Master in Advanced Architecture
Architecture is always facing the responsibility of responding to emergent needs, technologies and ever-changing programmes. We must ask more of architecture: we as architects should be required to design inhabitable organisms that are capable of developing functions and integrating the processes of the natural world that formerly took place at a distance, in other points of the surrounding territory. The models created for the metropolis of the last century are unable to accommodate new developments linked to contemporary urban lifestyles, which ever more discontinuous in space and time. The building-over of the global landscape requires us to project at the same time the full and the empty, the natural and the artificial, in such a way as to make economic impetus compatible with sustainable development. It is necessary to generate complex knowledge linked to a multi-layered reading of realities that have traditionally been thought of as separate, such as energy manipulation, nature, urban mobility, dwellings, systems of production and fabrication, the development of software, information networks, etc. This opens up the possibility of generating new prototypes, capable of engaging with complex and changing environments. Finally, every new urban or architectural production needs to update its materiality and reinterpret construction techniques of the past centuries, which are very directly based on the transformation of locally available materials. It is now time for interaction between disciplines and technologies to engage in a vision that embraces different fields of research.
The Master in Advanced Architecture is articulated in two different programmes: one year (MAA01) and two years (MAA02). Students who enrolled to the MAA01 program can also extended their studies joining the Open Thesis Fabrication (MAA01+OTF). During the first year (October 2019 - June 2020) the students enrolled in the programmes will work together in a common educational platform, with a common organisation and academic structure. After the completion of MAA01, students enrolled in MAA01+OTF or MAA02 will follow two different organisations and academic structures.

The MAA comprises the following elements:

- **IS.** INTRODUCTORY STUDIO
- **RS.** RESEARCH STUDIO
- **DS.** DEVELOPMENT STUDIO
- **SO.** OBLIGATORY SEMINAR
- **SE.** ELECTIVE SEMINAR
- **WS.** WORKSHOP
- **LS.** LECTURE SERIES
- **RSD.** RESEARCH AND DEVELOPMENT STUDIO
- **SW.** SEMINAR WORKSHOP

**MAA01: 75 ECTS, 1 YEAR**

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>OCTOBER 2019</th>
<th>IS and seminars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST TERM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2ND TERM</td>
<td></td>
<td>RS and seminars</td>
</tr>
<tr>
<td>3RD TERM</td>
<td></td>
<td>DS and seminars</td>
</tr>
<tr>
<td>CLOSING</td>
<td></td>
<td>Final project + WS</td>
</tr>
</tbody>
</table>

**MAA01 PROGRAM**

- **1ST TERM**
  - IS and seminars + LS
- **2ND TERM**
  - RS and seminars + LS
- **3RD TERM**
  - DS and seminars + LS
- **CLOSING**
  - Final project + WS + LS

**MAA02: 130 ECTS, 2 YEARS**

**MAA02 FIRST YEAR**

- **October 2019**
  - IS and seminars + LS
- **June 2020**
  - RS and seminars + LS
- **3RD TERM**
  - DS and seminars + LS
- **CLOSING**
  - Final project + WS + LS

**MAA02 SECOND YEAR**

- **October 2020**
  - RDS and SW + LS
- **June 2021**
  - RDS and SW + LS
- **3RD TERM**
  - RDS and SW + LS
- **CLOSING**
  - Individual research project + LS

*The following programme refers to the Academic Year 2018-2019. The programme for the Academic Year 2019-2020 may be subject to slight variations.*
# MAA - FIRST YEAR

**OCTOBER 2019 - JUNE 2020**

**MAA01: 75 ECTS, 1 YEAR**  
**MAA01 + OTF: 100 ECTS, 15 MONTHS**  
**MAA02: 130 ECTS, 2 YEARS**

## FIRST TERM

The 10-week introductory term (Oct - Dec) provides a common grounding of knowledge and skills to new IAAC students. It is a formative platform structured by a Design Project and five complementary courses anticipating ideas that will appear during the programme in relation to self-sufficiency, design strategies, innovative forms of planning and contemporary culture. A toolbox of both, theoretical and practical skills for further research work.

### COURSES AND CREDITS
- **IS | INTRODUCTORY STUDIO** (8 ECTS credits)
- **SO.1 | DIGITAL FABRICATION**
  - Introduction to Digital Fabrication (3 ECTS credits)
- **SO.2 | THEORY CONCEPTS**
  - Advanced Architecture Concepts (3 ECTS credits)
- **SO.3 | DIGITAL TOOLS**
  - Computational Design (3 ECTS credits)
- **SO.4 | DIGITAL TOOLS**
  - Introduction to Programming and Physical Computing (3 ECTS credits)

## SECOND TERM

The second term is an Open Educational Structure where the students attend a Research Studio, one obligatory seminar of computational design and two elective seminars chosen out of three options according to their academic interests.

The second term is divided in four different research lines:
- X-Urban Design
- Self-Sufficient Buildings
- Digital Matter
- Advanced Interaction

### COURSES AND CREDITS
- **RS | RESEARCH STUDIO (I-IV)** (10 ECTS credits)
- **SO.5 | DIGITAL TOOLS** (3 ECTS credits)
  - Computational design
- **SE. | ELECTIVE SEMINAR** (3 ECTS credits)
  - Choice out of three options
- **SE. | ELECTIVE SEMINAR** (3 ECTS credits)
  - Choice out of three options

## THIRD TERM

The third term is an Open Educational Structure where the students attend a Research Studio, one obligatory seminar of computational design and two elective seminars chosen out of three options according to their academic interests.

The third term is divided in four different research lines:
- X-Urban Design
- Self-Sufficient Buildings
- Digital Matter
- Advanced Interaction

### COURSES AND CREDITS
- **DS | DEVELOPMENT STUDIO (I-IV)** (10 ECTS credits)
- **SO.6 | DIGITAL TOOLS** (3 ECTS credits)
  - Computational design
- **SE. | ELECTIVE SEMINAR** (3 ECTS credits)
  - Choice out of three options
- **SE. | ELECTIVE SEMINAR** (3 ECTS credits)
  - Choice out of three options

## CLOSING

The fourth phase focuses on the extended research of the Development Studio Project of Phase three (13 ECTS credits). During this period, students have the opportunity to intergrate to their projects more in-depth issues related to the self-sufficiency agenda, as well as the inherent material, organisational and spatial complexities determined by the chosen working scale and the experience gained during the year’s programme.

The transversal workshop (2 ECTS credits) offered by the Master programme is a short term intensive experience, in which the students work together on collective projects organized by local or invited international tutors.

### LECTURE SERIES

IAAC is organizing a Lecture Series along the academic year, counting on international invited experts on the fields of Design, Architecture and Technology. The Lecture Series is transversal to the IAAC educational programmes and students participation is mandatory as it is a transversal platform for widening knowledge, generate debates and network with other students and experts around the world.

---

**Note:** The distribution of students for the Seminars of the Second Term is done according to several criteria listed in the IAAC terms and conditions.
The following programme refers to the Academic Year 2018-2019. The programme for the Academic Year 2019-2020 may be subject to slight variations.
During the first phase of the second year, students propose their thesis project to be developed throughout the year and their strategies in the research and the design Project Studio. This phase is a formative platform structured by a research Design Project and three complementary courses anticipating ideas that will appear during the programme in relation to the research lines of the thesis themes, design strategies, innovative forms of planning and contemporary culture, supporting the theoretical research as well as the practical development of the thesis projects. All classes in this term are mandatory.

**COURSES AND CREDITS**

<table>
<thead>
<tr>
<th>FIRST TERM</th>
<th>SECOND TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDS</td>
<td>Research and Development Studio (I, II, III) Thesis Studio (10 ECTS)</td>
</tr>
<tr>
<td>SW.1</td>
<td>THEORY CONCEPTS (3 ECTS)  Mod 1: Research and Methods  Mod 2: Economics and Sustainability  Mod 3: Theory and Methods</td>
</tr>
<tr>
<td>SW.2</td>
<td>DIGITAL TOOLS  Python (2 ECTS)</td>
</tr>
<tr>
<td>SW.3</td>
<td>PRACTICE FABRICATION  Interaction and Prototyping - LLUM Festival (2 ECTS)</td>
</tr>
</tbody>
</table>

This period is structured by the Research and Development Studio and 4 seminars focused on Theory, Advanced Digital Tools and Fabrication. All classes in this term are mandatory.

**COURSES AND CREDITS**

<table>
<thead>
<tr>
<th>THIRD TERM</th>
<th>FINAL THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDS</td>
<td>Research and Development Studio (I, II, III) Thesis Studio (15 ECTS)</td>
</tr>
<tr>
<td>SW.4</td>
<td>THEORY CONCEPTS (2 ECTS)  Mod 1: Research and Methods  Mod 2: Economics and Sustainability  Mod 3: Theory and Methods</td>
</tr>
<tr>
<td>SW.5</td>
<td>DIGITAL TOOLS  Machine Learning (2 ECTS)</td>
</tr>
<tr>
<td>SW.6</td>
<td>DIGITAL TOOLS (2 ECTS)  Opt - Advanced Robotics  Opt - Advanced Sensing</td>
</tr>
<tr>
<td>SW.7</td>
<td>PRACTICE FABRICATION  Interaction and Prototyping - LLUM Festival (2 ECTS)</td>
</tr>
<tr>
<td>LS</td>
<td>LECTURES SERIES (2 ECTS)</td>
</tr>
</tbody>
</table>

This term is structured by the Research and Development Studio and Seminars focused in the practice of the investigation itself. In this term the students are finalising their proposal and constructing prototypes of their thesis projects. All classes in this term are mandatory.

**COURSES AND CREDITS**

This phase (summer period) - Dedicated to the individual work on the scientific paper presenting the Thesis Project to be submitted in September.

*The following program refers to the Academic Year 2018-2019. The program for the Academic Year 2019-2020 may be subject to slight variations.*
## SECOND YEAR - PROGRAMME ORGANISATION

**OCTOBER - JUNE**

The following programme refers to the Academic Year 2018-2019. The programme for the Academic Year 2019-2020 may be subject to slight variations.

