the app playcar
- **By car**

*Service available from Piazza Matteotti to Poetto (Ospedale Marino) and return
First Journey at 23 from Piazza Matteotti and the last at 3:50 from Poetto (Ospedale Marino)

Taxi Sharing Poetto Beach

Service valid from any point in the city to the Poetto beach Ottagono limit, operating 24h for 4 persons.
Up to 3 passengers the taximeter amount will be valid.

Map bus/metro

<https://www.ctmcagliari.it/wp-content/uploads/2019/12/mappa.pdf>



Local Public Transport

As you will stay in Cagliari for about 2 weeks, we recommend to buy **2 weekly tickets** at the cost of **€ 12,00 per ticket**.

The weekly ticket offers unlimited travel throughout the Metropolitan area network, including Metrocagliari service, for 7 days from the ticket validation time. Remember to validate the ticket on board the first time you take the bus.

You can **buy your tickets** at the nearest CTM ticket shop.

The **nearest CTM shop** to your hotel is in Piazza Matteotti, 3 minutes walking distance from Hotel Italia.

Please see shop's opening times below:

from Monday to Saturday	7.30-13.30
Sunday and national holidays	closed

The **ticket machine** outside the shop is **open 24/7** so you can buy the ticket on Sunday upon your arrival.



Alternatively, tickets are also available in **selected shops** that show this image at the door.

The best and quickest way to purchase the weekly tickets is by downloading the **App Busfinder**, available for Android, iOS and Huawei.

The app CTM busfinder can be downloaded in English and it is very easy to use. Once you have entered personal data for the subscription, select Tickets>Buy, then choose the **Weekly ticket** option and proceed to the payment.

