African Fabbers Lab: Urban Ecologies, Self-construction & Digital Fabrication

https://urbannext.net/african-fabbers-lab/



AFRICAN FABBERS LAB: URBAN ECOLOGIES, SELF-CONSTRUCTION & DIGITAL FABRICATION

Posted on May 1, 2019 by martabuges



Categories: <u>africanCities</u>, <u>Middle Density</u>, <u>Paolo Cascone</u>, <u>Project</u>, <u>Technology and fabrication</u>

Tags: 3D printers, Africa, African Cities, Dakar, Design process, Design strategies, Designing Matter, Digital fabrication, Environmental, Experimental Fabrications, Innovation, Local materials, Marrakesh, Material experimentation, Morocco, Performative Envelope, Project, Research, self-construction, Senegal, Technology, Tradition, Urban ecology, Vernacular

African Fabbers Lab: Urban Ecologies, Self-construction & Digital Fabrication

https://urbannext.net/african-fabbers-lab/

The African Fabbers School (AFS) is the first school of urban ecologies, self-construction and digital fabrication in Africa.

Following participation in the Dakar and Marrakesh biennales, the school project was directed by Paolo Cascone and developed with the urban fabrication laboratory. The project was realized in the framework of the CAMon program – an initiative promoted by the NGO CEO (Centro Orientamento Educativo) with the support of AICS, the Italian Agency for Development Cooperation. The educational and research platform is based on the idea of bridging African and European knowledge through community-oriented projects and applied research. Therefore, the AFS will be part of an international network of design schools and research laboratories. The project aims to respond to the lack of design schools in the region in order to investigate the growth of African cities, placing emphasis on an ecological agenda, and exploring the interaction between African material systems and computer-aided manufacturing technologies.

Khaima Urban Tent

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/



location: Salé (Morocco) client: CISS

team: Paolo Cascone (architect), Tamara Vecchione, with the local community

partners: Quartiers du Monde

This lightweight structure is conceived as a tensile fabric shelter for the public garden of Salé. The project is inspired by a traditional cables system for generating shade solutions in the ancient medina. The aim is to create a relational space in cooperation with the local community, involving

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

them in a self-construction project for a common shaded gathering place.

Earthground



location: Sourgoubila (Burkina Faso)

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

client: Sourgoubila primary school

team: Paolo Cascone (architect) with Pascal Angel, Geoffroy Griveaud, Christophe Lefevre, Matthieu De Lacvicier, Ali Benabdellah, Ayda Bennani-Smires, Edouard Fenet, Mathieu Quilici, Fatou Dieng, Youssef Haddadi, Victor Du Peloux, Nadege Guion, Oceane Patole, Murielle Teguel, Omar Ghaiti, Juliette Rubel, Loubna Touzani, Marguerite Bureau, Nina Rotter, Salwa Essoussi

construction team: Atelier Paolo Cascone, with the local community consultant: La Voûte Nubienne partner: ESA

The project was developed with the Atelier Paolo Cascone (ESA-Paris) in collaboration with the local community of Sourgoubila. The design process intended to develop a high-tech design / low-tech construction approach to performative design, merging a computational process with vernacular construction techniques from the Sahel region. Following research in a design workshop held in Paris based on the use of earth bricks for vaults, we discussed the project of building a primary school playground with the village. The space allows the children of the village to play and study in a shady playground.

Open-Air Lab

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/



location: Dakar (Senegal)

client: Ker Thiossane - Defko Ak Niep Lab

team: Paolo Cascone (architect) with Elena Ciancio, Flavio Galdi, Giuliano Galluccio, Andrea Giglio, Imma Polito technical partner: Urban Fablab

partner: Fondazione Idis - Città della Scienza; Fondazione Architetti e Ingegneri Liberi Professionisti Iscritti

Inarcassa; Ker Thiossane; Dakar Biennale.

The project is conceived as a small infrastructure realized in a public space in Dakar, providing an

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

open-air laboratory for local craftsmen. The construction of the structure was realized in the framework of the African Fabbers project, through a participatory process involving the local community and European makers, with the aim of supporting the creation of the first fablab in Senegal. The project was selected to participate at the Dakar Biennale in 2014.



African Fabbers Lab: Urban Ecologies, Self-construction & Digital Fabrication

https://urbannext.net/african-fabbers-lab/

3D-Printed Pavilion



location: Marrakesh (Morocco) client: Marrakech Biennale

team: Paolo Cascone (architect) with Elena Ciancio, Flavio Galdi, Giuliano Galluccio, Andrea Giglio, Imma Polito

technical partners: Urban Fablab; WASP, for the Big Delta prototype

partners: Fondazione Idis / Città della Scienza (Italy), Fondazione Architetti e Ingegneri Liberi Professionisti

