

Training School on Ground Penetrating Radar for civil engineering and cultural heritage management

Roma, Italy, May 14-18, 2018

Coordinators of the school:

Prof. Lara Pajewski (Department of Information Engineering, Electronics and
Telecommunications, Sapienza University of Rome, Rome, Italy)

Dr Raffaele Persico (Institute for Archaeological and Monumental Heritage of the National
Research Council, IBAM-CNR, Lecce, Italy)

Dr Lai Bun Lok (University College of London, London, United Kingdom)

WELCOME!!

OUR HERITAGE:
WHERE THE PAST
MEETS THE FUTURE

2018 
EUROPEAN YEAR
OF CULTURAL
HERITAGE
#EuropeForCulture

About Sapienza University



SAPIENZA
UNIVERSITÀ DI ROMA

- Sapienza is the 3rd largest European university by enrollments (147.000 undergraduate and graduate students in active enrollment) and one of the oldest in history (founded in 1303). It is one of the most prestigious Italian universities, often ranking first in national and Southern Europe rankings.
- Most of the Italian ruling class studied at Sapienza, which was the only state university in Rome until 1982. Sapienza educated numerous notable alumni, including Nobel laureates, Presidents of the EU Parliament, EU Commissioners, heads of several nations, religious figures, scientists, astronauts...

