

Mattia Scalas, PhD

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Job experiences

Urban Climate Data Analyst

CMCC Foundation - REMHI

March 2023 - present

Main activities:

- Development of the GIS for the assessment of climate risk and heat effects on the over 65 population in the city of Turin and development of the interactive dashboard for data visualization in Pilot 2 of the European project SDGs-Eyes.
- Literature research and collaboration in the development of a multiscale assessment framework for climate resilience in the MULTICLIMACT project.
- Development of an interactive survey for the acquisition of data on the climate vulnerability of the functional structures of the CAP water utility.
- Development of code pipelines for the calculation of climate indicators to support design for ETS engineering.
- Bibliographic research and drafting of technical documentation on the impacts of climate change on the water infrastructures of the Acquedotto Pugliese SpA group.
- GIS development, cartography production and documentation drafting for the Climate Change Adaptation Plan of the Municipality of Sassari.
- Collaboration in the development and maintenance of the Dataclime platform.

Researcher

Responsible Risk Resilience Centre (R3C - Polito)

November 2020 - November 2023

Main activities:

- Development of the GIS and the framework for the calculation of the territorial vulnerability index for the municipality of Moncalieri.
- Research in the field of urban and territorial resilience in the Post-UnLock project.
- Development of the GIS and cartography to support the update of the Trade Plan of the Municipality of Chieri.

- Development of the GIS and cartography to support the Integrated Territorial Assessment of the Municipality of Rovereto.

Teaching assistant

Politecnico di Torino

September 2022 - November 2023

Main activities:

- Teaching support in the courses of Planning and Architecture in the Urban Planning Ateliers and in the lessons of Resilience and Heritage.

External collaborator

OnStairs s.r.l.

April 2020 - September 2023

Main activities:

- Support in communication activities

Semi-Professional athlete

Atletica Casone Noceto

Gennaio 2014 - Dicembre 2017

Main achievements:

- Road Running Team Championship 2014; 2015; 2016; 2017
- Cross Country Team Championship 2015
- National U23 Champion 2015 of 10K on the road
- 2 participations in the national U23 team (2014, 2015)

Education

PhD in Urban and Regional Development

Politecnico di Torino

November 2020 - June 2024

Tesi: Framing the local resilience unit as a post pandemic planning paradigm. A case study in the city of Turin, Italy

Tutor: Angioletta Voghera; Grazia Brunetta.

Advanced Training Course Talenti per il Fundraising

Fondazione CRT

March 2020 - December 2020

Master's Degree in Territorial, Urban, Landscape and Environmental Planning

Politecnico di Torino

October 2017 - December 2019

Thesis: From awareness to responsibility. The design and implementation of the Regional Strategy for Adaptation to Climate Change of the Sardinia Region.

Supervisors: Grazia Brunetta; Ombretta Caldarice

Degree in Architecture

Politecnico di Torino

October 2012 - October 2017

Competences

Languages

Native language: Italian

Other languages: english (fluent), portuguese (good), french (beginner)

IT Skills

OS: Windows

Languages: Python; JavaScript (NodeJS, Express); HTML/CSS; C; SQL; bash

Databases: PostgreSQL; MongoDB

Versioning: Git; GitHub

Desktop: QGIS; ArcGIS Pro; Microsoft Office; EnviMET; Autodesk AutoCAD; Adobe Illustrator

Other: Docker and basic deploy skills; Basic cybersecurity and privacy knowledge; basic knowledge ML algorithms and proficiency in AI models and chatbots usage (GPT; Claude; Gemini; DeepSeek)

Licences and certifications

Driving licence B

Remotely Piloted Aircraft Pilot Certificate (non-critical operations)

Soft Skills

Confident; Fast-Learner; Open-Minded; Calm; Always learning

Publications

Scalas, Mattia; Apreda, Carmela; Barbato, Giuliana; Pugliese, Alessandro; Reder, Alfredo; Mercogliano, Paola; Treccani, Laura; Lazzaroni, Graziano (upcoming, July 2025). Effects of local heatwave adaptation actions: microclimatic simulation of the interventions in Via Metastasio, Brescia (Italy). In *Geographic Approaches to Climate Change and Mitigation: Urban and Rural Perspectives*. Eds Pir Mohammad, Shahfahad, Jesús Rodrigo Comino, Abraham R. Matamanda.

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0299 - Metodologia di Clusterizzazione climatica per le Aree Italiane basata sui dati di un modello Climatico ad Alta Risoluzione

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0297 - Variazioni attese sull'erosione dei suoli per i bacini sottesi agli invasi artificiali di interesse di Acquedotto Pugliese S.p.A.

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0296 - Variazioni attese sul regime delle piogge estreme per prefissati periodi di ritorno per i bacini sottesi agli invasi artificiali di interesse di Acquedotto Pugliese S.p.A.

