



## Federico Fiume

Nationality: Italian Phone number: [REDACTED]

Email address: [REDACTED]

Home: [REDACTED]

### WORK EXPERIENCE

#### Founder of Resiliens Arch Studio

*Studio Associato Resiliens Architettura* [ 01/01/2021 – Current ]

City: Rome

Country: Italy

Concept and creation of architectural projects, specialized in ecological, economic, and social sustainability. Management of relations with clients, construction companies, suppliers and Public Administrations. The Studio is committed to multiple fields:

- energy efficiency and refurbish, designing ZEB and NZEB buildings
- urban regeneration and social innovation, participating in development and social inclusion plans promoted by administrations and privates;
- digitalization of building heritage, exploiting the most innovative acquisition technologies (UAV photogrammetry, laser scanners), BIM digitalization and integrated design;
- practices related to tax incentives for energy efficiency.

Main projects:

- Technical economical feasibility study and executive design for the energy efficiency of public social housing ATER in Civitavecchia, Italy. Energy efficiency of two buildings: one with 37 units located in a suburb district, and it will be a top class energy efficiency rate building; the other with 15 units located in the city center it is a historic building with a heritage authority protection restriction
- Demolition and rebuilding of ruined buildings in Umbria, Italy (in progress). The building will be a private villa with ZEB building and it is in process the certification of LEED and PassivHaus standard top quality. It will be the first residential building in Italy to receive both certifications.
- Design and relief (laser scanner and BIM model) for the functional, anti-fire and energy efficiency of the Theatre of Amelia, an 18th-century theatre that was built in parallel to the Theatre La Fenice in Venice, Italy.
- Support for the architectural design for the redevelopment and social revitalisation of public spaces in the municipality of Villa Sant'Angelo, Province of L'Aquila, Italy
- Consultancy for the architectural design for the feasibility project for extraordinary maintenance works at railway station in Siracusa, Italy
- Laser scanner, photogrammetry and celerimetric survey of the railway station of Roma Termini, Cogoleto, Alassio and Genoa Pegli, Italy
- Design of 167 building units planned to be energy and/or seismically improved in the years 2021-2023. For more than half of which work has already been completed

#### University teaching assistant

*Università degli Studi Roma Tre* [ 02/10/2023 – Current ]

City: Rome

Country: Italy

Course: Tecnologia - Laboratorio di progettazione ambientale (Technology - Environmental Design Laboratory) - Professor Ilaria Montella

Topics of teaching assistance:

- high energy performance district design
- urban strategies of carbon reduction and mitigation

- climate change mitigation and adaptation strategies at urban scale design
- Positive Energy District

### **Architectural designer**

**Federico Fiume Architetto** [ 26/01/2015 – Current ]

City: Rome

Country: Italy

Concept and creation of architectural projects. Management of relations with clients, construction companies, suppliers and public administrations.

Main projects:

- Design projects and technical management of 5 private apartments and 1 condominium aiming to renovate buildings both internally and externally and to re-qualificate the buildings energetically
- Feasibility study for the realization of a private villa committed to zero-impact on the environment and Low Energy Protocols adoption.
- BIM digitalization projects of some buildings, on behalf of Baglioni S.r.l.
- Design of a co-working space in a warehouse in Via G. Bresadola, Rome.
- Design of temporary bar in a historical location in Rome.

### **University research support**

**Università degli Studi Roma Tre** [ 05/09/2023 – 05/11/2023 ]

City: Rome

Country: Italy

Research theme: "Il contributo degli spazi di prossimità alla mitigazione degli effetti dei cambiamenti climatici: studio di un modello di valutazione multicriteriale" PRIN\_2017\_TECH- START, "*The contribution of proximal urban spaces to mitigating the effects of climate change: a study of a multicriteria evaluation model*". Professor Simone Ombuen and Professor Andrea Filpa

Main activities:

- Creation of an extremely detailed GIS model of five different urban textures characteristic, on the whole, of the urban typology of the city of Rome
- Elaboration of a data analysis of these five neighbourhoods and comparison between them
- Elaboration of maps that graphically and quickly describe the above data analysis

### **Teaching assistant in universities**

**Università degli Studi Roma Tre** [ 15/03/2023 – 02/10/2023 ]

City: Rome

Country: Italy

Course: Laboratorio di Costruzione dell'Architettura (Architectural Technology Laboratory) - Professor Paola Marrone

Topics of teaching assistance:

