

2018

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GLOBAL SUMMER SCHOOL

DIGITIZE



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IAAC BARCELONA

Iaac

Institute for
advanced
architecture
of Catalonia

BARCELONA



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IAAC

THE INSTITUTE

The Institute for Advanced Architecture of Catalonia – IAAC is an international centre for Education, Fabrication and Research dedicated to the development of architecture capable of meeting the worldwide challenges in constructing 21st century habitability.

Based in the 22@ district of Barcelona, one of the world's capitals of architecture and urbanism, as well as the European Capital for Innovation (2014), IAAC is a platform for the exchange of knowledge with researchers, faculty and students from over 60 countries around the world.

IAAC is Education, with the Master in Advanced Architecture, Advanced Interaction and the Master in City & Technology giving the next generation of architects and professionals the space to imagine, test and shape the future of cities, architecture and technology. This is possible through Open Thesis Fabrication, the implementation of Applied Research and allowing learning by doing, as well as through short programmes, implementing global agendas developed through local solutions, such as the Global Summer School.

IAAC is Fabrication, with the Fab Lab Barcelona, the most advanced digital production laboratory in Southern Europe, a laboratory where you can build almost everything, that recently hosted Fab10, the 10th annual worldwide Fab Lab conference.

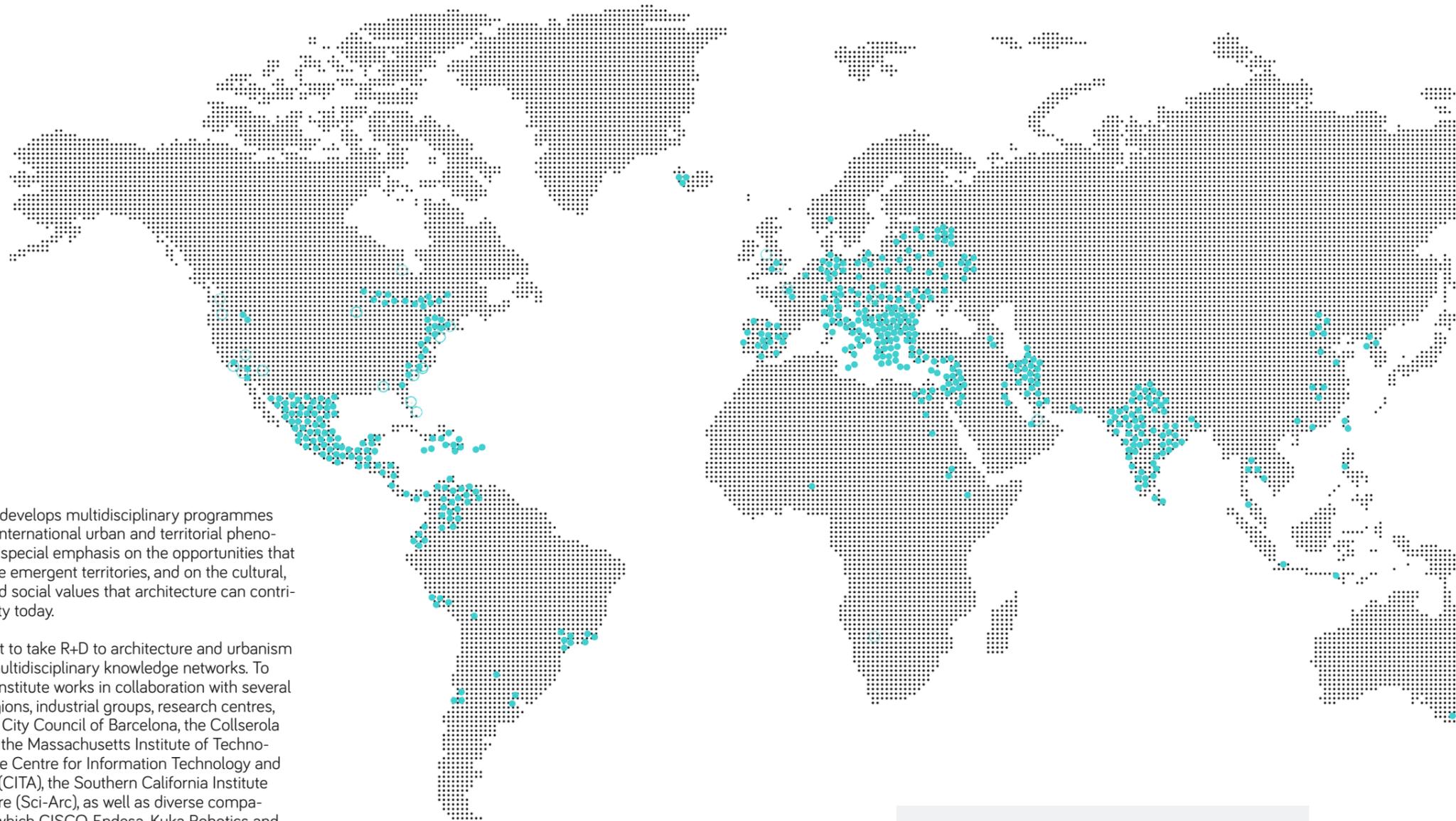
IAAC is Research, with Valldaura Labs, a self-sufficient research centre located in the Collserola Metropolitan park, 20 minutes from the centre of Barcelona, where a series of laboratories are implemented for the production and testing of Energy, Food and Things.

