This doctoral school will provide an overview of the most recent building technologies to reduce the carbon footprint and increase the sustainability of current construction practices. The school will cover several topics from the design of energy-efficient materials to the optimization of surfaces and facades, from the case study of "ecological" dwellings to the presentation of methods for the life cycle assessment of buildings, with a special focus on the use of geo-materials.

The school will take place in Anglet, next to the touristic city of Biarritz on the French Basque Coast, at the Montaury campus of the Université de Pau et Pays Adour (http://www.univ-pau.fr/en/home.html). The Montaury campus is surrounded by green and is located in a dynamic technological environment that includes also the Engineering School "Institut Supérieur Aquitain du Bâtiment et des Travaux Publics", the technological center "Nobatek", the generator of building activities "Arkinova" and the federation of construction trades "Les Compagnons".

The event has been organized with the support of the European Commission via the Marie-Curie Innovative Training Network (ITN-ETN) TERRE 'Training Engineers and Researchers to Rethink geotechnical Engineering for a low carbon future' (http://www.terre-etn.com/) and has been sponsored by the Communauté d'Agglomération Pays Basque and the Institut Pluridisciplinaire de Recherches Appliquées of the Université de Pau et Pays Adour.

Attendance to the school is free of charge but prior inscription is mandatory by returning the enclosed registration form to ecoconstruction.school@univ-pau.fr ***before Sunday 16 July 2017****. In case of no-show, a penalty of 100€ will be charged unless registration is withdrawn by giving notice to ecoconstruction.school@univ-pau.fr before 27 August 2017. Should you need further information please feel free to contact ecoconstruction.school@univ-pau.fr.*

THURSDAY 28 SEPTEMBER

14:00 – 14:30 *Opening and welcome address*

Introduction to sustainable construction

14:30 – 15:30 *Sustainability of current construction practices and biomimicry opportunities (50 mins presentation + 10 mins questions)*
Domenico Gallipoli (Univ Pau et Pays Adour, France)

15:30 – 16:00 Coffee break

Optimization of surfaces for human comfort

16:00 – 17:00 *An introduction to the optical and thermal properties of building surfaces (50 mins presentation + 10 mins questions)*
Benoit Beckers (Univ Pau et Pays Adour, France)

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HORIZON 2020

17:00 – 18:00 *Sustainable architecture: the key role of facades*
(50 mins presentation + 10 mins questions)
Antoine Dugue (Enterprise Nobatek, INEF4, France)

FRIDAY 29 SEPTEMBER

Energy-efficient building materials

9:00 – 10:00 *Hypercompacted raw earth for load bearing and air conditioning*
(50 mins presentation + 10 mins questions)
Walter Bruno (Univ Pau et Pays Adour, France)

10:00 – 10:30 Coffee break

10:30 – 11:30 *Challenges of phase change geo-materials for building applications*
(50 mins presentation + 10 mins questions)
Jean-Pierre Bedecarrats (Univ Pau et Pays Adour, France)

11:30 – 12:30 *Wooden piles as an alternative to concrete and steel foundations*
(50 mins presentation + 10 mins questions)
Jan Willem van de Kuilen (Technical Univ Delft, Netherlands)

12:30 – 14:30 Lunch

Towards the construction of sustainable dwellings

14:30 – 15:30 *The passive building: 20°C all year round without heating installations*
(50 mins presentation + 10 mins questions)
Sandra Ripeau (Enterprise Carbone 64, Arkinova, France)

15:30 – 16:00 Coffee break

16:00 – 17:00 *From thermite mounds to human dwellings: examples of raw earth buildings*
(50 mins presentation + 10 mins questions)
Thierry Perrocheau (Enterprise Mecoconcept, France)

17:00 – 18:00 *Life cycle assessment and the environmental costs of geo-structures*
(50 mins presentation + 10 mins questions)
Maxime Pousse (Enterprise Nobatek, INEF4, France)