

Contemporary Rentscapes

*Original*

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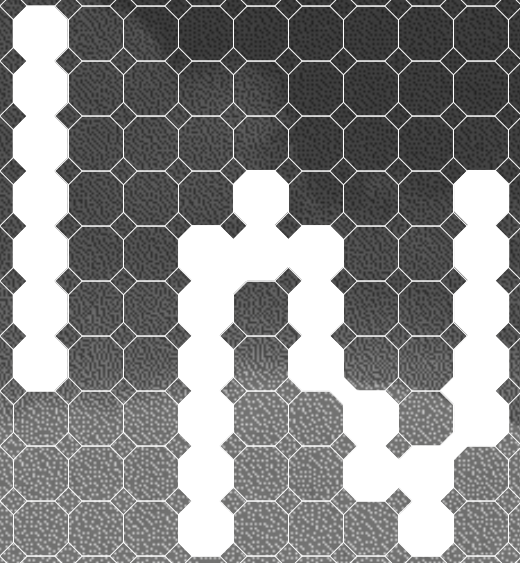
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**the Future**  
*Urban Legacy*  
**Lab**

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**a report**  
**2017-2021**





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One of the main challenges of FULL is to combine consistent research with a rich program of talks, lectures, and teaching. In this table of contents the activities of the Centre are separated by the research section for clarity, but in reality are mutually interconnected.

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Here we present our organization. With an overview of all the relevant information about the research centre.

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A detailed account of our research production, made of research projects, applied researches and PhD researches.

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# ACTIVITIES

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During the past four years FULL hosted numerous events and talks. We invited guests from the most diverse disciplinary fields. These kind of activities unfolded in different media and can be found on our Vimeo channel and our Podcast channel.

TEACHING	320
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# FULL

Future *Urban Legacy Lab* is an interdepartmental centre of the Politecnico di Torino that explores, imagines and designs the future of global and local urban legacy embodied in city form.

## FUTURE

/ˈfju:tʃər/ • noun

A period of time following the moment of speaking or writing; a time regarded as still to come.

## URBAN

/ˈə:b(ə)n/ • adjective

In, relating to, or characteristic of a town or city; e.g. 'the urban population.'

## LEGACY

/ˈleg.ə.si/ • noun

A situation that exists now because of events, actions, etc., that took place in the past.

## LAB

/lə'b/ • noun

A room or building equipped for scientific experiments, research, or teaching, or for the manufacture of drugs or chemicals.

# FAQ

How is an interdisciplinary research centre structured?  
how many resources are involved and what are the outputs?

# TS

# THE LAB PEOPLE

## Departments

7 departments,  
59 people,  
33 disciplinary  
expertise  
fields.

### DAD

Urban and architectural design, landscape design, construction technology, urban history, heritage preservation and restoration, geomatics.

### DIST

Urban planning, urban geography, urban economics, project evaluation.

### DET

Digital networks in urban settings, device-to-device communications.

### DIGEP

Innovation economics and innovation management.

### DIATI

Environmental assessment, urban environmental quality indicators, remediation techniques for urban post-industrial sites.

### DAUIN

Big data, information technologies, public data management and policies in cities.

### DENERG

Urban energy networks and grids, renewable energies in urban settings.



### Project manager

Matteo Robiglio

### Executive manager

Laura Martini

### Deputy project manager

Francesca Governa

### Scientific board

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### Faculty

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### Research Fellows

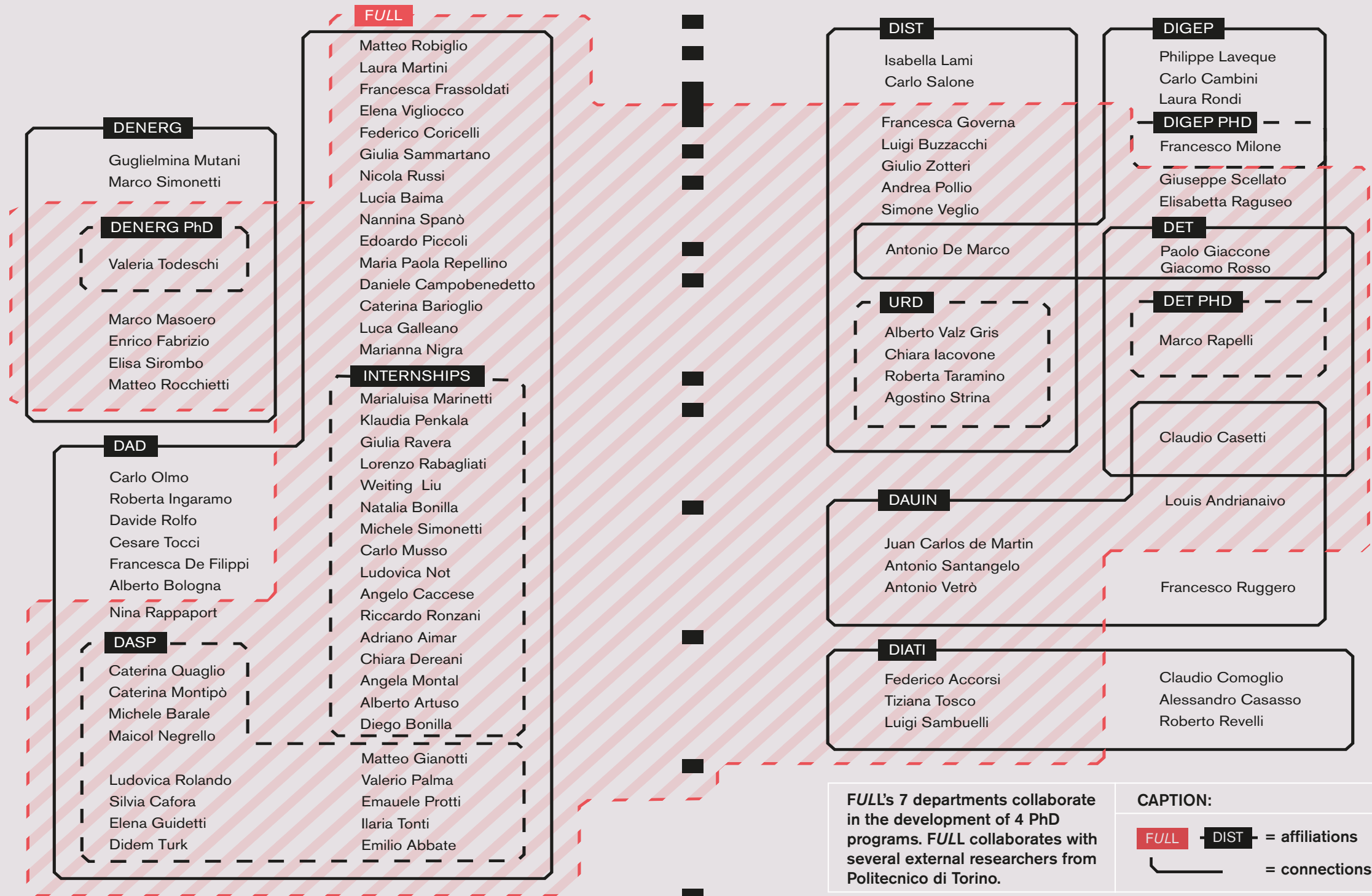
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Caterina Quaglio  
Maria Paola Repellino  
Giulia Sammartano