About Sapienza University

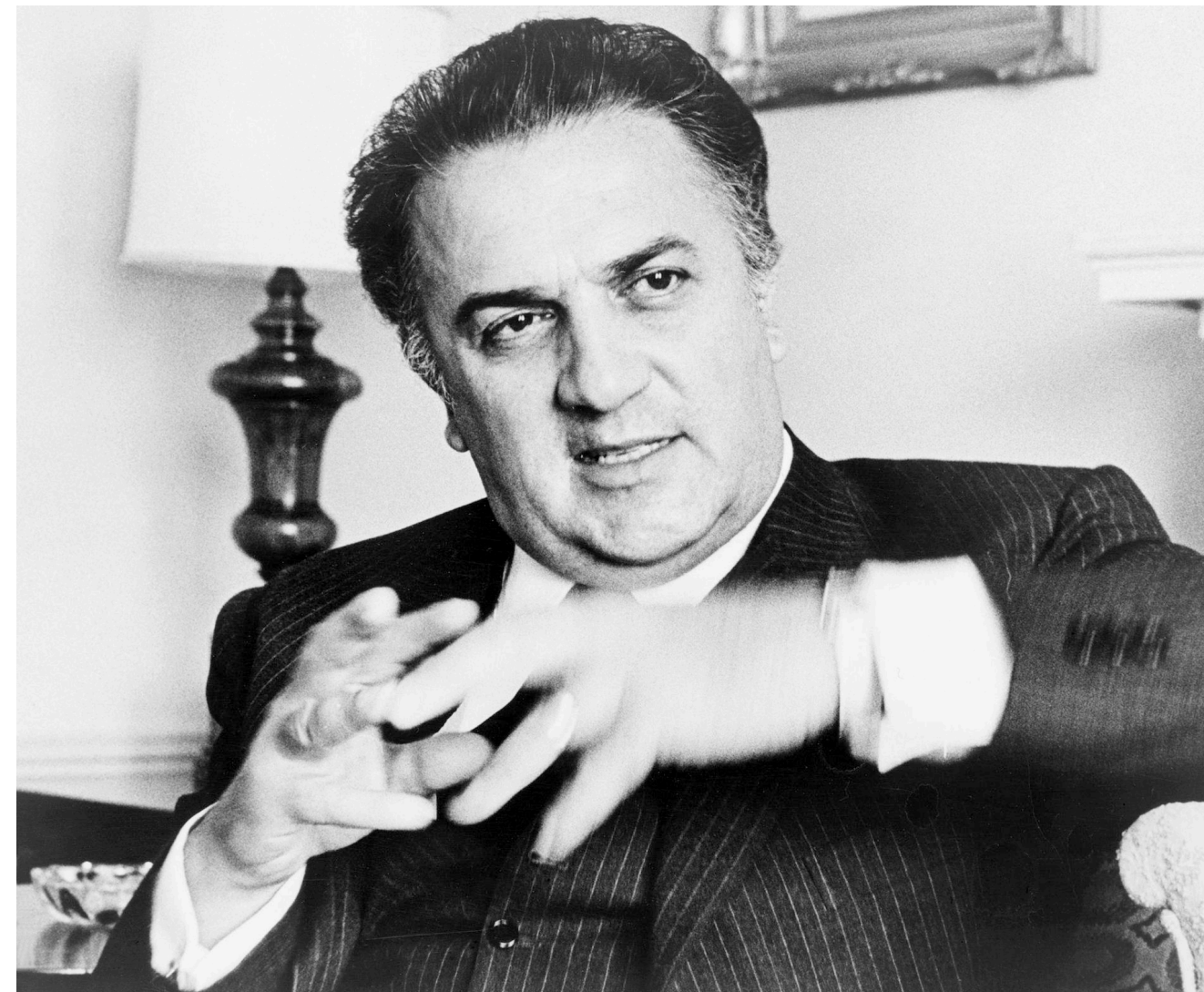
Maria Montessori



Founder of the Montessori method of education, regarded to be one of the most influential female physicians.

Federico Fellini

One of the most important filmmakers of the 20th century.



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UNIVERSITÀ DI ROMA

Evangelista Torricelli



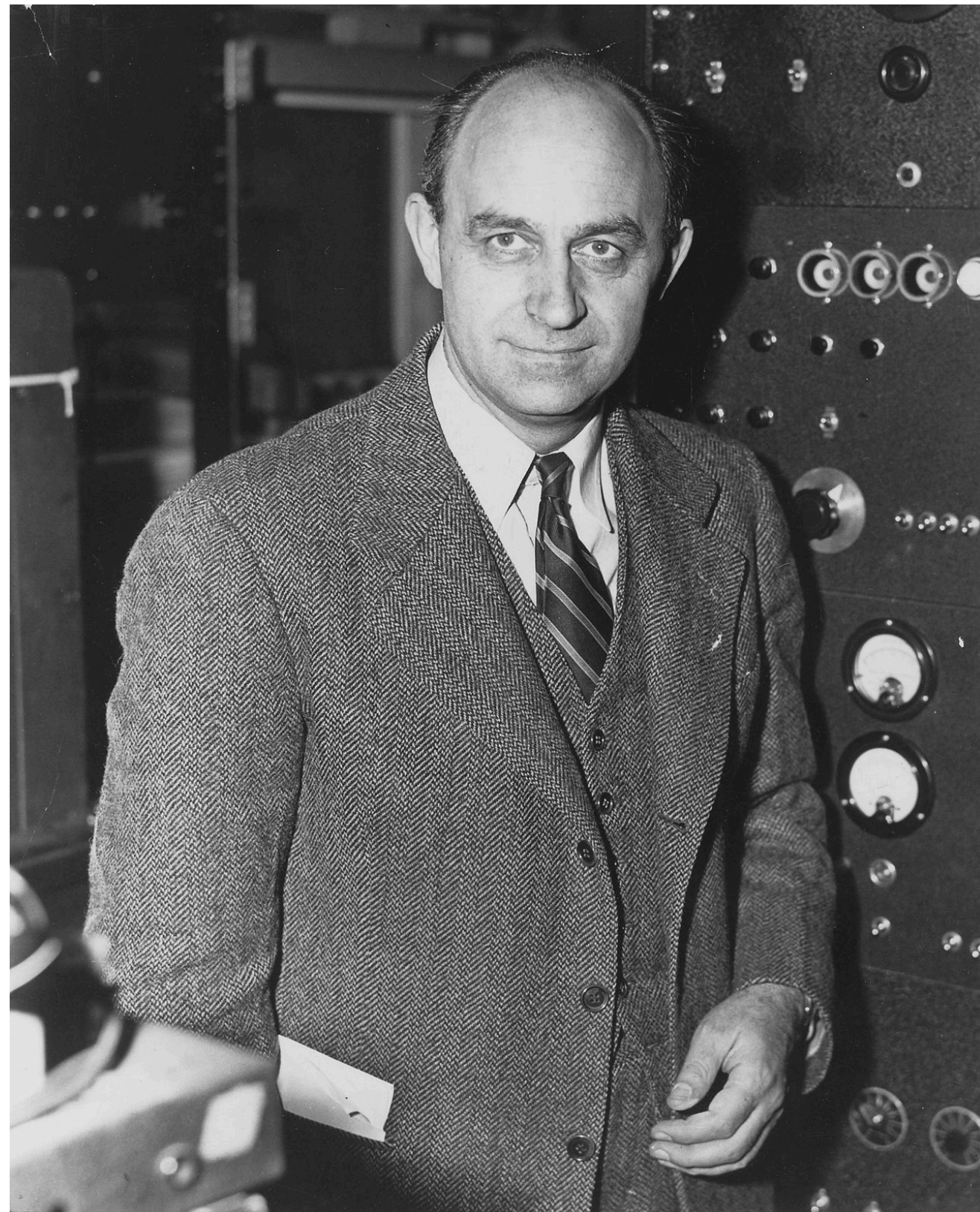
Inventor of the barometer. He made significant contributions in optics and on the method of indivisibles.

