

Vector-Valued Kernel Ridge Regression for the Modeling of High-Speed Links

Original

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(Article begins on next page)

From Wednesday June 29th
to Friday July 1st

CONFERENCE
PROCEEDINGS

15TH

CONFERENCE
OF THE INTERNATIONAL
FORUM ON URBANISM
(IFoU)

AT THE BORDEAUX NATIONAL
SCHOOL OF ARCHITECTURE AND LANDSCAPE
IN 2022

Conference theme
**Internationalizing Education for the
Ecological Transition Challenge :**
*New Stakes for Sharing Knowledge and
Acting in a Changing World*

CONFERENCE THEME:

INTERNATIONALIZING EDUCATION FOR THE ECOLOGICAL TRANSITION CHALLENGE:

New Stakes for Sharing Knowledge and Acting in a Changing World

As societies all over the world face the challenges of global change, the paradigms for spatial intervention are evolving. New attitudes for action are emerging, departing from the perspective of unlimited growth that has proven detrimental to the environment and putting forth the postulate of an ecological transition. In the realm of urban and architectural design, rampant productivism appears outdated and is progressively being replaced by an attitude that is more attentive to local environments and cultures. Different methods for space design at all scales are emerging locally, adopting new postulates in order to address global challenges.

In this context, the internationalization of higher education stands out as a powerful tool for helping our societies address current questions about the evolution of territories all over the planet in a spirit of complementarity and solidarity. As the internationalization of education has garnered widespread approval through its promotion of sharing knowledge between a wide diversity of countries, today it is a priceless vector for fostering the exchange of ideas and experiences about the ecological transition.

Broadly addressing these matters by studying what is done in different contexts would seem to be a fundamental task for higher education in architecture, urban design, planning, and spatial work in general carried out at all scales.

The 15th Conference of the International Forum of Urbanism (IFoU), to be held at the Bordeaux National Higher School of Architecture and Landscape Architecture in 2022, aims to present different approaches, methods, and experiments in teaching and research implemented in higher education institutions for architecture, urban design, planning and landscape architecture all over the world, with a focus on how internationalization contributes to meeting the challenge of the ecological transition.

FIVE DIFFERENT THEMES WILL BE ADDRESSED
IN THIS INTERNATIONAL CONFERENCE:

- 1 / NEW INTERDISCIPLINARY AND INTERCULTURAL APPROACHES FOR FACING GLOBAL CHANGES AND THEIR LOCAL IMPACT.**
- 2 / ELABORATING AND TEACHING NEW PARADIGMS PROMOTING LOCALNESS IN LIGHT OF THE CRISIS OF GLOBALIZED MODELS FOR ACTION.**
- 3 / NEW IDEAS ABOUT “NORTH-SOUTH” RELATIONS FOR STUDYING PLACES IN TRANSITION.**
- 4 / NEW APPROACHES TO TECHNICAL DIMENSIONS FOR THE BENEFIT OF LOCALITIES.**
- 5 / INTERNATIONAL EDUCATION POLICIES AND THE ECOLOGICAL**



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KEYNOTE SPEAKERS

JANA REVEDIN

Born in Constance (Germany), Jana Revedin is an architect, theorist and writer. The holder of a PhD in architectural and urban sciences and a full professor of architecture and urbanism, studied architecture and urbanism at Belgrano University Buenos Aires, Princeton School of Architecture and Milan Polytechnic University and taught at IUAV University in Venice as an assistant to Aldo Rossi. It was here that she presented her doctorate on the role of public space in the development of a democratic civic identity during the early German reform movement of the Bauhaus. Since receiving her authorisation to direct scientific research from the Ministry of Universities and Scientific Research in Rome in 2000 she has been appointed an associate professor of architecture and urbanism at Beuth University in Berlin and the University of Umeå in Sweden and a full professor at Blekinge Institute of Technology in Karlskrona, Sweden. In 2016, she was appointed a full professor of architecture and urbanism at the Ecole spéciale d'architecture in Paris. She is a member of the LAURE Research Laboratory of the National Centre for Scientific Research (CNRS), the founding president of the world-widely recognized Global Awards for Sustainable Architecture and serves as the UNESCO delegate to the UIA commission of research and education as much as a member of the Board of Directors of ENSAP Bordeaux. In 2022 she is the curator of the first international exposition of the Architecture and Landscape Biennale of the Ile de France held at the Castle of Versailles: "Land in Sight!". Her biographical novels on women in architecture and design are internationally renowned bestsellers.

https://www.youtube.com/watch?v=FrZlyDU_gSA



JIN YEU TSOU

Professor TSOU Jin Yeu is the Raymond Hu Professor of Architecture in the Department of Architecture and Civil Engineering of the City University of Hong Kong and the Emeritus Professor of Architecture, School of Architecture, Chinese University of Hong Kong.

He is the Founder and Founding Director of the Center for Housing Innovations; the Senior Fellow of the Architectural Society of China; Board of Directors and Chairman of China Green Building (HK) Council and Director of Board of Certification; Board of Directors of International Society for Computing in Civil and Building Engineering (ISCCBE); Senior Fellow of International Forum of Urbanism (IFoU); Advisory Board member of Greater Bay Area (GBA) Carbon Neutrality Association.

He received the SASADA Award 2016 by the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA). He assisted HKSAR in researching the impact of architectural design (e.g., Amoy Garden) on the spread of the virus in the air during SARS in 2003, and submitted the works to WHO as supporting documents.

His interdisciplinary research interests cover the areas of sustainable architecture design, performance-based simulation, evidence-based design, green building, remote sensing, and urban planning. His recent research projects include: applying CFD simulation to design D.I.Y. negative pressure air shield device against airborne COVID spread in crowded elderly homes in HK; establishing a multi-source remote sensing data fusion big data system for evaluating GBA coastal cities' carbon sequestration under different development strategies.

https://www.youtube.com/watch?v=MNUD2H82_Ro



DOMINIQUE GAUZIN-MÜLLER *

Dominique Gauzin-Müller is a French architect living in Germany since 1986 who since her studies, specialized in the multiple facets of eco-responsible land-use planning: materials, energy, social and cultural implications. She collaborates with numerous architecture journals and international publishing houses. She has published 21 books which were translated into several languages, and directs the "Ecological transition" collection at MUSEO editions.

Dominique Gauzin-Müller has curated several exhibitions, including "ecological living" (Cité de l'architecture, Paris, 2009). She initiated and coordinated the TERRA Award 2016, the first world prize for contemporary architecture in raw earth, then the FIBRA Award 2019, for contemporary architecture in plant fibres. Both awards were combined in 2021 in the TERRAFIBRA Award. Each of these prizes gave rise to a book and a traveling exhibition highlighting the finalists.

From 2007 to 2016, Dominique was editor-in-chief of EcologiK/EK, a magazine dedicated to eco-responsible architecture and urban planning. Honorary Associate Professor of the Unesco Chair "Earth Architectures, Constructive Cultures and Sustainable Development", she works in several universities around the world. She is also a member of the Compagnie des négaWatt, a group of independent experts working on energy transition scenarios for France.

In January 2018, Dominique Gauzin-Müller launched with Alain Bornarel and Philippe Madec the "Manifesto for happy and creative frugality in architecture and the management of territories", which has already collected more than 14,000 signatures from 85 countries, creating an international movement for a paradigm shift in the building sector.

*key note speaker from the 23th APERAU conference, shared with Bordeaux IFoU Conference

<https://youtu.be/BtRNUy2KfOg>



BERNARD BLANC *

Bernard Blanc is an urban planner, doctor of management and member of the Academy of Architecture. For 27 years, he was manager of public development and construction organisations in Paris, Nancy, Saint-Nazaire and then Bordeaux, where he served as managing Director of Aquitanis, the public housing office of the metropolis, from 2008 to 2019. As such, he received the Mies van der Rohe Award as contracting authority for the Grand Parc GHI project in 1999.

Founder of the New Paradigms transition consultancy, he is the author of books on Corporate Social Responsibility (CSR) and on citizen participation in the making of the city.

Since 2020, he is deputy for urban planning in the city of Bordeaux. In 2021, he led the creation of the Bordeaux Frugal Building framework, which aims to support the production of housing in an environmental, urban and architectural quality approach that meets the contemporary challenges of ecological, energy and societal transitions.