### PhD candidate

Silvia Cafora  
Matteo Gianotti  
Elena Guidetti  
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Valerio Palma  
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### Past fellow

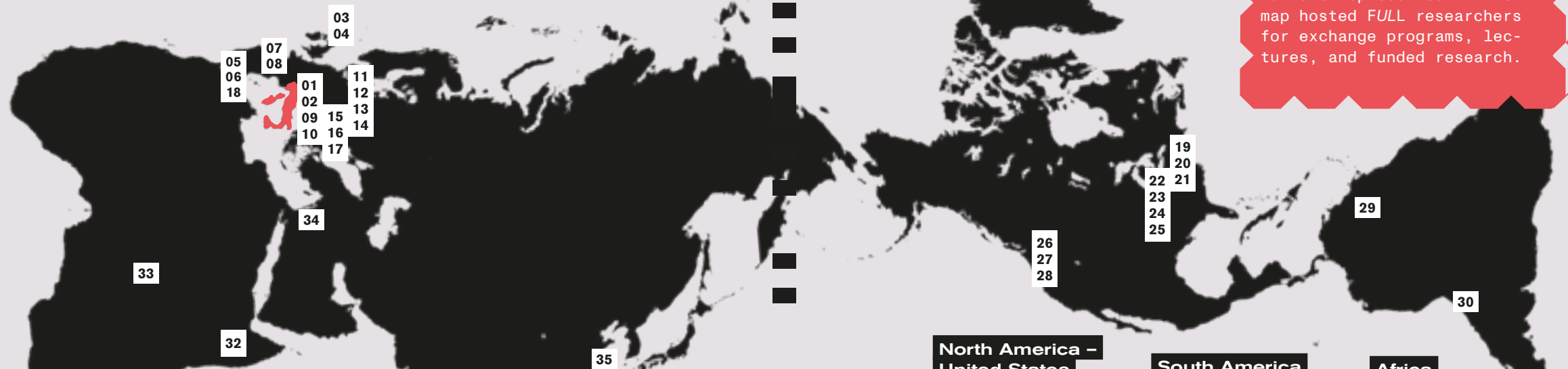
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Maicol Negrello  
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Elisa Siroambo



FULL's 7 departments collaborate in the development of 4 PhD programs. FULL collaborates with several external researchers from Politecnico di Torino.

# THE LAB OUTREACH

The map shows the institutions that collaborated with FULL in the past years. The institutions represented in the map hosted FULL researchers for exchange programs, lectures, and funded research.



## Europe

- 01 Biennale di Venezia Venice, IT
- 02 Avventura Urbana Turin, IT
- 03 Oxford Institute of Retail Management - University of Oxford, Saïd Business School Oxford, UK
- 04 ULI - Urban Land Institute London, UK
- 05 IAAC - Institut d'Arquitectura Avançada de Catalunya Barcelona, ES
- 06 Barcelona Super Computing Center Barcelona, ES
- 07 Baumeister - BMA Bruxelles, BE
- 08 Paul Andreu Architecte FR (Industrial collaboration)
- 09 Links Foundation Turin, IT
- 10 Fondazione Feltrinelli Milan, IT
- 11 PoliMI Politecnico di Milano Milan, IT
- 12 Università Bocconi Milan, IT
- 13 IUAV - Istituto Universitario di Architettura di Venezia Venice, IT
- 14 Audis - Associazione Aree Urbane Dismesse Bologna, IT
- 15 Università Roma 3 Rome, IT
- 16 Università di Macerata Macerata, IT
- 17 UniSalento Lecce, IT
- 18 Urban Next / ACTAR home based in New York, USA; office in Barcelona, ES

## North America – United States

- 19 German Marshall Fund Urban and Regional Policy Program Washington DC
- 20 Global Network of Internet and Society Research Centers, Columbia University New York
- 21 Urban Theory Lab, GSD Harvard Cambridge
- 22 Department of Urban Studies and Planning at the MIT Cambridge
- 23 Vertical Urban Factory network, Pittsburgh
- 24 Remaking City Institute – Carnegie Mellon Pittsburgh
- 25 Urban Land Institute Washington DC
- 26 Global Metropolitan Studies Center University of California Berkeley, California
- 27 UCLA - University of California, Los Angeles
- 28 UC Davis Art University of California Davis

## South America

- 29 IEUT Pontificia Universidad Católica Bogotá, Colombia
- 30 Instituto De Estudios Urbanos Y Territoriales - Pontificia Universidad Católica de Chile Santiago, CL

## Asia and Middle East

- 34 Technion Israel Institute of Technology Haifa, Israele
- 35 Tsinghua University Beijing, CHN
- 36 School of Architecture South CHN University of Technology, Guangzhou, Guangdong Province, CHN

## Africa

- 31 ACC African Centre for Cities University of Cape Town Cape Town, South Africa
- 32 Dire Dawa University Dire Dawa, Ethiopia
- 33 Asa Studio Rwanda (Industrial collaboration)

## Australia

- 37 ICS Institute for Culture and Society Western Sydney University Sydney

# NEW HOUSING ISSUES

NHI

What are the possible approaches to deal with the current housing crisis?

Housing can be described as the crossover point between economic, social and spatial qualities. As a 'natural' interdisciplinary subject, housing issues stimulated a set of research studies within the Centre, spanning from research on large-scale real estate landlords to co-housing and bottom-up processes. Keeping the spatial nature of housing as the core aspect of analysis, *FULL* research on this issue embraces an evidence-based model that avoids the common bi-

ases of a purely sociological approach. A two-year collaboration with the Italian Central Bank produced *Contemporary Rentscapes*, a compendium on the different forms of temporary housing and their urban forms.

*New Domestic Rentscape* investigates the crystallisation into architectural forms of the dynamic tenure of rent. Further research is ongoing on the social involvement in community-led housing models and alternative housing models in general.

Italy is a country of homeowners. However, according to national statistics, cash renters do not seem disadvantaged in relation to their landlords: 9 million of tenants spend an average of 400€ per month on their rent (only 14% of the average national income). In major cities, these figures change radically. In the case of Milan, the affordable rental flat area is of about 30 sqm -the area corresponding 30% of median rent over the median city income-, while the median area of rental flats in the city is 70 sqm.

