



Photography: Philipp Steiner

BASE*habitat*
International Summer School
on earthen and bamboo construction

Workshops

Bamboo

Luisa Correa and Joana Torres

Adobe

Franco Noriega and Zoé Tric (amàco)

Rammed Earth

Dominik Abbrederis and Timur Ersen

Earth & Fibre

Becky Little and François Streiff



Bamboo

Luisa Correa and Joana Torres

Luisa Correa is from Colombia, and currently lives in Mexico. She got her Bachelor degree in Architecture at the Universidad Nacional de Colombia, and received her Masters degree at UNAM in Mexico City.

Luisa started teaching bamboo workshops focused on community buildings and cultural centers in Mexico City in 2012. That same year she managed her first bamboo and earth construction projects and has been designing and building with bamboo since then.

In 2013 Luisa co-founded Bambuterra, a bio-construction firm focused on bamboo that rescues ancient building methods and enhances them with technological innovation. At Bambuterra, Luisa regularly teaches building workshops to university students and interested people.

At Bambuterra she collaborated in the development of the BiBa®, a prefab building system for walls and roofing made from bamboo. Among other structures, Luisa has vast experience designing and building geodesic domes made with bamboo poles.

www.bambuterra.com.mx



Bamboo

Luisa Correa and Joana Torres

Joana Torres studied architecture at the Technical University of Delft, and since then has been a project manager in projects spanning from conventional architecture to design-build social impact design.

She was first introduced to bamboo and earth construction in 2011 when in Mexico she volunteered on construction teams that built rural community infrastructures. Since then she has taught hands-on bamboo construction techniques to communities in Mexico and the Caribbean.

Joana founded Oficina Design in 2016, a non-profit organization that provides architecture and construction services to those who cannot afford it. Oficina designs and builds together with local communities, using sustainable, locally available materials and building techniques with simple tools that can easily be replicated.

Joana is originally from Portugal and, when not building in rural communities, she lives in New York City, USA.

www.oficinadesign.org



Photography: bambuterra

Selection of Projects

Luisa Correa – *bambuterra*

Casa Rural (Rural House)

CASA RURAL (RURAL HOUSE)
Construction of a social housing
prototype for a rural context.
México, 2019

Mercado Local (Local Market)

Design and construction of 15
commercial kiosks
México, 2018

Amate Camp

Design and construction of two
structures within a yoga retreat center
Tepoztlán, México, 2017

Un cuarto más (one more room)

Construction of social housing
extension prototype.
México, 2017

Bodega Textil (Textile Warehouse)

Construction of an overhang for 16
meter-long opening
México, 2017

Ciudad de las mujeres (Woman City)

Design and construction of shading
structures
México, 2016



Photography: oficinadesign

Selection of Projects

Joana Torres – *oficinadesign*

House Louisana

Two bamboo & earth houses + workshops for local community
Haiti, 2017

Workshop Source Farm

Theoretical & practical bamboo workshops for farmers
Jamaica, 2019

Zumapoop

Design-build of children-centric dry restrooms
Mexico, 2017

Threshold

Bamboo installation + hands-on workshop for 13-16 girls
USA, 2016

Inso Guesthouse

Design-build of guest studio + bamboo workshop
Mexico, 2011



Photography: BASEhabitat Philipp Steiner

Workshop Content

Bamboo is a versatile material that can be used either in remote communities or in urban settings; it fits either limited budgets or high budget projects; it can provide simple structures using low tech techniques and tools and can create contemporary high-tech solutions.

During this workshop students will learn about the transformation process of this grass into a permanent construction material. They will also explore the fundamentals of sustainable bamboo architecture through hands-on exercises supported by theoretical teachings.

Participants will learn engineering principles through a variety of bamboo carpentry and joinery exercises at different scales, from model making to building a structure in real size; and they will build a real size sculptural structure that contemplates both straight bamboo poles and curved bamboo section. There will be plenty of opportunity to explore hands-on the possibilities and limitations of this fascinating material.