29 August

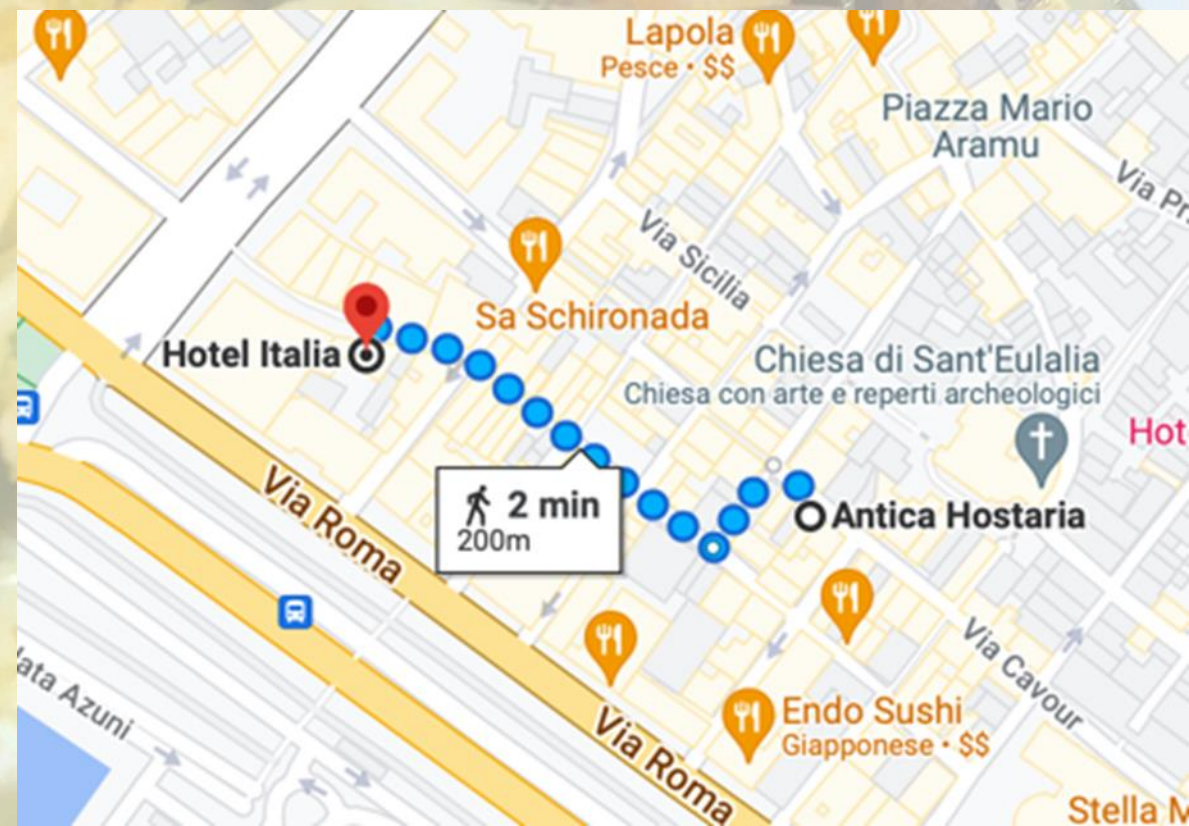


Welcome Dinner

20:00

«Antica Hostaria» Restaurant

Via Cavour, 60



29 August, h. 15:30 - 19:30

Lecture on the town of Cagliari and City Tour

15:30 - 16.30

The lecture illustrates the historical-architectural and urbanistic events of the city of Cagliari, from the late Middle Ages to the twentieth century, the evolution of its ancient districts and expansion plans drawn up since the second half of the nineteenth century. Through the projection of images, it will be shown how much remains in today's buildings of the various historical eras.

Marcello Schirru, University of Cagliari

16:30 - 19:30

3 hour Walking Tour of Cagliari's two most picturesque historic quarters: Castello and Marina

The tour will take you first of all to the 'old' Cagliari: the picturesque CASTELLO quarter, founded by the Pisans in the Middle Ages, which stands in a dominating position from where you can enjoy an amazing panorama of the entire city. Fortifications such as the towers, city walls, bastions, as well as churches and old noble residences will let you experience the immense historical, artistic and architectural heritage of ancient Casteddu.

We will continue our guided tour of LA MARINA, Cagliari's liveliest, most sparkling and dynamic district. La Marina is cosmopolitan and multicultural, and the shopping area is full of shops, art galleries, jewellers, small craft workshops, restaurants and typical trattorias.



1 September

CRS4-Nora Tour

10:00 am

Guest arrival and welcome at the Ubiquitous Platform Lab * CRS4 30th anniversary books and badges delivery (Valentino, Pintori) and CRS4 VIDEO projection

10:30 am

CRS4 Introduction and History (Agelli)

11:00 am

The Ubiquitous Platform (Impagliazzo)

11:30 am

Quantum Computing (Siddi)

11:45 am

Technologies and application for the interpretation and exploitation of digital contents (Agelli)

12:15 pm

The Ipoacusia Project: Interpretation of the Italian sign language with the support of artificial neural networks (Pili)