<table>
<thead>
<tr>
<th>TERM 1</th>
<th>TERM 2</th>
<th>TERM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MARCOS CRUZ</strong></td>
<td><strong>JORDI PAGES and LLUIS VIU</strong></td>
<td><strong>PETER TRUMMER</strong></td>
</tr>
<tr>
<td><strong>35 ECTS</strong></td>
<td><strong>35 ECTS</strong></td>
<td><strong>35 ECTS</strong></td>
</tr>
</tbody>
</table>

**THESESTUDIO**

**RESEARCH TRIP - VENICE BIENNALE**

**THEORY**

**RESEARCH AND METHODS - M. MARENCO**

**ECONOMICS AND SUSTAINABILITY - GONZALO DELACAMARA**

**THEORY AND KNOWLEDGE - M. GAUSA, J. VIVALDI**

**4 ECTS**

**INTERACTION AND PROTOTYPING - LLUM FESTIVAL**

**ADVANCED COMPUTATIONAL TOOLS**

**PYTHON**

**2 ECTS**

**ADVANCED COMPUTATIONAL TOOLS - MACHINE LEARNING**

**2 ECTS**

**ADVANCED COMPUTATIONAL TOOLS - ELECTIVE SEMINAR**

**2 ECTS**

*Choice out of 2 options:

- **ADVANCED ROBOTICS**
- **ADVANCED SENSING**

**ADVANCED COMPUTATIONAL TOOLS - BIM**

**2 ECTS**
# Master in Advanced Architecture

## First Year

<table>
<thead>
<tr>
<th>EDITION</th>
<th>19th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECTOR</td>
<td>Areti Markopoulou</td>
</tr>
<tr>
<td>DEGREE</td>
<td>Master in Advanced Architecture accredited by School of Professional and Executive Development at the Polytechnic University of Catalonia – European Higher Education Area (EHEA)</td>
</tr>
<tr>
<td>CREDITS</td>
<td>75 ECTS</td>
</tr>
<tr>
<td>DURATION</td>
<td>9 months from October 2019 to June 2020</td>
</tr>
<tr>
<td>MODALITY</td>
<td>Full time</td>
</tr>
<tr>
<td>LANGUAGE</td>
<td>English</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Barcelona, Spain</td>
</tr>
<tr>
<td>TUITION FEES</td>
<td>Non EU 18,750€ EU 15,000€</td>
</tr>
</tbody>
</table>
| STUDENT PROFILE | Architecture degree, Bachelor or higher degree from other related professions.

---

<table>
<thead>
<tr>
<th>EDITION</th>
<th>9th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECTOR</td>
<td>Areti Markopoulou</td>
</tr>
<tr>
<td>DEGREE</td>
<td>Master in Advanced Architecture accredited by School of Professional and Executive Development at the Polytechnic University of Catalonia – European Higher Education Area (EHEA)</td>
</tr>
<tr>
<td>CREDITS</td>
<td>130 ECTS</td>
</tr>
<tr>
<td>DURATION</td>
<td>18 months from October 2019 to June 2021</td>
</tr>
<tr>
<td>MODALITY</td>
<td>Full time</td>
</tr>
<tr>
<td>LANGUAGE</td>
<td>English</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Barcelona, Spain</td>
</tr>
<tr>
<td>TUITION FEES</td>
<td>Non EU 30,400€ EU 24,350€</td>
</tr>
</tbody>
</table>
| STUDENT PROFILE | Architecture degree, Bachelor or higher degree from other related professions.

Check more details in the web site  
https://iaac.net/maa
Within the current global context of rapid change, integrated with the potentials of digital technologies, IAAC’s Master in Advanced Architecture (MAA) is committed to the generation of new ideas and applications for Urban Design, Self Sufficiency, Digital Manufacturing Techniques and Advanced Interaction. In this context IAAC works with a multidisciplinary approach, facing the challenges posed by our environment and the future development of cities, architecture and buildings, through a virtuous combination of technology, biology, computational design, digital and robotic fabrication, pushing innovation beyond the boundaries of a more traditional architectural approach.

In order to allow the highest quality and applied research, the Master in Advanced Architecture proposes a multidisciplinary approach, considering architecture as a transversal field, for which it is imperative to integrate all research and applications with the knowledge of specialists from diverse fields of expertise.

The MAA program’s mission is to promote scientific and technological innovation in the conception, design and construction of the human habitat, at all scales, through the integration of technological, social and cultural innovation of our time, and contributing to the consolidation of Barcelona as a global platform for the urban habitat.

Students have the possibility to specialise and further develop applications in one of 4 Research Lines focusing on the following fields of investigation: X Urban Design, Self Sufficient Buildings, Digital Matter and Advanced Interaction.

The MAA incorporates learning and project realization, and new forms of practice within architecture and urbanism, ranging from large-scale environments to tectonic details and material properties, from material nanoscale exploration to building design, from sensors and physical computing to the strategic development of masterplan, from individuals to the global community, from bits to geographies.
X-Urban Design studio works beyond the conventional scales of territorial design, town planning, building or fabrication in designing a multi-scale habitat. As in the design of ecosystems, each level has its own rules of interaction and relation, and at the same time must comply with certain parameters that pertain to the system as a whole. The Studio focuses on projects that range in scale from the territory to the neighborhood. The idea of X-Urban Design is related to two issues: on one hand, the understanding of countries and cities around the world with emerging economies and cultures that, by virtue of their regional or economic position, can contribute value to the planet as a whole. In this sense the studio seeks to identify the particular urban and territorial values of these places in order to construct more intelligent territories anywhere in the world, moving on from the western idea that there is a single model of city (be it European or from the United States) to work on the basis of more complex and more open values. The other issue related to X-Urban Design has to do with their creation as intelligent territories that function in a multiscalar way, emphasizing the relationship between nature, networks and nodes and promoting the ‘emergence’ of an urban intelligence through research on the application of ICT (Information and Communication Technologies) in different aspects of the urban infrastructure and public space.
This project aims to study the local resources and what we can do with these, to produce whatever the city needs. A futuristic, smart, sustainable model of a city is about how we can reduce the amount of money we spend in the importing industries, and starting to produce our own systems where we can make things from our local sources and let the user and the city use them and be part of them.

According to the National Oceanic and Atmospheric Administration, the global sea level is expected to rise within 0.8-2 meters by 2100, enough to swamp many cities along the U.S East coast. The project seeks to engage the forces of the flooding and make use of it instead of fighting it. The approach of the performative landscape is based on voronoi tessellation, through a series of different iterations the proposed algorithm determines the control parameters of different stages for the arrival of water to the site.
The “Staple Scarcities” project focuses on the territorialization of food production in Hong Kong by triggering an urban intervention that will bring about a shift to a city that is listed among the most “food vulnerable” places in the world, importing 90% of what its population eats, towards a fully self-sufficient city.

The proposal reshapes the meeting line between water and land, giving place to a new waterfront which allows the water to penetrate both sides of the Victoria Harbour, deconstructing itself in a catalogue of cells of public space which will populate the harbour reconstituting new urban tissue on water.

Fixed nodes on the harbour allow the floating islands to attach in different positions, giving the city a different layout according to the needs and urban mutations.
Self sufficiency is about consuming just the resources you are able to produce, turning into zero our ecological footprint, or the surface of land that each one needs to live. This scenario is close to the statements that we need to achieve for the 2020 agenda. At the RSII self sufficiency will be wider a concept, not only we will apply this term when speaking about energy, but also speaking about other issues like water, food, economy and society among others.

As architects, our role in this new concept of ecology goes beyond buildings, materials, light, space or shape. Our approach to this new way of thinking must be holistic, emphasizing the importance of the whole, and the interdependence of its parts. Therefore, for us, architecture is about this complex combination of elements and their relations. At the RSII we will read and learn from the people that are already talking about this holistic way of thinking (Rifkin, Braungart, McDonough, Latour...). In order to face this approach to thinking, architects cannot be alone, they must learn to work inside multidisciplinary teams. A starting point will be the scenario of RSII, in which we will work on our projects together with physicists, biologists, economists and designers. Inside the topic of self sufficiency, in the past four years IAAC has developed projects around the ideas of Factory of the Future, Urban Retrofitting, Factory of Knowledge, and many more.
Retrofitting the industry, the “Urban Fabric” is a three-dimensional mesh envelope based on cell organisation in plants that combines farming, photovoltaic panels, metal, fibers, water and technology. This modulation from structure to plants, insulated to uninsulated, skin to nature, adapts to the seasons and reflects the environments of future activities. The radical element of the project marks the starting point of a new revolution in this industry.
A cloud problem requires a cloud solution. The jungle senses the cloud of pollution from external sources before reacting, creating a cloud on site that captures pollution.

This cloud is then manipulated to rain on site through over seeding, removing the pollution from the air. To create a self-sufficient system energy is needed. Algae uses CO2 and waste water creating bio fuel to power the cloud.

The Social Innovation Incubator performs through the development of an educational path set in a revolutionary environment, giving people a platform where to innovate and find their job opportunities.