### Contemporary Rentscapes

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### New Domestic Rentscape. A Critical Insight into Middle-class Housing

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### Community-led housing development. A key ingredient for a new housing architecture and policy

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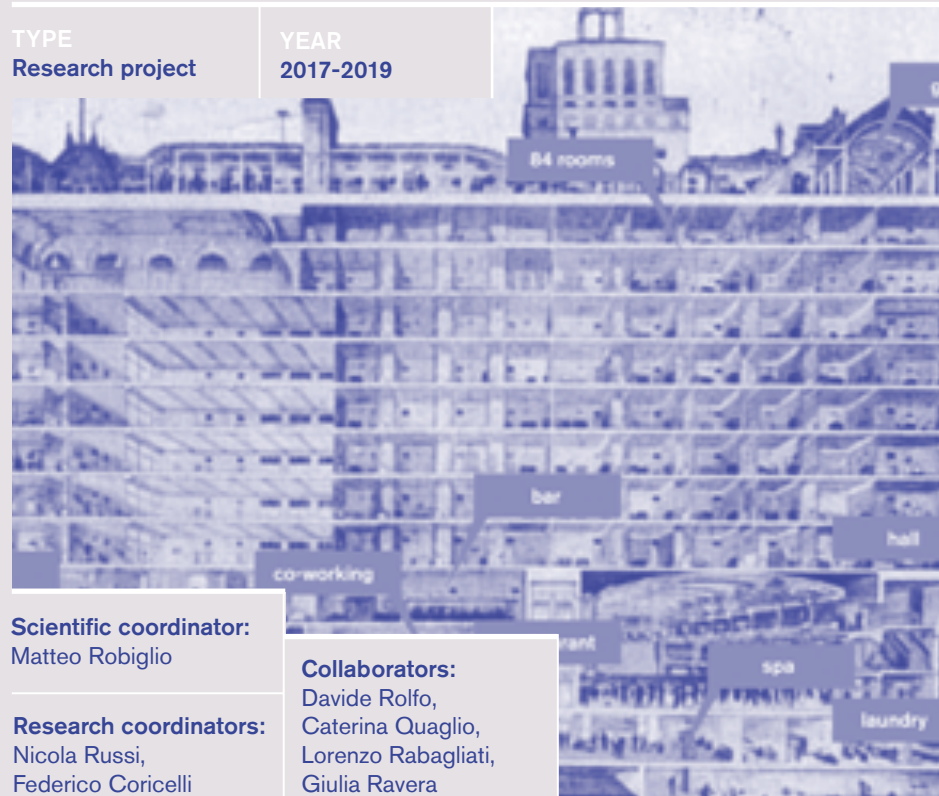
### Tailor-made housing. How to improve housing affordability and adequacy through innovation of the cohousing model

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# Contemporary Rentscapes

TYPE  
Research project

YEAR  
2017-2019



Scientific coordinator:  
Matteo Robiglio

Research coordinators:  
Nicola Russi,  
Federico Coricelli

Collaborators:  
Davide Rolfo,  
Caterina Quaglio,  
Lorenzo Rabagliati,  
Giulia Ravera

**Contemporary Rentscapes** is a biennial research project funded by Sidief Spa (Bank of Italy), focusing on transformative strategies for large rental housing stocks.

The first part of this project was published in the book *Re-housing, 'La casa come dispositivo di integrazione'* (The House as an Integration Device), (Politecnico di Torino, 2018). Triggered by the need for a generational

What would be the consequences in a city where no one owns a home, but everybody can rent a house?

turnover of the urban tenant, *FULL* demonstrated the flexibility of a portion of early twentieth-century housing stock through a toolkit of micro interventions. The second iteration of the project (*Living beyond Property*) investigates the innovative global offer on the private rental market, mapping and decoding the patterns and connections between private and public space in the serviced domestic realm.

## Contemporary rentscales

Contemporary rentscales is a biennial research project funded by Sidief Spa (Bank of Italy) focusing on transformative strategies for large rental housing stocks.

The first part of this project was published in the book *Re-housing, la casa come dispositivo di integrazione* (The House as an Integration Device) (Politecnico di Torino, 2018). Triggered by the need for a generational turnover of the urban tenant, *FULL* demonstrated the flexibility of a portion of early twentieth-century housing stock through a toolkit of micro interventions. The second iteration of the project (*Living beyond Property*) investigates the innovative global offer on the private rental market, mapping and decoding the patterns and connections between private and public space in the serviced domestic realm. This section of the project will be published in the book *Abitare oltre la proprietà* (*Living beyond Property*) (Politecnico di Torino, 2019).



## Re Housing (2018)

Can housing serve as an enabling factor to integrate new citizens? On 8th August 1991, the ship Vlora landed 20,000 Albanians on Italian shores. Since then, a lot has changed.

During the last twenty-five years, immigration from a wider and wider spread of foreign countries has coincided with radical cultural and economic transformations in Italy. The social fabric in Italy has been deeply changed by the interaction between different cultures.

This mutation has not been compensated for by a significant renewal in the built environment, historically characterised by an inertia towards inflexibility. The progressive mutation of life conditions of Italy's new residents is leading their housing demand to increasingly converge with that of more and more Italians. This unexpressed potential can be reimagined today as a resource to forecast strategies of renewal in the existing urban fabric and build a common ground, a place of sharing and integration.

Integrating housing with the city's new technological services and housing models today opens up the possibility of external-



ising much of the infrastructure embedded in the domestic unit. This phenomenon not only allows new housing typologies to be conceived, but also allows a portion of the existing housing stock to be radically transformed. The traditional housing models, characterised by a rigid and inflexible compartmentation, can be redesigned into flexible, open systems thanks to the application of new spatial strategies and new management tools. Transforming under-utilised rooms in new collective spaces and organising innovative management systems allows a new conception of housing to be formulated. A new form of housing able to meet the demand of new Italians.

## From specialised housing towards an original policy

The Italian city, with its sheer quantity of public space and high-density urban blocks, has for centuries represented an efficient model of integration between the individual and the collective dimension. This model, which in the recent past has seemingly been replaced by a sprawl of detached houses, is today becoming an actual one infilled with new ways to live and new



conceptions of inhabitation of the private and public spaces of the house. New housing typologies, developed inside dense portions of the city, allow innovative forms of integration between the private and the public dimension. The porosity of a densely-built city, subdivided in its core by a fragmented private property structure, represents the fertile ground to develop a system of housing and services distributed in the city in an efficient network instead of a one-size-fits-all model.

## Living beyond property (2019)

Italy is a country of homeowners. However, according to national statistics, cash renters do not seem disadvantaged in relation to their landlords: 9 million tenants spend on average €400 per month on their rent (only 14% of the average national income). In major cities, these figures change radically. In the case of Milan, the affordable rental flat area is about 30 m<sup>2</sup> – the area corresponding to 30% of median rent over the median city income –, while the median area of rental flats in the city is 70 m<sup>2</sup>.

Cities are the place where Engels' Wohnungsfrage has always unfolded in its more severe form, historically in purpose-built housing typologies like Berlin's Mietskasernen, the tenements of New York and the Parisian immeubles de rapport.

