

2018 Summer school



Living benthic foraminifera in coastal environments Integrated experimental approaches



10th - 15th of June 2018
LPG-BIAF, Angers University
(France)

Description:

This 2nd edition of the 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.

The topics covered are dealing with foraminiferal biology, ecology and the biogeochemical functioning of coastal environments. The main goal of this edition is 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.

Sunday, June 10th, 2018 (17:00-20:00): Welcome speech, course presentation & ice breaker party – Meeting room « 8ème sens » (near the train station “Angers Saint Laud”)		
Monday, June 11 th	8:30-12:00	Lecture: Overview of biological aspects of foraminifera – Room A120 Generalization - What is a foraminifer? (J. Bernhard, WHOI, USA) Reproduction and life cycle (M. Schweizer, LPG-BIAF, France) Trophic mechanisms (H. Nomaki, JAMSTEC, Japan)
	13:00-13:30	Visit of the LPG-BIAF – Meeting @ Faculty of Sciences – Room A120 Dr. Pia NARDELLI, LPG-BIAF Angers (France)
	13:30-17:30	Lecture: Coastal benthic foraminifera: habitats and ecology – Room A120 Principles of foraminiferal biomonitoring (F. Jorissen, LPG-BIAF Angers, France) Foraminiferal distribution in transitional environments (E. Geslin, LPG-BIAF Angers, France) Mudflat functions (B. Jesus, MMS Nantes) Field trip presentation (E. Metzger, E. Geslin, T. Jauffrais, C. Choquel, LPG-BIAF Angers, France)
Tuesday, June 12 th	6:45-12:30	Field trip, Bay of Bourgneuf (La Couplasse) (French Atlantic coast): Sampling cores / Functioning of Bourgneuf Bay (Main supervisors: E. Metzger, E. Geslin, T. Jauffrais, C. Choquel)
	14:00-18:00	Practical courses in groups – <i>Building F</i> - Group A: Core sampling preparation – CTG labelling – Sieving (J. Bernhard, E. Geslin, E. Beneteau) - Group B: Living foraminifera – Respiration rates (N. Risgaard-Petersen, T. Jauffrais, C. Lekieffre) - Group C: Sediment geochemistry – O ₂ profiling (E. Metzger, H. Nomaki)
Wednesday June 13 th	8:30-12:30	Lecture: Characterisation of the foraminiferal microhabitats: Early diagenesis – Room A120 Early diagenesis (E. Metzger, LPG-BIAF Angers, France) Temporal and spatial variabilities in intertidal environments: Geochemistry and foraminifera (E. Metzger, E. Geslin LPG-BIAF Angers, France)
	14:00-18:00	Practical courses in groups – <i>Building F</i> - Group C: Core sampling preparation – CTG labelling (J. Bernhard, E. Geslin, E. Beneteau) - Group A: Living foraminifera – Respiration rates (N. Risgaard-Petersen, T. Jauffrais, C. Lekieffre) - Group B: Sediment geochemistry – O ₂ profiling (E. Metzger, H. Nomaki)
	19:00-21:30 Social event	
Thursday, June 14 th	8:30-12:30	Practical courses in groups – <i>Building F</i> - Group B: Core sampling preparation – CTG labelling (J. Bernhard, E. Geslin, E. Beneteau) - Group C: Living foraminifera – Respiration rates (N. Risgaard-Petersen, T. Jauffrais, C. Lekieffre) - Group A: Sediment geochemistry – O ₂ profiling (E. Metzger, H. Nomaki)
	14:00-18:00	Lecture: Metabolism and genetics – Room A120 - Molecular biology and DNA Barcoding (M. Schweizer, LPG-BIAF Angers, France) - Microaerophilic metabolism (Endo/ectosymbionts, deep kleptoplasty) (J. Bernhard, WHOI, USA) - Heterotrophic anaerobic metabolism (denitrification) (N. Risgaard-Petersen, University of Aarhus, Denmark) - Mixotrophic metabolism (T. Jauffrais, LPG-BIAF Angers, France)
Friday, June 15 th	8:30-12:00	Synthesis of practical courses (Personal work by group) - Data analysis and interpretation
	14:00-18:00	Presentation by each group and open discussion