The building responds to the context and inspires innovation. You are introduced to advanced knowledge, tools and processes, practicing, testing, and performing innovative projects. You connect with people in different levels and fields. You come out a seed of innovation in the knowledge community.
Today, we are facing a change in paradigm in the field of Architecture. Information Era Technologies and their impacts on architecture are drastically changing, and their relationship calls for new or adapted concepts, where physical space seamlessly intertwines with digital content, and where the language of electronic connections ties in with that of physical connections. We are consequently moving towards a different form of "habitats", where architecture is not merely inhabited, but becomes technologically integrated, interactive and evolutionary. If computers were once the size of buildings, buildings are now becoming computers, both in a performative sense, on I/O Communication protocols, and in a programmable sense, at material-molecule nanoscale; even becoming operational thanks to self-learning genetic algorithms. The key, thus, to 21st century challenges generated by global urbanization, economic instability and particularly the increasing awareness related to the environmental crisis will be the development of high efficient "products" with increasing levels of functionality. Architecture following every stage of life will have to address and respond to both challenges and advancements. Our buildings and cities will need new interfaces to communicate with the environment and embedded systems of performance that do not rely on existing urban infrastructures. Active and bio-materials will play a critical role in this development, forcing architects to get free from mechanical actuators or computing devices and integrate into their designs the inherited functions that "smart materials" present on a molecular scale. At the same time, advance with the collaboration of digital manufacturing techniques contribute to digitally fabricate new material systems and building components with varied properties of density, translucency, elasticity and much more. This brings another level of sustainability awareness, one that questions concepts of durability or longevity and brings forward concepts of dynamics, adaptability and metabolism. Understanding the significant need of generating the production of non-rigid, responsive and multi-functional material and construction systems, the Digital Matter Research Line develops case studies on digital and computed matter, exploring intelligent construction systems to be applied at architectural scale. The projects implement active materials, information, digital content and fabrication foreseeing an engineered architectural future of intelligent responsiveness and adaptation. Should we continue constructing rigid and fixed structures? Or can buildings and cities begin to think? Digital Matter Research line will be generating an architecture that is not just mimicking the living but is roaring into life. The method of investigation follows a rigorous experimental approach and progresses in complexity from small scale material sampling to the production of 1:1 scale architectural components and prototypes.

*Check more student projects in the IAAC Blog (http://www.iaacblog.com)
The project seeks to create a responsive facade that on the one hand protects the people from environmental conditions and on the other hand becomes part of the public space. In this sense the project is able to interact and correspond to the people’s needs and activities with respect to the context they inhabit.

A project that investigates possibilities of using air inflation in architecture, as an active response to constantly changing parameters in environment: the Skin is a new composite material made of thin layers of flexible silicone rubber and elastic fabric. Series of inflatable cells combined in groups can be inflated or deflated to change form and appearance a tunable topography responding to real time data of wind and light. The responsive facade protects the people from environmental conditions and becomes part of the public space.
By combining the evaporation property of the hydrogels with the thermal mass and humidity control property of clay ceramic and fabric, a composite material responsive to heat and water was created. The proposed solution is a passive evapotranspiration system able to lower the temperature of an interior space. With the help of accurate energy and thermal analysis of today's technology, hydroceramic's passive system can effectively keep the balance of the humidity and temperature inside the human comfort zone.
Today we communicate and interact with smart devices, physical and virtual environments, the Internet of Things. User-generated content mixes with professional contributions. In our Age of Participation, mostly driven by social media and gaming but also by interactive arts and performances, passive recipients turn into active participants, becoming creative players. Interactive environments go beyond the passive reception by creating an immersive, communicative and social experience.

All fields of study and practice require the skills to make meaningful use of available and forthcoming technologies. This is mainly due to the increased adoption of technology in our daily lives. Data and Information now encompass a sort of Metadata Layer, which crosses all aspects of our existence.

The Advanced Interaction Research Studio is dealing with the core technologies across merging disciplines of all creative expressions, which will form future means of interacting. Creating dialogues between natural environment and new digital frontiers. It questions the limits of these contemporary technological phenomena and prepares candidates to be the key actors capable of making connections between disciplines where none were possible or even considered before.

The programme will empower you to create the interfaces for connecting all kinds of data and understand how to transform it into meaningful social and emotional communication.
AUGMENTED SENSES: Wearable Technology as an interface to augment our relationship with nature. Using advances in science, engineering and art to interact with nature in novel ways. The work has been developed at Valldaura Labs, IAAC’s Campus in Collserola Park.

RADIO TELESCOPE Suit is a wearable that allows to hear the radio frequencies of the broad spectrum, but most important, of some radiations from the space, for example the one of the sun. With the antenna in the back the user receive the frequencies according with their own movements allowing the possibility to interact with the environment. The radio frequencies are digitally decode in sounds and images in a Raspberry pi.

Project by: Agustina Palazzo in 2017/18
Playball! is an interactive installation that engages a big number of users that play together to create a visual and aural experience. Playball uses light to create interactions between the viewer and installation, and between the viewers themselves.

Installation developed for LLUM BCN 2018
In the framework of learning by doing, the Introductory Studio gives students the opportunity to fully explore and apply the various tools and techniques assimilated during their 1st term at IAAC. From the examination of space understood as layers of activities and interactions, to the design and simulation of their behaviours, animated through performative models; or the profound understanding of mechanisms of local energy, food and bio-materials production in dense urban environments, contributing to the urban morphogenesis of contemporary cities; all developed with the support of digital fabrication and parametric design.
Through select elective and obligatory seminars, the academic curriculum explores diverse fields of Advanced Architecture:

**DIGITAL FABRICATION**

**COMPUTATIONAL DESIGN**

**THEORY OF ADVANCED ARCHITECTURE**

**URBAN SCIENCE**

**PHYSICAL COMPUTING & PROGRAMMING**

**EXPERIMENTAL STRUCTURES**

Some of the renowned IaaC Seminar faculty are:

- Vicente Guallart (Architect)
- Enrico Dini (Engineer)
- Silvia Brandi (Architect)
- Tomas Diez (Urbanist)
- Edouard Cabay (Architect)
- Manja van de Worp (Engineer)
- Lluís Viu Rebés (Architect)
- Jordi Pages Ramon (Architect)
- Josep Mias (Architect)
- Fabian Scheurer (Computer Scientist)
- Alexandre Dubor (Architect)
- Anastasia Pistofidou (Architect)
- David Dalmazzo (Computer Scientist)
- Spyros Stavoravdis (Architect)
- Gonzalo Delacámara (Economist)
- Mathilde Marengo (Architect)
- Pablo Ros (Architect)

Petr Novikov (Architect)
- Dave Pigram (Architect)
- Iain Maxwell (Architect)
- Cristobal Castilla (Designer)
- Julian Vincent (Biologist)
- Pierre Belanger (Architect/Urbanist)
- Nikos Salingaros (Mathematician)
- Andreu Ulied (Engineer)
- Angel Muñoz (programmer)
- Starsky Lara (Designer/Engineer)
- Núria Conde Pueyo (Biologist)
- Marcos Cruz (Architect)
- Peter Trummer (Architect)
- Carlo Ratti (Architect)
- Mosé Ricci (Architect)
- Oriol Carrasco (Architect)
- Alejandro Zom (Designer/Engineer)
- Neil Harbisson (Cybor Artist)
- Luis Fraguada (Architect/Engineer)
- Claudia Pasquero (Architect)
THEORY OF ADVANCED ARCHITECTURE

TUTORS: MANUEL GAUSA / JORDI VIVALDI

Based on the term “Advanced Architecture” coined in 2003 by the Metapolis Dictionary of Advanced Architecture, this course aims to establish some theoretical principles around 3 Conceptual Frames:

[Frame 1] Systems/Strategies — Transversal Logics: information - cities
[Frame 2] Systems/ Environments — Relational Logics: cities - natures

The seminar will explore relevant architectural referents, in order to construct a critical body of knowledge that will serve as instruments (both theoretical and practical), that could provide important concepts related to the emergent paradigm around advanced architecture. The contents will be exposed within a contemporary theoretical frame, supported by a series of readings, analyzing a series of projects, and further complemented with some open lectures at the IaaC during the development of the course.

The series starts with a general overview of the Transversal Logics evident in architectural culture since the end of the Twentieth Century, triggered by the vast advancements in specialized knowledge, the impact of what has been often called the information society, and some pressing environmental concerns, which are deeply questioning and transforming contemporary architectural practice.

The Relational Logics frame is often present between the advanced architecture and its environment, between cities and nature. To make this relation explicit, the perceptive phenomena originated among the domestic spaces and elements annexed to these are further analyzed.

The Digital Logics frame examines solutions based on computation tools and information, incorporating innovative design methodologies, exploring new construction techniques, and investigating novel materiality. “Advanced architecture is to the digital society what modern architecture was to the industrial society; an architecture bound up with interchange and information. With the capacity for displacement and modification. With the dynamic evolution of process and their associated spatial definition. Advanced architecture occurs, in fact, as an outcome of direct process of interchange, in synergy and flexible interaction with the environment which it acts. It is an act of active ecology that interacts decisively with the environment, whether natural, artificial or digital. Advanced architecture is, therefore, a reactivating architecture to the extent that it strives to react with reality in order to restimulate it. Innovating it at once reinforming it and recycling it. Exchanging information with and within it.”
DIGITAL FABRICATION

The Digital Fabrication seminars explore different scales of production of architecture using Digital and Robotic Fabrication techniques such as: CNC cutting (laser), 3D printing, CNC milling, molding and casting and composites, design and fabrication.

One of the goals is to introduce the thinking around the function, by following the evolution of the design through iterations of production as a workflow.
The proposal seeks to draw the future city expansion in a different way, leading the next urban age, and creating a more sustainable society, in shape and function, focusing on humanity.

**EXPERIMENTAL STRUCTURES**

Experimental structure courses are aimed at pushing the limit of constructions, combining physical experimentation and digital simulations, in order to discovery new structural paradigms based on the concepts of lightweight, bending, tension, aggregation and components, as well as setting the logics behind these. 1:1 structures are tested through various media, materials, programs and scales, concluding with the construction of a large scale demonstrative prototype.

**COMPUTATIONAL DESIGN**

In computer science, algorithms are habitually defined as fixed and often finite procedures of step-by-step instructions understood to produce something other than themselves. Structures of logics interfacing with Data, sourced from any computable phenomena. Computational Design Seminars focus on emergent design strategies based on algorithmic design logics. From the physical spaces of our built environment to the networked spaces of digital culture, algorithmic and computational strategies are reshaping not only design strategies but the entire perception of Architecture and its boundaries.

