

**Iaac**

Institute for  
advanced  
architecture  
of Catalonia

BARCELONA



MASTER IN

**ADVANCED**

**INTERACTION**

BARCELONA 2017 - 2018

# CONTEXT

The Institute for Advanced Architecture of Catalonia has evolved from an institution for questioning architecture and territory, to a place where new architectures are conceived. There is a space between the built environment, the territories we inhabit, and the technology we confront, that nowadays needs to be addressed. Therefore, after the successful pilot-program in 2008, the Institute officially launches the Master in Advanced Interaction, as a natural evolution of the domains it is looking to further explore.

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 Master in Advanced Interaction questions the limits of this contemporary technological phe-

nomena and prepares candidates to be the key actors capable of making connections between disciplines where none were possible or even considered before.

Barcelona, the city that has historically been recognized as an international benchmark for design, architecture and urbanism, now stands as the world capital of the mobile and technology. Named as the European Capital of Innovation in 2014, Barcelona is creating a multi-disciplinary ecosystem of institutes, companies and entrepreneurs that favors cross-industry collaboration in the development of innovative solutions for the challenges of the XXI century's habitability.

IAAC is based in the 22@Barcelona district, an international reference of innovation and technology district. In 22@ district, cutting edge companies, universities, research, training and transfer of technology centers, that constitute the system of innovation are integrated with different agents of promotion that facilitate interaction and communication among them.

Barcelona is an urban laboratory of research and innovation in digital technologies of communication and interaction. This urban hub is supporting entrepreneurs in the area, create innovation clusters, looks for talent and serves as a model for developing solutions that could be exported in the world.



PHYSICAL COMPUTING - HANGING ANALOG  
Maria-Klaira Chartsia, Utsav Mathur, Ingrid Ramirez, Connor Stevens and Lily Tayefi



MAA 2015-16 - Advanced Interaction  
INTIMACY IN THE NEW ERA - Lina Salamanca



# MASTER IN ADVANCED INTERACTION

The Master in Advanced Interaction is a unique opportunity for Designers, Visual and Performing Artists, Choreographers, Dancers, Interaction Designers, VJs and DJs, Sound Artists, Scenographers, and profiles from related backgrounds to explore creative uses of technology for experimental and practical purposes. The course is aimed at developing and exhibiting projects which define meaningful interaction through novel technological solutions, performances, installations a series of installations and performances. The ambition of these projects go well beyond digital media and are communicated through software and hardware development, solid theoretical foundations, and prototypes completed in laaC's digital fabrication laboratory. The theoretical basis of the course is to question how current technology can augment the agency and impact of all kinds of interactions around us. Our learning-by-doing research integrates methods used in design, programming

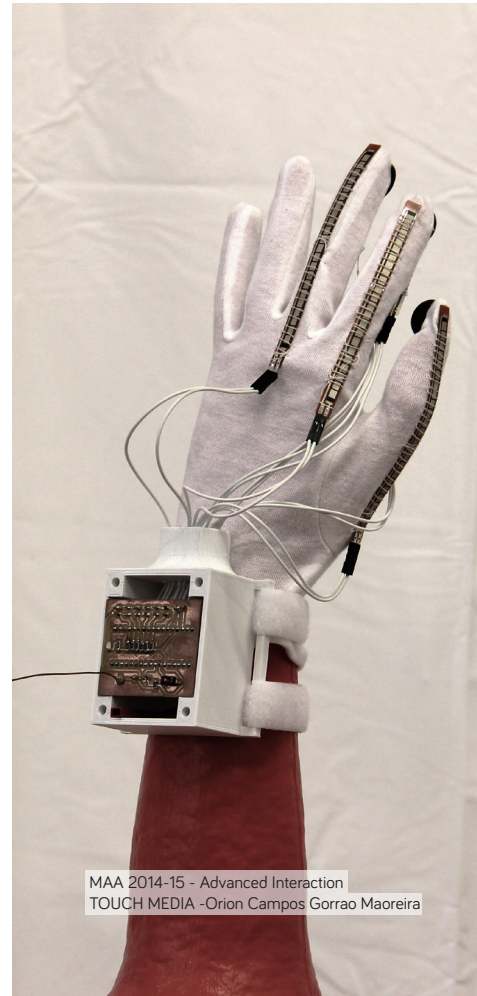
and social sciences to produce projects prototypes and products that will define the outer limits of what is possible to do imaginatively with technology today. Wearables, artificial intelligence, human-machine interaction and augmented environments are some of the key topics which form the agenda of the Master of Advanced Interaction. Students who attend the Master in Advanced Interaction join an international group, including faculty members, researchers and lecturers investigating critical issues facing modern society with the aim of developing the skills necessary to implement practical solutions in diverse professional environments.



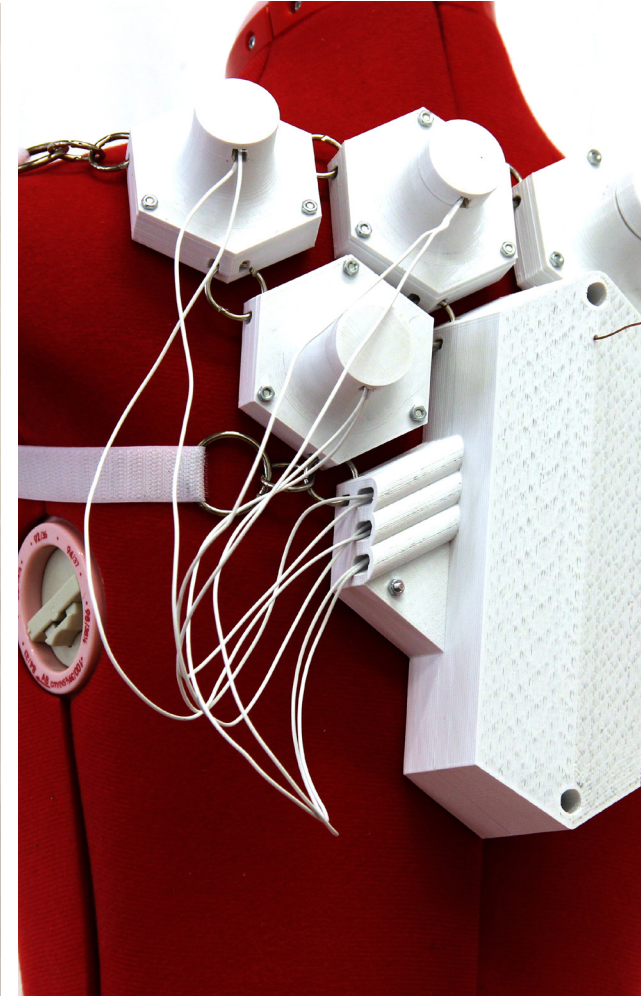
NEW INTERFACES  
Sebastian Munera, Utsav Mathur