In post-war Europe, the deprived social conditions associated with these typologies triggered experimentation in the field of social housing, assigning to the state also the role of great landlord. The mass provision of housing led to the dimensional standards still in use in planning regulations. Paralleled to this mainstream story, some housing typologies were designed and optimised based on human body dimensions. The hotel, from its first conception at the end of the 18th century in the United States, has always been an incubator for domestic innovation. Today, if we observe major cities across the globe, we find hybrid housing typologies, mixing the spaces and services of the hotel with the notions of comfort and security typically associated with the traditional rental flat. Rental housing in this sense operates simultaneously as a dwelling and as a constellation of included services. Units of reduced size are combined with common areas and facilities in single buildings. Plus, housekeeping service and hotel-like management are usually included in the rental fee. Depending on budget and target users, this can take the form of co-living for students and professionals, luxury or branded apartments, serviced apartments and apartments for elderly people.

What would be the consequences of a city where no-one owns a home, but everybody can rent a house?

and the notion of housing as a verb (Turner, 1976) are key themes. As a result of this paradigm shift, the cohousing model was born. It combines individual private housing with collective spaces characterised by flexibility. It allows costs to be reduced and spaces customised through participatory design. It was born in northern Europe and then spread to English-speaking countries and continental Europe, having entered a new stage of development since the 2000s in the rest of Europe, especially in the south.

Is it possible to design a model of cohousing that can be reproduced on a larger scale, overcoming the limitation of punctual, disaggregated enclaves, to help ensure housing accessibility in an effective way? This investigation focuses on the critical analysis of this typology to meet the most diversified contemporary needs. International case studies are chosen for the innovative characteristics of the management model (software) or physical model (hardware) and then analysed regarding both replicable typological aspects and the different possible approaches in terms of supply, the role of the social manager, the contractual variety, the social mix and the guarantees offered by the service. The aim is to analyse how the paradigms of flexibility, customisation and hybridisation translate architecturally and whether a participatory process is more effective. The goal is to outline, through ethnographic study and action research, that cohousing is a model, not a typology and can therefore be interpreted differently depending on the context; public administrations, recognising the trend, can act as facilitators through dedicated policies; the inclusion of users is a tool to ensure the effectiveness of the project; sharing spaces helps to reduce costs and, together with the low cost process and tax incentives, ensures access to affordable housing that is also tailored to the wishes of future users, combining solidarity networks and social value in inclusive, adequate and sustainable housing.

## NEW HOUSING ISSUES

# OUTCOMES

### BOOKS AND BOOK CHAPTERS

**Cafora, Silvia.** 2021. 'A Community Cohousing in Roccaparena'. In *HEALING CULTURE, RECLAIMING COMMONS, FOSTERING CARE A PROPOSAL FOR EU CULTURAL POLICIES*, 123–30. Napoli: Italian Institute for the Future.

**Coricelli, Federico, and Chiara Iacovone.** 2021. 'Poseur Real Estate. Home Staging as an Enabling Commodification Practice'. In *Rehab*, edited by Angelo Sampieri, Fabrizio Paone, and Quirino Spinelli. Jovis Verlag.

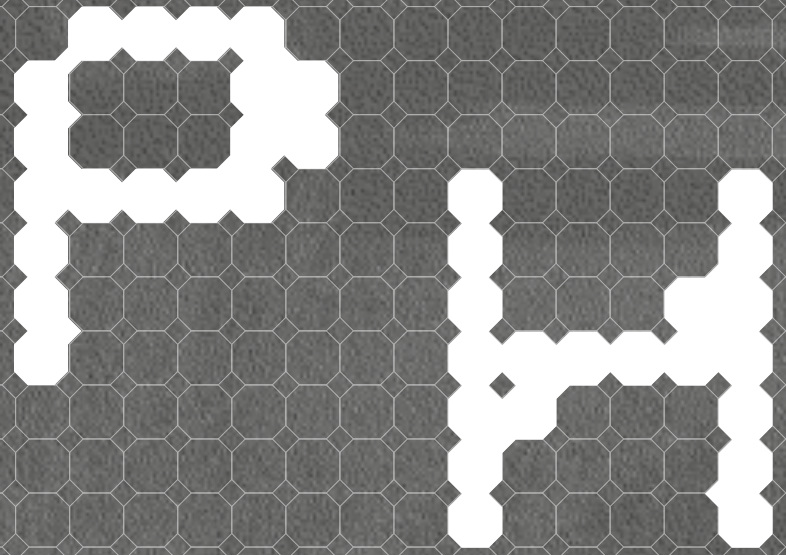
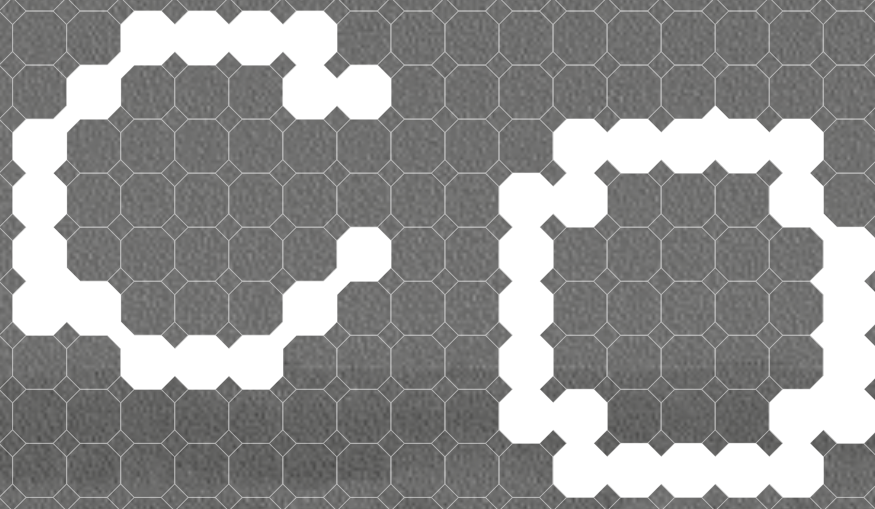
**Coricelli, Federico, Caterina Quaglio, Matteo Robiglio, Davide Rolfo, and Nicola Russi.** 2018. *Re-housing. La Casa Come Dispositivo Di Integrazione*. Quaderni del Future Urban Legacy Lab - Politecnico di Torino.

**Coricelli, Federico, Matteo Robiglio, and Silvia Cafora.** 2020. 'Le Case "Co"'. Dalle Cooperative Abitative Ai Modelli Di Cohousing: Genealogia e Declinazioni Dell'idea Di Abitare Insieme'. In *Abitare Pioniere. Innovazione Democratica e Nuovi Paradigmi Economici in Risposta Alla Finanziarizzazione*. Fondazione Giangiacomo Feltrinelli.

**Coricelli, Federico, Matteo Robiglio, and Nicola Russi.** 2019. *Abitare Oltre La Proprietà*. Quaderni del Future Urban Legacy Lab - Politecnico di Torino.

### CONFERENCE PROCEEDINGS

**Cafora, Silvia.** 2021. 'Territori in Contrazione e Diritti in Contrazione, Accesso Ed Eccesso Del Patrimonio Costruito'. In *DOWNSCALING, RIGHTSIZING. Contrazione Demografica e Riorganizzazione Spaziale*, 23–30. Torino: Planum Publisher.