---

**INSTITUTE FOR ADVANCED ARCHITECTURE OF CATALONIA**

**MASTER IN ADVANCED ARCHITECTURE**

---

MAA - Experimental Structures

MAA - Computational Design
Since the emergence of the Third Industrial Revolution, Urban Sciences are facing major challenges: how do we respond to the shift from an industrial society to an informational society? In fact, the space we inhabit today was basically constructed at the start of the Industrial Revolution, the Information Society is now bringing to bear new principles and technologies with which to rethink the functioning and structure of the city and how its citizens interact with it.
MASTER IN ADVANCED ARCHITECTURE
SECOND YEAR
During the second year of the Master in Advanced Architecture Students have the opportunity of counting with the necessary support from a series of renowned experts in various fields, to develop an in-depth individual research agenda. Students propose a thesis project, that they are going to develop throughout the year, and are allocated with an Individual Thesis Advisor who is specialised in the topic proposed.

MAA02 is a formative platform structured by a research Design Project and three complementary courses anticipating ideas that will appear during the programme in relation to the research proposals of the thesis themes, design strategies, innovative forms of planning and contemporary culture, supporting the theoretical research as well as the practical development of the thesis projects.

On top of this, the MAA02 students have the opportunity to work alongside the IAAC team in the development of a series of 1:1 scale projects and prototypes to be deployed throughout the city of Barcelona.
C-Biom.A
Computation, Biomaterials and Architecture

C-Biom.A is an innovative design research group at the IAAC focused on developing new bio and environmentally integrated designs strategies. Students explore advanced computational models and simulations that are applied to building prototypes made of new material composites that are either bio-inspired or bio-integrated. Many of the proposed objects and components aim to stimulate natural growth of bacteria, fungi, algae, and higher plants and the integration of these species in buildings. In a time in which more people are living in cities, the ultimate aim of the group is to develop a radically new sensibility of understanding of architecture where climate and nature, as well as new sense of materiality is the driving motif for design.

There is a high level attention given to the use of new digital tools and fabrication techniques through which more complex and highly differentiated responses can be given to our rapidly changing urban environment. Final Submission of the Individual Thesis will be composed of a written and illustrated portfolio, scientific paper, as well as substantial models and prototypes that are shown in a final exhibition designed and set up by the students.

*Check more students projects in the IAAC Blog (http://www.iaacblog.com)
Rather than to frame architecture as an energetic or a geometric issue Climatic Matter Thesis studio aims at problematizing architecture’s physical materiality. Within the depths of matter and its internal consistency, within the realm of pure organization devoid of cultural interferences, metaphors and meanings, where beauty is not taken into account, that one can focus on strategies to develop novel proposals for architecture. The focus of the studio is to abandon the glitz of the surface, to abandon the visible and its panoply of image simulators in order to overturn the experiment into an operative and performative act: developing, testing and building non-gravitational Climatic Matter.

Over the years of teaching at IaaC, Climatic Matter studio faculty have developed a speculative and opportunistic agenda that embraces architecture’s contemporary paradigms - sustainability and object oriented programing - and synthesized them into an operative method that purposely avoids metaphors. The studio aims at implementing systematic and methodological processes that imbricate the ecological and the digital, a consistent palimpsest of environmental and parametric design processes tested under non gravitational conditions (underwater) for the purpose of eliminating our research form the ultimate architectural metaphor of all: the gravitational determination of site. Through suspending dynamic and unstable material aggregates, under a fluid and viscous milieu, we aim at building algorithms that will ultimately surface as Climatic Matter. The agenda of the studio is pure process. The language is geometry. The context is underwater. Abstraction is the instrument have been favored to achieve, develop and materially build prototypes of non-gravitational Climatic Matter.

Final Submission of the Individual Thesis will be composed of a written and illustrated portfolio, scientific paper, as well as substantial models and prototypes that are shown in a final exhibition designed and set up by the students.

*Check more students projects in the IAAC Blog (http://www.iaacblog.com)
Today we built cars without drivers, buildings without inhabitants, cities without roads. We try to make cities smart; turn every building into a power station and have built after 9/11 more high-rise buildings than ever before. We do not either really know why we do that nor what we are doing when we design these entities. The Framework of the Thesis Program on the City is based on a simple question: How do our cities look like? How does reality design? The aim of the Thesis Program is to develop an architectural project for the city, which is neither driven by a scientific approach of data-scape nor should it be guided by empirical case studies to understand their morphology. Rather what Thesis Studio would like to propose is if we can search the City in the Age of Hyperobjects. Hyperobjects are to what Timothy Morton refers to: “things that are massively distributed, very large relative to humans, weather directly manufactured by humans or not”. They have a significant impact on us humans and that we struggle to understand them. We discover we are stuck to them and realize as more as we know about them as more they withdraw from us. Hyperobjects to Timothy Morton are the Biosphere, our Solar System, the sum of Nuclear materials on the planet or the sum of the Machinery of our Capitalism. Hyperobjects are hyper to humans, but effect humans daily life and produce their own architecture like nuclear or solar Power-station in the desert, Pencil high-rise towers in New York, human less cities in China or sustainable building systems. Hyper buildings become the Author of our architecture.

The aim of the research project is to design new forms of architecture for our contemporary city, in which objects of any kind, like machines, buildings, landscapes or artificial environments are designed under the influence of hyper objects and become fused or merged together to form new architectural types.

Final Submission of the Individual Thesis will be composed of a written and illustrated portfolio, scientific paper, as well as substantial models and prototypes that are shown in a final exhibition designed and set up by the students.

As a support for the research project the following Reading list is recommended:
- “On the mode of existence of technical objects” by Gilbert Simondon
- “On Vicarious Causation” by Graham Harman
- “The third table” by Graham Harman
- “The Stack by” Benjamin Bratton
- “A Speculative History of Architecture as Asset” by Peter Trummer

*Check more student projects in the IAAC Blog (http://www.iaacblog.com)
MASTER IN ADVANCED ARCHITECTURE

FACULTY

4.0
MASTER IN
ADVANCED
ARCHITECTURE

GENERAL INFORMATION
To apply for IAAC, please fill out and submit the online applications form (www.iaac.net/iaac/apply) for the programmes: MAA01, MAA02, MaCT01, MaCTO2, MAA01 + OTF, OTF, MAEB, MRAC, MDEF.

For the online application, the following required documents should all be submitted in English, with the exception of the undergraduate diploma (All documents must be uploaded onto the designated space on the online application form in PDF format).

- A letter of intent expressing the reasons for which you wish to attend the chosen master – Written in English, PDF and with a maximum of two A4 pages.
- Curriculum vitae
- Portfolio, showing samples of your work –maximum of 10MB.
- Two letters of recommendation (from professional or academic referees) – In English, PDF and with the corresponding referee contact information.
- A copy of your highest academic degree.*If you haven't graduated and therefore your diploma is not available at the moment of your application, you will need to send a letter in English or Spanish emitted by your University acknowledging that you are currently studying (name of the programme) and will graduate in (specific date).
- A copy of a valid passport (copy of valid I.D. is accepted for citizen of member states of the EU) *If you hold more than one passport bear in mind that the one you provide in the application form is the one IAAC will use for your acceptance letter and therefore the one you will use to apply for your Spanish visa (non EU students) and NIE (all students).

APPLICATIONS

To apply for IAAC, please fill out and submit the online applications form (www.iaac.net/iaac/apply) for the programmes: MAA01, MAA02, MaCT01, MaCT02, MAA01 + OTF, OTF, MAEB, MRAC, MDEF.

For the online application, the following required documents should all be submitted in English, with the exception of the undergraduate diploma (All documents must be uploaded onto the designated space on the online application form in PDF format).

- A letter of intent expressing the reasons for which you wish to attend the chosen master – Written in English, PDF and with a maximum of two A4 pages.
- Curriculum vitae
- Portfolio, showing samples of your work –maximum of 10MB.
- Two letters of recommendation (from professional or academic referees) – In English, PDF and with the corresponding referee contact information.
- A copy of your highest academic degree.*If you haven't graduated and therefore your diploma is not available at the moment of your application, you will need to send a letter in English or Spanish emitted by your University acknowledging that you are currently studying (name of the programme) and will graduate in (specific date).
- A copy of a valid passport (copy of valid I.D. is accepted for citizen of member states of the EU) *If you hold more than one passport bear in mind that the one you provide in the application form is the one IAAC will use for your acceptance letter and therefore the one you will use to apply for your Spanish visa (non EU students) and NIE (all students).

APPLICATIONS, GRADING SYSTEM & MORE

INSTITUTE FOR ADVANCED ARCHITECTURE OF CATALONIA

MASTER IN ADVANCED ARCHITECTURE

INSTITUTE FOR ADVANCED ARCHITECTURE OF CATALONIA

TUITION FEES

TUITION FOR STUDENTS ATTENDING MAA01 (75 ECTS: 1 YEAR)

Tuition for the year 2019/2020 is Non EU 18.750€ / for EU students 15.000€. The selected candidates must send a scanned proof of a down payment of 2.500€ to the Institute to confirm participation, maximum 4 weeks after their acceptance. The remaining part of the tuition fee may be paid either in one or two instalments, 60% before September 1st, 2019 and 40% before December 1st, 2019.

All payments of the selected programme must be paid by bank transfer only to:
Bank: Santander
Agency: 6784
IBAN – ES55 0049 6784 3226 1615 5632
SWIFT – BSCHESMMXXX
Holder: Institut d’Arquitectura Avançada de Catalunya.
Address: Via Augusta, nº182 (Es 08021 Barcelona)

Note: Make sure that bank transferring SUBJECT is the applicant’s name, and not the person who orders the transfer. Also make sure to select the SWIFT instructions code “OUR” when ordering the bank transfer. This means that you have to pay the transfer charges.

TUITION FOR STUDENTS ATTENDING MAA01+OTF (100 ECTS: 15 MONTHS)

Tuition for the year 2019/2020 is 25.500€ for Non Eu students and 20.500€ for EU students. The selected candidates must send a scanned proof of a down payment of 2.500€ to the Institute to confirm participation, maximum 4 weeks after their acceptance. The remaining part of the tuition fee may be paid either in one or two instalments, 60% before September 1st, 2019 and 40% before December 1st, 2019.