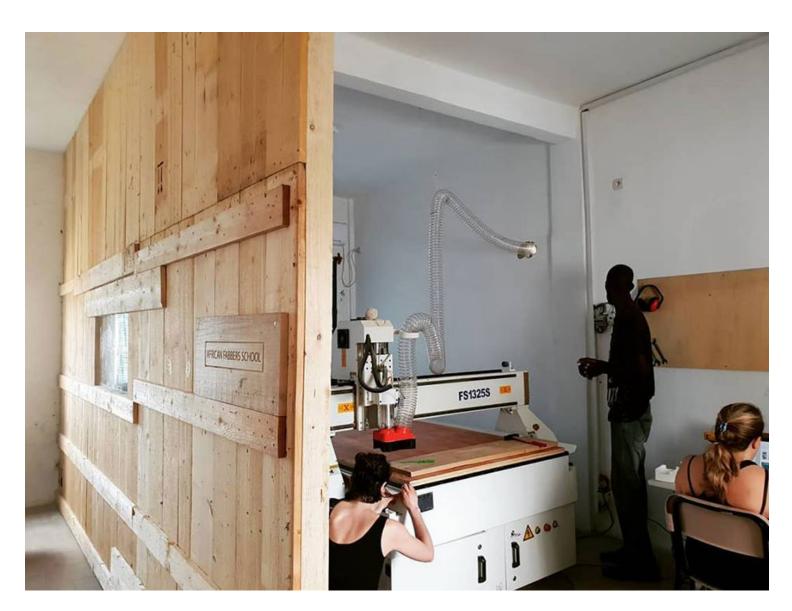
African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

Iscritti Inarcassa, Marrakesh Biennale thanks to: Madre Museum - Naples, ESAV - École Superieure des Arts Visuels, Cfqmam - Centre de Formation et Qualification dans les Métiers de l'Artisanat, Voice Gallery – Marrakesh

The project explores the use of 3D-printing technologies for structural components in architecture. The structure in question is made with interlocked ceramic elements, fabricated by extruding local clay. The components are designed with the aim of generating a hydroponic system.

Temporary Laboratory Marrakesh

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/



location: Marrakesh (Morocco) client: Marrakech Biennale

team: Paolo Cascone (architect) with Elena Ciancio, Flavio Galdi, Giuliano Galluccio, Andrea Giglio, Imma Polito

technical partners: urban fablab; WASP, for the Big Delta prototype

partners: Fondazione Idis / Città della Scienza (Italy), Fondazione Architetti e Ingegneri Liberi Professionisti

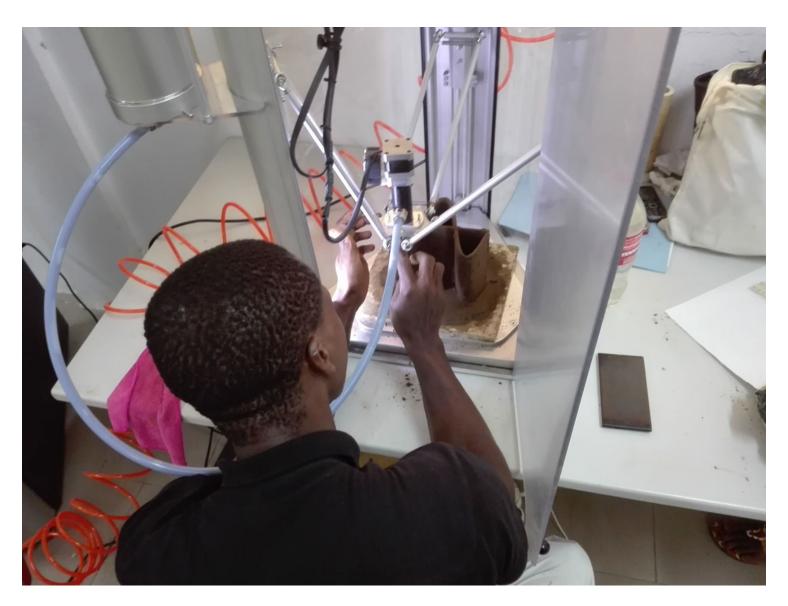
African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

Iscritti Inarcassa, Marrakech Biennale thanks to: Madre Museum - Naples, ESAV - École Superieure des Arts Visuels, Cfqmam - Centre de Formation et Qualification dans les Métiers de l'Artisanat, Voice Gallery – Marrakesh

The project was developed in the framework of the African Fabbers project in Marrakesh and consists in the transformation of an abandoned hangar into a productive atelier for design students from the ESA and the local community of artisans. The space was equipped to be a temporary laboratory, with a Big Delta 3d-printer for natural materials, an Arduino coding location and a computer area. Inside the atelier, we developed an energetically sufficient 3D-printer and explored the potential of 3D-printing with natural local materials to realize structural component prototypes for a hydroponic pavilion made from interlocked ceramic elements fabricated by extruding local clay.

u3dp

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/



location: Marrakesh (Morocco) client: Marrakesh Biennale

team: Paolo Cascone (architect) with Elena Ciancio, Flavio Galdi, Giuliano Galluccio, Andrea Giglio, Imma Polito

technical partners: Urban Fablab; WASP, for the Big Delta prototype

partners: Fondazione Idis / Città della Scienza (Italy), Fondazione Architetti e Ingegneri Liberi Professionisti

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/

Iscritti Inarcassa, Marrakesh Biennale thanks to: Madre Museum - Naples, ESAV - École Superieure des Arts Visuels, Cfqmam - Centre de Formation et Qualification dans les Métiers de l'Artisanat, Voice Gallery – Marrakech

The urban 3D-printer is a prototype of a low-cost, off-grid, transportable digital fabrication device. The first prototype was developed in the framework of the African Fabbers project and presented at the Marrakech Biennale.

African Fabbers Lab: Urban Ecologies, Self-construction & Digital
Fabrication
https://urbannext.net/african-fabbers-lab/