Workshop Motivation

Bamboo, despite its many different uses, remains unknown to most architects and builders. This workshop is an opportunity to create awareness about the advantages (and disadvantages) of building with this natural material. We love to get our hands dirty, so as we learn about bamboo, we would not miss the opportunity of having outdoor fun doing something we love: to design-build.

Just as importantly, we see this as a great opportunity for us to learn from a community of like-minded people. We look forward to share our experiences and exchange ideas with the summer school participants.





Earth & Fibre in Structures and Surfaces

Becky Little and François Streiff

Becky Little is a craftsperson and has worked with earth since the early 90s. With a background in conservation of earth, stone and lime buildings she has wide experience of mudwalling (cob), earth mortars, wattle and daub, light earth, turf building and clay | lime finishes in both repairs and new build.

Her company *Rebeearth* specialises in these earth techniques as well as materials research, training and education. She is currently developing a range of decorative earth finishes using local natural materials.

François Streiff is architect for the Regional Nature Park of the Marshes of Cotentin and Bessin in Normandy. He has been working for more than twenty years on the preservation of wattle and daub and cob heritage and traditional raw earth and fibers techniques.

The action of the Park is as much today on the support and guidance of trained professionals, as in the training of architects and engineers.

François is also teaching at the ESITC Caen on the techniques of historic building and raw earth building, and at the School of Architecture of Normandy in the field of Science and Technology for Architecture on sustainable building, especially in the use of geo and bio-sourced materials.



Selection of Projects

Becky Little – *Rebearth*

Errol cob shelter

Arc Architects

Rebearth and the local community

Errol, Scotland 2017

Repairs to historic cob, daub and turf buildings

Rebearth

Scotland 1992 - 2020

Various homes and offices in Fife

Rebearth using daub, mud bricks,
light clay|hemp, clay plaster, earth floors
Fife, Scotland 2014-2020

Workshop, Clayfest

EBUKI – Earth Building UK and Ireland
annual week long gathering
Festival organiser
Errol, Scotland 2015

Workshop, Clayfest

EBUKI – Earth Building UK and Ireland
annual week long gathering
Festival organiser and trainer
Lincoln, England 2015-2019

Earth renders at the Chelsea Flower Show

Rebearth

London 2019.

Cobbauge

EBUKI trainer and builder in an Interreg
research project which aims to optimise
the thermal efficiency of cob
2017 - 2020

Jump! Training for Change

EBUKI trainer. A European training for
trainers project, about transformation and
eco-building.
2019-2020



Selection of Projects

Francois Streiff

Resurrection of a Gallic Habitat

Archaeological Museum of Lattes
Archaeologist Training 2010 | 2011

Energy Pavilion

Meadow and Sheep Shelters
Demonstrative Projects 2013 | 15 | 17

Workshop Asterre

Lyon Confluence Museum
Ephemeral Installation 2016

Reverse the Curvature of the Earth

Experimental Constructions with ENSAN
students 2015 | 16 | 17

Workshop Grains d'Isère

Ephemeral Constructions
GAIA France since 2014

Extension of the Park House

Technical Assistance of a Tertiary Building
in wood | straw bales | cob | wattle and
daub | clay plaster 2016

National choreographic center in earth and straw

Supervision of the building in a parti-
cipative workshop of a NCC within the
framework of an artistic happening by the
artist Claudia Triozzi - 2019

CobBauge experimental pavilion

Building of a prototype experimenting
a new technology of mixes of earth and
fibers within the CobBauge project - 2019-
2020



Photography: BASEhabitat Stefanie Hueber

Workshop Content

By experimenting with the nature and length of different fibres, the quality and composition of the soil, and changes in water content, we will show how these parameters can influence the design, construction, and aesthetics of earth structures. After discovering the range of daub traditions, the variety of historic and modern applications of cob, and the richness of clay and fibre plasters, the participants will make their own creative and sensory experience by building a temporary structure of load-bearing cob walls, cob furniture, daub panels and earth plasters.