12:30 pm

End of the visit and final conclusion

12:30 pm

Picnic at Nora Beach

16:30 pm

Guided tour of the Nora archeological area

18:15 pm

Back trip to Cagliari

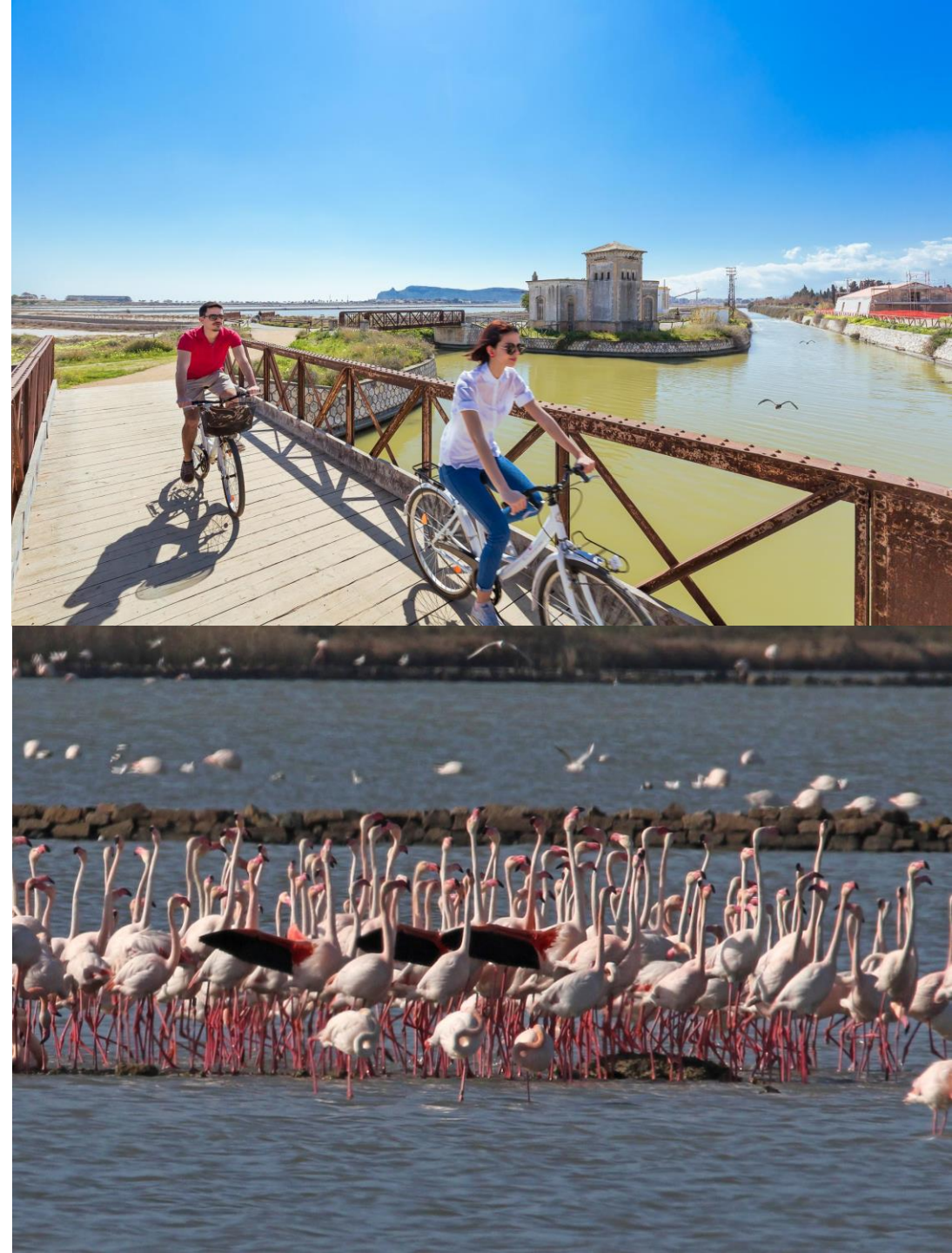


3 September

Molentargius Parc Bike Tour - *Optional*

***A naturalistic oasis a stone's throw
from the city, with its pink flamingos***

**Price: 10 euro/person
From 10.00 to 12.00**



7 September

Visit to Tiscali Telecommunication Company

9:30 am

Guest Arrival

10:00 am

Tiscali Tour: presentation of the Company and its activities

10:30 am - 12:00 pm

Visit to Tiscali Datacenter





With the participation of the EDUC Alliance

MASARYK
UNIVERSITY

Université
Paris Nanterre



PÉCSI TUDOMÁNYEGYETEM
UNIVERSITY OF PÉCS

Universität
Potsdam

UNIVERSITÉ DE
RENNES 1



Università
degli Studi
di Cagliari