**Project manager**

**Matteo Robiglio**

is an architect and urban designer. He is a Full Professor at Politecnico di Torino. After 20 years of practice in community architecture and urban regeneration with Avventura Urbana, he founded in 2011 with Isabelle Toussaint the office TRA (lit.: in-between). In 2014 TRA and the community foundation Benvenuti in Italia jointly founded the non-profit social innovation start-up HOMERS, recognized as PoliTo spin-off, promoting bottom-up cohousing projects for the reuse of abandoned buildings. He was a member of the Scientific Committee of the Centre for African Studies, of Re-build and of the recovery project of Giancarlo De Carlo's University Colleges in Urbino of the Getty Foundation. He is a German Marshall Fellow in Urban and Regional Studies. He has also been a visiting lecturer in many universities such as the Carnegie Mellon of Pittsburgh, the Xi'an Jiaotong-Liverpool University in Suzhou, the Technion of Haifa, and the MIT in Boston.

**Executive manager**

**Laura Martini**

is an architect PhD, since 2017 she is the executive manager at FULL – The Future *Urban Legacy* Lab. Her research interest lies in the area of urban theories, psychogeography, and urban countercultures. As part of the informal research group luoghisingolari.net and as a PhD candidate at Politecnico di Torino she did field research on the relationships between underground, radical spatial practices, real estate values and metropolitan conflicts. She has co-authored with D. Vazquez, the book: *Che cosa è un luogo singolare? Scritti del Centro di Ricerca dei Luoghi Singolari*. 2004-2016. 2018, Aracne Ed., Roma.

**Deputy project manager**

**Francesca Governa**

is a PhD in Spatial Planning, she is an urban geographer and Full Professor of economic and politic geography. She is part of the Academic Board of the PhD in Urban and Regional Development. She is involved in research activities at national and international level on four main issues: local development processes and policies; urban margins and spatial justice; urban development and the rescaling of the urban realm; Urban China and urbanization processes in the Global South. She has carried on fieldworks in European, North African and Chinese cities.

**Scientific Board**

**Luigi Buzzacchi**

is Full Professor since 2000 at the Politecnico di Torino, where he teaches courses in urban economics and industrial organization. He also taught insurance economics and financial markets economics in various universities. His research interests lie in the area of urban and regional economics, insurance and financial markets (in particular, contract theory, ownership structure, venture capital contracts, and innovation incentives), economics of risk and uncertainty, regulation and public policies, firm size distribution and spatial competition, economics of professional sports.

**Claudio E. Casetti**

is a Full Professor at the Department of Control and Computer Engineering, Politecnico di Torino, Italy. He has published more than 200 papers in peer-refereed international journals and conferences on the following topics: Transport and network protocols in wired networks, IEEE 802.11 WLAN, Vehicular networks, Ad hoc and sensor networks. Also given Tutorials on vehicular networks at major IEEE Conferences, including IEEE ICC, IEEE Globecom, IEEE CCNC and IEEE VTC. He has served in the Technical Program Committees of the main international conferences in the networking field.

**Juan Carlos De Martin**

is a Full Professor at the DAUIN Department of the Polytechnic of Turin, he co-founded and co-directs the Nexa Center of Internet and Society. Since 2011, he is a Berkman Faculty Fellow at the Berkman Center for Internet & Society of Harvard University and Senior Visiting Researcher at the Internet and Society Laboratory of Keio University (Tokyo). It is known for its activities in the Internet and the Society, with particular attention to issues of copyright in the digital age and net neutrality. Often writes in the daily "La Stampa" as a columnist on issues related to digital technologies and their impact on society.

**Enrico Fabrizio**

a PhD in Energy Technologies at the Politecnico di Torino and at the INSA de Lyon, since 2015 is Associate Professor at the Energy Department of Politecnico di Torino. From 2008 to 2015 he has been assistant Professor at the DISAFA Dept. of the University of Torino. He carries out research activities in the fields of zero-energy buildings performance simulation and optimization, environmental control for animals and plants, impacts of renewable energy technologies and energy poverty issues.

## Francesca Frassoldati

is Associate Professor at the School of Architecture of Politecnico di Torino since December 2015. From 2008 she has been working at the South China University of Technology. Out of a long-term commitment to understanding processes, tensions, and spatial effects of socio-economic transformations in the habitable world, her major lines of work address rural-urban interaction and urban regeneration processes with particular emphasis on the use of spatial design in public discourse.

## Paolo Giaccone

is currently Associate Professor in the Department of Electronics Telecommunications of Politecnico di Torino. Between August 2000 and September 2001 he was visiting researcher in the Information Systems Networking Lab of Prof. Balaji Prabhakar at the Electrical Engineering Department of Stanford University. In February 2002 he obtained the PhD degree at Politecnico di Torino, with a dissertation about "Queueing and scheduling algorithms for high performance routers".

## Marco Carlo Masoero

holds MSc degrees in Civil Engineering from Politecnico di Torino and in Mechanical and Aerospace Engineering from Princeton University. He is a Full Professor at Politecnico di Torino in the Department of Energy "Galileo Ferraris" (1995-1999 and 2012-2015). He is International Faculty Affiliate in the Department of Mechanical and Industrial Engineering of the University of Illinois at Chicago. His teaching, research and consulting activity focuses on two main areas: Energy Efficiency in Buildings and Technical Systems, and Applied Acoustics.

## Antonio Santangelo

is a semiologist. He studies the relationship between digital technologies and society. He carries out this research at the Nexa Centre for Internet & Society of the Polytechnic of Turin, together with an interdisciplinary group, composed of computer engineers, lawyers and economists. He teaches Semiotics and Philosophy of Language, Semiotics of Text and New Media Languages at the eCampus Telematics University and Semiotics of Television at the University of Turin.

## Giuseppe Scellato

holds a PhD in Economics and is a Full Professor at the Department of Management and Production Engineering (DIGEP) and the Future *Urban Legacy* Lab (FULL) of Politecnico di Torino, where he teaches Corporate Finance in graduate programs and Economics and Management of Innovation in post-graduate programs. During 2015-2018 he has been the Vice Dean of the College of Industrial Engineering and Management. Since November 2018 he is the president and CEO of the Innovative Enterprise Incubator of Politecnico di Torino.

## Tiziana Tosco

is an Associate Professor at DIATI - Politecnico di Torino since April 2018 and formerly She was Tenured Assistant Professor in the same department. She is co-responsible of the Environmental nanotechnologies Laboratory at DIATI and the responsible for Internationalization of the Environment and Land Engineering Bachelor and Master programs. She is Professor of the MSc course Reclamation of Polluted sites and in other courses of the MSc of Environmental Engineering and in the Specializing Master Program of Water for Civil and Industrial uses at Politecnico di Torino.

## Antonio Vetrò

is Assistant Professor at the Department of Computer and Control Engineering, at Politecnico di Torino. He is also Senior Research Fellow at the Nexa Center for Internet and Society and at the Future *Urban Legacy* Lab, both at Politecnico di Torino. Currently, Antonio is conducting research on how to detect and mitigate potential discriminations deriving from biases in the data and in the algorithms of decision systems.