- high energy performance buildings design
- architectural technology and techniques
- architecture drawing techniques
- construction phases
- building site organization and management
- passive building design
- energy and environmental certifications (Italian energy label, LEED, PassivHaus)

### **University research support grant**

**Università degli Studi Roma Tre** [ 01/04/2022 – 01/04/2023 ]

City: Rome

Country: Italy

Research theme: "Il contributo degli spazi di prossimità alla mitigazione degli effetti dei cambiamenti climatici: studio di un modello di valutazione multicriteriale" PRIN\_2017\_TECH- START, "*The contribution of proximal urban*

*spaces to mitigating the effects of climate change: a study of a multicriteria evaluation model". Professor Paola Marrone*

Main activities:

- Elaboration of an urban scale GIS model using Q-GIS software
- Development of a parametric model based on the ratio of consumption VS electricity production on a neighbourhood scale in different urban textures and typologies
- Development of a model of evaluation of the best configuration of the "proximal urban spaces" using a "Population Game model" for founding the Nash equilibrium
- Positive Energy District strategies (part of the winning team of the DUT call 2023 - Positive Energy District - with Italian case study the city of Civitavecchia)
- Removable Energy Community design and study for the creation of a parametric model for fast-design
- Elaboration of tools for the public authority for fast study and plan the urban carbon reduction and mitigation

### **Architectural designer**

***Dead Poets Society S.r.l.s. (Ex Dogana di Roma)*** [ 01/03/2016 – 30/06/2016 ]

City: Rome

Country: Italy

Concept and creation of architectural interventions, design renovations (both internal and external) and energy efficiency for huge historical location for events organized at the Ex Dogana location of Rome (26.000 sqm of spaces). The location is the former customs house in Rome, situated in the historic district of San Lorenzo, is an example of industrial design at the turn of the 19th and 20th centuries. Management of the relations with Institutions, corporates, suppliers, technicians and professionals.

### **Architectural designer**

***Studio Ninfea S.a.s.*** [ 11/01/2014 – 30/06/2015 ]

City: Rome

Country: Italy

Design of the "Mensa Sociale e della Legalità" (Canteen of the Social Issues and Legality) in the Corviale area, Rome. The project was entirely developed using the BIM software.

- Development of the architectural project; management and team coordination
- Project presentation at Expo 2015 Milan - Coca Cola Pavilion
- Concept and management of energetic and environmental strategies
- In-depth research of innovative building and environmental technics

Design of the preliminary phases of the following projects:

- Energetic, social and architectural re-qualification project of the Corviale residential area in Rome. Presentation of the project at the presence of the Mayor and the Assessor to the Public Works and Peripheries.
- Project of a bike and pedestrian path ring to connect the entire city of Rome.
- Project of the poly functional center in Capannelle, Rome, including the directional center of Enter Parco Appia Antica, offices, archeological museum Appia Antica, touristic center, nursery, rental office of electric means of transportation to be uses within the park.

### **Teaching assistant in universities**

***Università degli Studi Roma Tre*** [ 01/03/2012 – 31/07/2015 ]

City: Rome

Country: Italy

Course: Laboratorio di Costruzione dell'Architettura (Architectural Technology Laboratory) - Professor Paola Marrone

Topics of teaching assistance:

- high energy performance buildings design
- architectural technology and techniques
- architecture drawing techniques

- construction phases
- building site organization and management
- passive building design
- BIM
- Autodesk Ecotect Analysis

### **Sustainable energy consultant**

***Candidate Mayor to the municipality of Albano Laziale, Rome*** [ 19/01/2014 – 28/11/2014 ]

City: Albano Laziale (RM)

Country: Italy

Consultancy in the following activities:

- Editing of studies about energetic saving of the heritage developed in 4 phases:
  - a. metric surveys and BIM digitalization of the public buildings
  - b. consumption analysis through simulation
  - c. monitoring and coordination of the phases
  - d. variations through BIM system.
- Ideation of actions with the aim of create awareness among citizens about how to decrease energetic consumptions in private buildings, through re-qualification and efficiency
- Editing of master plans for the re-cycle and waste disposal system aiming to gradually transform waste from duty to resource.
- Creation of public interventions based on European best-practices: territorial energetic plans, re-cycle and waste disposal plans, management of green transportation.
- Development of a preliminary analysis on a partecipative and shared planning of energy, means of transportation and waste, in order to create an autonomous district.
- Support to communication.