*key note speaker from the 23th APERAU conference, shared with Bordeaux IFoU Conference

<https://youtu.be/BtRNUy2KfOg>



TATJANA SCHNEIDER

Tatjana Schneider is a Professor for Architectural Theory and Head of the Institute for the History and Theory of Architecture and the City (GTAS) and the Architecture and Engineering Collection (SAIB) at the Technische Universität Braunschweig.

In the face of the climate emergency, wider epochal transformations and increasing socio-spatial inequalities, his work is concerned with case studies that promote principles of common good and justice. It focuses on how we can resist violent—exploitative, speculative, and exclusionary—productions of architecture, city, and space.

It is important to her to address the impact of these changes on the profession, practice and education of spatial planners, architects, and city makers to shape other forms of organizing, working and producing. She is particularly concerned with the social, economic, and political parameters within and through which architectures and cities emerge, as well as the tools and methods that enable people to intervene transformatively in the production of space. She is (co-)author or (co-)editor of books such as Flexible Housing (2007), Agency (2009), A Right to Build (2011), Spatial Agency (2011, 2016), Living the City. Of Cities, People and Stories (2020) and Making Futures (Spring 2022); currently working on a series of research projects that focus on spatial practice in the face of the climate emergency, most notably: Architecture after Architecture. In 2021, she ran for mayor of the Braunschweig, city where she lives.

<https://youtu.be/MhyJ8oaIxms>



PAOLA VIGANÒ

Paola Viganò architect and urbanist, is Full Professor in Urban Theory and Urban Design at the EPFL (where she directs the Habitat Research Center and the Lab-U) and at IUAV Venice. She received the French Grand Prix de l'Urbanisme in 2013, the title of Doctor Honoris Causa by the UCLouvain in 2016 in the frame of "Utopia for our Time", the Flemish Culture Award for Architecture in 2017, and the Golden medal to the career of Milano Triennale in 2018. Together with Bernardo Secchi, she founded Studio (1990-2014) working on numerous projects and visions in Europe. Since 2015 StudioPaolaViganò works on the ecological and social transition of cities, landscapes and territories designing urban and territorial projects and realizing public spaces in Europe. In 2019 her work has been exhibited at the Shenzhen Biennale and in 2021 at the Venice Biennale.

Among her recent publications:

Viganò Paola (2022), «Life as a Common: Space for a New Biopolitical Project» in New Geographies 12, Commons, Mojdeh Mahdavi and Liang Wang, eds., Harvard University Press.

Cavalieri Chiara & Viganò Paola (2019), eds., The Horizontal Metropolis. A Radical Project, Zürich: Park Books.

Viganò Paola (2016), Territories of Urbanism. The Project as knowledge Producer, Routledge-EPFL Press.

Viganò Paola, Secchi Bernardo and Fabian Lorenzo, (2016), eds., Water and Asphalt. The Project of Isotropy, Zürich.

<https://youtu.be/MhyJ8oalxms>



SCHOOLS OF EXCELLENCE INTERNATIONAL FORUM

This part of the 15th IFoU conference was devoted to the presentation by representatives of the highest ranked universities in QS Worlds University Ranking, how these universities approach the pedagogy related to the question of the issues of ecological transition in an international perspective.

These presentations were followed by a debate with representatives with the other schools present who are members of the IFoU as well as exchanges with the participants.

It was divided into two sessions in which the representatives of universities from various continents intervened:

SCHOOLS OF EXCELLENCE INTERNATIONAL FORUM 1

Delft University of Technology (TU Delft): Machiel VAN DORST

National University of Singapore (NUS): Chye Kiang HENG

<https://youtu.be/l8rkorxjnZ0>

SCHOOLS OF EXCELLENCE INTERNATIONAL FORUM 2

Tsinghua University (THU): Li ZHANG

Swiss Federal Institute of Technology (ETH Zurich): Christophe GIROT

<https://youtu.be/RNmDXGlhyag>

MACHIEL VAN DORST

Machiel van Dorst is full professor Environmental behaviour & Design at the department of Urbanism. His research field is on the crossroad of environmental psychology and urban design and including topics as: liveability, sustainability & behaviour, territorial behaviour, design & research methodology, design education, sustainable urbanism, health & the built environment.

Machiel van Dorst has 140 publications and has a long-standing reputation in education (mentoring over 180 graduation MSc students). Machiel was (and still is) promotor of more than 20 PhD candidates. Van Dorst is the chair of the scientific board of the International Forum on Urbanism, the worldwide network of top universities in the field of Urbanism. Machiel van Dorst was vice dean of the faculty of Architecture, Delft University of Technology, and chaired different departments the last 12 years. The faculty has the second position in the world ranking according to QS World University Rankings by subject.



CHYE KIANG HENG

Professor Heng Chye Kiang, PhD (UC Berkeley) is the Provost's Professor and Deputy Dean at the College of Design and Engineering, National University of Singapore. He was the former Dean of the School of Design and Environment (2007 to 2016) and the Head of its Department of Architecture prior to his deanship. He teaches and researches urban history, sustainable urban design and planning, and publishes widely in these areas. Professor Heng has served on the boards of government agencies including the URA, HDB, CLC, JTC, BCA and advises academic institutions like Singapore Institute of Technology, Nanyang Academy of Fine Arts, Chinese University of Hong Kong and Hong Kong University. He is currently appointed Honorary Professor at CUHK and has been appointed Visiting Professor at Hanyang University (Korea), Keio University (Japan), Southeast University, Chang'an University, Xiamen University and Tongji University (China) and EAVT (France). He has served as a jury member in numerous international design competitions locally and overseas and on several editorial boards of international journals. He is also planning consultant to numerous award-winning urban planning and design projects in Asia. Some of the awards include Architecture MasterPrize 2020 (urban planning) and Cityscape Global Master Plan Project 2018. His books include Singapore Chronicles: Urban Planning (2017), 50 Years of Urban Planning in Singapore (2016); Re-Framing Urban Space: Urban Design for Emerging Hybrid and High-Density Conditions (2015), On Asian Streets and Public Space (2010), A Digital Reconstruction of Tang Chang'an (2006) and Cities of Aristocrats and Bureaucrats: The Development of Medieval Chinese Cityscapes (1999).



LI ZHANG

Zhang Li is the Dean / Professor of Architecture in the School of Architecture, Vice Principal THADI, Tsinghua University, China. He founds the award-winning design laboratory TeamMinus in THADI. In late 2021, he has been elected to the Hall of National Masters in Survey, Engineering and Design.

Zhang Li is currently a Council Member [Region IV] of UIA, a standing board member of the Architectural Society of China, and the Editor-in-Chief of the leading Chinese magazine World Architecture.

Zhang Li's is the founder and a main advocator of Urban Ergonomics, an inter-disciplinary domain focusing on human body and space, and the design of active urban spaces.

Zhang Li's design works cover a wide range of scales, from urban designs, buildings to microcosm interventions. He and TeamMinus has won over thirty national and international awards in the past decade. He is currently the Architect-in-Chief of Zhangjiakou Zone, and Shougang Big Air, both for Beijing 2022 Olympic Winter Games. He is also the curator of China Pavilion in Venice Architecture Biennale 2020[2021].



CHRISTOPHE GIROT

Christophe Girot is Professor and Chair of Landscape Architecture at the Department of Architecture of the ETH in Zürich since 2001. He has directed the Institute of Landscape Architecture since 2005 and received the ETH Golden Owl award for teaching excellence in 2016. His research cover three domains:

- Methods in landscape architecture and topology
- New media in landscape analysis and perception
- History and theory of Western landscape architecture.

Emphasis at the Chair is given to large scale landscape design and modelling methods with particular attention to the topology of nature in and around cities. The LVML (landscape visualising and modelling laboratory) of the ETH and ongoing research with the NCCR in Digital Fabrication, the Kyoto Institute of Technology, CTI and SNF grants has yielded ground breaking results in point cloud design, modelling and acoustic sensing.

Christophe Girot received a double Masters of Architecture and Landscape Architecture from U.C. Berkeley (1986-1988) and a Bachelor of Science in Environmental Planning from U.C. Davis (1981). He was Professor and Chair of Landscape Architecture at the Versailles School of Landscape Architecture in France from 1990 to 2000 until he joined the ETH. He holds a practice in Zürich with projects in Europe and in Asia.