About Sapienza University



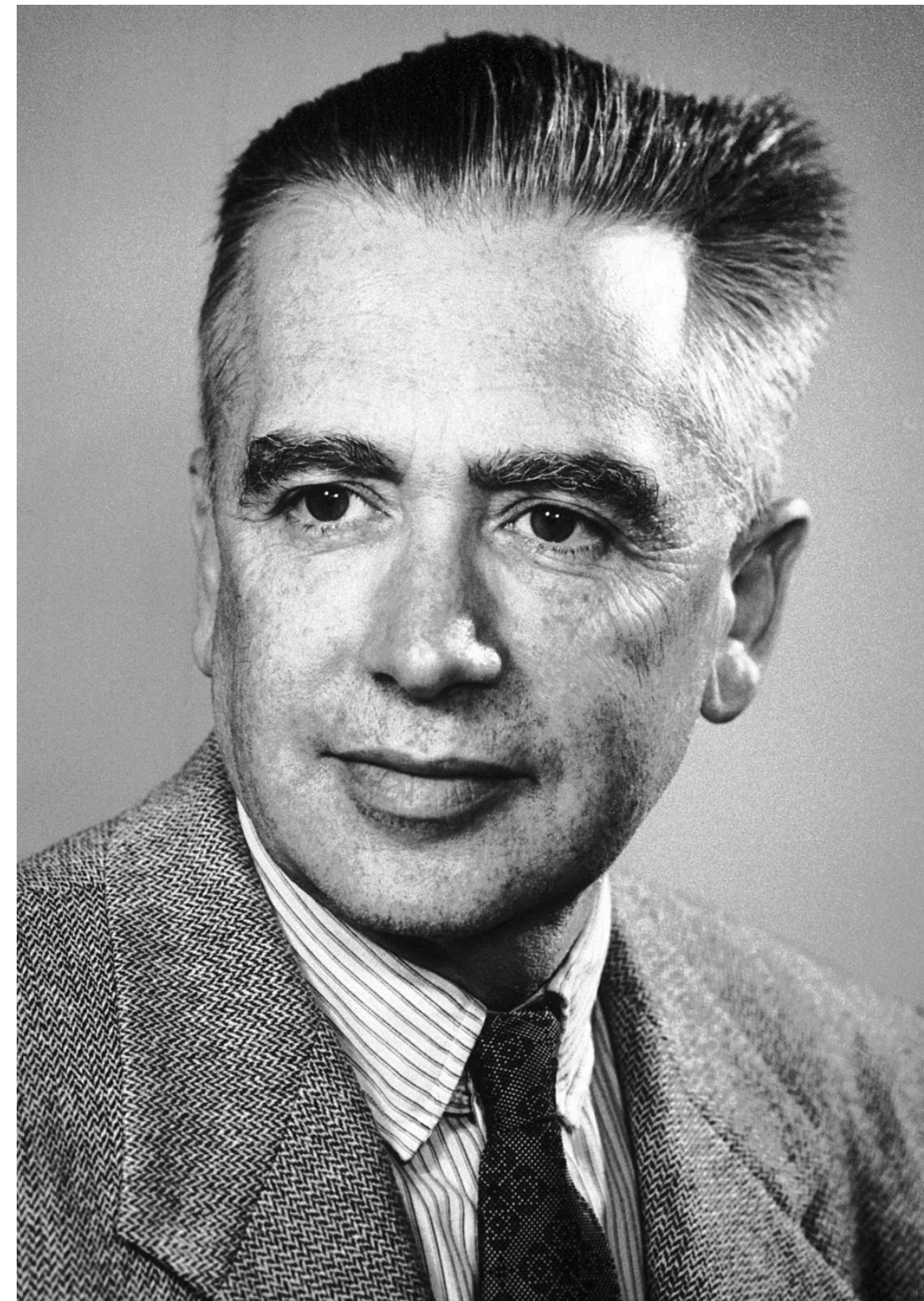
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Enrico Fermi