Each lift or panel will be approached as an experiment to explore the nature of the different materials and methods and how they work together.

- :: traditional and contemporary building culture of wattle and daub, cob and clay plaster

- :: processing methods for earth and fibres mixes

- :: understanding the use of different earth and fibre mixes in structures and finishes



Photography:BASEhabitat Stefanie Hueber

Workshop Motivation

This workshop is for us a great opportunity to finally put hands (and feet) into a common construction. We have been crossing paths regularly for several years, which has allowed us to share our passion for these wonderful mixes of fibres, soils and water that have housed and still house so many people on every continent. We look forward to sharing what we have learnt about earth heritage and traditions and how it inspires us today to respond to the current challenges of eco-responsible construction.





Rammed Earth

Dominik Abbrederis and Timur Ersen

Dominik Abbrederis was born in Feldkirch, Austria. After a three-year apprenticeship in a sports shop he travelled and worked as skiing and surfing instructor and dedicated some years to social work with children in Austria and Portugal. In the meanwhile he attended an outdoor guide training in Switzerland. Martin Rauch he met by coincidence and worked four years in his company, where he got to know rammed earth techniques and its peculiarities, while taking part in some great earth construction projects. He also attended the advanced training *Fachkraft Lehm* in Germany to get a deeper understanding of the material.

Timur Ersen is a French/Turkish architect, graduated from the School of Architecture of Lyon. He worked for one year with the visionary rammed earth craftsman Martin Rauch on the Ricola Herb Center designed by Herzog & De Meuron, still one of the biggest

contemporary rammed earth buildings in Europe. After a short training in Anna Heringer's office he designed and built a project in Mexico that won the blue award 2014. Then he spent two years in Turkey experimenting on rammed-earth. Since 2017 he created Atelier Kara, a company that builds with rammed-earth technique in France. He is now based in Crest, in the Rhone-Alpes Region where rammed-earth was a traditional technique used for centuries. He works as an architect but mostly as a rammed-earth builder.

www.timurersen.com

Visiting Expert Martin Rauch

Martin Rauch founded the company *Lehm Ton Erde Baukunst GmbH* 1999, in Schlins, Austria. In cooperation with BASEhabitat he led several international workshops also in Bangladesh, South Africa and Austria. Since 2010 he is honorary professor from the UNESCO chair for Earthen Architecture.

www.lehmtonerde.at



Selection of Projects

Dominik Abbrederis

Production- and Building Manager with M. Rauch

Ricola Herb center
Basel, Switzerland 2012-2013

Swiss Ornithological Centre
Switzerland 2013-2014

ETH Earth Dome
Zurich, Switzerland 2014

King Abdulaziz Center
Saudi Arabia 2014-2015

School Pavillon
Allenmoos 2014

Personal Works

La Bodega, Mexico 2013-2014
Housing Project, Benin 2015-2016
Interior Design, Paraguay 2014
Rammed-earth oven, Austria 2015

Construction Manager

at different sites all over the world
with BASEhabitat since 2016

Timur Ersen

Atelier Timur Ersen

Buidling and Planning for LTE, M. Rauch

Ricola Herb center
Basel, Switzerland 2013

Residential Housing and Orphanage concept and design together with T. Fritz

Lahore, Pakistan 2015-2016

La maison des Vins Argos

Wine tasting center
Anatolia, Turkey 2016

Bar en pisé

Restaurant Le Grand Beau
Paris, France, 2019

Various Workshops

e.g. with Domaine de Boisbuchet
organizer and teacher
2014 - 2020



Photography: BASEhabitat Corinna König

Workshop Content

Rammed earth is a thousand of years old building technique and is a widely used. Crumbly, soil-damp and relatively lean silt matter is poured in layers into a mould and compressed mechanically.

A certain advantage of the rammed earth technique is, that the mixture of silt, sand and gravel often appears in nature and is perfect in its characteristics for this building technique. With this in mind, 50% to 100% of the excavation material without topsoil can be used for building.