SUMMARY OF PAPERS

TOPIC 1 / NEW INTERDISCIPLINARY AND INTERCULTURAL APPROACHES FOR FACING GLOBAL CHANGES AND THEIR LOCAL IMPACT

■ (A) STUDY THE COMPLEXITY OF CROSS-BORDER AND CONSTANTLY CHANGING TERRITORIES

For an inclusive and multi-benefit flood risk management overview of existing tools, preamble of an action methodology for a french-belgian cross-border case study

Emeline Coszach, Vincent Becue, Jérémy Cenci, Isabelle De Smet, Patrizia Laudati, Cédric Rivière

Practice of planning coordination for cross-border spatial governance in the Yangtze River Delta Region, a transformative analysis in meta-governance

Dong Su, Jian Liu

A multidisciplinary approach to the cross-border project

Julie Martin, Frédéric Dellinger

Spatialising runoff water across Belgian territories

Thaïs Delefortrie

An academic reflection on urban reconstruction in contexts of post-disaster

Carmen Mendoza Arroyo

■ (B) REVIEWING TERRITORIAL PRACTICES THROUGH CROSS-SCALE AND CROSS-CULTURAL APPROACHES

Territorial logics of marginalisation

Lucas Lerchs

Systemic and holistic territorial approach

Tewfik Hammoudi

Urban regeneration, publicness and participation in spatial planning : a case of Taipei

Hsinko Cinco Yu

Transversal teaching of architecture and urbanism and local impact in two countries

Velia Ordaz, Carlos Gotlieb

Stuttgart meets superblocks: rediscovering streets as urban living rooms through a transdisciplinary and intercultural teaching approach

Astrid Ley, Leonie Fischer, Solène Guenat, Franziska Schreiber

SUMMARY

■ (C) NEW TRANSDISCIPLINARY QUESTIONS OF THE NATURAL AND CULTURAL ENVIRONMENT

Exploration of a socio-ecological continuity project in Great Geneva, towards a convergence of the territorial project of biodiversity & ecological continuities.

Marine Villaret

The bird-friendly cit: graphic representation as a design research tool to explore a “landscape continuum” and its interactions with the avifauna in 5 different urban fabrics within the city of Toulouse, France.

Anaïs Leger-Smith , Anne Péré, Andrey Marco

Nature-based architecture: an integrative design studio with a contextual approach

Ernesto Philibert, Paola Bárcena

Renewing urban models: does the city need low-tech?

Nils Le Bot, Pauline Héron-Detavernier, Philippe Bihoux

Underground systems, a framework for urban soil assessment.

Alexandre Bossard, Chiara Cavalieri, Olivier Ska

■ (D) NEW VISIONS ON ARCHITECTURE AND THE CITY FACED WITH THE CHALLENGES OF SUSTAINABILITY

Teaching for sustainability, inspirations from hybrid modernism

Dan Teodorovici

Exploring local perspectives on areas in transition, socio-spatial analysis with narrative story maps

Shaharin-Elham Annisa, Sigrid Busch, Josefine Fokdal

Interdisciplinary research in architecture: the practice of eco-philosophical theory in contemporary chinese architecture

Mingyue Zhang, Shan Feng, Jisun Han, Jin Baek

Observational design, a phenomenological view on polyvalent everyday places

Sascha Bauer, Martina Baum

Tools, networks and common resources: emergent paradigms during COVID19

Danai Toursoglou -Papalexandridou

■ (E) NEW TRANSDISCIPLINARY APPROACHES INTEGRATING URBAN AND TECHNICAL ISSUES

International architecture and engineering competitions as a framework for active Pedagogy: the Baitykool experience in SDME 2016-2018

Myriame Ali-oualla, Ana Graham, Ferran Yusta Garcia Ferran, Philippe Galimard, Alain Sempey, Philippe Lagièrè, Rémi Goiffon, Denis Bruneau

Artificial intelligence and heat exposure: mapping pedestrian density around metro stations

Shereen Wael , Abeer Elshater, Sami Afifi

Construction waste as a resource for a new practice: opportunity for projects negotiated between ecological transition, operational feasibility, and sustainability of the process

Safa Ben Khedher

A theoretical review of machine learning technology-assisted street quality research in the era of artificial intelligence: potential, development and innovation

Xinyu Liu

Learning from Sub-Saharan African urban complexities: students as catalysts for knowledge

Ute Vees, Fabienne Hoelzel

TOPIC 2 / ELABORATING AND TEACHING NEW PARADIGMS PROMOTING LOCALNESS IN LIGHT OF THE CRISIS OF GLOBALIZED MODELS FOR ACTION

■ (A) NEW EDUCATIONAL EXPERIMENTS BASED ON FIELD PRACTICES

“Cycle de la matière, a pedagogical experiment on local material reuse”

Dimitri Toubanos, David Serero, Vassily Laffineur

Platform for the dissemination of prospective scenarios for the valorisation of local resources to respond to sustainable development issues in the Landes de Gascogne territory

Camille Mesnard

Experimenting pedagogies of transition, situated prospective transition designs: shifts in design knowledge, skills and teaching practices

Andreea Grigorovschi, Anne Jaureguiberry

Renewal design of human settlements based on anthropological observation: a pedagogic exploration of architectural design studio

Shiyu Wei, Naifei Liu

A Franco-Vietnamese doctoral program in research-action through landscape approach: a place for the exchange of experiences and the renewal of professional practices in spatial planning and urbanism

Bernard Davasse, Huyen Thai Nguyen, Alexandre Moisset

SUMMARY

■ (B) NEW PERSPECTIVES ON RURALITY AND TOURISM

Tourism development at an urbanizing landscape, questioning the role of planner. Study Case: Nglanggeran Tourism Village, Yogyakarta, Indonesia
Wita Simatupang

Evolving tradition: self-examination of modernity based on the rural process in southern Jiangsu, China
Xiangrui Xiong, Yanhui Wang, Joaquin Sabate Bel

Expression Mechanism and Inheritance Strategies of Localness in the Construction of Rural Settlements
Yaowu Li, Jian Liu

Living the slope: the social role of topography on place-based hydrological strategies in the urban territory of the valley of Selembao, Kinshasa
Pietro Manaresi

The green city by agriculture an ecological paradigm facing climate change
Hammam Saida, Cherif Nadhima, Amamou Souhir

■ (C) NEW APPROACHES TO STUDY THE RELATIONSHIP BETWEEN TRADITION AND MODERNITY

Inspection of the Development of Chinese Rural Architecture - Reflections from "Empty Nest Home for Twenty People"
Shan Feng, Mingyue Zhang, Jin Baek

Teaching research on urban block shaping and architectural design integrating local architectural form -graduation design as a case: neighbourhood vitality renewal and architectural design based on traditional building forms in Eastern Zhejiang
Caixia Gao, Baraka Joji Destin

Typological study in historical town renewal process : examining urban design projects in Changting, China
Yidan Liu, Lian Tang, Wowo Ding

The impact of group migration on spatial form in an anthropological perspective: a case study "Ancient Yao village in the Qiannan region of China" as an example.
Shuangning Li, Lorenzo Cantini

■ (D) REVISITING PROJECTUAL PRACTICE THROUGH THE PRISM OF TRANSITION

Faced with metropolization: rethinking the teaching of design practices through the lens of transitions
Xavier Guillot, Julie Ambal, Aurélie Couture, Abdourahmane Ndiaye, Cécile Rasselet, Fabien Reix, Mathilde Teixeira-Col, Delphine Willis

The role of transitional environments design: a new paradigm in Hong Kong
Laurent Gutierrez, Gerhard Bruyns, Hee Sun

The role of the international urban development models in enhancing architectural Education
Salim Elwazani

"Pedagogy and Urban Development in Jakarta and San Francisco"

John Zarobell, Jo Santoso

Waking up in Anthropocene: Rethinking a collaborative society in response to pre-crisis production industrial port areas case

Mikhalis Montarnier, Theodosis Montarnier, Paul de Cathelineau

■ (E) MAPPING AND SPATIALIZING RESOURCES AND TRANSITIONS

Ethos and typicality as a hint at the restoration of the crisis of representation and dwelling

Sang-Woo Han, Hye-Jo Choi, Jin Baek, Uoo-Sang Yoo

Spatialize the complexity of a food system in its scales, flows and models: the lever of socio-spatial nodes and rural relevance in the diffuse urban context, study of school canteens in the municipality of Tournai

Augustin Hauteceur

Inventory of local resources for a new model of project: between pedagogy, research and operational context

Christel Marchiaro, Chiara Silvestri

How we will live together?