### **Architectural Intern**

***AEDAS*** [ 01/10/2012 – 31/12/2012 ]

City: London

Country: United Kingdom

Part of the design team of the "Gold Coast World Trade Center District - Australia". The request include:

- Design and 3D model of the area with:
  - 2 luxury hotel (more than 1.000 rooms and suites per building). One with conference hall and private port
  - 4 skyscraper and relative financial district on the base, with a "water" plaza
  - 1 marina bay
  - 1 theater
  - 1 yacht club
  - 10 luxury villas
  - 2 bridges
  - public parks
- Preliminary sustainable strategy design
- Discussion with client and the art director
- Creation of some Grasshopper tools for design aid and optimization process

### **Architectural Intern**

***Architetto Luciano Cittadini*** [ 01/09/2012 – 30/09/2012 ]

City: Rome

Country: Italy

Architectural relief and drawing of historical palace in L'Aquila (Italy) for the reconstruction after the earthquake of the Abruzzo 2009

## **Architectural Intern**

**Zero Lucenta S.r.l.** [ 01/09/2010 – 01/11/2011 ]

City: Rome

Country: Italy

Energy optimization design and analysis for refurbishments of private residential buildings. BIM models and digitalization of the projects.

## **Architectural Intern**

**Studio Associato Architetto Maria Cristina Pedri** [ 01/09/2009 – 01/02/2010 ]

City: Rome

Country: Italy

Interior design. Study for the design of an archeological museum in south Italy. Ecotect Analysis.

## **Architectural Intern**

**Studio Carlo Berarducci Architecture** [ 01/09/2010 – 01/11/2011 ]

City: Rome

Country: Italy

Architectural design and energy reduction design for:

- Eco-resort in Maldive
- International competition for a Museum in Finland
- Private villas and apartments
- Restaurants

## **EDUCATION AND TRAINING**

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### **Doctor of Philosophy**

**University of Trento** [ 01/10/2017 – 22/01/2022 ]

City: Trento

Country: Italy

Website: <https://www.dicam.unitn.it>

Field(s) of study: Engineering, manufacturing and construction: *Inter-disciplinary programmes and qualifications involving engineering, manufacturing and construction*

Thesis: Emergency Modular Architecture - Study of applying of modular building technics to the house emergency field

In western countries, we are now living in a period of economic prosperity. This has undermined in a certain way the "world's balances" in terms of social, economic and well-being equilibrium. In particular, well-being grows in parallel with its side effects: it allows the population to grow, which generates a rise of the resources need, with related risk of pauperization of the planet. The two main aspects of the current world's living system crisis are climate change and widespread poverty, even and mainly in terms of lack of housing.

Today, especially in growing countries, the building industry is yet too slow to meet the contemporary changes which are consistently faster and pressing. The main theme is now to explore the possibility of generating a new building system which can be fast in construction, adaptable to changes and completely fade away. It must respond either to growing needs or to change during the time. All focusing on very low energy consumption in use and to production/disposal phases.

### **Architecture Master Degree**

**Università degli Studi Roma Tre** [ 01/03/2010 – 24/05/2013 ]

City: Rome

Country: Italy

Website: <https://architettura.uniroma3.it>

**Field(s) of study:** Engineering, manufacturing and construction: *Architecture and town planning , Building and civil engineering*

**Final grade:** 107/110

**Thesis:** Toward a sustainable housing - how the components of a building can impact on its ability to keep internal temperature constant

The energy consumptions, in the building field specially, is being important like the economic fields. Now is not so easy preview the energy consumption of a building in each steps of the design process. Very often the test of every design choices is made at the end of the final project or at less at the end of each steps. This is often a problem for the designer and for the final results because there isn't a clear data of how much each choice will change the energy consumptions of the final building.

The idea is to create a system of knowledge about the quantification and parameterization of the most relevant architectural and technological choices to be taken when dealing with residential energetic consumptions. This knowledge is based on a data, taken from an interpolation of the data of many simulations. The result is a "level" of consumptions of each choice. These levels can help the designer to know how much cost, in term of energy, each choice.

At the end of the building design (reach following the guideline of the model and the personal target) energetic impact simulated was tested with the starting data: the result was, related to the exactly same building typology, footprint and highness, with a reduction of energetic consumptions near to 50% and an increase in the space of the 20%.