Physicist, colleague and close friend of Ettore Majorana. A key figure in the creation of the atomic bomb. He is also known for the Fermi–Dirac statistics and the theory of beta decay. Nobel Prize in Physics (1938).

Emilio Gino Segrè



Physicist, colleague and close friend of Ettore Majorana. A key figure in the creation of the atomic bomb. He discovered the antiproton, a subatomic antiparticle, for which he was awarded the Nobel Prize in Physics in 1959.

...and many more

About Sapienza University



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- Sapienza University has many campuses in Rome. The main campus is denominated “Città Universitaria” (University city): it covers 44 ha and is located between Roma Termini and Roma Tiburtina train stations.
- Sapienza University has satellite campuses outside Rome, as well, the main of which is in Latina (about 60 km south of Rome).
- Our University has 11 faculties and 65 departments.

About Sapienza University



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- The Faculties of Information Engineering, Informatics and Statistics, Industrial and Civil Engineering, are in the XVI century building of S. Pietro in Vincoli (a former monastery).

- The cloister designed by Giuliano da Sangallo includes a well to collect filtered rain water and is the symbol of engineering studies of Sapienza.



About me (Lara Pajewski – lara.pajewski@uniroma1.it)

- Electronic engineer with a PhD in applied electromagnetics and electrophysics sciences (2004).
- Main scientific interests: GPR technology, methodology, and applications – Electromagnetic modelling of complex scenarios.
- Since November 2016 I'm a Professor of Electromagnetic fields in the Department of Information Engineering, Electronics and Telecommunications of Sapienza University of Rome, Italy. I was recruited in this position via a 'special procedure' for winners of high-quality EU projects ('chiamata diretta'), being the Proposer and Chair of COST Action TU1208.
- COST Action TU1208 was the first project that I coordinated and managed: a wonderful and life-changing experience that significantly helped me to develop my career and skills.

Training School (Rome, 14-18 May 2018)