Luis Martin, Elena Longhin

TOPIC 3 / NEW IDEAS ABOUT "NORTH-SOUTH" RELATIONS FOR STUDYING TERRITORIES IN TRANSITION:

■ (A) RESILIENCE AND EXPERIMENTAL APPROACHES TO KNOWLEDGE SHARING AND TRANSFER

Localness in water sensitive urban development for Bhuj and Kozhikode, India

Geert J.M. van der Meulen

Critical urban water landscapes : a North-South research-by-design university network fostering the co-transfer of knowledge for urban areas characterised by changing water regimes

Lisa Diedrich, Flavio Janches, Diego Sepulveda

Digital Commons: decolonial Urbanism in Datafied Societies

Provides Ng, Alberto Fernandez, Kalema Naigwe

Habitat Program and Transition Resilient Communities, Action Without Borders to promotes resilient communities

Rafael De Balanzo Joue, German Lopez Mena, Carlos Gotlieb

SUMMARY

■ (B) COMPARATIVE APPROACHES TO LARGE WETLANDS

Making water cultures globally mobile: how knowledge travels between The Netherlands and India through water sensitive urban design

Raquel Silva, Dominic Stead, Margreet Zwarteveen, Taneha Kuzniecowa Bacchin

Hydropower at the frontier of urbanisation: mediating cosmovisions and the climate crisis in the Brazilian Amazon

Lucas Di Gioia, Taneha Bacchin, Diego Sepulveda

An atlas analysis of the Dutch Delta knowledge transfer in the vietnamese Mekong Delta: lessons to learn in meeting the ecological transition

Sylvie Tram Nguyen

TOPIC 4 / NEW APPROACHES TO TECHNICAL DIMENSIONS FOR THE BENEFIT OF LOCALITIES:

■ (A) MOBILITY, NETWORKS, BIODIVERSITY

Exploration of a socio-ecological continuities in Great Geneva, weak networks as a territorial project

Flore Guichot, Marine Villaret

Spatial Allocation Framework of Urban Carbon Emissions Inventory Based on Big Data and Rethinking of the Equity of Carbon Reduction Policy: A Case Study of Xing'an, China

Lelin Chen

The evolution of the skywalk network: a case study of Hong Kong

Pu Jiang, Francesco Rossini

Research on design strategies for connection between skyway networks and urban fabric: comparison of Minneapolis and Sewoon

Youngmyung Kim, Min Ji Lee, Jin Baek

Tools for a convivial reconfiguration of the sealed space

Federico Broggin, Marco Ranzato

■ (B) DESIGN A TRANSITION ENVIRONMENT AND MEASURE ITS ACCEPTABILITY

Popularity influencing factors of factory renovation cultural and creative industrial parks on social media: a case study on Beijing

Yixin Zhang, Jian Liu, Shurui Yan, Peiqi Xu

“There are more instagrammers than coffee beans”: retracing wang-hong urbanism in Hong Kong

Izzy Yi Jian, Caterina Villani, Mia Borch Münster, Kin Wai Michael Siu

Urban quality of life in the city of Monterrey Mexico, generational contradictions on a changing and complex context after the 2020-21 lockdown

Jorge E. Galván Salinas

Analysis of the Influence of Using the Sustainable Building Materials in the Architectural Design on Nature and Society on the Example Results of the Green Policy of Seoul, South Korea

Alisa Kolova, Tamer Sammour

TOPIC 5 / INTERNATIONAL EDUCATION POLICIES AND THE ECOLOGICAL TRANSITION CHALLENGE

Circular City Studio: Exploring circularity in an international master course setting

Marta De Marchi, Andrea Bortolotti, Giulia Lucertini

International «co-training : action» between students pairs, a promising experiment to support sustainable and shared transitions

Silvia Rosales-Montano

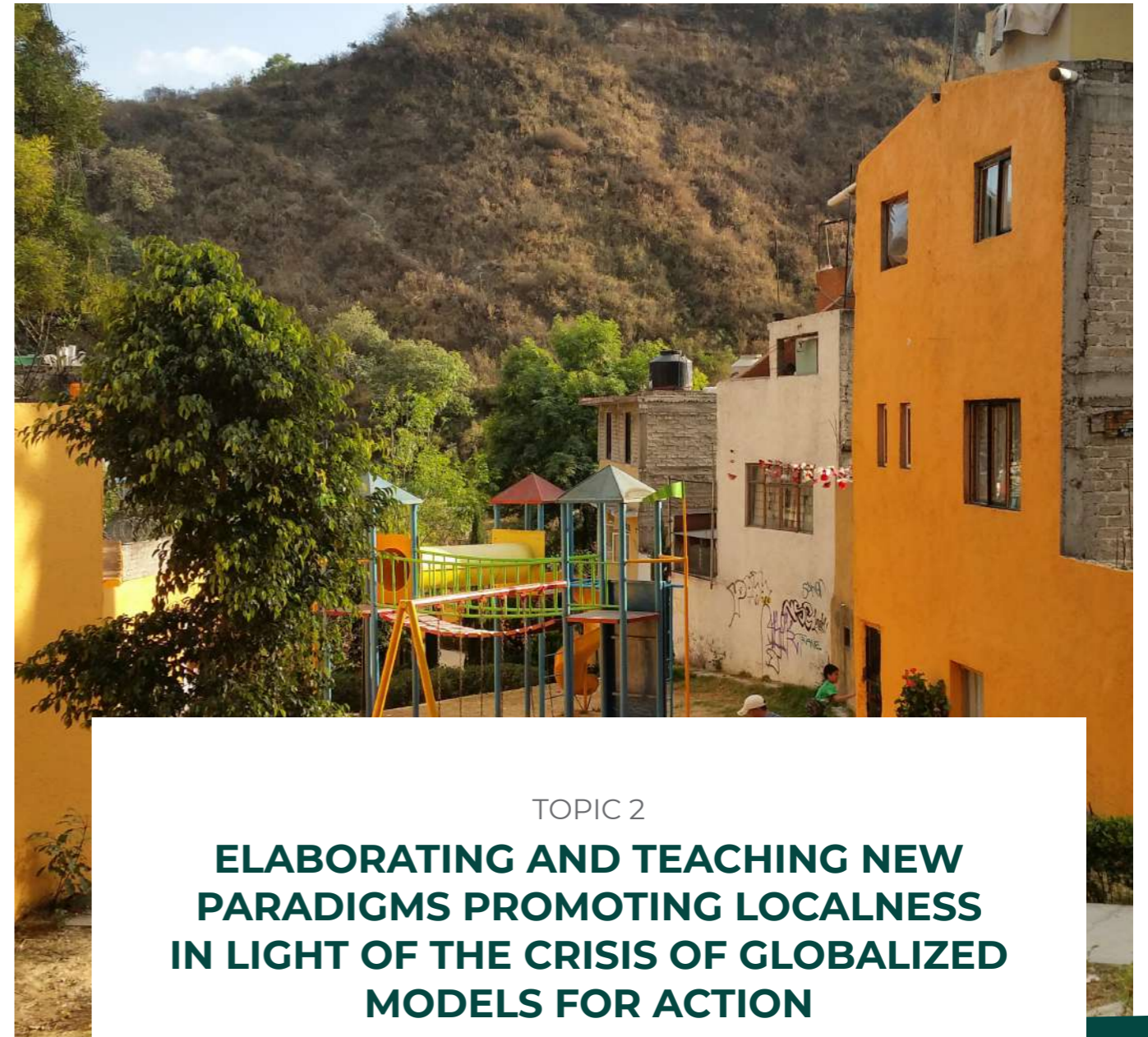
Towards an Atlas of the transitionExploring representations of territorial habitability

Noémie Lecoanet

Sound design anthropology and “ecosound”

Frank Pecquet

2



TOPIC 2

ELABORATING AND TEACHING NEW PARADIGMS PROMOTING LOCALNESS IN LIGHT OF THE CRISIS OF GLOBALIZED MODELS FOR ACTION

The environmental crisis caused by productivism questions the models of action promoted in the name of modernity, focused as they are on perpetually increased performance and universal reproducibility in any context. By the same token, the crisis also favors the emergence of a new attitude of frugality attentive to the use of resources in a given milieu, in spatial terms as much as in cultural, social or economic terms. In a hyperconnected world, widely circulating singular approaches supplant models with purported universal validity, suggesting a new complexity in the relation between the local and the global. This theme aims to seize a panorama of pedagogies invested in this new way of imaging situated development, as well as to identify their possible contribution to new figures of internationalization, and cooperation in particular.

HOW WE WILL LIVE TOGETHER?