## Giulio Zotteri

is Full Professor at Politecnico di Torino where he currently teaches Distribution Logistics, Marketing, and Urban and Regional Economics. Giulio has published more than 20 articles in international journals on the above topics. Giulio is part of the Consortium on Operational Excellence in Retail and has studied the retail sector for more than 20 years.

## Faculty

### Edoardo Piccoli

is Associate Professor since 2000 at the Politecnico di Torino, where he teaches courses in urban economics and industrial organization. He also taught insurance economics and financial markets economics in various universities. His research interests lie in the area of urban and regional economics, insurance and financial markets (in particular, contract theory, ownership structure, venture capital contracts, and innovation incentives), economics of risk and uncertainty, regulation and public policies, firm size distribution and spatial competition, economics of professional sports.

### Nina Rappaport

is an architectural critic, curator, and educator. She is publications director at Yale School of Architecture and editor of the biannual publication *Constructs* (numbering 35), the exhibition catalogs (numbering 48), as well as the school's book series (22 to date). She is the director of the project/think tank the Vertical Urban Factory, which includes an exhibition with graphic design by Sarah Gephart of MGMT Design and the exhibit design by Studio Tractor. The show was most recently displayed at EPFL's Archizoom in Lausanne, and the Gallery at Industry City, in Sunset Park, Brooklyn".

## Nicola Russi

is an architect and Associate Professor at Politecnico di Torino. He studied at TU Delft and at Politecnico di Milano, where he obtained his Phd in 2007. In 2008 he founded the architectural practice Laboratorio Permanente in Milan with Angelica Sylos Labini. He won the international competition for the masterplan of Farini and San Cristoforo railway yards, participated in the 16th and 14th Venice Biennale International Architecture Exhibition and received the Honour Mention for the Golden Medal for Italian Architecture in 2012 with the project "The landscape has no rear".

## Luigi Sambuelli

took service as a Full Professor of Applied Geophysics at the Università di Cagliari and in November 1995 he moved to the Politecnico di Torino with the same role. From April 2015 he is full Professor of Applied geophysics at the Politecnico di Torino. His main interests are the application of geophysics to archaeology, architecture, tunneling, geotechnics and hydrogeology.

## Nannina Spanò

is Associate Professor in the discipline 08-Civil engineering and architecture / 04: Geomatica from 2014, at Politecnico di Torino - Department of Architecture and Design. He teaches several courses in the I, II and III level programs in Architecture (bachelor course) and Architecture for sustainable design (Master of science course) and Geomatics for Architectural and Landscape Heritage (doctoral course); since 2007 he has been a member of the board of Professors of the PhD program in Architectural and Landscape Heritage.

## Elena Vigliocco

is an architect, Phd in Theories and Construction of the Architecture (2005), since 2017 she is Assistant Professor in Architectural and Urban Design at the Politecnico di Torino. In 2019 she is Visiting Professor at the Pontificia Universidad de la Javeriana in Bogotá. Her research interests are focused on issues concerning adaptive reuse of cultural heritage. As architect, she is author of the renovation of the Astra Theatre and of the Paideia Centre both in Turin.

## Research fellow

## Federico Accorsi

is an environmental engineer specialized in the field of reclamation and monitoring of contaminated sites. He acquired a high level of technical / commercial knowledge, holding positions of responsibility for projects located throughout the national territory and for each phase of the project: sizing, reclamation, offer formulation, personnel supervision and management of construction site, communication with Italian / foreign customers. He focuses on: integration of the remediation processes in the architectural restoration project, monitoring and modeling of biogas emissions into the atmosphere.

## Adriano Aimar

is an architect graduated from the Politecnico di Torino and Politecnico di Milano as an alumnus of the Alta Scuola Politecnica. His master thesis has been developed within *FULL* and it explored the non-spatial relationships among urban venues based on the analysis of Instagram social urban data. His research work has been focusing afterwards on data analysis for urban and regional development. He is currently an MBA fellow at the Collège des Ingénieurs in Turin.

## Lucia Baima

is an architect, PhD and Research Fellow at *FULL* - Politecnico di Torino. She holds a PhD in Architecture, History and Project. Her research activities investigate the role of Intensity as a dynamic parameter able to reveal the potential of spaces and projects to catalyze multiple uses and kinetic processes. Her doctoral dissertation and forthcoming book explore the concept of Intensity within the city of New York City. She collaborated as a teaching assistant in architectural and urban design studios at the Politecnico di Torino where she has graduated after a period of studies in Barcelona. Previously she worked with several architectural offices. For six years she has been a part of MARC Michele Bonino e Subhash Mukerjee Architects as project manager for several awarded projects. With MARC she participated at the 12th and 13th Biennale of Architecture in Venice. She is the author of several articles and publications on Intensity issues and co-curator of the special issue of *UrbanisticaTre Sharing of public spaces* (2015).

## Caterina Baroglio

is Assistant Professor at the Department of Architecture and Design of Politecnico di Torino. She earned a PhD in History of Architecture and Urban Design in 2016 with a dissertation carried out between Turin and Columbia University in New York City. Bridging history and design, her research relates to urban regeneration processes, with a main focus on the spatial effects of urban rule and socio-economic transformations. From 2016 to 2018 she worked for the masterplan project of the Politecnico di Torino. Since 2018 she has been editor of the *ARDETH - Architectural Design Theory* magazine.

## Angelo Caccese

is an architect. He graduated at Politecnico di Torino after a period of studies between Turin, Buenos Aires and Madrid. His master thesis, entitled *The Airbnb effect: architecture and urban consequences of a new way of trading homes* was carried out during a period of seven months as visiting student at School of Architecture of Madrid (ETSAM). He collaborated with several architectural offices and formed part of the research group LoCUS from the Universidad Politecnica de Madrid. He currently collaborates with *FULL* and he is a freelance architect.

## Daniele Campobenedetto

is an Assistant Professor in Architectural and Urban Design at Politecnico di Torino. He holds a PhD in History of Architecture and Town Planning from Politecnico di Torino and in Architecture from Université Paris Est. His research activities investigate especially the role of rules and bureaucracies in urban transformation. He has been part of the PoliTo Masterplan Team and he is a funder and an editor of the journal ARDETH - *Architectural Design Theory*.

## Federico Coricelli

is an architect graduated from the University of Florence. He holds a PhD from Politecnico di Torino. He is the author of various articles and publications on housing issues. During the past years he worked for several architectural offices and collaborated independently in several competitions, some of them successfully awarded. He collaborated as teaching assistant in architectural design studios at the University of Florence and Politecnico di Torino. Since 2017 he is partner at UHO, an architectural office based in Paris.

