Marco Fontana

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Education

Part III Architect

- **October 2021** — **University Luigi Vanvitelli (Italy)**

Blender Professional User

- **March 2021** — **Blender Italia (Italy)**

Autodesk Certified Professional

- **June 2017** — **Autodesk Training Centre IFE (Italy)**

Course on Grasshopper "Ecologic Patterns" (35h.)

- **January 2016** — **Le Penseur and Arturo Tedeschi (A>T) (Italy)**

Course on Grasshopper "Form Finding Strategies" (21h.)

- **January 2016** — **Le Penseur and Arturo Tedeschi (A>T) (Italy)**

Course on Grasshopper "Plug it2" (40h.)

- **November 2015** — **Le Penseur and Arturo Tedeschi (A>T) (Italy)**

Rhino Fundamental Course (48h.)

- **December 2014** — **Poli.design of Milan (Politecnico di Milano) (Italy)**

Part III Engineering

- **June 2014** — **University of Pavia "Alma Mather Studiorum" (Italy)**

Post-graduate Diploma in Urban Design

- **September 2012 – October 2013** — **University of Westminster (England)**
  - **Relevant modules:** Urban design skills, Master planning, Public Realm and others.

Academic IELTS & General English course

- **April 2012 – June 2012** — **University of Westminster (England)**
- **October 2011 – May 2012** — **Callan school course of general English (England)**

Graduated in a Master degree course in Engineering and Architecture

- **October 2003 – September 2011** — **University of Pavia "Alma Mather Studiorum" (Italy)**
  - **Relevant modules:** Architectural composition, Landscape design, Urban planning, Structural calculation and sizing, Sizing of civil systems (lighting, acoustics, thermal insulation, humidity, heat exchangers), Mathematical analysis, Site management, Economy, Architectural history, Integration of alternative energy technologies, Hand drawing and drawing with information technologies.
  - **Final year: Degree thesis title:** "Mathematical modelling of shapes for urban-landscape renewal of an area in a developing country, researching the causes of the shape through scientific considerations".
  - **Competitions and academic works:**
    - **June 2011: Competition for students on the façade's reconstruction of engineering pole at the University of Pavia (Italy)**
      - ✓ This was an open competition with Tongji university of Shanghai, Escuela politecnica de Madrid and university of Pavia and my project was amongst the ones that received an honorable mention.
    - **October 2010 – September 2011: Degree thesis carried out in Rio de Janeiro (Brazil)**
      - ✓ I did my degree thesis in Rio de Janeiro and in that period, I had contacts with Brazilian institutions and with UFRJ in order to gather material and develop my thesis.

- **October 2008: I organised a show of architectural projects made by the students of architecture from the University of Pavia and Politecnico di Milano (Italy)**
  - ✓ In that show, the projects (the most innovative in shape, technologies and concepts) of the students were shown to people who are not familiar with new discoveries in order to arouse enthusiasm towards awareness of aesthetics and energetic problems.
- **September 2008 – July 2009: Competition for urban renewal and redefinition of public spaces of Torrevecchia-Pia (Italy)**
  - ✓ In this competition, I was in a group with students from Madrid and Italy and we reached the fifth position.
- **September 2007 – June 2008: Landscape design Competition for the park of Lambretta (Italy)**
  - ✓ This competition was on an international level and I was in a group with a student from Madrid and we reached the eighth position.

- **September 1998 – July 2003 High school: Liceo Classico San Giorgio (Italy)**
  - ✓ **Subjects included:** English grammar and literature, Latin grammar and literature, Old Greek grammar and literature, Mathematics, Philosophy, Italian grammar and literature and others.

Technical skills

- **IT Skills:** Good Knowledge**:** Word, Excel (I created software for sizing structural beams and for calculating the thermal transmission of a wall), PowerPoint, Windows, Mac Os, Pages, Keynotes, Numbers, Autocad 2D and 3D, Photoshop, Sketch up, Telaio 2D (open source program for the resolution of two-dimensional frames), Trave conDwg 7.1 (open source program for the resolution of multi-spam beams), 3D studio max, Archicad, Rhinoceros, Grasshopper, VRay, Blender, Cycles, Cura, 3D printing, HTML, CSS.
- **Language Skills:** English (fluent), Italian (native), Portuguese (basic), Spanish (basic), French (basic).

Articles

- **October 2012:** I wrote an article for the University of Pavia about the research method that was carried out in my thesis for the publication on "Journal of Urban planning and development", Gang-Len Chang, University of Maryland**.**

Relevant Experience

- **March 2021 – Now:** I am the interior and industrial designer for the interior and the park of the company Innesti with my office Marco Fontana Design
- **March 2021 – Now:** I am a teacher for MAC Formazione. My courses are:
  - ✓ **Rhinoceros**
  - ✓ **Blender modelling, physics, particle system, rigging, animation, sculpturing**
  - ✓ **Industrial Design**
- **November 2018 – Now:** I am a teacher for Click Academy. My courses are:
  - ✓ **AutoCAD 2D & 3D**
  - ✓ **Rhinoceros**
  - ✓ **Blender (texturing)**
  - ✓ **Industrial Design**
  - ✓ **Webinar: 3D printing**
- **June 2016 – Now: Designer and CEO of Marco Fontana Design (Italy):** I am working on some fornitures which are algorithmically defined. The idea behind all my creation is the research of natural shapes. In this path we experiment new materials (such as bio-plastic and

Carbonium fibers), new techniques (such as 3D printer and robotic arms) and join this energy with the Italian craftsmanship.