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ABSTRACT:

The *City and Territory* course entitled “How we will live together?” (titled borrowed from the 17th Venice Architecture Biennial held in 2021) of the Turin Polytechnic’s Bachelor of Architecture degree was an opportunity to build and test a working group of researchers and students who would spend four months discussing the question of a project marking the transition from multiculturalism to ‘multi-naturalism’, as Eduardo Viveiro de Castro suggested in the 2020 Taipei Biennial. It was an opportunity to construct a new narrative of the city of Turin that overlaps climatic aspects, environmental resources, urban practices, and spatial characteristics. The question at the core of the course was: how can we learn, map, and analyse something that is not human, and how can this become the subject of a territorial project that puts coexistence at the centre of its agenda. The aim of this paper is therefore to analyse the experiences made within the course that tried to trace design strategies that emerged from an unprecedented reading of the city.

KEYWORDS:

coexistence, project, liveability

The succession of numerous crises in recent years - economic, financial, democratic - the radicalisation of racial and gender conflicts, and the insidious convergence of environmental and health crises have confronted us with the precariousness of our being on earth. “What to do when our world begins to crumble?” asks Anna Tsing in her latest book (2021). What is the role of a profession, urban planning, so concerned with imagining and designing the future in a situation where there seems to be no future at all? The awareness of the vulnerability of our bodies and the precariousness of our existence on Earth (Butler, 2013) obliges us to rethink, within our disciplines, certainties linked to the myth of progress and modernisation that still mark “the very fabric of all that exists or can exist” (Consigliere 2019). As obsolete as the latter two notions are, our society and economy are still steeped in the creed of economic growth and scientific progress in the hope that “humans will manufacture themselves through progress” (Tsing, 2021) and build the world that best represents them. So, what is the role of design in this seemingly catastrophic context?

State of the Art. A new plural research

Thus, what would seem to be emerging is what Cristina Bianchetti calls a new and broad plural research in our knowledge centred on the themes of defense, protection, and support for life and living. The theme of ‘livability’, i.e. the protection and defence of life in a condition of ‘disruption’ (Tsing, 2021), places the relationship between human and non-human bodies at the centre. These are all issues that resurface in all their urgency within the major exhibitions of recent years: at the XXII Milan Triennale (*Broken Nature*, 2019), at the XVI Istanbul Biennial (*The Seventh Continent*), at the XII Taipei Arts Biennial (*You and I Don’t Live on the Same Planet*, 2020), at the XVII Venice Architecture Biennial (*How we will live together?*, 2021), and at the Turin Democracy Biennial (*Un pianeta, molti mondi - One Planet, Many Worlds*, 2021). The centrality of these themes also resurfaced in recent years in a multitude of researches (and research groups) in the territorial sphere that configure new alliances and new competencies to address these issues. They are researches such as *Feral Atlas* (edited by Anna L. Tsing, Jennifer Deger, Alder Keleman Saxena and Feifei Zhou) or the work developed by Forensic Architecture (at the Goldsmith University of London) that construct new forms of multidisciplinary, explore radical geographies and constitute themselves as instruments of protection and life support. Moreover, an extensive literature, ranging from philosophy (*Quando la casa brucia*, Macerata: Quodlibet, 2020; Elena Pulcini, *La cura del mondo. Paura e responsabilità nell’età globale*, Torino: Bollati Boringhieri, 2009; Rosi Braidotti, *Posthuman Ecologies: Complexity and Process After Deleuze*, Lanham: Rowman & Littlefield, 2018; Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, Durham: Duke University Press, 2016) to anthropology (Bruno Latour, *Facing Gaia: Eight Lectures on the New Climatic Regime*, Cambridge: Polity, 2017; Anna Tsing, *The Mushroom at the end of the World: On the Possibility of Life in Capitalism Ruin*, Princeton NJ: Princeton University Press, 2015) is increasingly at the centre of the debate on territorial and urban design in a multidisciplinary key.

Methods. Descriptions, interpretations, and strategies:

This intense debate suggests, on the one hand, abandoning the technocratic and functionalist scenarios on which part of the design tradition of Modernity was built, but also to think outside the pacified projects built in the wake of a Landscape to be protected and enhanced, typical of the 1990s, but rather to reconstruct a lexicon around the terms: coexistence/co-existence and conflict/contamination. To do this, it is necessary to construct an integrated reading between descriptive aspects, quantitative information, critical observations, and qualitative analysis of the territories. It means looking at the relationships that human bodies, non-humans, and the environment build with and into the space, whilst at the same time at how exogenous variables determine the change of experiences, practices, and values.

The design exercise is divided into two main phases. The first descriptive and interpretative phase of the territory (fig. 1-7) aims at designing a project not just as a practice of modifying the territory, but of further knowing it. In this first part, some significant features of the territory investigated are therefore described starting from four main themes: water, soil, vegetation, and non-human animals. All four themes focus on the relationship of coexistence (conflictual, pacified, exploitative, etc.) between humans and the environment. The descriptive exercise opens up new interpretations of the Turin metropolitan territory that construct new imaginaries linked to the coexistence project. In order to do so, integrated readings are constructed between descriptive aspects, quantitative information, critical observations, and qualitative analyses, looking at the relationships that bodies and elements build with and in space, but at the same time how exogenous variables determine the change in experiences, practices, and values.

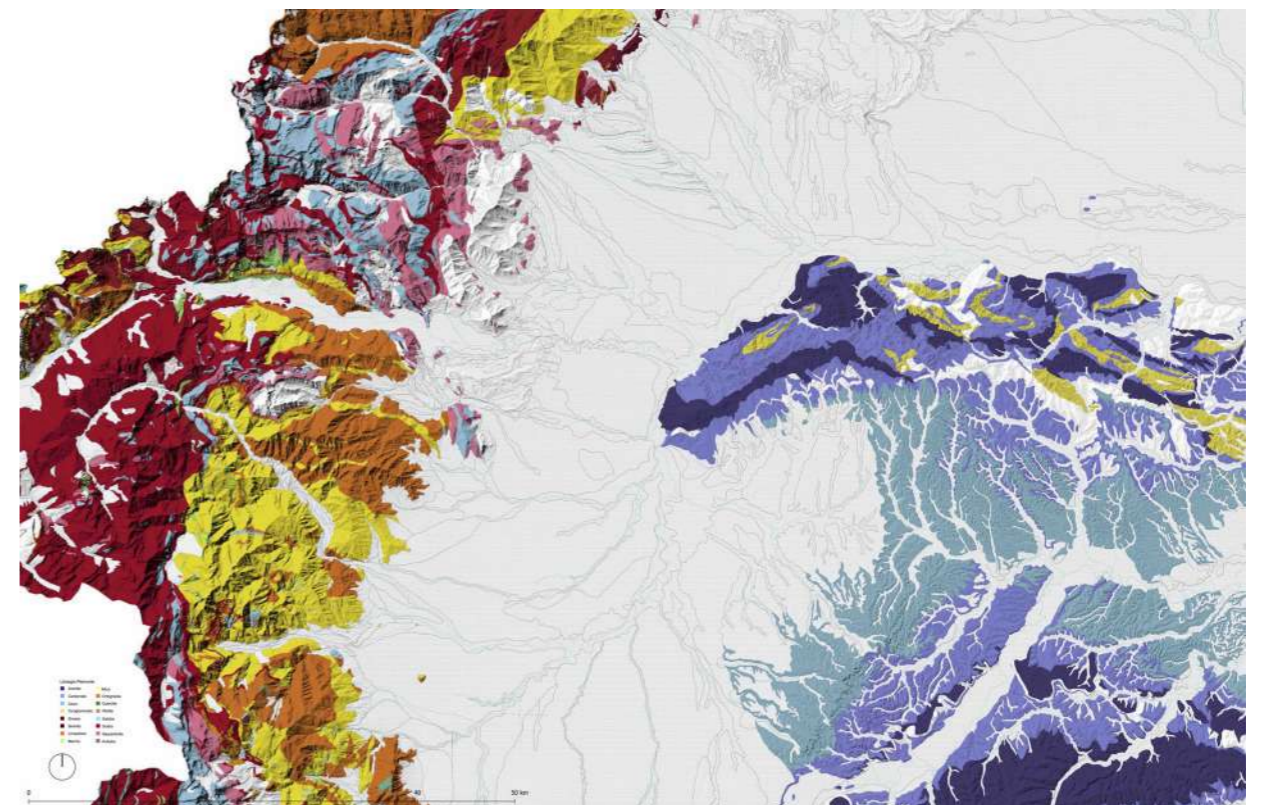


Fig. 1 Geolithology. Turin metropolitan area.

