



43rd Course
**FRONTIERS
IN GEOPHYSICS
FOR THE THIRD
MILLENNIUM**

DAY 1

23 September

MORNING	GLOBAL CHALLENGES	
8:30 - 8:45	Director & Conveners	Welcome to the 43rd Course of the International School of Geophysics
8:45 - 9:30	G. Spada	Earth's dynamics in the centennial to millennial time scales
9:30 - 10:15	S. Wiemer	How predictable are earthquakes?
10:15 - 11:00	L. Giulia	Is the worst over? Real-Time events discrimination with the Foreshock Traffic Light System
11:00 - 11:30	Coffee break and poster session	
11:30-12:15	G. Ekström	Global Earthquake Seismology
11:15-13:00	J. Tromp	Global Full Waveform Inversion
13:00 - 15:00	Lunch	
AFTERNOON	UNDERSTANDING GLOBAL ISSUES AND THREATS	
15:00 - 15:45	G. Beroza	Machine-Learning-based earthquake monitoring
15:45 - 16:30	D. Wald	Evolving strong motion metrics for use in engineering analyses
16:30 - 17:00	Coffee break and poster session	
17:00 - 17:45	G. Di Toro	The contribution of rock mechanics laboratory studies to earthquake research
17:45 - 18:30	D. Giardini	Major research infrastructures for 21st century Geophysics

DAY 2

24 September

MORNING	DEALING WITH ENVIRONMENTAL AND SOCIETAL ISSUES	
8:30 - 9:15	L. De Santis	Geophysical and geological data in the polar regions: tools to investigate past and modern environmental changes and ice sheet dynamics
9:15 - 10:00	N. Pinardi	The science of ocean and coastal predictions
10:00 - 10:45	A. Neri	Modelling explosive eruptions and their hazards; achievements and perspectives
10:45 - 11:30	Coffee break and poster session	
11:30 - 12:15	M. Rosi	Managing volcanic risks in densely populated areas
12:15 - 13:00	R. Pinho	From Earthquake Early Warning to Autonomous Seismic Protection: an integrated, evolutionary approach to societal resilience
13:00 - 15:00	Lunch	
AFTERNOON	ENZO BOSCHI: MEMORIES AND ACCOMPLISHMENTS	
15:00 - 15:45	A. Michellini	1982-2025: The evolution of INGV seismological and geodetic networks
15:45 - 16:30	S. Branca	Frontiers of volcanological observatories: the case of INGV's Etna Observatory
16:30 - 17:00	Coffee break and poster session	
17:00 - 17:30	T. Pepe G. Valensise	The legacy of Enzo Boschi
17:30-18:00	P. Gasperini	The school of Geophysics in Bologna
18:00-18:30	A. Amato	Enzo Boschi and the l'Aquila trial

DAY 3

MORNING	EARTHQUAKE OBSERVATIONS AT DIFFERENT SCALES	
8:30-9:15	R. Bilham	The influence of variations of Polflucht-Kraft on lithospheric seismicity
9:15-10:00	R. Bürgmann	Variable fault coupling and earthquake potential along the Hayward Fault
10:00-10:45	S. Wesnousky	Past and future fault rupture lengths for seismic source characterization: insights from Earthquake Geology
10:45-11:30	Coffee break and poster session	
11:30-12:15	M.A. Gutscher	Submarine fiber optic cables: a new technology to study earthquakes and the seafloor environment - The FOCUS project
12:15-13:00	R. Arrowsmith	Adapting new tools to advance Earthquake Geology observations and understanding
13:00-15:00	Lunch	
AFTERNOON	EARTHQUAKE EARLY WARNING AND RISK MITIGATION	
15:00 - 15:45	A. Zollo	Seconds that matter: the physical basis and effective use of Earthquake Early Warning
15:45 - 16:30	R. Allen	Frontiers in hazard reduction using massive sensor networks
16:30 - 17:00	Coffee break and poster session	
17:00 - 17:45	I. Iervolino	The time-space scales of seismic risk: from Earthquake Early Warning to the life-cycle of civil infrastructure
17:45-18:30	Closing remarks	