## Marco Cappellazzo

holds a master's degree in Architecture Construction and City with a thesis project developed on the areas of Parco di Porto Conte in Alghero. The purpose was to describe, through GIS and rapid mapping technologies contribution, the municipality's territory, leaving out the usual glance of coasts confined only for seaside tourism, and rethinking the legacy of military architectures from the IIWW as hubs to further new strategies of development both for tourism and for residence. He cooperates with lab G4CH and FULL. His research deals with geo-spatial science techniques for the documentation of Cultural Heritage by use of GIS mapping and data analysis approach.

## Luca Galleano

is an architect. He has graduated at Politecnico di Torino with a thesis entitled "Designing with autonomous relationship properties of complex systems: a parametric approach to achieve building sustainability". He is specialised in computational design and sustainability architecture, indeed is also a WELL AP and LEED Green Associate. He collaborated with several architectural offices, and he currently collaborates with FULL as part of the WHO Covid-19 Helpdesk project and he is a freelance architect.

## Antonio De Marco

is Assistant Professor at the Department of Management and Production Engineering (DIGEP) and the Future *Urban Legacy* Lab (FULL) of Politecnico di Torino, holds a PhD in Economics and Complexity at Collegio Carlo Alberto and a M.Sc. in Management Engineering at Politecnico di Torino. In the last few years he has been involved as Research Assistant in a number of projects funded by the European Commission, gaining an in-depth knowledge of advanced methodologies for patent data-mining and technology intelligence.

## Marianna Nigra

is a Research Fellow at Politecnico di Torino. She is an experienced Architect with a demonstrated history of working in the research industry and a PhD focused in Management, Production and Design from Politecnico di Torino. She has strong International experience, developed by collaborating with The Melbourne University, Australia; The Vrije Universiteit, Amsterdam; and Strathclyde University, Glasgow, Scotland, and a number of French architectural practices in Paris, France. Her work focuses on the management of complexity in sustainable architecture, encompassing concepts of economy, building physics, and architectural design. She has collaborated with a number of Institutions in support of the definition of policies and strategies to enhance the sustainable development of the built environment. She is currently collaborating with the World Health Organization (WHO) to support the research against the diffusion of covid-19 in health infrastructure and public spaces.

## Andrea Pollio

holds a PhD in Economic Geography and Urban Studies from the Institute of Culture and Society, Western Sydney University. His research interests coalesce around the relationship between urban economies and technological innovation in African cities. Andrea is currently Marie-Sklodowska Curie Fellow (grant no 886772) jointly at the Future *Urban Legacy* Lab (through DIST) and at the African Centre for Cities, at the University of Cape Town. His project addresses the impact of private Chinese finance on the transformation of African cities that lie on the 21st century Maritime Silk road.

## Caterina Quaglio

is a doctoral student in "Architecture, History and Project" at the Politecnico di Torino. She graduated in architecture in Italy in 2015, spending two years abroad for exchange programs in Brussels and Madrid. Since her master thesis and during an internship in Chile, she has worked on the issue of public housing. Her PhD research is focused on the policies and practices of public housing urban regeneration, studied through in-depth analysis of three European case studies.

## Maria Paola Repellino

graduated in Architecture in Politecnico di Torino and then obtained a PhD with a thesis on the dynamics of transformation of industrial heritage into creative places in Contemporary China. Since 2016 she is a post-doc researcher at the Polytechnic of Turin, where she coordinates a research in collaboration with Tsinghua University and EPFL dedicated to the Chinese new towns: within the program she curated the exhibition-seminar at the Beijing Design Week 2016 and the cycle of conferences on the new Chinese urbanization along the new Silk Road.

## Giulia Sammartano

is architect and PhD in Geomatics. She cooperates with lab G4CH and FULL. The research interests in geo-spatial science born in the Geomatics techniques for 3D documentation of Cultural Heritage by use of multiple digital approaches: 3D modelling by LiDAR, SLAM mapping, close-range and UAV photogrammetry, data analysis and GIS mapping. She is part of DIRECT Team Polito for emergency surveying, and 2016 Polito Task Force post-earthquake mission. She participates at PRIN 2015 and takes part in the Italian Archaeological Mission in Hierapolis of Phrygia in Turkey (2015, 2017, 2018).

## PhD candidate

### Silvia Cafora

is a PhD researcher at Politecnico of Turin where she is working on new radical approaches to collaborative housing. She studied Architecture between Milan (Politecnico) and Valparaiso in Chile. She early developed an interest in the right to the city, focusing on the abandonment of public spaces in urban areas and their informal re-use by citizens. She led a research at PUCV Escuela de Arquitectura y Diseño in Valparaiso, Chile with the theme *Obra Habitada, housing from everyday life*, creating international symposiums in Paris (ENSCI), Santiago de Chile, Milan. She collaborates with Feltrinelli Foundation in Milan in the Housing research team. As a professional she worked at the first co-housing projects in Milan, and she is now part of Homers in Turin.

### Matteo Gianotti

is a PhD researcher working on urbanization in developing countries. He studied architecture and urban planning at Politecnico di Torino, Università IUAV di Venezia and Chalmers University of Technology (Gothenburg). His Master's thesis focused on urban development strategies in response to climate change. He worked in the Urban Planning Unit at UN-Habitat (Nairobi) and with Subhash Mukerjee architectural design studio (Turin).

### Elena Giudetti

is a PhD Candidate in Architecture, History and Project and a PhD fellow at FULL. Her research focuses on the *transformative potential* in existing buildings. Until 2018, she was a freelance architect and a teaching assistant at UniFe, taking part in the organization of two international workshops in Sarajevo. During 2017 she worked in Zimoun Contemporary Art Studio in Bern. In 2017 she graduated at the Faculty of Architecture of Ferrara, with a thesis focused on adaptive reuse of a post-industrial site in Porto, in collaboration with the FAUP.

### Chiara Iacovone

is an urban geographer with a background in architectural studies. She holds a BA at Roma Tre University and a MA at Politecnico di Torino both in Architecture; she graduated with a research thesis on the urban transformations in Berlin. She continued her career mostly oriented on urban studies, experimenting with different tools and media to investigate space. Her interests concern with questioning urban dynamics and looking at contemporary cities through different lenses. She has collaborated with art galleries across Europe with visual research projects. From November 2017, she became part of FULL.

## Francesco Milone

is an engineering and Management student at Politecnico di Torino. Interested in Economics, Strategy, Innovation and new Business Model Development. Worked as an assistant research scientist about economics and management field. The focus of this research is on "Platform business models". As case study, a particular attention is kept on Airbnb. In order to perform this analysis this research needs an important effort as data analytics due to the greater amount of data that have to be analyzed, all results are elaborated in a simple visual way and in detailed reports.

## Valerio Palma

holds a master's degree in Architecture and Urban Design from the University of Roma Tre (2016). He has been a research fellow at the ReLOAD Lab of the University of Padova (2016-2017), dealing with interoperable digital models for architectural cultural heritage. His work at FULL focuses on the use of quantitative models and digital tools for urban design and the analysis of urban transformations.