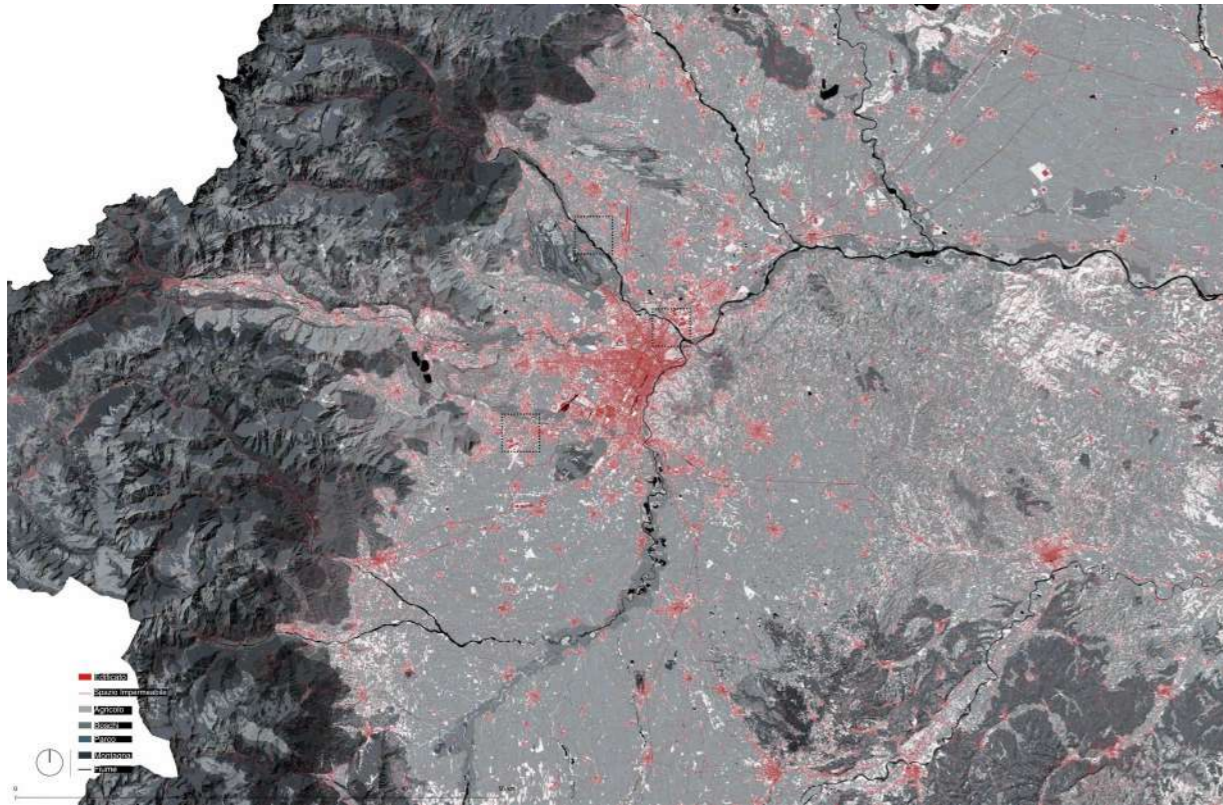


Fig. 2 Permeable and impermeable soils. Turin metropolitan area.