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0295 - Variazioni attese sul regime delle portate estreme per prefissati periodi di ritorno per i bacini sottesi agli invasi artificiali di interesse di Acquedotto Pugliese S.p.A.

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0294 - Variazioni attese sul regime di siccità idrologica per i bacini sottesi agli invasi artificiali di interesse di Acquedotto Pugliese S.p.A.

Mercogliano, Paola; Barbato, Giuliana; Scalas, Mattia (2024). TN0293 – Variazioni attese sul regime delle portate per i bacini sottesi agli invasi artificiali di interesse di Acquedotto Pugliese S.p.A.

Scalas, Mattia (2024) Framing the local resilience unit as a post pandemic planning paradigm. A case study in the city of Turin, Italy. relatore: VOGHERA, ANGIOLETTA; BRUNETTA, GRAZIA; , 36. XXXVI Ciclo, P.: 241 Doctoral Thesis

Pede, Elena; Scalas, Mattia; Staricco, Luca (2023) Towards Neighbourhoods as Minimum Units of Resilience?. In: Post Un-Lock. From Territorial Vulnerabilities to Local Resilience / Brunetta G., Lombardi P., Voghera A., Cham, Springer, pp. 71-80. ISBN: 978-3-031-33893-9 Contributo in Volume

Trane, Matteo; Ricciardi, Guglielmo; Scalas, Mattia; Ellena, Marta (2023) From CFD to GIS: a methodology to implement urban microclimate georeferenced databases. In: TECHNE, vol. 25, pp. 124-133. ISSN 2239-0243 Contributo su Rivista

Buccheri, Désirée Rosetta; Curreli, Giulia; Mondino, Lorenzo; Pizzorni, Maria; Scalas, ... (2023) Esperienze didattiche per l'analisi del patrimonio nel contesto territoriale: il workshop «Rischio territoriale e patrimonio culturale: pianificazione della prevenzione e rigenerazione del patrimonio culturale diffuso di interesse religioso». In: PATRIMONIO CULTURALE E RISCHIO Storia, analisi e prevenzione per un patrimonio resiliente / De Lucia G., Milano, CittàStudiEdizioni, pp. 151-159. ISBN: 9788825174618 Contributo in Volume

Fiermonte, F.; Scalas, M.; Riccia, La (2023) Source and Data for the Analysis of the Metropolitan Territory with GIS Tools: A Critical Review Between Commercial and Open Access Tools. In: Post Un-Lock - From Territorial Vulnerabilities to Local Resilience / Brunetta G., Lombardi P. · Voghera, A., Cham, Switzerland, Springer - The Urban Book Series, pp. 169-182. ISBN: 978-3-031-33893-9 Contributo in Volume

Pede, Elena; Scalas, Mattia; Staricco, Luca (2023) Analysis of Hydrogeological Risks Related to Climate Change: Testing the ClimeApp Assessment Tool on the Torino Nord Homogenous Zone. In: Post Un-Lock. From Territorial Vulnerabilities to Local Resilience / Brunetta G., Lombardi P., Voghera A., Cham, Springer, pp. 111-121. ISBN: 978-3-031-33893-9 Contributo in Volume

Castro Rodriguez, David Javier; Demichela, Micaela; Beltramino, Simone; Scalas, Mattia; ... (2023) Vulnerability Scenario Characterization in an Industrial Context using a Natech Indicator and a Territorial Multi-risk Approach. In: The 33rd European Safety and Reliability Conference (ESREL 2023), Southampton, UK, 3 – 8 September 2023, pp. 2181-2188. ISBN: 978-981-18-8071-1 Contributo in Atti di Convegno (Proceeding)

Castro Rodriguez, David Javier; Beltramino, Simone; Scalas, Mattia; Pilone, Eleonora; ... (2022) Territorial Representation of a Vulnerability Associated with the Seveso Installations in a Nord Italian Case Study. In: ESREL2022, Dublin, Ireland., 28/08/2022 - 01/09/2022, pp. 1463-1470. ISBN: 978-981-18-5183-4 Contributo in Atti di Convegno (Proceeding)

Beltramino, Simone; Scalas, Mattia; Castro Rodriguez, David Javier; Brunetta, Grazia; ...
(2022) Assessing Territorial Vulnerability. Testing a multidisciplinary tool in Moncalieri,
Italy. In: TEMA, vol. 15, pp. 355-375. ISSN 1970-9870 Contributo su Rivista

Scalas, Mattia; Faravelli, Martino, a cura di (2021) Strategic Planning for Resilience. A
Study Experience in Copenhagen | Pianificazione Strategica per la Resilienza.
Un'esperienza didattica a Copenaghen. Torino, Politecnico di Torino, P. 106. ISBN: 978-
88-85745-59-9 Curatele