MAA 2014-15 - Advanced Interaction  
MEGAWATTSMEGAWASTE -Mahdi Najafi



MAA 2014-15 - Advanced Interaction  
TOUCH MEDIA -Orion Campos Gorrao Maoreira



# PROGRAM ORGANIZATION

The program objectives are to build knowledge in the field of interactivity through prototypes, installations, exhibitions, and publications. Expose students to new methods and digital tools related to the exploration of interactivity. And prepare students for the relevant professional avenues related to interactive arts, user experience, and object agency.

While the primary activities of the course are in Barcelona, Spain, we look to international events to form part of our discourse and inspiration. From the myriad of international interaction festivals, to one in a lifetime events, each year there are unique opportunities for visiting relevant events and to experience new frontiers in interaction.

Seminar sessions are designed to transmit specific domains of knowledge from relevant experts involved in practice and academia. Seminars will include technical sessions involving software and software development, physical computing tutorials, and most importantly, applied theory sessions where a key topic is chosen which integrates acquired knowledge with theoretical concepts in

interaction. The objective of the seminar sessions is to provide a comprehensive knowledge base to support the student's ambitions in the research studios.

Candidates for the Master of Advanced Interaction have a deep curiosity to explore the creative limits afforded by current technologies, have prior academic or professional experience with interactive arts and a desire to combine this experience

The Master of Advanced Interaction is organized around three terms, beginning in October and concluding in June of the subsequent year. Each term includes a Research Studio and a series of Seminars and related events.

- IS. INTERACTIVE STUDIO
- IT. INTERACTION TOOLS AND METHODS
- PC. PHYSICAL COMPUTING
- AP. APPLIED THEORY
- LS. LECTURE SERIES
- RT. RESEARCH TRIP



## LECTURES

Throughout the academic year we invite artists and practitioners in interaction arts and related fields to talk about their work. This is an opportunity to connect our students with the current state of the art as practiced professionally, but also a means to expand our local and international community.

### Previous Lecturers and Instructors:

Xavi Gonzáles, Sietske Klooster, Alfonso Borragán, Eva Deckers, Marina Toeters, Christopher Grant, Tomas Diez, Angelo Palma, José Luis de Vicente, Alex Posada, Eloi Maduell, Héctor Sánchez-Pajares, Cristobal Castilla, José Hernández, Maximo Castagno, Santi Vilanova, Sergi Martinez, Nuria Diaz, Caroline Hummels, Julius Popp, Nicholas Negroponte, Roberta Bosco, Ethel Baraona, Behnaz Farahi, Elisabeth Plantada, Eunjeong Jeon, Martijn ten Bhomer, Kristi Kuusk, Oscar Tomico, Marina Castan, Marcel·lí Antúnez Roca

## EVENTS

The primary means to interface with the local and international community will be through events such as exhibitions, installations, and performances. Participants in the Master of Advanced Interaction will produce projects which will be demonstrated through such events both in Barcelona and in international locations.

### Previous Events:

Llum BCN 2014-2016  
Sonar 2016  
Sonar 2013

## COLLABORATIONS

Previous Collaborations:  
Department of Industrial Design at the Eindhoven University of Technology  
Higher School of Design (ESDi)  
Fundació del Disseny Tèxtil (FUNDIT)  
Bywire.net  
Sietske Klooster

## EU PROJECTS

Previous / Ongoing EU Projects:  
Active Public Space  
<http://activepublicspace.org/>,  
European Art Science technology Network  
<http://www.eastn.eu/>

# PROGRAM ORGANIZATION

## BOOTCAMP (02 ECTS CREDITS)

The Advanced Interaction Boot Camp is a one week workshop in IaaC's Valldaura Labs. For one week we will address the ambitions of the program and the new Candidates through a series of discussions, presentations, technical sessions, and projects making full use of this unique location.

## FIRST TERM (20 ECTS CREDITS)

The first term is an intense introduction to a broad range of tools and techniques relevant to the Master of Advanced Interaction. Candidates will not only learn new skills, they will also apply them in the Interactive Agency Studio, resulting in a complete project. The physical Computing seminar will introduce some of the hardware concepts which will be utilized throughout the course, as well as the means by which they will be programmed. The interaction tools seminar will focus on software based concepts for interaction such as computer vision and augmented reality.

### COURSES AND CREDITS

IS.1 | INTRODUCTORY RESEARCH STUDIO  
Interactive Agency (8 ECTS credits)

IT.1 | INTRODUCTION TO PROGRAMMING  
Computer Vision (6 ECTS credits)

PC.1 | INTRODUCTION TO PHYSICAL  
COMPUTING (6 ECTS credits)

## SECOND TERM (20 ECTS CREDITS)

The second term builds upon the introductory seminars and studios by expanding the focus on spatial interventions. This requires further development of conceptual approaches to embedding agency into a spatial experience through communication protocols, localized sensing, light and audio usage, and the physical actuation of mechanisms such as motors and relays. The careful consideration of data as a medium will also play an important role in the research projects undertaken in the Interactive Space studio.

### COURSES AND CREDITS

IS.2 | RESEARCH STUDIO  
Interactive Space (9 ECTS credits)

IT.2 | INTERACTION TOOLS AND METHODS  
Interop (3 ECTS credits)

PC.2 | PHYSICAL COMPUTING  
Making Things Talk (3 ECTS credits)

AP.2 | APPLIED THEORY  
(4 ECTS credits)

LS.1 | LECTURE SERIES  
(1 ECTS credits)

## THIRD TERM (20 ECTS CREDITS)

The third research studio addresses the production and conceptual challenges of a performance. Here, performance is used in a broad manner, allowing the students the freedom to propose projects which challenge the notion of interaction and performance. Projects have the opportunity to explore various modes of agency, including performing with digital systems or robots, robots as performance partners, and audience participation for augmenting performance.

