



UNIVERSITÀ  
DI TORINO



Dipartimento di  
Scienze della Terra

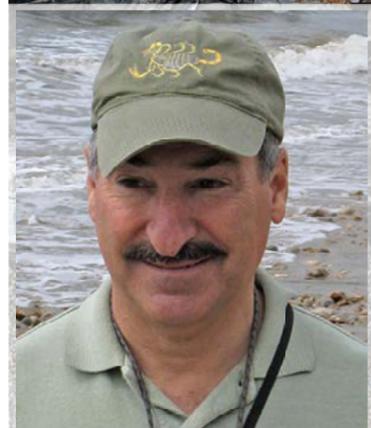


**3 ECTS COURSE FOR PhD STUDENTS**

## **Biogenic silica sedimentation through time**

**Prof. Richard Behl**

**Department of Earth Science  
California State University Long Beach (USA)**



### **The lecturer**

Richard Behl is a marine sedimentologist, Professor Emeritus at CSULB (USA). Most of his work focuses on the wonderfully complex Miocene Monterey Formation of California and the spectacular Quaternary record of Santa Barbara Basin. Overall, his research is tied together by trying to unravel the tectonic, climatic, and oceanographic evolution of the California Margin and the Pacific Ocean. In particular, his research focuses on the sedimentology and paleoceanography of continental margins and deep-sea upwelling zones, and the diagenesis of siliceous sediments and other authigenic minerals associated with organic-rich sediments.

### **WHEN & WHERE**

**May 4th-5th and 11th-12th, 2026**  
Department of Earth Sciences - University of Turin  
(Via Valperga Caluso 35, Torino - Italy)

### **COURSE DESCRIPTION & PROGRAM**

This course will provide students with an overview of the sedimentology, depositional environment and diagenesis of marine biosiliceous sediments with emphasis on the Cenozoic era. Siliceous plankton have become the main primary producers (carbon fixers) in the modern ocean and perform a critical role in the global carbon cycle, while their unique characteristics influence large-scale phenomena in the subsurface like sedimentary basin dewatering, polygonal fracture systems, seismic reflections and rock mechanics.

#### **May 4th (2-5 pm)**

Significance of biosiliceous sediments and sedimentary rocks  
Evolution of biosiliceous planktonic organisms  
Environmental requirements & depositional environments  
Sedimentary processes & sedimentary structures  
Vertical settling, sedimentary reworking & lateral facies distribution

#### **May 5th (2-5 pm)**

Silica phases and diagenesis  
Silica and fluid mobility  
Significance of burial history  
Composition & lithology  
Ribbon bedding in chert and porcelanite

#### **May 11th (2-5 pm)**

Petrography & microfacies of siliceous sediments & rocks  
Porosity and permeability  
Physical properties of biosiliceous sediments and sedimentary rocks  
Deformation and mechanical stratigraphy

#### **May 12th (2-5 pm)**

Significance and applications in petroleum geology  
Sequence stratigraphy and biosiliceous sediments  
Paleoceanography of biosiliceous sediments  
Integration of seminar content and applications to individual research

### **REGISTRATION & CONTACTS**

Registration form available at the following link:  
[https://www.phdearthsciences.unito.it/do/documenti.pl/Show?\\_id=psws](https://www.phdearthsciences.unito.it/do/documenti.pl/Show?_id=psws)  
Send to: francesco.delapierre@unito.it and lu.pellegrino@unito.it

Registration deadline: April 10th, 2026

Early registration is recommended as class size is limited to 13  
Notify any cancellations as soon as possible in order to allow substitutions