

## FIELD INSTRUMENTATION

**Topography & Imaging**  
 Terrestrial and Airborne LiDAR, DGPS, Theodolite, Pol-InSAR, Submarine video

**Geophysics**  
 Boomer, EM34, Georadar, PS, Syscal resistivity, Sparker, Sidescan sonar

**Sedimento./Geotech.**  
 Scissometer, corers, grabs, Altimeter ALTUS

**Hydrology and hydrodynamic**  
 ADCP, ADV, CTD, Ultrasound flowmeter, samplers, Flowtracker, GGun, Morphogranulometer, OBS, LISST, pluviometers, Radar HF, SalinoMadd, S4, multiparameter probes

## EXPERIMENTAL

Wave flumes (LDV, UDV, ADV, speed camera), Freezing chambers, GIS

## ANALYTICAL

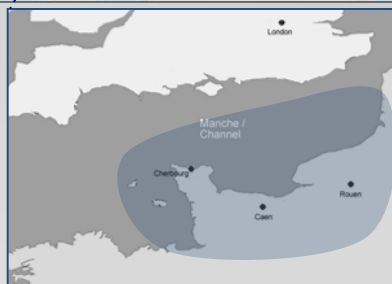
**Physical analyses**  
 Microgranulometry, hyperspectral camera, granulo-morphometer, Coring, œdometer, pycnometer, scissometer, viscosimeter, triaxial press

**Chemical analyses**  
 COT, colorimetry continuous, ion chromatography, spectrophotometer

**Microscopic Analyses and cytometry**  
 Microscopes, controlled pressure SEM with X-ray detector, Solid phase cytometry

**Microbiology and molecular ecology**  
 Autoclave, incubator shakers, refrigerated centrifuge, PSM, image analyzer, Thermocycler

**Benthic ecology**  
 Microscopes, binoculars, incubators



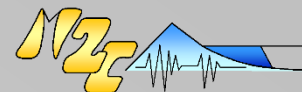
**Seine-Manche**, Algeria, Argentina, Belgium, Brazil, Cameroon, Canada, Chile, United States, Spain, Gabon, United Kingdom, French Guyana, Indonesia, Italy, Ireland, Morocco, Norvegia, Portugal, Russia, Senegal, Tunisia

## NATIONAL OBSERVATION NETWORKS

Coastline dynamics Observatory service (INSU/CNRS)  
 National Instrument Airborne Lidar (CIRCLE)  
 Karst Observatory service (INSU/CNRS)  
 Workshop Seine Area (INEE)

## RESEARCH NETWORKS

OSU ECCE TERRA (INSU-UPMC)  
 Federative Research Structure CNRS SCALE  
 Federative Research Structure ICORE  
 Luc-sur-Mer Marine station



## UMR CNRS 6143 M2C CONTINENTAL AND COASTAL MORPHODYNAMICS

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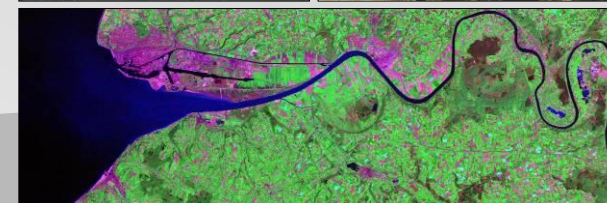
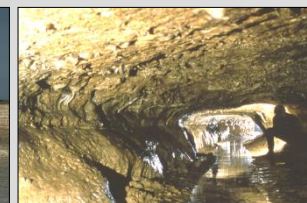
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WEB SITE : <http://m2c.cnrs.fr/>

## LAND-SEA CONTINNUM

Water and sediment cycle in watersheds: hydroclimatology, sediment fluxes, heterogeneous aquifers, environmental microbiology



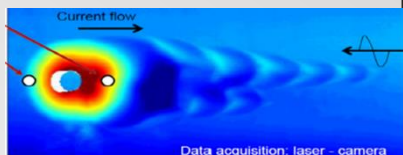
Macrotidal estuarine environments: hydrodynamics/sedimentology/geochemistry interactions



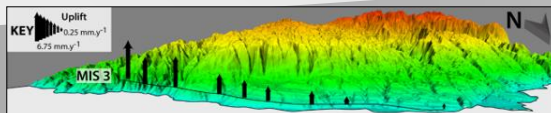
Coastline and internal platform dynamics



Hydrodynamics, sediment, structures in marine zones: processes and interactions



Morphological evolution of coastal watershed in response to climate and fini-Cenozoic tectonic forcings

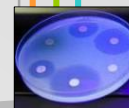
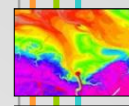


## COMPOSITION and EXPERTISE

UMR M2C gathers 100 members overall (teachers, researchers, engineers, technicians, administratives, PhD, lecturer, post-docs).

Research characterized by :

- In situ and high frequency measurements, analog, experimental and numerical modeling
- Spatial and Temporal multi-scale approaches : from instantaneous to pluri-millennial scale, from the particle to the geosystem
- Pluri and Interdisciplinarity



## DEVELOPMENT

- Assessment of anthropogenic and climate impacts: vulnerability of water resources, health risks, effects of ship-generated wave action, erosion of the coastline, dredging and piling effect, impact of aggregate extraction
- Implementation of management tools: application to Water Framework Directive, indicators, sediment as a natural resource
- Design of innovative marine technologies