- **April 2019: Fuorisalone of Milan (Italy):** I presented my works of design at "Fourisalone" during Milan Design Week 2019 with Khasma Studio a group I helped to create.
- **March 2018: Fuorisalone of Milan (Italy):** I presented my works of design at "Fourisalone", one of the most important show in the world for design. I was there with the group "Source self-made design".
- **December 2017: Design show at "Spazio Geco":** I participated in a show of creativity and design, where I presented my works of design in the FabLab of Pavia.
- **October 2017: Architectural and Landscape competition for the Sustainable Tourism Program of the United Nations (UN) in the state of Guanajuato (Mexico):** This was a competition for UN where I participated with a group of designers and researchers of the university of Pavia, I was the Leading Architect of the group. We had an honorable mention for our project.
- **October 2017: Conference and design show in Sassuolo at the ceramic district with "CNA Modena" (Italy):** This was a show and a conference on creativity and I was invited there by the CNA to show my design and have a speech in the conference on creativity.
- **March 2017: Renovation of an old building in Pavia (Italy):** I was contacted to design the renovation of this old building and carry out the works.
- **May 2017 – June 2017: Teacher of 3D modelling with Rhinoceros and Grasshopper and 3D printing for the foundation "Le Vele" (Italy):** I was teaching to the teachers of high school how to model in 3D a project and transform it in a useful file for rapid prototyping, in particular 3D printing.
- **March 2016 – June 2016: Architect, Computational Architect and Visual Programmer at Maffeis Engineering (Italy):** In that period, I worked on many different and complex high level architectural projects.
    - ✓ **I worked on:**
        - ✓ **Al Wakrah Stadium:** This is a project of Zaha Hadid Architects. I worked on the thermal analysis for the roof and the pitch of the stadium, with a particular stress on the PAR radiation to consider which type of grass is more suitable. My task was the analysis throughout the algorithmic design using Grasshopper, Geco and Ecotect. On this stadium I helped also in the planarization of some rigid panels using Grasshopper and Kangaroo.
        - ✓ **Al Rayyan Stadium:** I worked on the thermal analysis for the pitch only. My task was the analysis throughout the algorithmic design using Grasshopper, Geco and Ecotect.
        - ✓ **Adana Stadium:** I worked on getting the structural frameworks for the roof, with particular regards to the structure and to the membrane covering the roof. In this project I used mainly Grasshopprer and Kangaroo for the algorithmic design. I was the only architect working with the team of engineers.
        - ✓ **MBR Stadium in Dubai:** I worked on the proposal of Perkins + Will UK. My task was to get the structural frame of the skin and a proposal for the roof with a team of engineers. I carried out the task mainly with Grasshopper and Revit.
        - ✓ **Lusail Tower:** I worked on the proposal of Perkins + Will UK. My task was to propose a concept for the membrane parapet to the office using algorithmic design techniques, according to the request we had to stress very much on the

point of the solar radiation using Grasshopper and Geco, and then on the concept of privacy.

- ✓ **Rottweil Test Tower:** I worked on some algorithmic issues of the tower like the plate interferences with the cables and the rails and on some proposal for the cables.
- ✓ **New Stadium of Atletico Madrid:** I worked on the form finding of some panels using Grasshopper in combination with Strauss and Spider (a structural plug-in for Grasshopper developed by Maffeis Engineering for the structural form finding of the membranes).

- **October 2013 – March 2016: Freelance Architect and Designer (Italy):** I was working on different projects which include different approach to designing Architecture and Landscape.
  - ✓ **Experiences as Freelance:**
    - **November 2013 – June 2013: Landscape designer for a local gardeners**: I prepared the concepts and the projects of two gardens in Pavia.
    - **June 2013 – Now: Creator of my own design group**: Two business partners and I are developing the design, the productive system, the electronic system and the web site for our lamp design start up based on my research on parametric design.
    - **June 2013 – Now: 3D printer expert**: I build my own 3D printer based on FDM system. The printer was useful to start the research between parametric design and personalization.
    - **December 2014 – January 2015: Designer for Rizieri**: Thanks to my knowledge of 3D printer I was contacted by Roberto Broglia (CEO of Rizieri) to design and print the cap of a perfume for their spring collection.
    - **February 2015 – March 2015: Architect/Urban Designer for RBB Risolve**: I prepared the presentation of the Urban Project "Viviendas" in Peru to international investors.
    - **June 2015 – July 2015: Architect/Building Engineer for Team**: I collaborate as Leading Designer with Team Pavia to prepare the improving technical offer for the building competition of the new part of "Collegio di Milano", which was designed by "PiuArch".
- **July 2012 (Italy):** Preparation of material for a lesson on modern theories of contemporary Italian architecture for the head of Department of Architecture, University of Pavia.
- **June 2012 – August 2012: Design Member in the Company "RIALTO Ltd" (Italy)**
  - ✓ I worked in a team for the preparation of feasibility study for the project "Agri-Techno Villaggio" that will be realized in Peschiera Borromeo (MI). This company is a spin-off of the university of Pavia and they work as advice and design support for EU and non EU countries.
- **September 2004 – June 2006: Volunteering-Teacher of Latin, old Greek and Italian (Italy)**
  - ✓ I gave free lessons in grammar and literature of Latin, old Greek and Italian to the students of the parish "Santa Maria Assunta" of Albuzzano (PV).

Interests/ Extra Curricular

- ✓ During my period of university studies, I got involved in a variety of project workgroups and had the opportunity to work and study with people from different countries and cultures.
- ✓ I enjoy culture and sports, in particular football. I like to create and worked on some inventions during the period of my studies.
- ✓ I developed a deep understanding of 3D printing process and 3D graphic and renders with open source software (like Blender). I built my own 3D printer for the specific proposes I need.