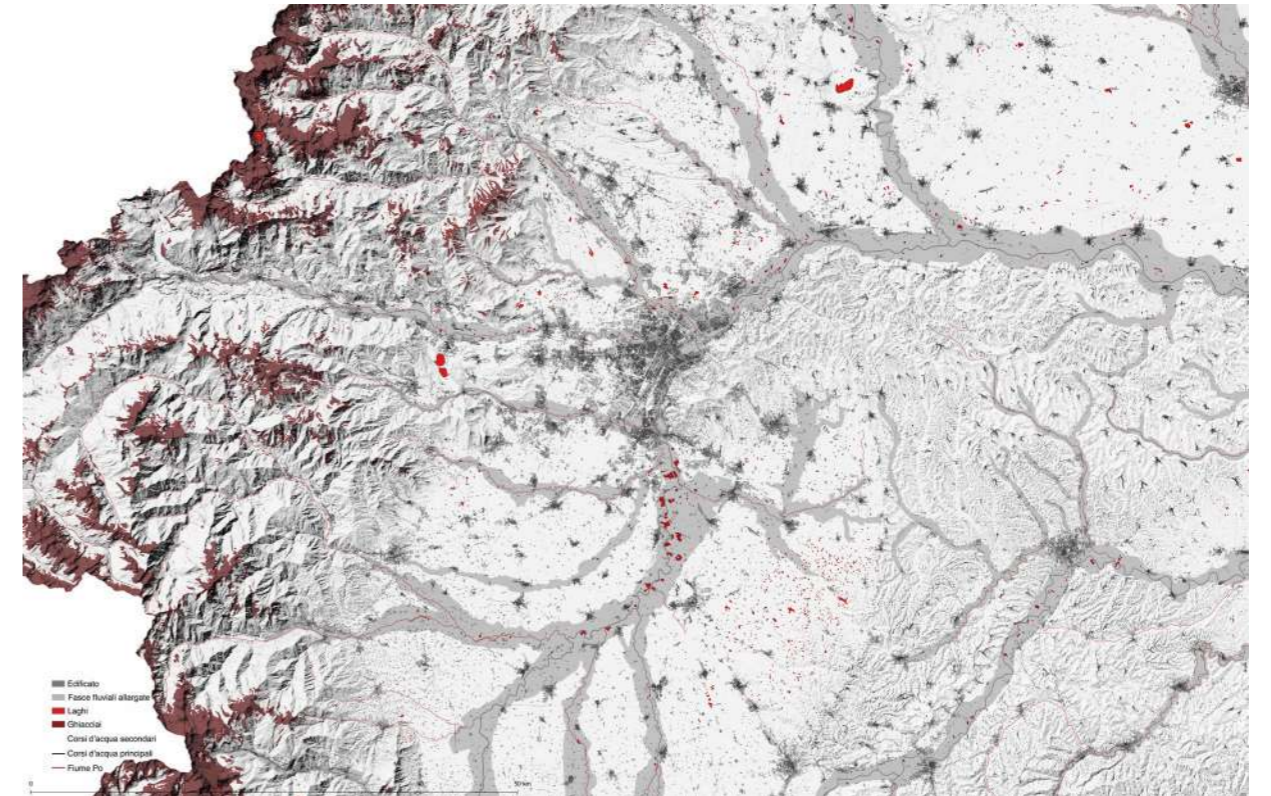


Fig. 4 Hydrogeological risk. Turin metropolitan area

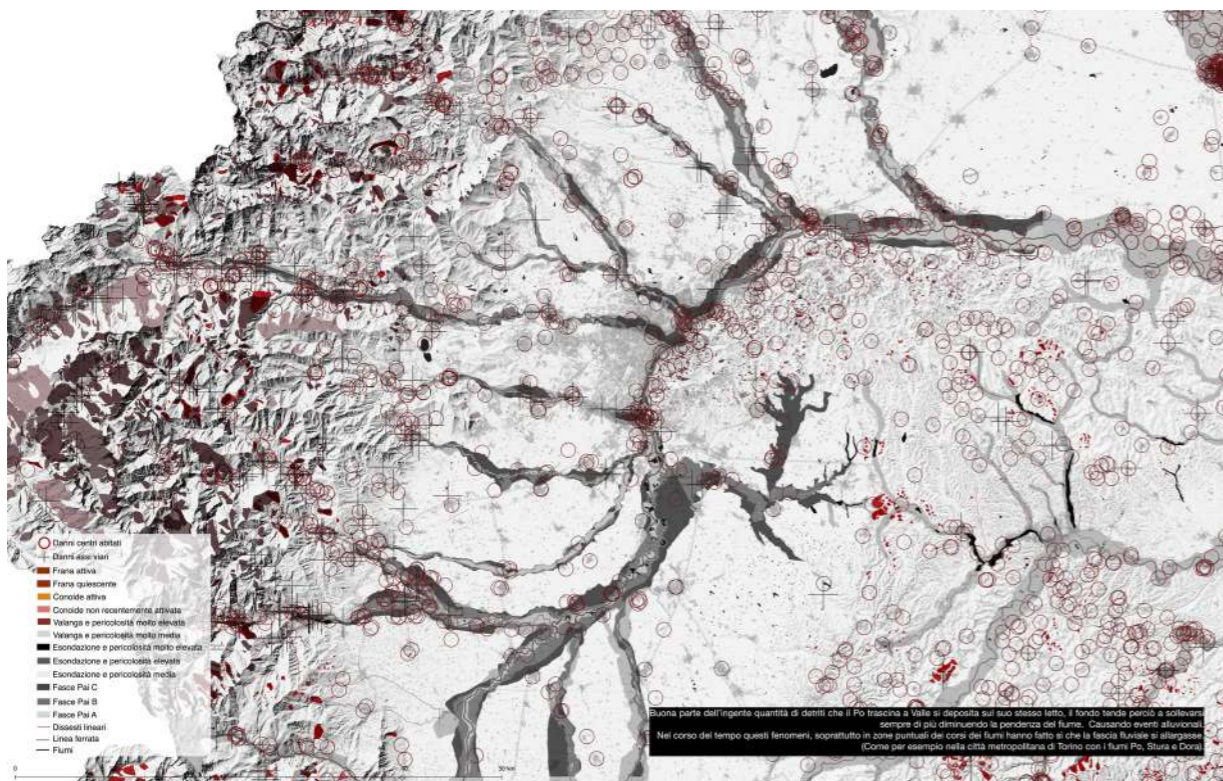


Fig. 3 Water system. Turin metropolitan area.

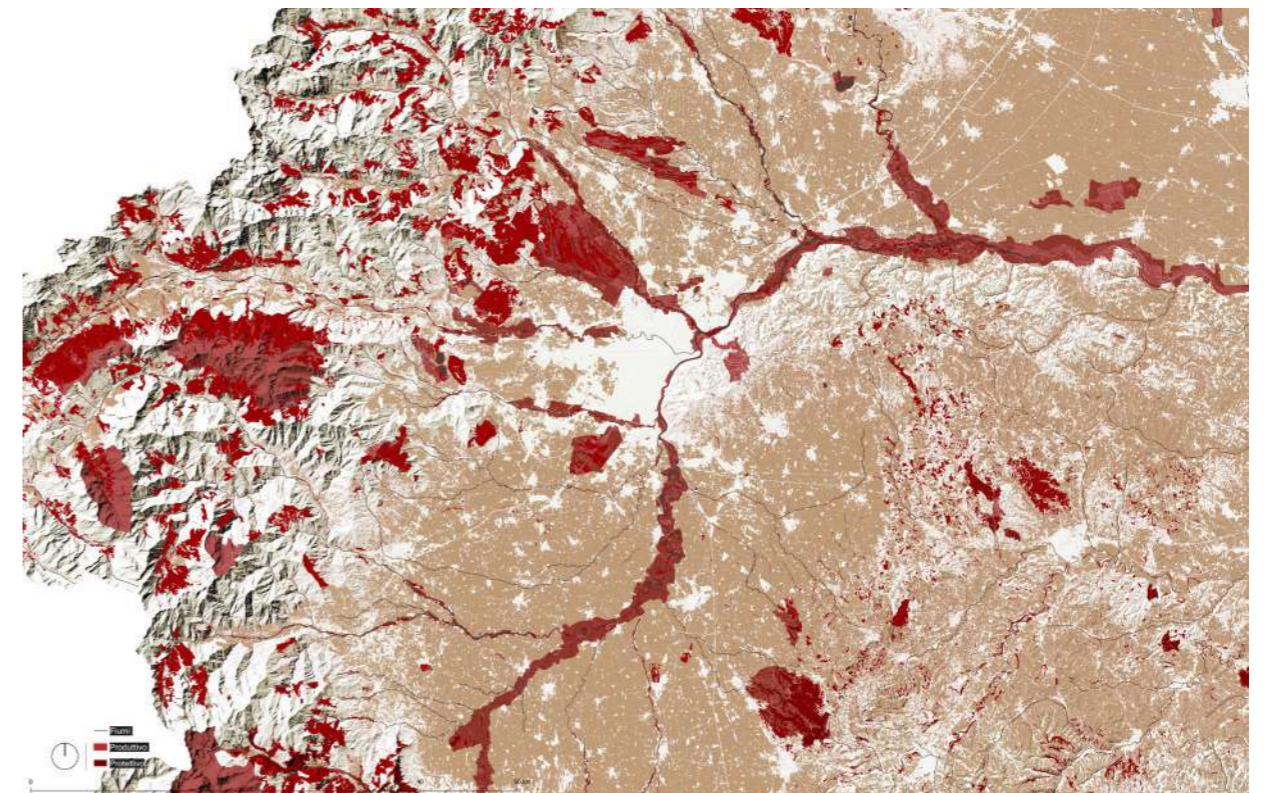


Fig. 5 The uses of vegetation. Turin metropolitan area



Fig. 6 Parks and protected areas. Turin metropolitan area.

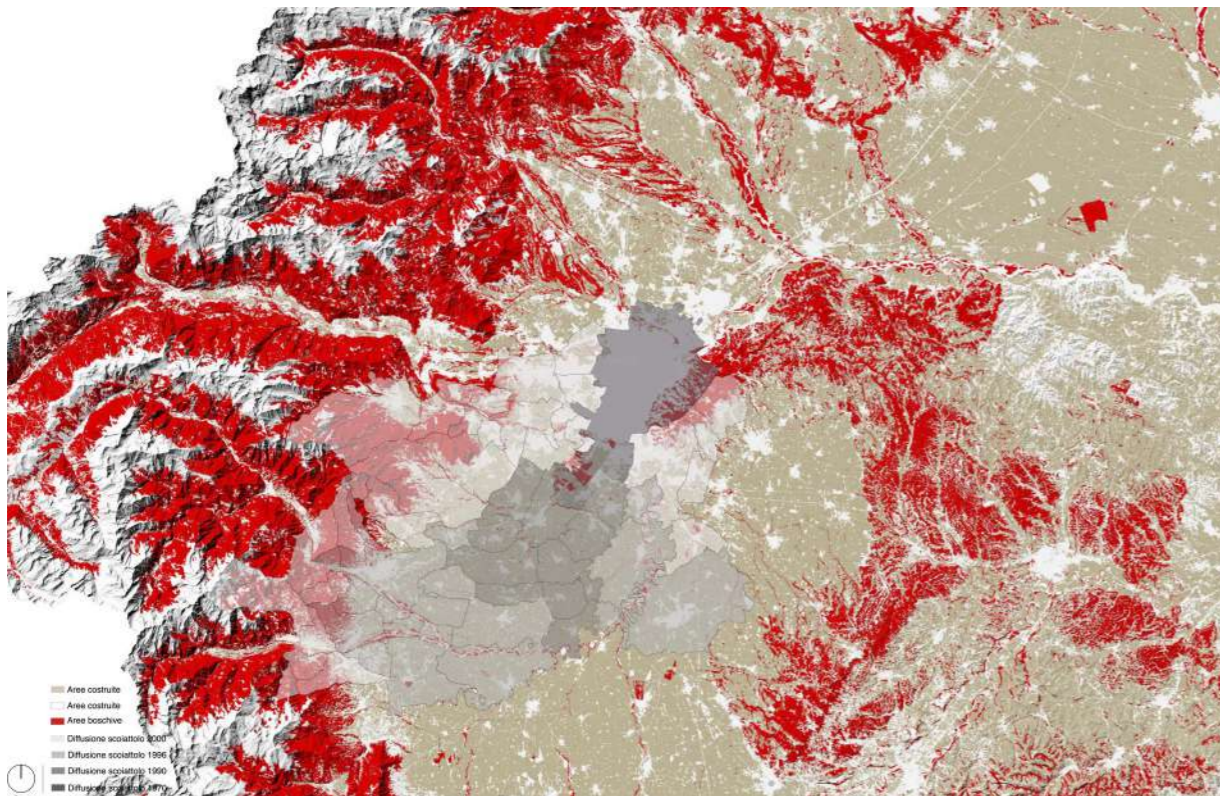


Fig. 7 Spread of the grey squirrel (invasive species). Turin metropolitan area.

The second phase tries instead to outline design strategies (fig. 8-9) that focus on the idea of coexistence between humans and non-humans, using the interpretations made previously in an articulate manner. The project area is that of the confluence of the Po and Stura rivers, a fringe area to the north of the city of Turin, which is characterised by the presence of urban parks, housing buildings of different types, productive spaces, and large commercial platforms — a piece of the city representative of what we call the contemporary city.