### COURSES AND CREDITS

IS.3 | INTERACTIVE STUDIO  
Interactive Performance (9 ECTS credits)

IT.3 | INTERACTION TOOLS AND METHODS  
(3 ECTS credits)

PC.3 | PHYSICAL COMPUTING  
Wearables (3 ECTS credits)

AP.3 | APPLIED THEORY  
(5 ECTS credits)

LS.2 | LECTURE SERIES  
(1 ECTS credits)

*Please note: The distribution of students for the Research Studios and Seminars of the Second Term is done according to their preferences and the obtained grades acquired in the MAI First Term.*

## FINAL EXHIBITION (12 ECTS CREDITS)

The Final Exhibition will be the culmination of the Master of Advanced Interaction. Candidates in the course will use this as their platform for demonstrating a critical work pushing the limits of Interaction. Through this exhibition we have the opportunity to redefine Interaction as we know it by inviting the community to participate. The design of the exhibition experience will be addressed as well as the proper framing of each Candidate's final project.

## LECTURE SERIES (1 ECTS CREDITS)

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

*Please note: The distribution of students for the Elective Seminars is done according to their preferences and grades acquired in the First and Second Term.*



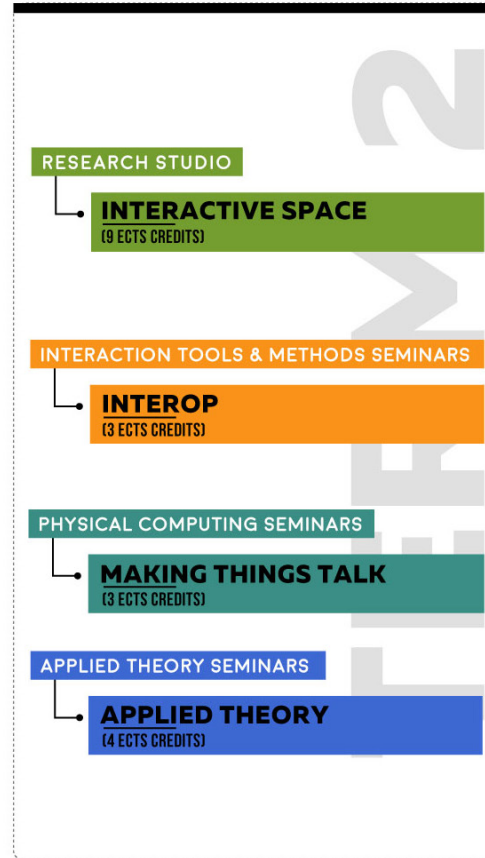
# PROGRAM

OCTOBER - JUNE

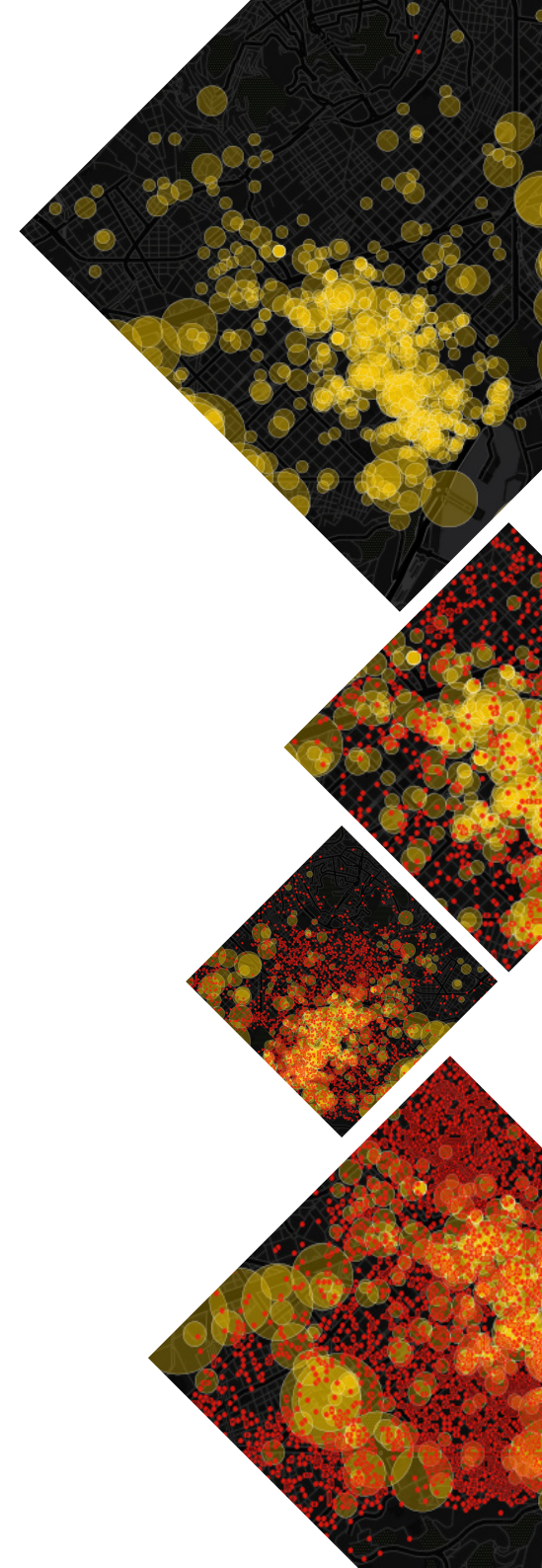
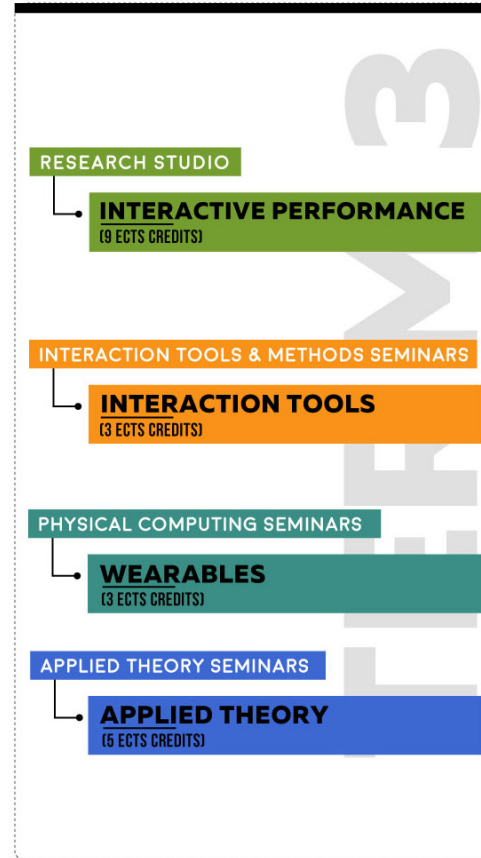
## TERM 1