TUITION FOR STUDENTS ATTENDING MAA02 (130 ECTS: 2 YEARS)

Tuition for the year 2018/2020 is 30.400€ for Non EU students and 24.350€ for EU students. The selected candidates must send a scanned proof of a down payment of 2.500€ to the Institute to confirm participation, maximum 4 weeks after their acceptance. The remaining part of the tuition fee may be paid either in one instalment; or divided it into 3 instalments: 35%, before September 1st, 2019; 30% before December 1st, 2019 and 35% before September 1st, 2020.
Class attendance is obligatory for studios and seminars. In both cases, courses are graded as follows:

- 0-4.9 Fail (this means that the student is not going to get his/her Master’s Degree, this grade will be justified and well explained)
- 5.0-6.9 Passed
- 7.0-8.9 Good
- 9.0-10 Excellent/Distinction

- Under no circumstances will students be excused from presenting their design work at the final review of a project.
- Diplomas will not be delivered to students with any incomplete in their final grades.

In addition to the above, Midterm Reviews will be held with the members of the faculty in order to inform each student briefly of the general feelings of the faculty about his or her work. Suggestions may be given on how to prepare for the Final Review.

The usual procedure IAAC uses for the collection and analysis of information to ensure the quality of the programme is the student surveys and evaluation reports. IAAC performs two different types of surveys: one survey is specific for each course, and is being made immediately after a course finishes, and the second survey is a general survey, which is conducted at the end of the academic year.

Course Survey: The surveys contain questions related to course content and structure of the class, the methodology used and the level of facilities where the course has been conducted. There are also questions about the faculty, allowing the student to evaluate the faculty’s communication capabilities, the capacity of synthesis and organise the content structure as well as the faculty’s competence in assessing and explaining the results obtained. The survey also include questions about the relevance of the class with respect to the students own interests and the relevance with the general research agenda of the Master programme. Students are also asked within this survey to suggest improvements in the courses that IAAC takes into consideration for the future editions.

General Survey: The general annual survey refers to the overall management of the programme and the efficiency of the entire organisation. It includes questions of whether students had difficulties in the application and admission process, whether they had problems in acquiring all necessary certificates and/or other documents and more. It also includes question of satisfaction in relation with the efficiency level of IAAC staff, whether faculty and content have met their expectations, and whether they were satisfied with the level of access to facilities and material resources at the Institute. Also, students are asked what course or activities considered more interesting and relevant to the programme and they are also asked to express ideas for overall improvement.

Study-related expenses such as the purchase of books, graphic reproduction, printing and model making are not included in the tuition fee. For field trips and excursions an individual financial contribution may be required.

Students are expected to bring their ownly a laptop computer no more than two years old, with the following specifications:
- PIV at 2.4 GHz (or similar in the case of an AMD processor).
- 8 Gb RAM.
- WIFI internet connection.
- 1280 x 1024 screen display resolution

Non European students accepted to the programme are advised to contact the nearest Spanish Embassy to start the Visa procedure. Be aware that the application procedure for a Student Visa can take up to 3 months.

Participants are responsible for their own health insurance and other personal insurance. It is mandatory to acquire a Medical Insurance to cover your stay here in Barcelona. The Catalan Public Health System does not cover students, and will charge you for any visit or consultation. Please note that the IAAC is not liable for loss or damage to personal belongings.
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)*, 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.

* http://ec.europa.eu/research/innovation-union/index_en.cfm?section=icapital
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 interdisciplinary knowledge networks. It promotes transformation from its humanistic ideology based on learning by doing.

VALUES

COMPACT
An organisation that is flexible, agile, quick and able to anticipate new challenges of our time.

INDEPENDENT
Private foundation that collaborates with individuals, universities, companies and public organisations to innovate the human habitat and interaction.

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.

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

NATURAL
Promoting connected self-sufficiency, according to the rules of biological ecosystems, to help build a more ecological and social world.

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

SOCIAL
Important social base, from interaction with individuals, companies and organisations that promote innovation in the construction of the human habitat, prioritising talent and avoiding social and economic stigmatisms.
• To underline and reinforce our position as a worldwide reference for education and research, as well as for self-sufficiency and digital fabrication, through the consolidation and expansion of research projects, as well as offering up to date and evolving academic programmes.

• To expand our collaborations with strategic public and private partnerships both nationally and internationally.

• To strengthen our consultancy role by creating specific alliances with industries that promote and support applied research.

• To actively pursue an agenda of activities related to green architecture, sustainability and renewable energies through the development of the Green Fab Lab, the Food Lab and the Energy Lab.

• To enhance our current work and profile as a specialised think tank for innovative strategies within the fields of urban planning and urban design with particular attention to the Smart Cities challenge.
MODERNISM
7 works by Gaudi are UNESCO World Heritage sites.

IMAGE
Almost 2,500 film shoots took place in the city during 2015.

CULTURE
50 museums and exhibition centers, Palau de la Musica, Sonar, Primavera Sound etc. Barcelona is part of the Network of UNESCO Creative Cities as City of Literature since 2015.

SPORT
In addition to the pulling force of FC Barcelona, the city also hosts several international sporting events each year; these include the X Games, the World Swimming Championship etc.

PROFITABLE
Since 2000, Barcelona has been the top European city in terms of the quality of life of employees (Report by Cushman & Wakefield and Cinco Dias).

TOURISM
More than 15.5 million foreign tourists visited Barcelona in 2015.

AFFORDABLE
Barcelona is not among the world’s 50 most expensive cities (according to Mercer Human Resource Consulting).

MOBILE
The city will continue to host the Mobile World Congress (MWC) until 2018. Barcelona welcomes more than 70,000 visitors during this annual event.

BARCELONA IS...

INSTITUTE FOR ADVANCED ARCHITECTURE OF CATALONIA
MASTER IN ADVANCED ARCHITECTURE
The Institute for advanced architecture of Catalonia is located in the Poblenou neighbourhood of Barcelona, in the recently created district known as 22@, a focus for companies and institutions oriented toward the knowledge society. The neighbourhood is close to the historic centre, the seafront, the Plaça de les Glòries and the Sagrera APT station, making it the most dynamic enclave in the city.

IAAC is housed in an old factory building, with 2,000 m² of space for research, production and dissemination of architecture, so that the space itself is a declaration of principles, embodying an experimental and productive approach to architecture. The IAAC premises include the Fab Lab Barcelona, an architecture and design oriented fabrication laboratory which is part of the global network of Fab Labs set up by The Center for Bits and Atoms at MIT. The Green Fab Lab, hosted in IAAC’s forest campus in the Valldaura Labs, is also part of the same global network, a fabrication laboratory this time oriented towards self-sufficient and productive solutions.

Valldaura is IAAC’s second campus located in the Collserola Park, the natural centre of the metropolitan area of Barcelona. Valldaura campus is a large park and testing ground for innovation that features the latest technologies in the fields of energy, information and fabrication. The core of this innovative project developed by IAAC is a laboratory to implement investigation and set a new benchmark for self-sufficiency. The Valldaura Self Sufficient Labs and its three Laboratories, Food Lab, Energy Lab and Green Fab Lab; allow to research the specificities of the production of key elements involved in self-sufficiency: food, energy and things, combining ancestral knowledge that connects us to nature with the latest advanced technology.
IAAC Educational Programmes give the next generation of architects the space to imagine, test and shape the future of cities, architecture and technology through applied research, learning by doing, and implementing global agendas developed through local solution. IAAC is also part of the European consortium InnChiChan, a consortium of six renowned research institutions and 14 leading industry partners: an interdisciplinary network developing PhD research in innovative building design practice under the Horizon 2020 programme.

The MAA01 - Master in Advanced Architecture Programme is oriented to graduates who wish to commit and develop their design research skills in the context of new forms of practice within architecture and urbanism, ranging from large scale environments to tectonic details and material properties. In order to allow the highest quality and applied research, the Master in Advanced Architecture proposes a multidisciplinary approach, considering architecture as a transversal field for which it is imperative to integrate all research and applications with the knowledge of specialists form a diversity of fields of expertise.

The MAA01 programme focuses on four select Research Lines all led by Internationally renowned experts, and bringing together students and faculty from different disciplines and origins, towards the creation of a Networked Hub dedicated to Research and Innovation for the habitability of the 21st Century.

The MAA02 programme combines the first year Master (MAA01) with a second year of investigation towards the development of a thesis project. This programme allows senior students, already having developed the appropriate sensibility and tools from MAA01, to get further a personal investigation, around the themes of the advanced technology, architecture and urbanism. During this second year students are required to deal with a project counting on the possibility of developing it with international faculty and enterprises, highly specialized in different fields.

During the second year each student will propose and develop his/her Individual Thesis Project through an academic programme structured in:
- Individual Tutoring with internationally renowned experts that will support the student in the development and in the theoretical definition of the thesis project
- Seminars focused on the topics of Advanced Digital Tools, Research Methodology and 11 Fabrication Systems.
- The thesis, submitted in publication format, can be developed according to diverse research methodologies.

The iimmersive programme takes place in Valldaura Labs, IAAC’s campus located inside Collserola Natural Park in Barcelona.
With the Master in Robotics and Advanced Constructions (MRAC), IAAC seeks to train a new generation of interdisciplinary actors capable of facing our growing need for a more sustainable and optimised construction ecosystem. The Master is focused on the emerging design and market opportunities arising from novel robotic and advanced manufacturing systems.

Through seminars, workshops and studio projects, the master programme challenges the traditional processes in the Construction Sector; it investigates how robotics and new digital fabrication tools change the way we build, and develops the design tools and processes for such new productions methods.

The master offers an international and multidisciplinary environment in which Engineers, Designers, Architects, Craftsmen, Academics and Industry partners must rethink the construction industry. The master will take place in IAAC, a creative space fully equipped with the latest manufacturing technologies, based in Barcelona, an International hub for innovation in a traditionally rich industrial region.