## Marco Rapelli

was born in Turin (Italy) on December 5th, 1992. He got his B.Sc. in Telecommunications Engineering (2015) and his M.Sc. in Computer And Communication Networks Engineering (2017) both at Politecnico di Torino. He then joined FULL (Future Urban Legacy Lab), an inter-disciplinary center of Politecnico di Torino, where, in November 2018, he started his PhD under the supervision of Prof. Casetti. As main research interests, he is working on mobility studies and large-scale urban traffic simulators.

## Ludovica Rolando

is an architect and PhD student in Architecture History and Design at Politecnico di Torino. She studied Architecture between Politecnico di Torino and UCL Université Catholique de Louvain. She collaborated with TeamMinus, Beijing (2016) and Miralles Tagliabue EMBT, Barcelona (2019/2020). She is now focusing on Contemporary Housing Models and she recently joined FULL.

## Agostino Strina

is an architect and a PhD Candidate in Urban and Regional Development at Politecnico di Torino. He holds a master's degree in Architecture for the Sustainability Design with a thesis focused on the internal areas of Sardinia, with the aim of rethinking some trajectories of regional development. His research deals with theories and cultures of contemporary urban design, with a particular focus on the relation between urban and rural, investigating the role of production landscapes and infrastructures. On these issues, since November 2020, he is conducting his research at FULL. He is also member of Politecnico's research group China Room, as junior fellow, and teaching assistant in Urban Planning at Politecnico di Torino.

## Roberta Taramino

is a M.sc in Engineering and Management at Politecnico di Torino. Her research grants to provide information to public institutes in order to improve the commercial system of cities. Understanding how consumers and close commercial environment react to a large-scale supermarket opening, using an innovative method to measure the impacts and studying the business model for the reuse of historical buildings in the urban landscape are two of the issues I've dealt with.

## Valeria Todeschi

graduated in Regional, Urban and Landscape-Environment Planning at the Polytechnic of Turin in 2016, with a thesis on "Energy sustainability at the urban scale. Energy consumption models of buildings in Turin and potential development of the district network". She started a PhD in Energetics on FULL project "Smart Energy Solutions for Sustainable Cities and Policies" at Polytechnic of Turin in 2018. The PhD aim is to drive smarter use of energy, matching it with the available energy renewable sources on the territory to help policy makers in defining effective policies adapted to the real energy-use.

## Ilaria Tonti

is an architect and a PhD researcher working on reconstruction design tools post-earthquakes emergencies. She studied architecture between Piacenza (BA-Politecnico di Milano) and Turin (M.Sc. - Politecnico di Torino). Her Master's thesis focused on the regenerative value of residual urban spaces and adaptive strategies for Turin. During 2019, she followed the research "FARB 2016 - Learning from catastrophes: methods, tools and techniques for the realization of resilient settlement systems" of the Politecnico di Milano. With her PhD research, she became part of two Interdepartmental Centre of PoliTo: FULL and PIC4SeR.

## Didem Turk

is a city planner and PhD candidate in the Architecture History and Project at Politecnico di Torino. Her background is urban planning and urban design. She received her bachelor's degree in Middle East Technical University (METU) from the City and Regional Planning Department. She pursued her Master degree in Urban Design at METU in the context of post-conflict urban areas. In the meantime, she followed studio related to parametric design. She is currently conducting a research on comparative urban morphology at FULL in collaboration of Transitional Morphologies Research Unit. Her field of interest is urban morphology, comparative urban morphology studies, and parametric design.

## Alberto Valz Gris

works as a geographer. He holds an M.Sc. in Architecture (Politecnico di Torino) and an MA in Fine Arts (Sandberg Instituut, Amsterdam). Combining theoretical reflection and on-field research into textual contributions and audiovisual productions, his work aims at transforming the relationship that humans entertain with the surrounding biosphere.

## Past fellow

### Emilio Abbate PhD candidate

cooperates with lab G4CH-Laboratory of Geomatics for Cultural Heritage at PoliTo and FULL-Future *Urban Legacy* Lab. He researches tools and survey methods for identify and implement HBIM model applied on Cultural Heritage, for monitoring, conservation, restoration and Finite Element Analysis (FEM). His interests are focused on the generation of BIM models from Point Clouds: modelling BIM from laser data and photogrammetric using object-oriented parameterization.

### Louis Andrianaivo Research fellow

is a *research fellow* from the department of Computer Science of Polytechnic University of Turin. He has graduated from the department of Mathematics, University of Roma Tre. His topic is the application of parallel programming in cryptography, statistical simulation and machine learning. Currently, his main contribution with Future *Urban Legacy* Lab is the use of machine learning algorithms in the field of Architecture and Urban design. He is working under the supervision of Professor Claudio Casetti.

### Michele Barale PhD candidate

is a journalist and a PhD candidate in Architecture, History and Design. He graduated in Architecture at Polytechnic of Torino, with a master thesis concerning typo-morphology research developed at Forma Urbis Lab in Lisboa (FAUL). Since may 2018 he is editor of In\_bo journal (University of Bologna). Active in dissemination of local, architectural and urban culture, he worked as journalist and he is member of local organisations.

# COLOPHON

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is an architect and research fellow at FULL and DAD (Politecnico di Torino). Graduated in Architecture after two international experiences at TTÜ Tallinn and at the CCA (Montréal), he holds a PhD at Politecnico di Torino with the thesis “Architecture for urban agriculture”. He is currently involved in studying the different forms of integration of nature in the city in the research NUI- Nature as Urban Industry.

### Emanuele Protti PhD candidate

is an architect and PhD student in Architecture History and Design at Politecnico di Torino. He collaborated with Carlo Ratti Associati, Plateau Collaboratif, UdA Marcante-Testa. In 2016, he won in collaboration with Plateau Collaboratif the international competition for the redevelopment of the industrial sector Pasubio in Parma. He lives and works in Turin.

### Elisa Sirombo Research fellow

architect, leed ap bd c, o m, itaca protocol expert Since 2011 he has been a consultant on energy-environmental sustainability issues and on the LEED and Itaca certification processes and since 2014 he has been collaborating with Macro Design Studio. Since 2013 research fellow at the Department of Energy of the Polytechnic of Turin, he carries out research in the field of sustainable construction. Author of several technical and scientific publications.

### Natalia Bonilla Research fellow

finished her major in Architecture at the Universidad de Costa Rica, Natalia gained experience for two years in design and construction as a junior architect in the San José based firm Grupo Terraba. In 2015, she undertook the masters joint programme PLANET Europe, part of Erasmus+, between Radboud Universiteit (Netherlands) and Cardiff University (United Kingdom) in European Spatial Planning and Environmental Policies.

### Caterina Montipò PhD candidate

is an architect and PhD She graduated from Politecnico di Milano in 2013, and earned her PhD from Politecnico di Torino in 2019 with the thesis “Loft Working. Urban manufacturing spaces in North American cities.” She has a rich and diversified international experience developed both as a student as well as a professional between Spain (Universitat Politècnica de València), Chile (Pontificia Universidad Católica de Chile), and USA (Carnegie Mellon University). She has been collaborating with different architectural studios and engineering companies between Chile (2013-2014) and Italy (2015-current).