## TERM 2



## TERM 3



# TUITION FEES

## TUITION FOR STUDENTS ATTENDING MAI (75 ECTS: 1 YEAR)

Tuition for the year 2017/2018 is 16,000€. The selected candidates must send to the Institute a scanned proof of a down payment of 2,500€ to confirm participation, maximum 4 weeks after their acceptance. The remaining part of the tuition fee (13,500€) may be paid either in one or two intallments, 60% (8,100€), before September 1st, 2017 and 40% (5,400€) before December 1st, 2017.

All payments of the selected program must be paid by bank transfer only to:

Bank: Santander  
Agency: 6784  
IBAN - ES55 0049 6784 3226 1615 5632  
SWIFT - BSCHEMXX  
Holder : Institut d'Arquitectura Avançada de Catalunya.

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.

# RESEARCH STUDIOS

The Research Studios are the main part of the Master of Advanced Interaction. They focus on building technical, aesthetic and conceptual skills by working on real-life situations. Each studio has a research agenda and students will develop individual portfolio projects around the main brief of the studio. Special emphasis will be put on the relevance of the project for society. Guest critics will be invited to assess work, and regular input from students in the studio is encouraged and required. By the end of the studio, students will have a portfolio of projects and a working prototype of a thesis project. Projects will be part of an exhibit at the end of the year.

## INTERACTIVE AGENCY (08 ECTS CREDITS)

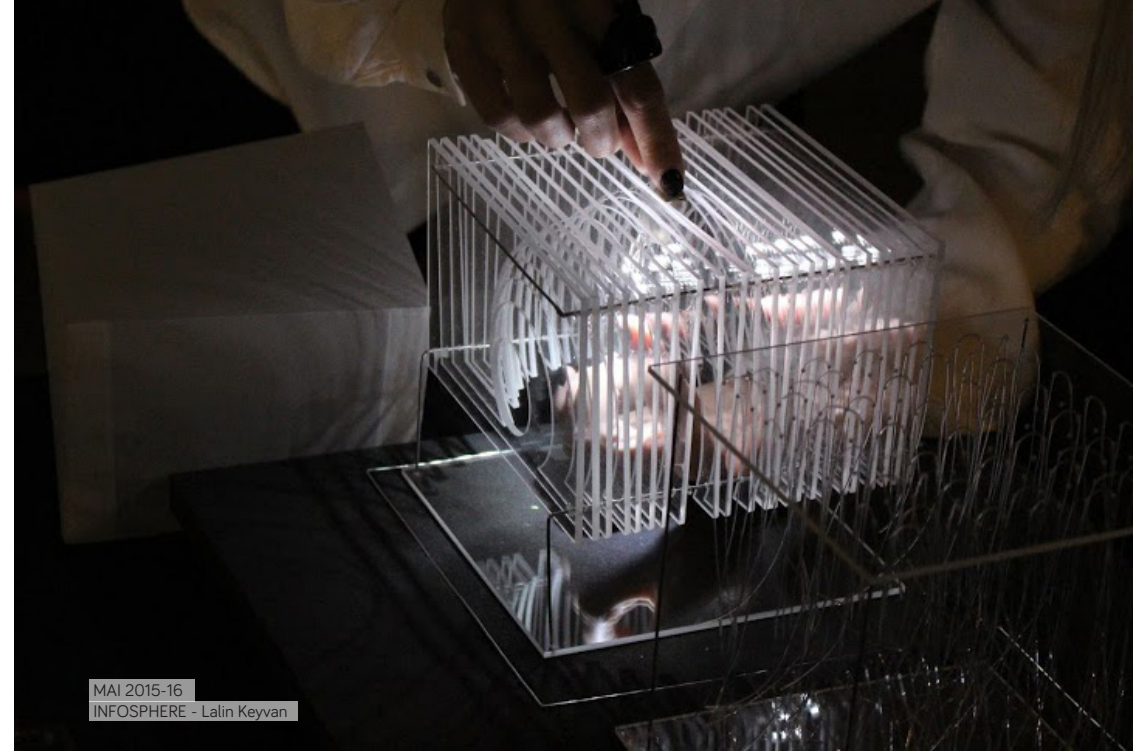
The introductory studio serves to question the agency in interaction. Students will propose and complete projects which combine core skills and contemporary theoretical discourse by applying techniques acquired in the seminar sessions. Key to this studio is the application of Computer Vision as a medium which allows interaction to pass between human and digital actors alike. The application of computer vision in the studio will extend into Virtual and Augmented Reality for mixed reality experiences.

## INTERACTIVE SPACE (09 ECTS CREDITS)

The second research studio expands the scope and scale of the projects to encompass a spatial domain, engaging both the technical capabilities already learned as well as the opportunities afforded by conceiving of a space capable of interacting to passive and active forces acting within. Techniques such as interactive projection mapping and proximity sensing expand the potential for projects to explore novel means to employ light and sound to create immersive spatial experiences. Data gathering, manipulation, and interchange will play a key role during the studio and will include the opportunity to use data from various input sources.

## INTERACTIVE PERFORMANCE (09 ECTS CREDITS)

The third research studio addresses the production and conceptual challenges of a performance. Here, performance is used in a broad manner, allowing the students the freedom to propose projects which challenge the notion of interaction and performance. Projects have the opportunity to explore various modes of agency, including performing with digital systems or robots, robots as performance partners, and audience participation for augmenting performance.