14
MAY

DAY 1

GPR basic principles
Choice of equipment
for different
applications

GPR technology

Showcase of
GPR prototypes



15
MAY

DAY 2

Civil engineering,
hydrogeological
and geotechnical
applications of
GPR



16
MAY

DAY 3

GPR Applications
for archaeology
and cultural
heritage

Commercial GPR
systems

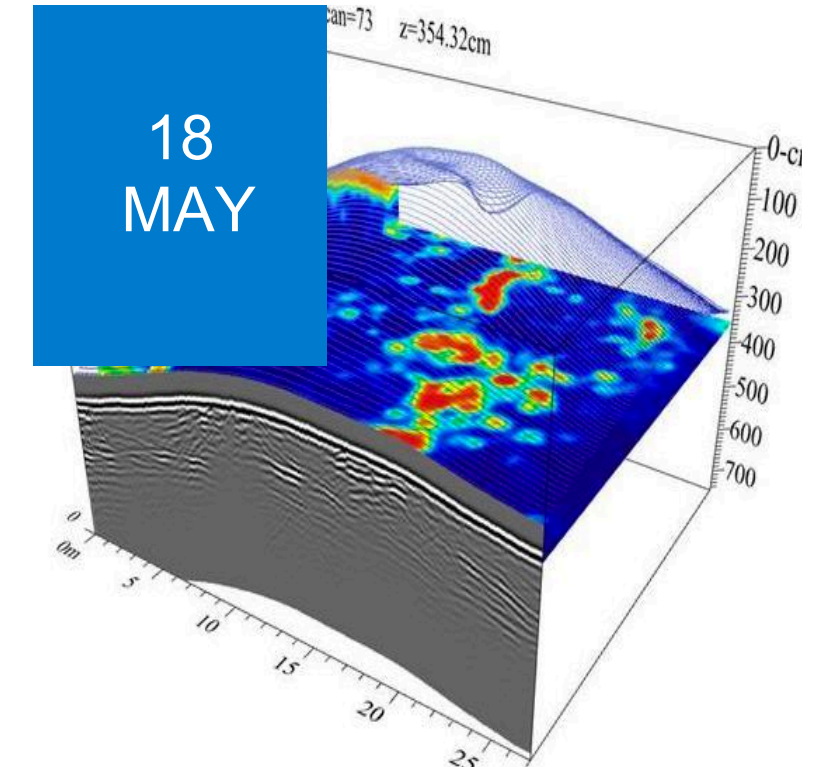
**Practical sessions
in San Pietro in
Vincoli Church**



17
MAY

DAY 4

**Practical sessions
in Quadriportico
and Chiostro of
San Paolo Fuori
le Mura**



18
MAY

DAY 5

Data processing and
interpretation

A look at other areas
of application of GPR

Free software tools
for GPR & Open
database of
radargrams

GPR Systems & Trainers

GPR 1) GSSI UtilityScan LT

Aleksandar Ristic

GPR 2) Stepped-Frequency Prototype

Raffaele Persico

GPR 3) GSSI StructureScan

Michael Arvanitis

GPR 4) GSSI SIR 4000

Maurizio Porcu

Supervisors & Helpers

S1) Lara Pajewski

S2) Lai Bun Lok

H1) Santo Prontera

H2) Alessio Ventura

Trainees: Group 1

- 1) *Dragan*
- 2) Adam
- 3) Benedetto
- 4) Lorenzo
- 5) Jaime
- 6) Michalina
- 7) Katerina

Trainees: Group 2

- 1) *Anna*
- 2) Martina
- 3) Dan
- 4) Afief
- 5) Fabio
- 6) Andrea

Trainees: Group 3

- 1) *Loredana*
- 2) Davide
- 3) Olav
- 4) Andreas
- 5) Heorhii
- 6) Octavio

Trainees: Group 4

- 1) Erika
- 2) Anton
- 3) Mezgeen
- 4) Carla
- 5) Francesco
- 6) Iginio

Timetable – San Pietro in Vincoli

	GPR 1	GPR 2	GPR 3	GPR 4
Round 1 15:00 – 15:45	Group 1	Group 2	Group 3	Group 4
Round 2 15:45 – 16:30	Group 2	Group 3	Group 4	Group 1
Round 3 16:30 – 17:15	Group 3	Group 4	Group 1	Group 2
Round 4 17:15 – 18:00	Group 4	Group 1	Group 2	Group 3

San Paolo



Please arrive by 9:00. You can arrive sooner if you want: after 8:00

Timetable – San Paolo (morning)

GPR 1

Group 1

Group 2

Group 3

Group 4

GPR 2

Group 2

Group 3

Group 4

Group 1

GPR 3

Group 3

Group 4

Group 1

Group 2

GPR 4

Group 4

Group 1

Group 2

Group 3

Round 1
09:00 – 10:00

Round 2
10:00 – 11:00

Round 3
11:30 – 12:30

Round 4
12:30 – 13:30

Timetable – San Paolo (afternoon)

	GPR 1	GPR 2	GPR 3 & 4
Round 1 14:30 – 15:30	Group 1	Group 2	Group 3
Round 2 15:30 – 16:30	Group 2	Group 3	Group 1
Round 3 16:30 – 17:30	Group 3	Group 1	Group 2