The aim of the Master in Design for Emergent Futures (MDEF) is to provide the strategic vision and tools for designers, sociologists, computer scientists, to become agents of change in multiple professional environments. This programme focuses in the design of interventions in the form of products, platforms and deployments in the context of emerging future scenarios in society and industry.

Students will be encouraged to work at multiple scales (product, platforms, strategic planning and distribution strategy) in order to create prototypes to be tested in the real world. The theoretical and practical contents in this programme propose an exploratory journey aimed to comprehend and critique the role of disruptive technologies, including digital fabrication, blockchain, synthetic biology, Artificial intelligence, among others, in the transformation of the established order.

The programme is recommended for designers, sociologists, computer scientists, economists, anthropologists, technology entrepreneurs and changemakers who are looking to develop an interdisciplinary career path to conceive and produce impactful ideas to transform the world. This Master has a high component of hands-on learning and project-based learning where students will be requested to turn big ideas into design strategies, prototypes and interventions to be tested in the real world, focused in Barcelona but connected globally with other cities.

The aim of the programme, in line with the opportunity of making a difference, is to develop research to be applied through patents or products for marketing. This will be obtained through the common goal of researching of different fabrication techniques, materials and form, towards the implementation of a large scale prototype, understanding the potentials of digital fabrication together with new needs of current society and the market.

All the IAAC BUILDs researchers will be working together in 1 group towards a collective goal and project, in turn subdivided into different specialized research teams each focusing on a specific aspect of the projects development. Hence the implementation of a 1:1 scale prototype allowing to test techniques and materials on real scale.

IAAC BUILDs follows in the footsteps of OTF developing the applied research in partnership companies, whose involvement will vary according to project focus. The program measals counts on the collaboration of experts in various fields such as engineering and structures, materials, technical components, and much more, allowing the development of a full scale and fully functioning prototype.

The Global Summer School (GSS) is a platform defined by ambitious, multifocal investigation into the implications of emergent techniques on our planned environments. The programme develops a global agenda in various institutions around the world, each focusing on developing localised solutions. International teams located in key cities around the globe explore a common agenda with projects that are deeply embedded in diverse local conditions. 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.

The programme focuses on a global agenda developing local solutions.

Fabric Academy is an intensive six month programme that teaches students to design, prototype and invent almost anything using digital fabrication tools and machines. The Fabric Academy brings together a multi-disciplinary and hands-on learning experience that can be taken in any number of participating Fab Labs (digital fabrication labs) around the world. At it’s core, Fabric Academy Barcelona empowers students to learn by doing, inspires them to make stuff locally and to become active participants in sustainable cities and communities such as Barcelona’s Poblenou district.

The course is directed by Neil Gershenfeld from MIT’s Center For Bits and Atoms and based on MIT’s rapid prototyping course: How to Make (Almost) Anything. Since 2001, they have been at the cutting edge of the global maker movement, enabling innovation and democratising the use of digital fabrication technology through the growing network of Fab Labs around the world.
FabLab Barcelona is one of the leading laboratories of the worldwide network of Fab Labs, a small scale production and innovation center equipped with digital fabrication tools and technologies for the production of objects, prototypes and electronics. Fab Lab Barcelona is part of the Institute for Advanced Architecture of Catalonia, where it supports different educational and research programme related with the multiple scales of the human habitat. It is also the headquarters of the global coordination of the Fab Academy programme in collaboration with the Fab Foundation and the MIT’s Center for Bits and Atoms; the Fab Academy is a distributed platform of education and research in which each Fab Labs operates as a classroom and the planet as the campus of the largest University in construction in the world, where students learn about the principles, applications and implications of digital manufacturing technology.

The Fab Lab Barcelona has produced projects such as Hyperhabitat IAAC (official selection for the Venice Biennale XXI) or the Fab Lab House (Audience Award in the first Solar Decathlon Europe in Madrid). It is currently developing projects of different scales, from smart devices for data collection by individuals (Smart Citizen innovative project award in the Smart City Expo and World Congress in Barcelona), the development of the new generation of Fab Labs in the Green Fab Lab project, to the new production models for cities with the Fab City project being implemented in Barcelona in collaboration with the city council.

Fab Labs mission is to provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital fabrication to allow anyone to make (almost) anything, and thereby creating opportunities to improve lives and livelihoods around the world. Community organisations, educational institutions and non-profit concerns are our primary beneficiaries.
As a part of the Fab City network, the Green Fab Lab works towards the creation of a self-sufficient habitat and research centre at Valldaura Self Sufficient Labs, one of IAAC’s campus locations. Located in the Collserola Natural Park, in the heart of the metropolitan area of Barcelona, it has laboratories for the production of energy, food and things, and develops projects and academic programmes in association with leading research centres around the world.

As part of IAAC’s commitment to promoting and advancing habitability in the world based on ecological principles and making the fullest use of all available technologies and resources, we have created a research centre focused on the idea of self-sufficiency, with a view to provide a worldwide point of reference. The Green Fab Lab offers an opportunity to learn directly from nature to bring that understanding to the regeneration of 21st century cities.
ELISAVA Barcelona School of Design and Engineering is the pioneer academy in this field in Spain, with more than half a century of experience. Founded in 1961, it promotes education, knowledge, research, development and innovation on design.

Associated with the Universitat Pompeu Fabra (UPF), ELISAVA offers a Degree in Design, a Degree in Engineering in Industrial Design and a wide range of Master and Postgraduate programs in the areas of Space Design and Architecture; Graphic Design and Communication; Product Design; Design, Strategy and Management; and Interaction Design; to which must be added the MUDIC, first official Master in Design and Communication in Spain, and the innovative Master in Creative Process, to be taught from 2018.

Through the relationship with businesses, institutions and society, ELISAVA trains its students to encompass professional challenges in an international context and it also delves into practical work and stimulates critical reflection among them, so they finish their studies with the ability to answer the needs of an evolving society.

Inspiring, multidisciplinary, knowledge-generator and trendsetter, our centre trains professionals who will challenge the future.
As part of IAAC’s commitment towards the investigation of new and emerging areas of the Architectural discipline, pilot projects are launched on a yearly basis. These projects, such as the Fab Lab House (1), the Endesa Pavilion (2), Hyperhabitat (3) and Smart Citizen Kit (4), operate in the field between academia, architectural practice and information technologies, and are designed and fabricated by IAAC faculty, students and collaborative companies. These projects operate on several scales, from 1:1 architectural interventions to pocket sized microprocessors, all sharing a common vision of investigation towards a more sustainable and socially empowering design approach. All projects have been welcomed with considerable success, with various distinctions in events such as the Solar Decathlon and the Venice Biennale, as well as being published in several reviews and publications. In the development process of these pilot projects, IAAC collaborates with a network of partners from various disciplines, including leading universities and innovative companies.
The Pavilion of Innovation 2015 in Beyond Building Barcelona, curated by IAAC | Fab Lab Barcelona, presented new ideas and construction paradigms emerging from international excellence in research and pilot projects, forming the basis of future buildings and cities. Novel and reactive materials, advanced digital/robotic manufacturing techniques and responsive environments were the key topics presented, towards shaping the future of the building industry.

2017 - CONSTRUMAT

The twentieth edition of Barcelona Building Construmat, put a particular emphasis on innovation and new technologies. IAAC played a central role in the Future Arena of the fair, where the Institute could showcase its most recent research projects about additive and robotic manufacturing applied to the construction sector. On Site Robotics, the project born from the collaboration between IAAC and Tecnalia with the participation of Noumena, on-site construction of a 3D printed pavilion made with 100% natural materials, which has been completed in only four days.

2016 - IN3DUSTRY

This is an international event, focusing on the current state and future of Additive and Advanced Manufacturing.

The event, co-organised by IAAC Fab City Research Laboratory and Fira Barcelona, is a global hub bringing together all components of the Additive Manufacturing ecosystem to showcase the latest technologies and innovations.

2015 - BEYOND // INNOVATION PAVILION

The Pavilion of Innovation 2015 in Beyond Building Barcelona, curated by IAAC | Fab Lab Barcelona, presented new ideas and construction paradigms emerging from international excellence in research and pilot projects, forming the basis of future buildings and cities. Novel and reactive materials, advanced digital/robotic manufacturing techniques and responsive environments were the key topics presented, towards shaping the future of the building industry.
SPECIAL PROJECTS

LLUM BCN INSTALLATION 2014/2018

2018 - PLAYBALL! // LLUM BCN
Playball is an interactive art light installation that engages a big number of users that play together to create a visual and aural experience. Playball uses light to create interactions between the viewer and installation, and between the viewers themselves.

2017 - BRILLEN EN LA FOSCOR // LLUM BCN
Located in an enclosed patio in the Gothic quarter of Barcelona, the installation, an interactive audiovisual instrument, transforms the space through a musical performance based on citizen participation. The visitor enters the patio space and is invited to play with the strings of light, composing musical melodies based on the citizens’ real time interaction.

2016 - LLUM TAFANERA // LLUM BCN
La Llum Tafanera, The Curious Light, was an interactive kinetic light installation that wanted to make technology more friendly and closer to the public through the simulation of the personality of a star. IAAC once again had the honour of being invited to participate in the Llum BCN Urban Light Festival in Barcelona.

2015 - PLUJA DE LLUM // LLUM BCN
The Llum BCN festival of lights takes place each year in February. For the 2015 edition, IAAC created an illuminated installation that combines art, tradition and technology. The concept of the installation follows a mixture of the elements of the tale of Santa Eulalia, in particular her tears, transforming these into conceptual rain. A rain of light, emanating from translucent vertical elements interacting with sounds and music.