MAI 2015-16  
INFOSPHERE - Lalin Keyvan



MAA 2014-15 - ADVANCED INTERACTION  
THE DESOLATE TRANSIT - Stephanie Farah - Maulidianti Wulansari



# INTERACTION TOOLS AND METHODS SEMINARS

## FIRST TERM: INTRODUCTION TO PROGRAMMING (06 ECTS CREDITS)

Computer Vision - The first Interaction Tools seminar will focus on surveying the digital tools available for exploiting computer vision systems. Techniques include simple image processing algorithms to more complex operations such as blob and feature detection. These techniques are intimately tied to certain hardware setups which will also be addressed such as basic cameras, Kinects and other depth sensing hardware, and head mounted displays for virtual and augmented reality.

## SECOND TERM: INTEROP (03 ECTS CREDITS)

Interop - The second Interaction Tools seminar looks at systems which allow the orchestration of data collection, manipulation, and transfer. Such systems are crucial when coordinating mixed media and data such as live camera feeds, sensor output, real-time web data, etc. Max/MSP and similar visual programming languages provide interaction developers a means by which to create customizable canvases where all of this data can interact and be used to actuate physical mechanisms for various intents.

## THIRD TERM (03 ECTS CREDITS)

The third Interaction Tools seminar digs deeper into interaction development looking at innovating platforms such as Cinder, Openframeworks, and Three.js + Javascript for the development of customized applications for interaction. We will also look at the potential for using industrial robots in performances.



URBAN INTERFACE GRAPHENE  
Ingrid Ramirez - Chenthur Raaghav



NEW INTERFACES AR/VR  
Lina Salamanca - Lalin Keyvan



# PHYSICAL COMPUTING SEMINARS

Physical computing is about creating a conversation between the physical world and the virtual world of the computer, is about prototyping with electronics, turning sensors, actuators and microcontrollers into materials for designers and artists. Much of the challenge of physical computing is converting various forms of energy, such as light, heat, or pressure, into the electronic energy that a computer can understand. This course is presented as the starting point to learn the theoretical foundations of Physical computing techniques. Through a theoretical and practical methodology, based on Laboratory examples, students can learn to develop simple projects. It involves the design of interactive objects that can communicate with humans using sensors and actuators controlled by a behavior implemented as software running inside a microcontroller.

## FIRST TERM: INTRODUCTION TO PHYSICAL COMPUTING (06 ECTS CREDITS)

The first physical computing seminar will use Arduino as the main technology for the course, since it is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software for the creation of interactive objects or environments.

## SECOND TERM: MAKING THINGS (03 ECTS CREDITS)

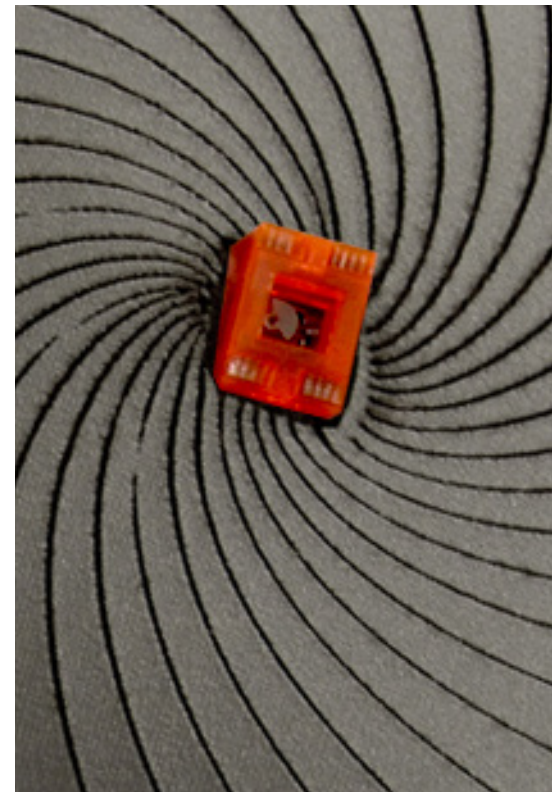
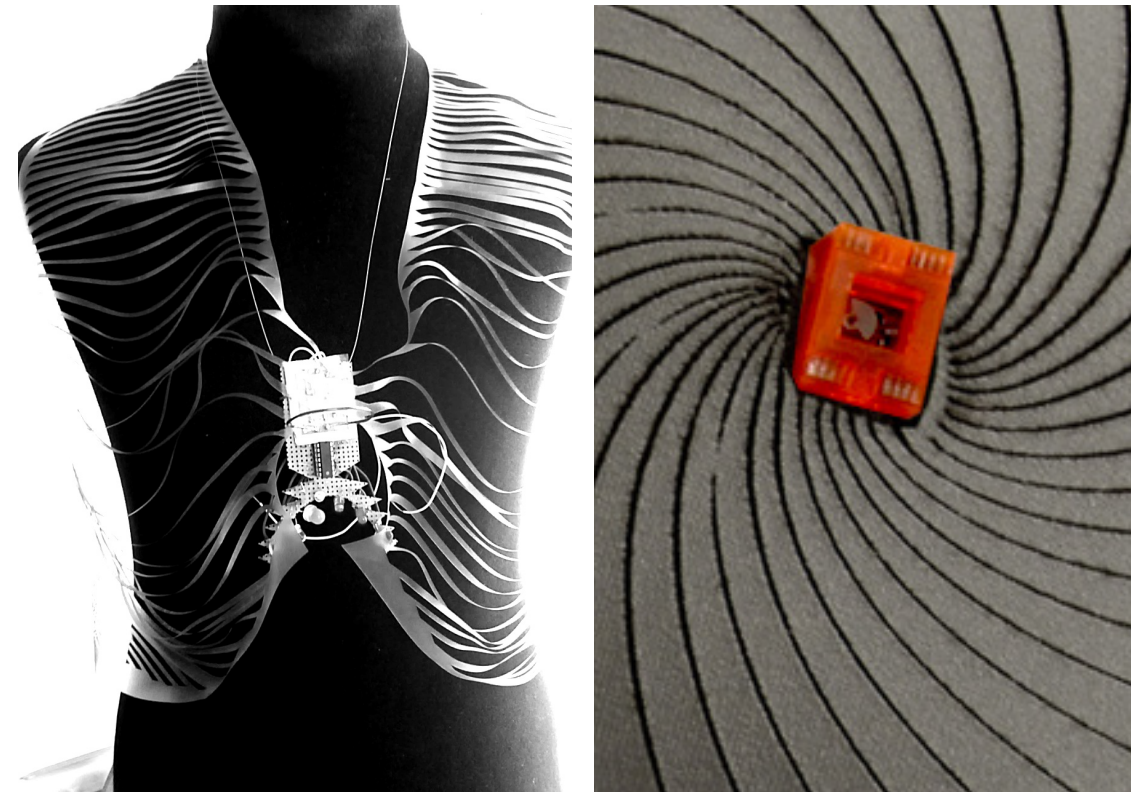
Making things Talk - The second seminar on Physical Computing focuses on the technicalities and design of communication protocols between devices, in other words, making things talk. Special emphasis will be placed on evolving from serial (cable) based communication protocols to wireless standards such as WiFi, Bluetooth, and GPRS. The seminar will also cover the technicalities in dealing with different device topologies, from one device to another, to mesh networks and other informal configurations.

