

1st *FRESCO* Summer school



Living benthic foraminifera in coastal environments



2nd - 7th of July 2017

LPG-BIAF, Angers University
(France)

Description:

The first FRESCO Summer School addresses a wide array of innovative interdisciplinary research tools used in coastal foraminiferal studies. The summer school offers a combination of theoretical and practical courses and a field excursion. After a common part dealing with foraminiferal biology, ecology and the biogeochemical functioning of coastal environments, two optional topics are proposed: **1) integrated experimental approaches (IEA)** **2) bio-monitoring (BM).**

Option 1 (IEA) "integrated experimental approaches", aims to familiarize the participants with multidisciplinary experimental and field-based tools to study highly complex coastal environments, focusing on the role of foraminifera in biogeochemical cycles.

Option 2 (BM) "biomonitoring", taught by members of the FOBIMO consortium, will treat the various methods to determine marine ecosystem quality, focusing on methods recently developed for foraminifera.

Sunday, July 2 nd , 2017 (17:00): Welcome speech, course presentation & ice breaker party				
Monday, July 3 rd	8:30-12:00	Lecture: Overview of biological aspect of foraminifera General introduction - What is a foraminifer? (J. Bernhard, <i>WHOI, USA</i>) Reproduction and life cycle (P. Heinz, <i>Vienna University, Austria</i>) Trophic mechanisms, case studies (H. Nomaki, <i>JAMSTEC, Japan</i> & P. Heinz, <i>Vienna University, Austria</i>) Other physiological functions: growth, locomotion... (P. Heinz, <i>Vienna University, Austria</i>)		
	13:30-18:00	Lecture: Coastal benthic foraminifera: habitats and ecology Foraminifera in subtidal coastal environments (J. Schönfeld, <i>GEOMAR, Germany</i>) Functioning of coastal mudflats: photosynthetic biofilms and foraminiferal distribution in transitional environments (B. Jesus, <i>MMS Nantes</i> , & E. Geslin, <i>LPG-BIAF Angers, France</i>)		
Tuesday, July 4 th	6:00-12:30	Field trip, Bay of Bourgneuf (French Atlantic coast): Sampling cores / Functioning of Bourgneuf Bay		
	14:00-18:00	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Option 1 (IEA): Practical courses in Groups - Group A: Core sampling prep. – CTG/labelling - Group B: Living foraminifera – Respiration rate - Group C: Sediment geochemistry; O₂ profiles - Group D: Feeding experiment </td> <td style="width: 50%; vertical-align: top;"> Option 2 (BM): Practical courses - Sediment sampling and sample treatment according to the FOBIMO protocol - Sediment profiling and geochemistry </td> </tr> </table>	Option 1 (IEA): Practical courses in Groups - Group A: Core sampling prep. – CTG/labelling - Group B: Living foraminifera – Respiration rate - Group C: Sediment geochemistry; O ₂ profiles - Group D: Feeding experiment	Option 2 (BM): Practical courses - Sediment sampling and sample treatment according to the FOBIMO protocol - Sediment profiling and geochemistry
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Wednesday, July 5 th	8:30-12:00	Lecture: Characterisation of the foraminiferal microhabitat Early diagenesis (E. Metzger, <i>LPG-BIAF Angers, France</i> & N. Risgaard-Petersen, <i>University of Aarhus, Denmark</i>)		
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Thursday, July 6 th	8:30-12:00	Lecture: Metabolism and genetics Genetics and Barcoding (M. Schweizer, <i>LPG-BIAF Angers, France</i>)		
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18:30-20:00 Farewell Party				