Fig. 8 A project made of rooms for coexistence. Confluence of the Po and Stura rivers, Turin.

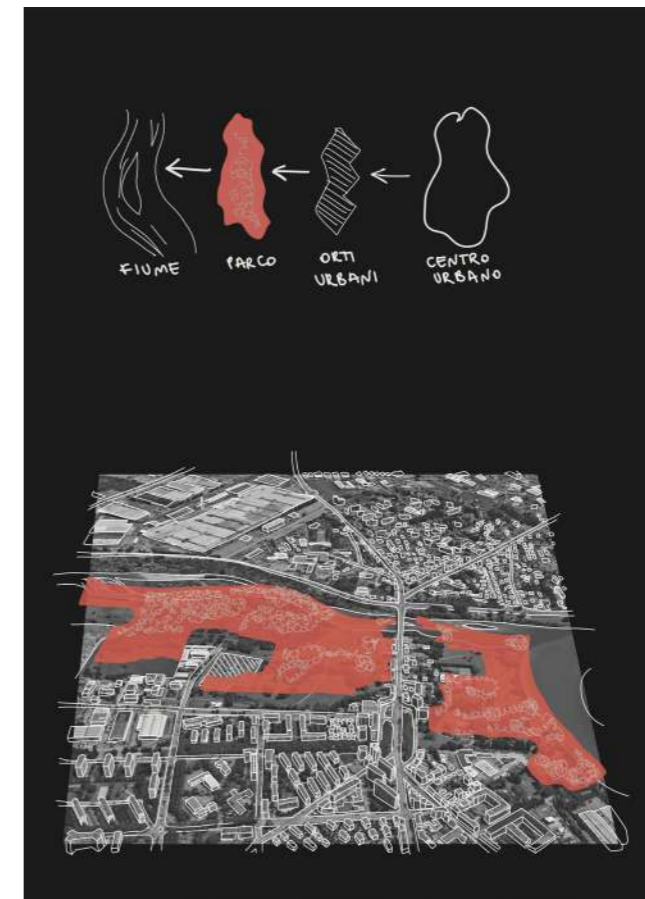


Fig. 9 Sous les pavés, la plage! Depaving and renaturalisation strategy. Confluence of the Po and Stura rivers, Turin.

Case study description: Turin, Anthropocene territory

The area chosen to test a post-anthropocentric coexistence project was the metropolitan area of Turin in the far west of the Po Valley. The Po Valley, a large plain area that extends in the north of Italy, is an interesting field in which to explore this issue given its combination of strong characteristics of urbanisation and industrialisation, that make this territory one of the most polluted areas in Europe. This is where the European Commission's area quality standards are not reached for NO₂, PM₁₀ nor O₃. Further, the topographical characteristics of this area - surrounded on three sides by major mountain ranges (Alps and Apennines) - strongly influence the local climate by causing weak winds that lead to a greater accumulation of pollutants. The Po Valley thus presents itself as an area heavily marked by human action in close contact with large environmental infrastructures (which are also highly anthropised) such as the Alpine and Apennine Mountain ranges or the Po River delta.

In this complex territory, the metropolitan area of Turin constitutes an excellent terrain wherein to test some issues related to a new project of coexistence between man and the environment, given some of its particular and ambivalent spatial characteristics. First of all, Turin is the Italian industrial city *par excellence*, home of the national automotive industry throughout the 20th century and still today the site of important industrial plants. It is also one of the most polluted cities in Italy, thanks in part to a rather unfortunate location (at the bottom of the Po Valley). But Turin is also one of the Italian metropolitan cities with the largest amount of green areas, boasting about 55 square metres of green area per resident. This ambivalence between purely extractive features and a large natural infrastructure means that the city has been chosen as a testing ground for an urban and territorial project of coexistence.

The descriptive and interpretative phase of the course, divided into four relevant topics (water, soil, animals and vegetation), then investigates the territory on a metropolitan scale by incorporating heterogeneous urban and non-urban ecosystems. From the Alpine areas to the west, to the hilly areas to the east of Turin, via the Plain with the city of Turin at its centre. The anthropised landscape is also quite varied, with the city of Turin at its centre studded with minor and diffuse urban centres, articulated metropolitan agricultural areas and large industrial and commercial platforms. The design strategies put to the test — “A room project” and “*Sous les pavés, la plage!*” —, on the other hand, focus on the area of the confluence of the Po and Stura rivers in north of the city of Turin, a fringe urban area that combines particularly rich urban, productive and natural features.

Results. Atlas and Design Strategies:

The course condenses an unpublished atlas of the Turin territory that focuses on the theme of coexistence, constructing a discourse through images. Through different territorial readings we observe a territory through an original point of view that focuses on soils, water, non-human animals, and vegetation, in a city often reported in all other terms (meaning the factory city). A number of issues from here emerge that we find interesting: by investigating the presence of non-human animals in the Turin metropolitan area, different types of relations with man materialise. Firstly, a relationship of competition (wild boars, nutria, squirrels, usually invasive species), secondly a relationship of protection (through the numerous local protected areas, places that aim at nature with conservative and patrimonial approaches, however not always with virtuous results) and thirdly a relationship of exploitation (linked generally to the widespread and concerning presence of farm animals in the area). The resulted vegetation atlas describes a reality that is rich, but at the same time in little contact with man; parks and reserves, although numerous, are often poorly planned and the relationship is often one of distance and separation. The territory, though rich in water (nonetheless now increasingly subject to the effects of climate change), and even the soils, would require an overall

project given the large presence of mineralised soils inherited from an outdated Fordist past.

Moreover, through the construction of two design strategies, it tries to test how urban and spatial design can provide an answer to the question of coexistence that is not simple, obvious or straightforward. It does so by avoiding somewhat Franciscan clichés of looking at nature as a place of redemption and purity, but by making the issue more complex. The first strategy implemented (titled “A project of rooms”) tries to think of the project area as a series of different rooms; here coexistence is a question of separations, of limits and enclosures, more or less light, of thresholds, openings, and closures. The second strategy (entitled “*Sous les pavés, la plage!*”), on the other hand, works on mineralised industrial soil by depaving and re-naturalising large areas. Vegetation and soil are used as real project materials that construct different spatialities: open spaces where coexistence has more traditional characters and opaque spaces imagined as a refuge, places of evasion and more intimate and close relationships.

Conclusions. A (not-naive) Project for Coexistence:

The current pandemic crisis, with its zoonotic origin, makes it necessary to rethink in all its complexity the relationship between human and non-human species with a view to renewed coexistence. This is a theme that is not new to the disciplines that deal with territorial design, but which in recent years has had a strong acceleration with increasing public attention (exemplary in this sense is the “Fridays For Future” movement born in 2018). The feeling is that the ‘great acceleration’ (McNeill and Engelke, 2018) that began after the Second World War - a period in which the Anthropocene entered a new era in which humanity increasingly conditions global ecology - is reaching a critical point (Longhin, 2021). In this sense, ecological thinking disrupts the idea of the human species above - or at the centre of - a nature that is dominated and exploited for the benefit of a specific subject, humans (Povinelli, 2017), considering instead “nature, a living whole that includes without distinction humanity, plants and animals, but also rocks, winds, water, the common mechanisms of the planet, considered in turn a living being” (Clément 2011, p. 45).

During the first phase of the pandemic crisis, the rhetoric of the ‘reconquest’ by non-human species of contemporary territories was the focus of media attention. Uncritical celebration of a wilderness that did not reckon with either the zoonotic origin of the crisis or the massive presence of farmed animals (if we remind ourselves that some 70 billion animals, excluding fish, are bred for human consumption every year) that allowed for the much-celebrated solidity of the food chain during the harshest months of confinement. From this perspective, the territory is celebrated as a space of reconnection between different species, as a space of creation of new ecosystems in which the human habitus reunites with non-human species, ceding spaces and rights to them. However, the crisis has clearly shown how the fracture has been generated by forced proximity between systems that are now too distant. It forces the project to address this issue in its complexity (social, economic, cultural) from the point of view of ecological impact, public health, and, not least, from an ethical point of view (Martin Sanchez, 2021). It eventually is what for Martha C. Nussbaum (2020) remains the greatest challenge of our time: the extension of ‘the cosmopolitan tradition to non-human animals and the natural world’.

Acknowledgments

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