## THIRD TERM: WEARABLES (03 ECTS CREDITS)

Wearables - The third Physical Computing seminar combines the knowledge of the previous seminars and applies it on the scale of wearable technology. Wearables seminar has the added challenge of dealing with the complexities of the human body. The seminar will cover issues dealing with battery powered devices capable of sensing and actuating with alternative input systems.



MAA 2013-14  
Sebastian Alvarado Grugiel



# APPLIED THEORY SEMINARS

SECOND TERM (04 ECTS CREDITS)

THIRD TERM (05 ECTS CREDITS)

The Applied Theory seminar provides an opportunity to connect with an invited expert in the field of Interaction. Here, the expert will share insights into their research, culminating in workshops where students can experiment with these concepts to produce new research avenues.





FACULTY

# FACULTY



**ARETI  
MARKOPOULOU**  
ACADEMIC DIRECTOR

Arete Markopoulou is a Greek architect, educator and urban technologist working on the intersection between architecture and digital technologies. She is currently the Academic Director at IAAC in Barcelona, one of the leading international platforms for education. Arete is also co-editor of the Urban Next, a global network focused on rethinking architecture through the contemporary urban milieu, and co-founder of StudioP52, a collective arts & tech gallery. Her research and practice design explores new architectural models that incorporate the application of ICTs, Material Intelligence and Fabrication, allowing built and public space to dynamically adapt to behavioural and environmental changes over time. She has been developing urban projects and guidelines with the City Council of Barcelona and the Municipal Institute of Information for the implementation of ICT in the public space and the implementation of renewable Energy technologies in buildings and open spaces. Arete has also served as a curator of international exhibitions such as the Pavilion of Innovation (Construmat 2015), MyVeryOwnCity (World Bank 2011) and Fabrication Laboratory (Barcelona Design Museum 2010). She holds a Bachelor in Architecture & Engineering from DUTH - Democritus University of Thrace, an MArch from IAAC, and a Fab Academy diploma on Digital Fabrication offered by the Fab Lab Network. She is currently a PhD candidate in the UPC, researching the topic of Responsive Environments and Smart Cities.



**LUIS  
FRAGUADA**  
MAI\_MASTER IN ADVANCED  
INTERACTION DIRECTOR

Luis E. Fraguada investigates critical issues in modern society through various modes, including computer programming, digital fabrication, and hardware development. Luis is currently member of the Faculty of Architecture at laaC in Barcelona, Spain as Lead Professor of the Advanced Interaction Research Studio. Luis joined Built By Associative Data as an associate and the Director of the Barcelona office in 2010. His time there is focused on the research, collection, generation, and classification of relevant data and strategies which are utilized to guide and formalize project decisions. This work also includes creating custom computational tools for clients while broadening the scope of the office into fashion, product design, and gastronomy. Luis is also the Editor and chief designer for Robots in Gastronomy Group, a foundation focusing on the application of digital tools and robotics in gastronomy. Luis has created the Food Form 1, a 3D Food Printer which has been exhibited at the Istanbul Design Biennial, Salone di Mobile in Milan, and at the Przemiany Festival in Warsaw. Recently, Luis, along with Elizabeth Bigger, have won the Jury Prize in the 17th International Symposium on Wearable Computers (ISWC) for their work on the Lume Collection, a line of garments that can be controlled via a smartphone application. They also won the Jury Prize in Fibre Arts at the 20th ISWC for their work on Programmable Plaid - a technique for creating garments with embedded fibre optics.



**KLAUS  
OBERMAIER**  
MAI\_MASTER IN ADVANCED  
INTERACTION DIRECTOR

Since more than two decades media-artist, director, choreographer and composer Klaus Obermaier creates innovative works with new media in performing arts, music and installations, highly acclaimed by critics and audience. His inter-media performances and artworks are shown at festivals and theaters throughout Europe, Asia, North and South America and Australia. He worked with dancers of the Nederlands Dans Theater, Chris Haring, Robert Tannion (DV8), Desiree Kongerød (S.O.A.P. Dance Theatre Frankfurt). He composed for ensembles like Kronos Quartet, German Chamber Philharmonics, Art Ensemble of Chicago, Balanescu Quartet, among others. Since 2006 he is visiting professor at the University IUAV of Venice/Italy, since 2013 also at Babes-Bolyai University in Cluj-Napoca/Romania teaching interactive arts and performances. In 2005 and 2008 he taught as an adjunct professor for composition at the Webster University Vienna. In 2010 and 2011 he held courses for choreography and new media at the Accademia Nazionale di Danza di Roma. From 2006 to 2014 he was jury member of the international choreography competition 'no ballet' in Ludwigshafen/Rhein, Germany. He gives lectures at international universities and institutions. He lives in Vienna, Barcelona and Venice.



**MATHILDE  
MARENGO**  
ACADEMIC COORDINATOR

Mathilde Marengo, PhD Architect and Urbanist, graduated cum laude in 2010 from the Faculty of Architecture in Genoa. During her academic career she collaborated in several research projects investigating territorial and contemporary urban transformations such as 'LUNGOILMARE' and "The Eco\_University Genoa Project" with Università di Genova, Technische Universität München; as well as the Inter-University Research team for the PRIN 2010-2011 managed by Ministry of Education, University and Research (Ministero dell'Università, dell'Istruzione e della Ricerca) RECYCLE research project, focusing on urban recycling as the generator for new infrastructure and creativity in urban contexts. She won a research grant co-financed by Compagnia di San Paolo for the "Atlante Med-Net" project, and in support for the development of her PhD research, developed both at the PhD School of Architecture and Design in Genoa, and the Universitat Politècnica Catalunya. She obtained her International PhD title in April 2014, with "Multi City Coast. The evolving forms and structures of the Mediterranean multi-city. New models of urban thinking and perspective." Since 2012 she is enrolled in the certified chamber of architects in Genoa. From 2013 to 2015 she was in charge of Communication & Publications at IAAC, and in late 2015 moved back into the Academic field of the Institute as Academic Coordinator, as well as being a PhD Supervisor as part of the InnoChain EU research project.