2014 - DATANET // LLUM BCN
For the Llum BCN 2014 in the courtyard of the Museu Frederic Marès in Barcelona, IAAC ‘plants’ DATA NET, a new artificial tree, forming an interactive mesh. The intensity of light of the installation changes, reacting to the location and the density of the visitors through a series of sensors that track peoples’ movement.
Poblejoc, an interactive installation conceived during the Active Public Space workshop, was designed as an Urban Game with the aim of activating public space. Poblejoc was created in the framework of the #Superilla (Super-block) workshop, a pilot test of the Superilla plan for Barcelona, that was developed in the Sant Martí district. The plan aims to close a part of the cities roads to traffic, allowing to use these new pedestrianised areas as public space.

SuperBARRIO is a videogame that boosts participatory design processes. Developed as an open source video game for smartphone and tablets, it is a tool for architects and public entities to engage the citizens in the design of the public space, to educate to sustainability and inclusiveness, and to collect data about the citizens' needs, desires and proposals. SuperBARRIO is a flexible tool that can be applied to different neighborhood. Pilot projects have been developed for the Superilla Pilot Barcelona, and for the Gavoglio area in Genoa, Italy.

Liberty follows the concept of FREEDOM. Knowledge provides freedom and progress; and the power of freedom is expressed through reading. This installation consists of three different trees whose trunks and branches are made of steel, while the leaves are made of books; and the earth made of concrete. Liberty activates a new public space; a shady bench and a new interactive area in the city centre.
Castejón de Monegros has once again hosted the Nowhere Festival, the one-week festival promotes cultural and educational activities focused on self-expression. The Nomad Folding Flax Pavilion, result of the lightweight Bio Composite seminar, was among the installations presented at the event, developed around the structural value of origami shapes.

The first pedestrian, 3D printed bridge in the world was inaugurated on December 14th in the urban park of Castilla-La Mancha in Alcobendas, Madrid. The Institute for Advanced Architecture of Catalonia (IAAC) was in charge of the architectural design of the bridge, which has a total length of 12 meters and a width of 1.75 meters and is printed in micro-reinforced concrete. The 3D printed bridge, which reflects the complexities of nature’s forms, was developed through parametric design, which allows optimising the distribution of materials to minimise the amount of waste by recycling the raw material during manufacture.

Castejón de Monegros has once again hosted the Nowhere Festival, the one-week festival promotes cultural and educational activities focused on self-expression. The Nomad Folding Flax Pavilion, result of the lightweight Bio Composite seminar, was among the installations presented at the event, developed around the structural value of origami shapes.

The Institute for Advanced Architecture of Catalonia (IAAC) was in charge of the architectural design of the bridge, which has a total length of 12 meters and a width of 1.75 meters and is printed in micro-reinforced concrete. The 3D printed bridge, which reflects the complexities of nature’s forms, was developed through parametric design, which allows optimising the distribution of materials to minimise the amount of waste by recycling the raw material during manufacture.

The Institute for Advanced Architecture of Catalonia (IAAC) was in charge of the architectural design of the bridge, which has a total length of 12 meters and a width of 1.75 meters and is printed in micro-reinforced concrete. The 3D printed bridge, which reflects the complexities of nature’s forms, was developed through parametric design, which allows optimising the distribution of materials to minimise the amount of waste by recycling the raw material during manufacture.

The Institute for Advanced Architecture of Catalonia (IAAC) was in charge of the architectural design of the bridge, which has a total length of 12 meters and a width of 1.75 meters and is printed in micro-reinforced concrete. The 3D printed bridge, which reflects the complexities of nature’s forms, was developed through parametric design, which allows optimising the distribution of materials to minimise the amount of waste by recycling the raw material during manufacture.

Pavilion for the FAB10 Symposium (July 2nd to 8th, 2014). Initial design by Margen-Lab, produced by IAAC and collaboratively designed, built, and customized by the Fab Lab Network.

IAAC MAA01, in collaboration with Map13 Architects built a Parametrized Catalan Vault, fruit of a 2 week long workshop in Vallissa Llab. Using digital tools along with traditional century old Catalan masonry techniques, with students seeking to re-engineer, compute, and construct a Vault in the forest. IAAC is also furthered this research investigating in the field of advanced robotic fabrication techniques towards the implementation and autonomation of these complex Catalan vault forms.
EXHIBITIONS 2014/2017

EXHIBITIONS

EXPERIENCE FUTURE CITIES EXHIBITION
IAAC End of Year Exhibition Experience Future Cities, the public event which showcased the best projects of IAAC international researchers. The work displayed had been developed in Institute's Master programmes. Given the multidisciplinary and multiscale nature of the Master's methodology, the exhibition content ranged from experimentations on new materials to scale-up proposals for new cities, using a variety of materials and supports.

AUTO-MÀTIC EXHIBITION
An exhibition that addresses the limits and potentials of generative drawing, emerging from data through mathematical and mechanical operations; raising questions on automation, reproducibility, and the role of the arbitrary or accidents as sources of creative experimentation. The research was developed in the framework of Machinic Protocols, a research line directed by Edouard Cabay, in IAAC's Master in Advanced Architecture.

LIVING IN FUTURE CITIES
The exhibition Living in Future Cities is a product of work developed by the international architectural researchers of IAAC. The work examines issues of the near future and proposes a series of solutions in the era of experience, where technology can aid us to positively define the spaces and cities we live, grow and thrive in.

VENICE BIENNALE
The Institute for Advanced Architecture of Catalonia took part in the 15th Venice Biennale, titled "Reporting From the Front" and curated by Alejandro Aravena, with an interactive installation made in collaboration with the Indian architect Anupama Kundoo. Information Technology has opened up new ways of sharing knowledge, moving towards faster and more inexpensive ways, making knowledge more accessible, and making it easier to gather people around common topics of interest.
Some of the brightest minds in the fields of Sociology, Urban Sciences, Technology and Architecture gathered in Barcelona to discuss the Future of our Cities.

The first edition of the Responsive Cities Symposium, chaired by Areti Markopoulou, with programme chairs Chiara Farinea and Mathilde Marengo, established itself as a major event in the architectural debate.

Fifteen outstanding keynote speakers, fifty-four international panellists and more than 400 visitors animated the two-day gathering, held in Barcelona CaixaForum on the 16th and 17th of September 2016 and followed online by more than 700 spectators.

What is the most important challenge for the future Urbanity? What should the role of technology be in the Future City?

Saskia Sassen, Carlo Ratti, Philippe Rahm, Janet Sanz Cid, Areti Markopoulou, Tomás Diez, Albert Cañigueral, Marina Hallikainen, Lydia Kallipoliti, Maïta Fernández-Armesto, Mar Santamaria, Manuel Gausa, Ethel Barona Pohl and Daniele Quercia were among the international speakers and panellists who met in Barcelona to join the debate about the Urbanism in the Experience Age.

The Symposium was organised by the Institute for Advanced Architecture of Catalonia as one of the main activities carried out under the Knowledge Alliance for Advanced Urbanism – KAAU, the EU co-funded project seeking to promote the innovative education and training that emerging technologies require.
The second edition of the Responsive Cities Symposium, chaired by Areti Markopoulou, with programme responsibles Chiara Farinea and Mathilde Marengo. More than a dozen outstanding keynote speakers, 30 international panelists and more than 400 visitors animated the two-day gathering, held in Barcelona CaixaForum and Smart City Expo on the 13th and 14th of November 2017.

On the first day of the symposium the opening of the APS exhibition “Implementing Technology Towards Active Public Space” aimed to promote the knowledge generated in the framework of the Active Public Space Project. At the show, visitors were able to explore best examples of implementation of innovative technologies for public space activation.

How do we design and inhabit our Public Space? How does it perform? What does it produce? These were some of the questions and discussion topics raised during the roundtables and debates taking place at CaixaForum and Smart City Expo. Through transversal viewpoints, the 2nd edition of the Responsive Cities Symposium combined disciplines such as urban planning, biology, advanced architecture, interaction, participatory technology and even performing arts to respond to the challenge of how cities can shape their public spaces towards more dynamic, productive and active citizen meeting places.

The Symposium was organised by the Institute for Advanced Architecture of Catalonia as one of the main activities carried out under the Knowledge Alliance for Advanced Urbanism – KAAU, the EU co-funded project seeking to promote the innovative education and training that emerging technologies require.
The Fab City Summit 2018 was an invitation to take part in the global shift towards a more sustainable and accessible future for cities and society. Participants to the summit were invited to experience and learn about how to grow the future of cities. The potential that collaboration and disruptive technologies have to create locally productive and globally connected cities was explored across greater Paris; a fertile territory with many initiatives around circular economy, co-living, urban food production and transformative policy.

The bi-annual summit gathers experts and communities interested in circular economy, urban planning, digital fabrication, new business models, civic engagement and sustainable design and production. Fab Lab Barcelona and IAAC were co-producers of the 2018 two week event at the Parc de la Villette and Hotel de Ville, specifically focused on curating the three-day speaker program which included speakers Saskia Sassen, Dave Hakkens and Mayor of Barcelona Ada Colau.
Maker Faire is a gathering of fascinating, curious people who enjoy learning and who love sharing what they make. From engineers, to artists, to scientists, to crafters, Maker Faire is a meeting place for these "makers" to show experiments, projects and innovations.

We call it the Greatest Show (& Tell) on Earth – a friendly showcase of invention, creativity, and resourcefulness. Glimpse the future and get inspired!

Maker Faire is a hands-on visual feast of invention and creativity and a celebration of technology, arts, craftsmanship, science, and the Do-It-Yourself (DIY) culture. It’s for innovative, creative people who like to tinker and love to create, and also for those curious minds who want to see what new and innovative things are just around the corner… and get hands-on!

Maker Faire Barcelona is not just another Maker Faire, or another event in the city, it is the celebration of a new vision for a productive city that a world capital in design, innovation, architecture, urbanism and creativity.

The fifth edition of Maker Faire Barcelona, was an event that aims to bring together Barcelona’s creative and innovation communities, and understand them as part of an ecosystem that holds the potential to transform how we will live, work and play in our cities, through the democratisation of technology.
Since the year 2000, IAAC runs an international lecture programme in which architects and experts from a variety of different disciplines present their work. The lectures are open to the public, making it a high quality cultural activity open to the city of Barcelona.