And IAAC is also Barcelona, the European Capital for Innovation (2014)¹, the city that aims to be a self-sufficient city, a Fab Lab city, a smarter city. Thanks to its innovative visions, IAAC is strategically aligned to the new urban policies of the city, developed in close collaboration and mutual inspiration between the two entities.

The Institute develops multidisciplinary programmes that explore international urban and territorial phenomena, with a special emphasis on the opportunities that arise from the emergent territories, and on the cultural, economic and social values that architecture can contribute to society today.

IAAC sets out to take R+D to architecture and urbanism and create multidisciplinary knowledge networks. To this end the institute works in collaboration with several cities and regions, industrial groups, research centres, including the City Council of Barcelona, the Collserola Natural Park, the Massachusetts Institute of Technology (MIT), the Centre for Information Technology and Architecture (CITA), the Southern California Institute of Architecture (Sci-Arc), as well as diverse companies among which CISCO, Endesa, Kuka Robotics and many others. Together with these the Institute develops various research programmes bringing together experts in different disciplines such as architecture, engineering, biology, sociology, anthropology and other fields of investigation.

IAAC has made its name as a centre of international reference, welcoming students and investigators from over 60 different countries among which Australia, the USA, India, Brazil, Russia, Ethiopia, all European countries and many others.



IAAC HAS MADE ITS NAME AS A CENTRE OF INTERNATIONAL REFERENCE, WELCOMING STUDENTS AND INVESTIGATORS FROM OVER 60 DIFFERENT COUNTRIES AMONG WHICH AUSTRALIA, THE USA, INDIA, BRAZIL, RUSSIA, ETHIOPIA, ALL EUROPEAN COUNTRIES AND MANY OTHERS.

1. http://ec.europa.eu/research/innovation-union/index/_en.cfm?section=icapital

MISSION VISION & VALUES

MISSION

The Institute for Advanced Architecture of Catalonia (IAAC) is a vanguard academic and research centre whose mission is to promote scientific and technological innovation in the conception, design and construction of the human habitat, at all scales (from bits to geography), integrating technological, social and cultural innovations of our time and contributing to the consolidation of Barcelona as a global platform for the urban habitat.

To this extent IAAC works with a multidisciplinary approach, facing the challenges posed by our environment and shaping the future of cities, architecture and technology.

This is obtained through the focus on select criteria:

- Design for Self-sufficiency
- Application of ICT (Information and communication technologies) at all levels of daily life.
- Contribution to the distributed networks in the conception of the environment.
- Advanced digital and parametric design.
- Digital and Robotic Fabrication

VISION

IAAC encourages innovation and construction of the human habitat, offering a working environment in the following areas:

- Education through academic programmes for graduate students and international faculty and students, continuous education programmes in design, interaction, architecture, urbanism and landscape.
- Research by developing projects to expand the boundaries of architecture, in collaboration with experts from multiple disciplines.
- The development of innovation projects with companies and institutions that define role models, responding to global realities.
- The promotion of projects through publications, exhibitions and competitions developed physically and virtually.

For all this, IAAC works with local and global organisations participating in multidisciplinary knowledge networks. It promotes transformation from its humanistic ideology based on learning by doing.

VALUES

Holistic

Broad overview of the conception, design and construction of the human habitat, and this works at all scales, in interaction with multiple disciplines.

Global

In thought and action, in the origin of human capital, learning from the diversity of the world, promoting the construction of local realities with very specific identity.

Experimental

Use of digital systems as a technological base that transforms our world today, integrating technologies and processes associated in all areas of their action.