### **Master scholarship**

***UCL, Institute for Environmental Design and Engineering*** [ 01/10/2012 – 31/12/2012 ]

City: London

Country: United Kingdom

Website: <https://www.ucl.ac.uk/bartlett/environmental-design/ucl-institute-environmental-design-and-engineering>

### **Architecture Bachelor of Sciences Degree**

***Università degli Studi Roma Tre*** [ 01/09/2006 – 01/03/2010 ]

City: Rome

Country: Italy

Website: <https://architettura.uniroma3.it>

### **High School Diploma**

***Liceo Ginnasio Torquato Tasso*** [ 01/09/2001 – 30/06/2006 ]

City: Rome

Country: Italy

Website: <https://www.liceotasso.edu.it>

### **Engineering Master Degree**

***Università E-Campus*** [ 01/10/2023 – Current ]

City: Rome

Country: Italy

Website: <https://www.uniecampus.it>

### **Certified PassivHaus designer**

***ZEPHIR - PassivHaus Italia*** [ 01/06/2023 – Current ]

City: Trento

Country: Italy

Website: <https://passivhausitalia.com>

## LANGUAGE SKILLS

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Mother tongue(s): **Italian**

**Other language(s):**

**English**

**LISTENING B2 READING B2 WRITING B1**

**SPOKEN PRODUCTION B1 SPOKEN INTERACTION B2**

**French**

**LISTENING B1 READING A2 WRITING A1**

**SPOKEN PRODUCTION A2 SPOKEN INTERACTION B1**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## DIGITAL SKILLS

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Python Language - Basic knowledge / Steinberg Cubase / Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access

**Adobe**

Adobe (Adobe InDesign, Adobe Acrobat) / Adobe Scan / Adobe Illustrator, InDesign, Photoshop

**Autodesk**

Autodesk AutoCAD (2006/2017) / Navisworks basics / Autodesk Revit - Proficient user

**Energy Simulation**

Energy + / EDSL TAS / Termus ACCA

**3D, Parametric and GIS**

Rhino 3D modeling / Rhino and Grasshopper / QGIS (Advanced level) / SketchUP (3D modelling) / LUMION 3D Rendering

## HOBBIES AND INTERESTS

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**III Dan Black Belt Ju Jitsu and Karate Wado Ryu - Instructor**

Teacher for 3 years of a Ju Jitsu course for children from 4 to 12 years of age

## CREATIVE WORKS

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**Founder of Resiliens Recordings**

[ 01/01/2012 – Current ]

founder of the record label and artistic collective Resiliens Recordings. Our productions include:

- 15 digital single albums of electronic music and techno
- 4 vinyl single albums of electronic music and techno
- 1 special edition vinyl album of electronic music and jazz with music by Markus Stockhausen and Martux\_M with 10 limited editions with hand-painted covers (each unique) by artist Paolo Canevari

In addition to this, two soundtracks for a contemporary dance performance were composed and produced: Garbage Girl and In-Habit. The first sustained a world tour and was very successful.

In 2013-2014, both a radio programme on Radio Popolare Roma 103.3 on the history of electronic music and a school on the history and theory of electronic music were held.

Many events and shows related to electronic and contemporary music were organised

Links: [www.youtube.com/@Resiliens](https://www.youtube.com/@Resiliens) | [resiliensrecordings.com](https://resiliensrecordings.com)

**Architettura Organica Vivente '22**

[ 14/12/2022 – Current ]

Foundation and attendance of the study/work group on the subject of living organic architecture. The group is active in the theoretical study and practical application, including through shared projects, of the themes and principles of living organic architecture

## **Associazione Culturale Arslineandi**

[ 01/10/2015 – 01/02/2020 ]

Attendance at courses held by the cultural association on the topics of *organic living architecture*, an architectural movement founded in the early 20th century by Rudolf Steiner. The greatest exponent of this architecture is the Goetheanum with its anthroposophical centre in Dornach, Basel (Switzerland). The focus of living organic architecture is to place man and his interaction with the space around him, in physical, soul and spiritual terms, at the centre of design.

## **VOLUNTEERING**

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### **Associazione Sinergicamente**

[ Rome, 01/11/2019 – Current ]

Member of a voluntary association for the social and cultural inclusion of people from favored groups: immigrants, people with disabilities and poor people. Among the association's projects are:

- Construction of a water supply well in Angola in the region of Cuando Cubango
- Community kitchen' project: cooking school for immigrants and persons with mild autism. Cooking, intended as the ability to cook and manage a professional kitchen (both in technical and administrative terms), is a common language and can be an opportunity for work and the inclusion of people with difficulties