# FACULTY



**MARTINA  
MENEGON**

MAI\_INSTRUCTOR

Martina Menegon (1988, Italy) is a new media artist, programmer and educator. Her work deals with the instability and ephemerality of the human body as well as the alienation from physicality in today's digital age, questioning the gap between real and virtual, flesh and data.

Since 2010 she also works together with Stefano D'Alessio creating interactive performances and installations.

With a degree in Visual and Performing Art at IUAV University of Venice and in Transmedial Arts at The University for Applied Arts of Vienna, since 2010 she is teaching assistant of at the IUAV University, where she teaches multimedia tools for interactive arts with Klaus Obermaier, artist she regularly collaborates with as programmer and tech/artistic assistant. She is also lecturing at the Art University of Linz and at the University of Applied Art in Vienna.

Martina Menegon currently lives and work in Vienna.



**STEFANO  
D'ALESSIO**

MAI\_INSTRUCTOR

Stefano D'Alessio (1987 Italy) is a New Media artist and composer, lives and works in Vienna (Austria). He creates interactive performances and installations, combining visuals, sound, physical computing and performance through programming.

His research addresses the digitization of the human in new technologies, virtual representations of the "real" and the distortions and perceptive amplifications caused by them. His work involves the human body as a subject for analyzing, coding, and decoding processes of the real/physical, into digital/abstract, questioning the ephemeral limits between machine and body, artificial intelligence and consciousness.

With a degree in Visual Art and Theatre at the IUAV University of Venice, Stefano D'Alessio is regularly teaching new media for interactive arts with Klaus Obermaier, at bachelor, master, and post-graduate master courses at the IUAV University and at the Linz University of Arts.

Since 2010 he regularly collaborates with Martina Menegon and Klaus Obermaier on different art projects, furthermore he realized music and interactive visuals for various artists, musicians, choreographers and theatre directors.



**CARLOS  
GOMEZ**

MAI\_LLECTURER - INSTRUCTOR

Professor of sound art and sound for interactive systems in different institutions in Barcelona.

Director of the Orquestra del Caos and Sonoscop: archive and research platform, and Zeppelin Sound Art Festival. The Orquestra del Caos is a group currently associated with the Centre de Cultura Contemporània de Barcelona.

His current work is focused on sound installations, electro-acoustic composition, research around the soundscape and the development of platforms for sound diffusion in space, recurring themes in his work as a teacher and mentor projects postgraduate research in interactive design and digital art.



**GUILLEM  
CAMPRODÓN**

MAI\_LLECTURER - INSTRUCTOR

Guillem Camprodón is an interaction designer working on the intersection between the Internet of Things and Digital Fabrication. His wide knowledge on internet technologies and his training as a product designer makes him an expert on developing Internet of Things projects. He currently holds a researcher position at the Institute for Advanced Architecture of Catalonia (IAAC) and Fab Lab Barcelona working for companies such Endesa or Cisco. He is also a regular advisor on many projects as a tangible interaction expert and he teaches regularly workshops on open-source electronics and programming for Architects and Designers. He is one of the core members of the Smart Citizen project, a global open-source environmental monitoring platform.



# FACULTY



**ROMÁN  
TORRE SANCHEZ**  
MAL\_INSTRUCTOR-LECTURER

Román Torre Sánchez (Asturias, 1978), has worked conceptualizing, producing, and collaborating in visual and interactive productions of all sizes, from small devices to art installations or medium scale scenography, through great visual productions on stage, such as dance or opera. Román has presented work nationally in places such as LABoral art center in Gijón, Spain (Lifefloor 2008-2012), Reina Sofia and Matadero museums in Madrid, Spain (Avatar\* 2010), and Mercat de les Flors in Barcelona (RESET 2016). Román has also exhibited work internationally in solo expositions and collaborations with other artists in institutions, museums, and theatres in Cairo, Egypt (Lifefloor 2008), Portugal, Colombia, Argentina, Chile, Slovenia, France, and UK (Avatar\* 2009 - 2013), Tokyo, Japan (Oriestada/La Fura dels Baus 2012), and Munich, Germany (Babylon/La Fura dels Baus - 2012). Currently, Román is immersed in the development of THERO (Research Residence NEXT THINGS, LABoral Arts Center and Telefonica 2016) and Liquid Series II within the Made EU Funded Call for projects (IAAC, Barcelona).



**ANASTASIA  
PISTOFIDOU**  
MAL\_INSTRUCTOR

Anastasia Pistofidou is a Greek Architect currently working at Fab Lab Barcelona/IAAC as the Professional Projects Director, specialised in hardware development, rapid prototyping and design to production. With an architecture degree from AUTH Aristotle University, Thessaloniki and a Master Degree from IAAC, (Fabbots 2011) she worked at Fab Lab Barcelona applying digital fabrication technologies to installations, artistic creations, prototyping, architecture, furniture, interiors, exhibitions and products. She developed a personal applied research line on textiles, soft architectures and innovative materials : [fabtextiles.org](http://fabtextiles.org). Experimenting with new materials and processes, combining digital fabrication techniques and crafts, her work is demonstrating how new technologies can shift the massive consumption of fast fashion to a customised, personal and local fabrication applied on education and every day life. She is also a founding member at FirstV1sion.com, developing a wearable t-shirt for sports, that integrates a camera with a HD transmission system. Her artistic public interventions are together with a multidisciplinary collective, [chinos.international.cc](http://chinos.international.cc), an activist group of programmers, interaction designers and artists.



