



School of Rock  
Pavia 24-27 Luglio 2018

***“Comprendere il Sistema Climatico attraverso i sedimenti marini profondi”***  
***Understanding the Climate System through ocean sediments***  
**Pavia - Italy, 24<sup>th</sup>-27<sup>th</sup> July 2018**

From 24 to 27 of July, Pavia will host, for the first time in Italy, the European course for secondary school Science teachers "ECORD School of Rock".

The ECORD "School of Rock" is a unique opportunity for interaction and exchange between academy and school world. Thanks to the participation of scientists involved in the IODP expeditions and thanks to an innovative method of scientific divulgation, the participants become familiar with the Earth Sciences and with the program of exploration and perforation of the oceans. This immersive experience will provide Italian Science teachers with an opportunity to work side-by-side with IODP scientists, using current state-of-the-art approaches to solve scientific problems of global interest, and gaining first-hand knowledge of the results of science expeditions. To achieve this goal, School of Rock alternates lectures to practical activities conducted directly by participants on IODP materials.

The topic of this edition is the study of Quaternary Climate Change through ocean sediments. About twenty Science teachers from all over Italy will be in Pavia to explore the mechanisms of the Climate System, to discover what tools Earth Sciences provide to scientists to reconstruct the Climate of the Past, and to understand how to make predictions about the Climate Change of the Future. At the end of the school, the teachers will participate in a discussion on how civil society can and must face the Climate Change with a view to adaptation and mitigation. Invited speakers are scientists who have taken part in IODP expeditions and/or have strong expertise in Climate Change.

***“School of Rock 2018” is organized by:***

- **Claudia Lupi**, Micropaleontologist at the University of Pavia
- **Angelo Camerlenghi**, Geologist at National Institute of Oceanography and Applied Geophysics (OGS) of Trieste - Italy
- **Alessia Cicconi**, Science Teacher at the secondary school Liceo Classico "F. Stabili - E. Trebbiani" di Ascoli Piceno

Organizational secretariat

**Michela Comensoli**

**Chiara Bernuzzi**



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**ECORD School of Rock 2018 is supported by:**

*International Ocean Drilling Program (IODP) National Office Italia*

*European Consortium for Ocean Research Drilling (ECORD)*

*Piano Lauree Scientifiche (PLS) Geologia Pavia – National Program for STEM – Geology Pavia*

*Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS) National Institute of Oceanography and Applied Geophysics Trieste Italy*

*Department of Earth and Environmental Sciences of Pavia*

*Fraccaro College, EDiSU, University of Pavia*

**Speakers and Instructors:**

Angelo Camerlenghi: Geologist at the OGS; Co-Chief Scientist expedition ODP Leg 178 (Antarctic Peninsula); Technician expedition ODP Leg 115 (Indian Ocean); Sedimentologist expedition ODP Leg 146 (Cascadia Margin). From 2003 to 2014, member of the committee *Geosciences Information for Teachers* of the European Geosciences Union (EGU).

Sergio Castellari: Senior Scientist of the National (Italian) Institute of Geophysics and Volcanology (INGV) currently Seconded National Expert at European Environment Agency (EEA), Copenhagen (Denmark)

Alessia Cicconi: Science Teacher, PhD in “Earth Science Education”; Outreach and Education Officer expedition IODP 367 (South China Sea).

Florence Colleoni: paleoclimate & ice sheet modeller at the OGS.

Laura De Santis: Geologist at the OGS; Co-Chief Scientist expedition IODP 374 (Ross Sea West Antarctica).

Patrizia Ferretti: researcher at the Istituto per la Dinamica dei Processi Ambientali (CNR-IDPA) *Institute for the Dynamics of Environmental processes Venice – Italy*. Sedimentologist a terra expedition IODP 359 (Maldives Monsoon); Sedimentologist expedition IODP 344S (Baffin Bay); Sedimentologist expedition IODP 306 (North Atlantic).

Claudia Lupi: Teacher of Paleoclimatology at the University of Pavia; Calcareous Nannofossil specialist expedition IODP 367 (South China Sea).

Nicoletta Mancin: Teacher of Applied Micropaleontology at the University of Pavia, Planktonic and Benthic Foraminifera specialist.



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## PROGRAM

### **24<sup>th</sup> July 2018**

At the Fraccaro College - Aula Magna “Edoardo Porro”

15:00: Welcoming Organizer Committee and IODP – National Office

15:30 – 16:30: “The Climate System” Speaker: *Claudia Lupi*

17:00 – 18:00 “Climate History of the Earth” Speaker: *Claudia Lupi*

18:00 – 18:30 Musical intermezzo: clarinet duet

18:30 Ice breaker Party

### **25<sup>th</sup> July 2018: Practical hands-on activity**

At the Department of Earth and Environmental Sciences - Room D7 and labs

9:00 -10:00 “The Joides Resolution: an extraordinary lab” Speaker: *Angelo Camerlenghi*

10:30 - 11:30 “Times and modes of climatic variations” Speaker: *Patrizia Ferretti*

11:30 – 12:30 “Core description, labelling and sampling” Instructor: *Angelo Camerlenghi*

14:30- 18:30 Pratical labs in three small groups (1) core description (Instructor: *Angelo Camerlenghi*), (2) preparation and analysis of washed residue (Instructor: *Nicoletta Mancin*); (3) preparation and analysis of *smear slide* (Instructor: *Claudia Lupi*).

### **26<sup>th</sup> July 2018: Practical hands-on activity**

At the Department of Earth and Environmental Sciences - Room D7 and labs

9:00-11:00 Practical labs in three small groups.

11:30-12:30 “Glacial History of Antarctica through ocean sediments” Speaker: *Laura De Santis*

14:30-15:30 “A teacher onboard: IODP Exp 367, South China Sea” Speaker: *Alessia Cicconi*

16:00 – 18:30 Exercises on IODP, ECORD and JOIDES databases and websites and on the book “Reconstructing Earth’s Climate History” Instructors: *Alessia Cicconi, Laura De Santis e Claudia Lupi*

### **27<sup>th</sup> July 2018: Conclusions**

At the Department of Earth and Environmental Sciences - Room D7

9:00-10:30 “From Paleoclimate to Future Climate: the previsional models” Speaker: *Florence Colleoni*

11:00 - 12:30 “Keywords for the Future: Mitigation and Adaptation” Speaker: *Sergio Castellari* (via Skype)