WHAT IS IAAC GLOBAL SUMMER SCHOOL

The Global Summer School (GSS) is a platform defined by ambitious, multi-scalar investigation on the implications of emergent techniques in our planned environments. Each year, international teams located in key cities around the globe explore a common agenda with projects that are deeply embedded in diverse local conditions. Because of this, participants have an international laboratory to test their design hypothesis, understanding how design conclusions derived locally can be tested and evolved globally in different cities where other teams reside.

This intensive two week course connects each participant to ongoing research agendas in robotics, simulation, physical computing, parametric design, digital fabrication, and other relevant emerging design methodologies. Specific emphasis is placed on understanding the multiscale implications of design conclusions, thus creating critical research advanced on the application of new technologies in design.

STRUCTURE

IAAC Global Summer School is a full-time two-week course that provides both practical and theoretical knowledge. Its structure consists in three main learning modules led by expert tutors, combined with lectures by renowned professionals and academics relevant to the topics to be treated during the course. These will be broadcasted in the different node-cities, all globally connected.

The lecture program will be announced prior to the GSS launch and will be developed on the following three course modules:

CODING

PROTOTYPING

INTERACTION





APPLICATIONS & ADMISSIONS

To register to the Global Summer School, participants need to submit an online application form. The applications are open until the 31st of May 2018

More info on: <http://globalschooliaac.net>

GLOBAL GRADUATION

During the last day of the course, participants from all the nodes around the world will join a collective presentation of all the projects developed by each team followed by reviews of a renown jury.

At the end of the course, participants will receive a Global Summer School Diploma.

REQUIREMENTS

IAAC GSS is open to creative and innovative people who are interested in fields such as architecture, urban planning, digital fabrication, technology and design applications, searching for a multidisciplinary experience in an international environment. No previous skills are required, although CAD design, programming and digital fabrication skills are welcome. The official language of the course is English.

After the course, the participants will have gained theoretical and applicative knowledge about current urban innovative strategies. Moreover, they will become familiar with parametric software, data visualization and the use of digital fabrication machines.



GSS PREVIOUS EDITIONS

10 YEARS OF GSS

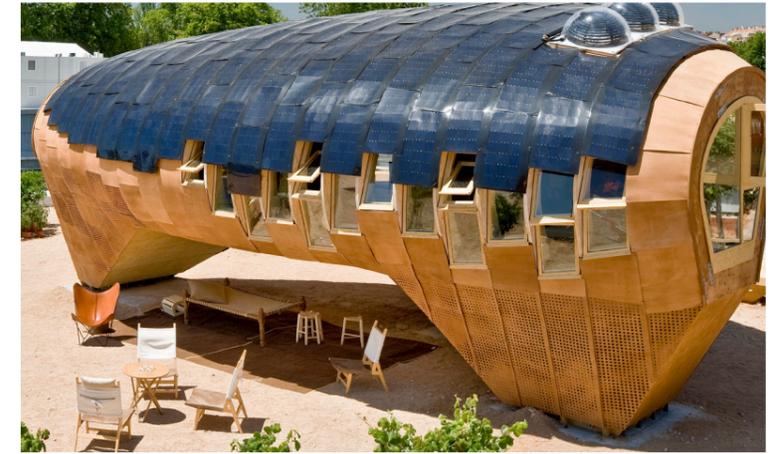
IAAC Global Summer School has inspired many students during the past decade and created an active alumni community distributed around the globe allowing a decentralized expansion of IAAC expertise and knowledge.

Years after years, IAAC Global Summer School aims to empower the bonds with the community members, therefore places them in strategic positions which allows GSS programme to take place simultaneously in different cities around the world: Barcelona, New York City, Monterrey, Moscow, Tehran, Ahmedabad, Beirut, Muscat, Beijing, Boulder, San José and more.

Advancements of technologies of information, interaction and fabrication for the redefinition of public space as catalyst for achieving high quality of life allowed GSS students to define strategies for the applications of Advanced Urban Technologies as essentials means for the change.

FAB LAB HOUSE GSS 2009

GSS participants worked on design, development and fabrication of structural and skin variations of the final Fab Lab House project's prototype (www.fablabhouse.com).



THE NEXT CITY GSS 2014

GSS explored how a city could evolve under different forces at urban scale through the reconstruction of a Smart city block capable of mitigating its production to and from the city.

NETWORKED CITY GSS 2011

An interactive installation was realized to show the use of interoperable devices, applications and models to test the interconnection of people, technology and city infrastructure.





GLOBAL LECTURES

The Global Summer School lectures have been held by several professionals, experts in the disciplines of robotics, simulation, physical computing, parametric design, architecture, digital fabrication and other design methodologies. During the course of global lectures, specific emphasis is placed on understanding the multiscale implications of design conclusions, thus creating critical research advanced on the application of new technologies in design.