**ANGEL  
MUÑOZ**  
MAL\_INSTRUCTOR

Angel Muñoz is a Programmer from La Rioja in Spain. Passionate for art, science, music and retro-futurism, he started programming (self taught) at the early age of 9. In 2001 he moved to Barcelona where he began to work in international publicity agencies (EURO RSCG and Doubleyou). He also worked in the interactivity and multimedia departments for brands like Coca-Cola, AUDI, Danone, SEAT, Adolfo Dominguez, and more, winning various prizes in international publicity festivals such as Cannes, El Sol, and more. In 2006, looking to extend the digital world to the physical world, he began developing an interest in open hardware and studied Electronic Product Design obtaining a Higher Vocational Training Qualification. He then began collaborating with the Hangar Medialab. Since then he has also been collaborating in various projects, also with IAAC and the Fab Lab Barcelona Pro team, including The machine to be another, Omnipresenz. First Vision, Smart Citizen. Angel is now part of the IAAC Academic team as Physical Computing Expert.



**ANGELOS  
CHRONIS**  
MAL\_INSTRUCTOR

Angelos is a PhD Candidate, as part of the InnoChain program at the Institute of Advanced Architecture of Catalonia, Barcelona, Spain. He teaches at laaC and at the Bartlett School of Architecture of University College London. Previously he has been working as an Associate for the Applied Research + Development group at Foster + Partners. He holds a diploma in Architecture from the University of Patras, Greece and an MSc in Adaptive Architecture & Computation from the Bartlett School of Graduate Studies, UCL, with distinction. He is a registered Architect both in Greece and in the UK. His main research interest lies in the integration of simulation, optimization and performance drive in the design and fabrication process with a deeper expertise in computational fluid dynamics (CFD) but he has worked across many fields including virtual & augmented reality, interactive installations, 3D scanning, spatial analysis and parametric design. He is also actively involved in scientific committees as an author, reviewer and organizer as well as participating in lectures, workshops and architecture crits internationally. He is currently the program chair of SimAUD 2016 which is going to be held in UCL, London.

# FACULTY



**ALEXANDRE  
DUBOR**

MAL\_INSTRUCTOR

Alexandre Dubor is an architect from Paris looking for more multidisciplinary in the design of our built environment. From the early stage of his experiences, he was looking at various way of mixing science with art (Art specialization within a scientific bachelor, Web-design & info-graphics scripts). Going further in the studies, he was able to develop project as architect and engineer (Structure & Architecture Master at EAVT + ENPC, Paris 2008). After some years working in various offices such as Studio Daniel Libesking, Atenastudio, Donati et associés, Arep, he obtain an architect license (HMONP at EAVT, 2010). Along side this work, he co-founded Collectif 277 (Paris, 2008), mixing architects, graphic designer and Computer engineer. Willing to develop connection between computer science and architecture, he obtain a postgraduate in Digital Tectonics at IAAC (Barcelona, 2012). After a successful experience as teacher auxiliary at the University of Technology of Sydney (Australia, 2011), he is becoming more active in the academic field within the digital fabrication area (Auxiliary teacher at IAAC 2012), especially using 6-axis robot (workshop at IAAC & TU Delf, lecture at TU Vienna).



**ECE  
TANKAL**

MAL\_INSTRUCTOR

Ece Tankal is a Turkish Architect. IAAC Alumni, Ece completed her Master in advanced Architecture in 2014, presenting a project entitled Translated Geometries, developed along with Efilena Baseta and Ramin Shambayati, investigating the potential of programmable matter, in particular Shape Memory Polymers, towards the generation of Responsive Environments. Before coming to IAAC, Ece Completed a joint degree of the IED and UAB (Barcelona) in Interior Design, specializing in the design for Commercial Spaces; as well as a degree in Interior Architecture and Environmental Design at the Bilkent University in Ankara. Ece is currently working with other IAAC Alumni, Carmen Aguilar and Jin Shihui, on a series of International Projects, among which a kinetic interactive installation.

# GENERAL INFORMATION

## GENERAL INFORMATION

# APPLICATIONS, GRADING SYSTEM AND MORE

## APPLICATIONS

To apply for IAAC, please fill out and submit the online applications form ([www.iaac.net/iaac/apply](http://www.iaac.net/iaac/apply)) for the programs: MAA01, MAA02, MaCT, MAA01 + OTF, OTF.

For the online application, the following required documents should all be submitted in English, with the exception of the undergraduate diploma that needs to be translated into Spanish. (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 – maximum two A4 pages in PDF.

- Curriculum vitae and portfolio showing samples of your work – A4 format maximum 10MB in PDF.

- Two letters of recommendation (from professional or academic referees), in PDF, with the corresponding referee contact information.

- Legalized copy of previous architecture degree\* or other related professional degrees. Please make sure that you arrange the legalization of your diploma as required depending on your country of origin. More info about degree legalization here. In the case of this document is not available at the moment of the application, please contact us.

- An official translation into Spanish of your diploma\* (if the diploma is not in Spanish already). More info about official translations here.

- A copy of a valid passport (copy of valid I.D. is accepted for citizen of member states of the EU)

- Non-refundable application fee to be paid to the bank information mentioned at the end of this page under the section titled “Bank Information”.

\* If you have not yet graduated, but will be graduating before the commencement of the academic year to which you are applying at IAAC, you are eligible to apply. However, to complete the application process, will need to ask you to provide us with a provisional certificate from your University, in English, stating that you will graduate this year.

If you have any questions or doubts with regards to the application process, please feel free to contact us at [applications@iaac.net](mailto:applications@iaac.net)



## GRADING SYSTEM

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 Degree, this grade will be justified and well explained)
- **5.0–6.9** Pass
- **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 an 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

## STUDENT FEEDBACK AND EVALUATION

The usual procedure IAAC uses for the collection and analysis of information to ensure the quality of the program 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 organize 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 program. 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 program and the efficiency of the entire organization. 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 program and they are also asked to express ideas for overall improvement.

## STUDY EXPENSES

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

## MATERIALS

Students are expected to bring their own 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).  
1024 Mb RAM.  
WIFI internet connection.  
1280 x 1024 screen display resolution

## NON EUROPEAN STUDENTS

Non European students accepted to the program 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.

## MEDICAL INSURANCE

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.

## ACCOMMODATION

IAAC does not provide accommodation for students, although can provide information and assistance related to rental procedures.

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[www.iaac.net](http://www.iaac.net) - [www.iaacblog.com](http://www.iaacblog.com)  
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To apply: [applications@iaac.net](mailto:applications@iaac.net)



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