**2014/2018 LECTURERS**

- Mathis wackernagel
- Neil Harbisson
- Massimiliano Fuxas
- Bjarke Ingels
- Elizabeth Diller
- Bob Sheil
- Laura Andreini
- Li Xiangning
- Izaskun Chinchilla
- Oscar Tomico
- Mitchell Joachim
- Farshid Moussavi
- Giovanna Carnevali
- Rodolphe el-Khoury
- Alberto Diaspro
- Alfredo Brillembourg
- Hubert Klumpner
- Andrew Watts
- Jose Luis de Vicente
- Dave Pigram
- Jelle Feringa
- Aaron Betsky
- Ali Basbous + Luis Fraguada
- Kengo Kuma
- Jan Knippers
LECTURE SERIES

PREVIOUS LECTURERS

Yael Reisner
Manuel Jimenez Garcia
Winy Maas
Benhaz Farahi
Shigeru Ban
Michel Rojkind
Matthias Kohler
Peter Eisenman
Farshid Moussavi
Bjarke Ingels
Peter Cook
Ricardo Bofill
Ben Van Berkel
Gunter Pauli
Enric Ruiz-Geli
Brett Steele
Pepe Ballesteros
Laura Cantarella
Santiago Cirugeda Parejo
Luca Galofaro
Lourdes Garcia Sogo
Adriaan Geuze
Xaveer de Geyer
Toyo Ito
Francisco Jarauta
Young Joon Kim
Kanellis Klaasen
Anne Lacaton
Duncan Lewis
Greg Lynn
Winy Maas
Josep Lluís Mateo
Fernando Menis
Alfredo Payá
Jaime Salazar
Max Sanjulián
Charles Renfro
Amadeu Santacana

Mark Wigley
Yung Ho Chang
ILSA & Andreas Ruby
Jacub Szczesny
Jou Min Lin
Lucy Bullivant
Momoyo Kajima
Manuel Balio + Rosa Rull
Andrés Canovas
Andrés Jaque
Carlos Arroyo
Angel Borrego
Colectivo Zuloark
Ana Salinas
Maria Auxiliadora Galvez
Isabela Wieczorek
Ecosistema Urbano
Claudia Pasquare
Marco Poletto
Bernhard Franken
Sabine Müller
Bostian Vuga
Axel Kilian
Benedetta Tagliabue
Alejandro Gutierrez
Juan Herreros
Winka Dubbeldam
Hanif Kara
Neil Leach
Minsuk Cho
Alfonso Vegara
Behrokh Khoshnevis
Stephen Wolfman
Caterina Tiazoldi
Jaime Lerner
Massimiliano Fuksas
Rajendra Kumar
Ariadna Alvarez Garreta

Manuel de Landa
Manuel Gausa
John Palmesino
Maurizio Carta
Philippe Rahm
Eva Franch
Benjamin Barber
Francis Soler
Maria Sisternas
Mosé Ricci
Massimo Banzi
Simon Schleicher
Ronen Kadushin
Ethel Baraona
Hernan Diaz Alonso
Luca Galofaro
Maria Airola
Mette Rasmgaard Thompsen
David Mocarski
Neil Leach
Richard Blythe
Ben Flanner
Marco Poletto
Anupama Kundoo
Andrii Goldack
George Jerominidis
Eric Owen Moss

and many others…
BOARD OF TRUSTEES
President – Oriol Soler i Castany
Lucas Cappelli
Lluís-Xavier Comerón Graupera
Tomás Diez
Vicente Guallart
Daniel Ibañez
Areti Markopoulou
Willy Müller
Andreu Mas-Colell
Secretary – Àngel Fernández

SCIENTIFIC COMMITTEE
Nader Tehrani
Juan Herreros
Neil Gershfenfeld
Vicente Guallart
Hanif Kara
Willy Müller
Manuel Gausa
Aaron Betsky
Hugh Whitehead
Nikos A. Salingaros
Artur Serra
Salvador Rueda

DIRECTIVE BOARD
Silvia Brandi
Tomás Diez
Vicente Guallart
Areti Markopoulou
Willy Müller
Josep Maria Romero

ACADEMIC TEAM
ACADEMIC DIRECTOR - Areti Markopoulou
HEAD OF STUDIES - Mathilde Marengo
ACADEMIC COORDINATOR - Marco Ingrassia
MAA COORDINATOR - Valentina Toscano
MACT COORDINATOR - Alex Mademochoritis
MRAC / GSS COORDINATOR - Laura Ruggeri
MDEF COORDINATOR - Chiara Dall’Olio
MAEB COORDINATOR - Marziah Zad
ACADEMIC SECRETARY - Pilar Xiqués
ADMISSIONS COORDINATOR - Egle Muzikeviciute

COMMUNICATIONS
COMMUNICATIONS DIRECTOR – Silvia Brandi
DIRECTOR OF MARKETING, COMMUNICATIONS & PR - Layla Serra
COMMUNICATIONS MANAGER - Alice Puleo
MARKETING MANAGER - Chris Rheeston
COMMUNICATIONS ASSISTANT - Gerard Fernández
LEAD VISUAL DESIGNER - Lina Salamanca
ADVANCED ARCHITECTURE GROUP

ACADEMIC DIRECTOR - Areti Markopoulou
HEAD OF STUDIES - Mathilde Marengo
HEAD OF EUROPEAN PROJECTS - Chiara Farinea
MRAC DIRECTOR / OTF DIRECTOR - Alexandre Dubor
OTF DIRECTOR / MAA SENIOR FACULTY - Edouard Cabay
MRAC DIRECTOR / GSS DIRECTOR - Aldo Sollazzo
HEAD OF THEORY & KNOWLEDGE / IAAC BITS DIRECTOR - Manuel Gausa
ACADEMIC COORDINATOR - Marco Ingriassa
ADVANCED INTERACTION DIRECTOR - Luis Fraguada
COMPUTATIONAL EXPERT - Rodrigo Aguirre
MCT COORDINATOR - Alex Mademochoritis
MAA COORDINATOR - Valentina Toscano
MRAC COORDINATOR - Laura Ruggeri
FABRICATION & COMPUTATIONAL DESIGN EXPERT - Raimund Krenmueller
MULTIMEDIA DESIGN EXPERT - Cristian Rizzuti
EU PROJECTS ASSISTANT - Federica Ciccone
EU PROJECTS COMPUTATION AND FABRICATION EXPERT - Mohamad Atab
FABRICATION EXPERT - Ricardo Mayor
FABRICATION EXPERT - Lana Awad
FABRICATION ASSISTANT - Sujal Kodamadanchirayil Suresh
ACADEMIC SECRETARY - Pilar Xiqués
ADMISSIONS COORDINATOR - Egle Muzekeviciute
MAA FACULTY - David Andres Leon
PHD CANDIDATE, INNOCHAIN - Stephanie Chaltel
IAAC BITS EDITORIAL COORDINATOR - Chiara Cesareo
MRAC FACULTY ASSISTANCE / MAA OTF FABRICATION EXPERT - Kunaljit Chadha
BIG DATA RESEARCH - Irene Nete

VALLDAURA LABS

DIRECTOR VALLDAURA LABS AND MAEB DIRECTOR - Vicente Guallart
MAEB DIRECTOR - Daniel Ibañez
OPERATIONS MANAGER - Laia Pfarré
URBANIZATION.ORG COORDINATOR - Honorata Grzesikowska
FAB MANAGER - Nicolò Gneccchi
MAEB COORDINATOR - Marziah Zad
FOOD LAB MANAGER - Jordi Ubach

BARCELONA URBAN SCIENCES LAB

DIRECTOR, BARCELONA URBAN SCIENCES LAB - Willy Müller
RESEARCHER COORDINATOR - Jordi Vivaldi

FAB CITY RESEARCH LAB

FAB LAB BCN DIRECTOR, FAB CITY GLOBAL INSTIGATOR - Tomas Diez
FAB LAB BCN COORDINATOR, FAB ACADEMY GLOBAL COORDINATOR - Luciana Asinari
RESEARCHER, SMART CITIZEN PROJECT MANAGER - Guillem Campodron
RESEARCH COORDINATION AND SUPPORT MANAGER - Massimo Menichelli
RESEARCHER, ROMI PROJECT MANAGER - Jonathan Minchin
DSISCALE PROJECT MANAGER, PRODUCTION MANAGER - Matias Verderau
EU PROJECTS COORDINATOR - Alessandra Schmidt
FAB LAB BCN COMMUNICATIONS - Kate Armstrong
COMMUNITY MANAGEMENT - Lisa Herzog & Hannele Teras
GRAPHIC DESIGN & CONTENT CREATION - Marcel Rodriguez & Manuela Reyes
FLU COORDINATOR, FAB ACADEMY GURU - Santiago Fuentemilla
INDUSTRIAL DESIGNER & FABRICATION EXPERT - Ingi Freyr Gudjónsson
FAB TEXTILES COORDINATOR, FABRICADEMY GURU - Anastasia Pistofidou
MDEF COORDINATION, FAB ACADEMY GLOBAL ASSISTANT - Chiara Dall'Olio
F/AB LAB MANAGER - Mikel Ulober
FAB LAB ASSISTANT - Ioannis Romanos
HARDWARE & SOFTWARE DEVELOPER - Victor Barberan
SOFTWARE DEVELOPER - Viktor Šmari

ADMINISTRATIVE DEPARTMENT

GENERAL MANAGER - Silvia Brandi
FINANCIAL DIRECTOR - Josep Maria Romero
SECRETARY - Ana Bosch
HEAD OF ADMINISTRATION AND ACCOUNTING - Daniel Sallés
ADMINISTRATION AND ACCOUNTANCY - Vanesa Buenosviveros
EU MANAGER - Cristina Gonzalez
RECEPTIONIST - Pepi Escudero