YONA FRIEDMAN



BENEDETTA TABGLIABUBE



USMAN HAQUE



ARETI MARKOPOULOU



NADER TEHRANI



CARLO RATTI



MASSIMO BANZI



LONG NGUYEN



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DIGITIZE 2018



GLOBAL SUMMER SCHOOL

GLOBAL BRIEF

BROADBAND CONNECTIVITY, CLOUD COMPUTING, SOCIAL MEDIA, SENSORS ARE COMING TOGETHER, CHANGING THE WAY WE INTERACT, CONSUME, TRANSPORT, SHAPING A NEW URBAN LANDSCAPE BLURRED BY DIGITAL AND PHYSICAL STIMULI. THIS PROCESS IS CALLED "DIGITIZATION".

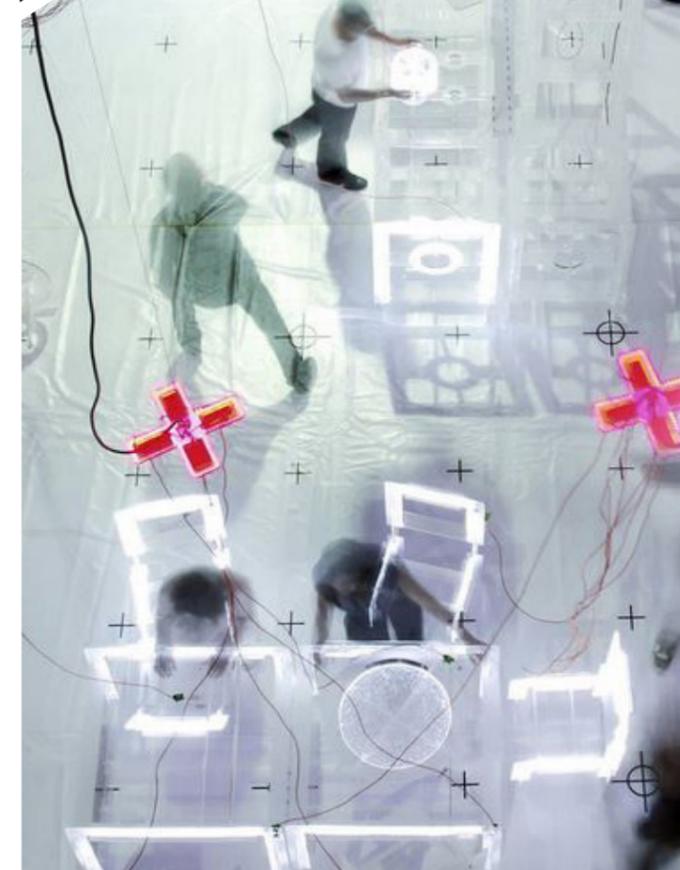
The pervasive adoption of a wide variety of digital, real-time, and networked technologies, products, and services enable people, companies, governments, and even machines to stay connected and communicate with one another, gathering, analyzing, and exchanging massive amounts of information on all kinds of activities.

The construction sector has been slow to adopt process and technology innovations, unable to apply a digitization among main categories of labor, usage and assets.

The area where its most lacking is providing digital tools to their workforce. Integration of technologies into everyday life reveal that tech has just penetrated the sector.

How will implementing these tools affect the way of designing, living and interacting in new habitats, finally shaping a new digital consciousness of our environments?

As part of the GSS18 program, students will define strategies for the applications of Advanced Digital Design Strategies as essentials means for the change. Testing the combination of software and hardware students will explore real-time data capture, energy generation, storage and reuse, material adaptability, real-time management of time-uses and citizen-space interaction.