Its best use is for load bearing earthen structures. Also for heat storing in glasshouses and in the combination with heating systems can the technique be applied technically and creatively.

The aim of the workshop is to get an intensive hands-on experience and to gain application-orientated knowledge in building with rammed earth technique.



Workshop Motivation

We're looking forward to the Summer School 2020. Not only will it be an occasion to meet people from all over the world with many different backgrounds, but also a good chance to pass on a bit of our passion for rammed earth and its potentials.

Working with our hands is a truly satisfying experience. We will have a great time, ramming some earth together.





Adobe

amàco Gian Franco Noriega and Zoé Tric

amàco, *atelier matières à construire*, is a center of research, training and experimentation of matter. The project aims to upgrade and disseminate knowledge revealing in a sensitive way the inner qualities of natural materials, such as sand, clay, water, fibers, etc., related to building arts. Approaching matter through science and more subjective concepts, such as materiality and aesthetics, *amàco* seeks to take part of an environmental paradigm shift, stimulating creativity through the re-connection of emotion and intellect in construction practices.

The project brings together insights of different disciplines to integrate different perceptions and to foster and inspire new contemporary practices. Exploring preconceptions of the idea of progress and innovation, *amàco* is inspired by the experience of nature and its genius of simplicity. Artists, architects, engineers, scientists, philosophers, researchers and

others, participate in an interdisciplinary and experimental project that revolves around four interacting areas: science, art, technique and architecture.

amàco is based in France and is supported by four institutional partners:

:: Grands Ateliers, educational center for research and experimentation in construction

:: ENSA Grenoble, school of architecture

:: INSA Lyon, school of engineers

:: ESPCI ParisTech, school of physicians and chemists



Selection of Projects

La Tour de Sable

Sand Tower
ephemeral construction
France 2010

Extension : laboratoire *amàco*

amàco lab: building prototype France
2013

Pavillon Fibres et Adobes Adobe and Fibers Pavillion

Prototype building
France 2014

Abris à vélos | Bicycles shelter

building prototype
France 2015

Workshop Jeux d'adobes

mud bricks prototypes
International 2013 - today

Architecture Biennale Lyon

ephemeral installation
France 2017



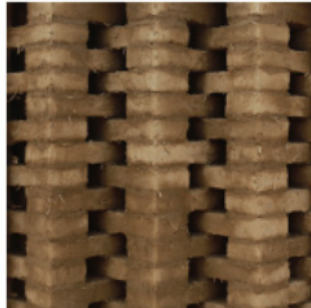
Workshop Content

Earthen bricks workshop main objective is to explore and experiment building potentials of raw-earth bricks in contemporary architecture and design. Through theory inputs and practical experimentation of this ancestral building technique, participants will follow a creative process in order to *learn by doing*.

Participants will design and built with a particular brick imagined to innovate and responds to an architectural need. They will experience and acquire masonry skills through the construction of a small-scale building prototype.

These are some of the topics that will be emphasized:

- :: Overview of *mud bricks* building culture: inspirations from vernacular to contemporary architecture.
- :: Evolution of production practices and building methods with earthen bricks.
- :: Understanding earth material physical qualities and building properties.





Workshop Motivation

amàco teaching method is based on experimentation and hands-on approach. As a pedagogical project we emphasize aesthetics and emotion as creative vectors to instill curiosity in participants for natural materials architectural potentials. We believe that these methods foster open-mindedness and pleasure of learning. We give a priority to teamwork to encourage knowledge exchange and interdisciplinary to develop a collective intelligence.

Moreover, *amàco* principal motivation is to build and disseminate in a big scale a scientific and an eco-friendly technical building culture. In that matter, we are specialized in developing building techniques using local materials like earth and natural fibers. Every workshop we take part is an opportunity to put into practice our teaching methods, to experiment and to exchange with other participants around the question that animates us: How to think and build our environment?