GSS 2018 NODES



GSS

TEAM 2018



ALDO SOLLAZZO
IAAC GSS DIRECTOR



LAURA RUGGERI
GSS COORDINATOR



RODRIGO AGUIRRE
GSS BARCELONA



KUNALJIT CHADHA
GSS BARCELONA



ADRIEN RIGOBELLO
GSS PARIS



MARIA CYNTHIA FUNK
GSS MANILA



MARIA KUPTSOVA
GSS MOSCOW



ELENA MITROFANOVA
GSS MOSCOW



IVAN MITROFANOV
GSS MOSCOW

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SAVERIO SILLI
GSS SHANGHAI



MEHRAN DAVARI
GSS TEHRAN



RASHA SUKKARIEH
GSS BEIRUT



CHIRAG RANGHOLIA
GSS CHANDIGARH



NISHTHA KAUSHIK
GSS CHANDIGARH



MAHAVIR SINGH
GSS CHANDIGARH



STEPHANIE BASHIR
GSS BEIRUT



FERNANDO MENESES-CARLOS
GSS QUERETARO



SEIICHI SUZUKI
GSS QUITO



MARCELLA DEL SIGNORE
GSS NEW YORK



FRANK MELENDEZ
GSS NEW YORK



NANCY DINIZ
GSS NEW YORK



ABDULLAH IBRAHIM
GSS MUSCAT



DARIO DONATO
GSS MUSCAT



SAMIR AL AZRI
GSS MUSCAT



MATHILDE MARENGO
GSS MELBOURNE



NATALIE ALIMA
GSS MELBOURNE

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IAAC PEOPLE

ADVANCED ARCHITECTURE GROUP - ACADEMIC TEAM

ACADEMIC DIRECTOR - Areti Markopoulou
 HEAD OF STUDIES - Mathilde Marengo
 AAG COORDINATOR - Maria Comiche
 MAA01 COORDINATOR - Marco Ingrassia
 MAA02 COORDINATOR - Maria Kuptsova
 MACT COORDINATOR - Alex Mademochoritis
 MAI COORDINATOR - Valentina Toscano
 DIGITAL AND ROBOTIC FABRICATION - Alexandre Dubor
 FABRICATION & COMPUTATIONAL DESIGN EXPERT - Raimund Krenmueller
 HEAD OF VISITING PROGRAMMES - Aldo Sollazzo
 HEAD OF EUROPEAN PROJECTS - Chiara Farinea
 THEORY ADVISOR - Maite Bravo
 MAI DIRECTOR - Luis Fraguada
 COMPUTATIONAL EXPERT - Rodrigo Aguirre
 PHD CANDIDATE, INNOCHAIN - Stephanie Chaltiel
 PHD CANDIDATE, INNOCHAIN - Angelos Chronis
 ACADEMIC SECRETARY - Alejandra Rojo

COMMUNICATIONS

COMMUNICATIONS MANAGER - Alice Puleo
 FAB LAB COMMUNICATION MANAGER - Marco Sanalidro
 MARKETING MANAGER - Sandra Marcela Correa
 COMMUNICATIONS ASSISTANT - Gerard Fernández
 ADMISSIONS COORDINATOR - Miriam Lopez
 LEAD GRAPHIC DESIGNER - Lina Salamanca

FAB CITY RESEARCH LAB

DIRECTOR, FAB CITY GLOBAL INSTIGATOR - Tomas Diez
 COORDINATOR, FAB ACADEMY GLOBAL COORDINATION - Luciana Asinari
 RESEARCHER, ORGANICITY & iSCAPE PROJECT MANAGER - Guillem Campodron
 FINANCE & LOGISTICS MANAGER - Marcel Tkocz
 FAB LAB BARCELONA MANAGER - Martin Seymour
 GREEN FAB LAB COORDINATOR - Jonathan Minchin
 FAB ACADEMY GURU - Santiago Fuentemilla
 INDUSTRIAL DESIGNER - Ingi Freyr Gudjónsson
 DESIGN & FABRICATION EXPERT - Ricardo Valbuena
 DESIGN & FABRICATION EXPERT. Matteo Guarnaccia
 RESEARCHER, MAKING SENSE PROJECT MANAGER - Mara Balestrini
 RESEARCHER, MAKE - IT PROJECT MANAGER - Massimo Menichinelli
 HARDWARE & SOFTWARE DEVELOPER - Victor Barberan
 GRAPHIC DESIGNER - Mariana Quintero
 CREATIVE DIRECTOR - Gui Seiz
 COMMUNICATIONS - María Ustarroz

VALLDAURA PROJECT FOR SELF-SUFFICIENCY

DIRECTOR, VALLDAURA PROJECT FOR SELF-SUFFICIENCY - Vicente Guallart
 OPERATIONS MANAGER, VALLDAURA PROJECT FOR SELF-SUFFICIENCY - Laia Pifarré
 EDUCATION COORDINATOR - Eulalia Moran

BARCELONA URBAN SCIENCES LAB

DIRECTOR, BARCELONA URBAN SCIENCES LAB - Willy Müller
 UNDERGRADUATE DEGREE COORDINATOR - Maite Bravo
 RESEARCHER COORDINATOR - Jordi Vivaldi
 ASSISTANT RESEARCHER - Matas Olendra

ADMINISTRATIVE DEPARTMENT

GENERAL MANAGER - Silvia Brandi
 SECRETARY - Ana Bosch



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