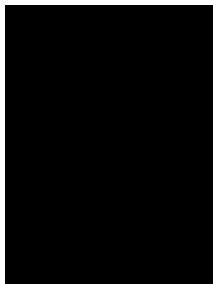


PERSONAL INFORMATION

Matteo Clementi



Affiliation
Politecnico di Milano

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	<input checked="" type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

2009 -2023

- Associate Professor of Building Technology and Environmental Design, Dpt. DASTU Architecture and Urban Studies. Politecnico di Milano;
- 2019-2022 Assistant Professor of Building Technology, Dpt of Architecture and Urban Studies.
- 2014-2019 Research Fellow, Dpt DASTU, Architecture and Urban Studies, Politecnico di Milano
- 2009-2013 Research Fellow, Dpt ABC, Architecture, Built Environment and Construction engineering, Politecnico di Milano

EDUCATION AND TRAINING

2003-2008

- 2003-2008 PhD in Building Technology and Environmental Quality, degree with honors, Department ABC, Politecnico di Milano. Thesis title: Sustainable architecture and relations with the territory. Principles, methods and tools to assess the "strong sustainability" of design proposals.
- 2003 Degree in Architecture, 100/100 cum laude Thesis title: Revitalization project of Valle Pezzata in the Gran Sasso and Monti della Laga National Park. A center for the promotion of environmental friendly cultures.

WORK ACTIVITIES

Teaching activity

- 2023 Founder and scientific director of the summer school AFA23, Architecture for Agroecology, Faculty of Architecture, Politecnico di Milano.
- 2023 Teacher in the summer school "Agroecology for the regeneration of the territory", Scientific direction: Stefano Bocchi and Alice Dal Borgo, State University of Milan.
- 2021 – 2023 Academic teaching "Fundamentals of Architectural Technology", Faculty of Architecture, Politecnico di Milano.
- 2018-2023 Academic teaching "Construction and Sustainability Studio", Faculty of Architecture, Politecnico di Milano.

Editorial activity

- Founder and member of the scientific committee of the UNAPRESS open-access series (<https://urbannarraction.net/>).
- Member of the editorial board of the magazine "Contesti. Città, Territori e progetti". Florence University Press | ISSN 2035-5300

Presentations as speakers in scientific conferences

- LOC2023, Local Open and Circular, Experiences of Regenerative Environmental Design in the Vettabbia Park, first meeting of the LOC series, coordinator and scientific supervisor, April 21st, 2023, Politecnico di Milano.

- Med Green Forum – 6 th edition: Mediterranean Architecture & Green-Digital Transition Florence, Italy 20-22 July 2022 “ presentation title” Generative Environmental Design tools to support circular economy at the local scale”.
- Foss4G2021 world congress, online Edition, from 27 September to 2 October 2021, title of the speech "GED-TOOLKIT: Open Geospatial Data and Tools to support Generative Economy Processes in local communities.
- SEB21, Sustainability in Energy and Buildings, 9 - 11 September, KES Virtual Conference Center. In the Session" Cross-scale adaptive design research for fragile built environment ". Title of the speech:" Open-Source Integrated Mapping of Urban Form and Solar Radiation for Environmental Design ".
- "SUM2020 - Fifth Symposium on urban mining and circular economy", virtual event - 18 - 20 November 2020. Within the Session "NeWs - 8 - Recoding Infrastructure". Title of the paper: "From waste to locally sourced building materials for a prosuming community". Web reference: www.urbanmining.it. From 20-11-2020 to 20-11-2020.
- FOSS4G2018, International Congress on Open Source Geospatial Software", held in Dar Es Salaam, Tanzania, from 28 to 31 August 2018. Title of the speech: "Open Network for Local Self Sustainability, boosting bioregional development through an open data sharing system. From 28-08-2018 to 31-08-2018
- AESOP 2015, 7th Sustainable Food Planning Conference. Localizing Food Strategies. Farming Cities. Performing Rurality". Held in Turin on 8 and 9 October 2015. Title of the speech, within the parallel session B: "Local productive systems planning tools for bioregional development". From 08-10-2015 to 08-10-2015
- National Conference INBAR, National Institute of Bioarchitecture, in 2014 in Piombino, within the session "Territory and Energy", title of the speech "Energy aspects and local development: innovative methodologies and design applications". From 20-06-2014 to 20-06-2014
- EAEA11-2013 Envisioning Architecture: Design, Evaluation, Communication. 11th Conference of the European Architectural Envisioning Association, Session 5, Track 1. Held from 25 to 28 September 2013 in Milan. Title of the paper: "Representing local self-sustainability". From 26-09-2013 to 26-09-2013.
- Palenc 2010. Passive and Low Energy Cooling for the Built Environment, held in Rhodes in Greece from 29 September to 1 October 2010, in the session 06: Passive cooling and sustainability at the community level. Title of the paper: "Solar radiation mapping at the micro-urban scale using GIS". From 29-09-2010 to 29-09-2010.
- WREC 2008, World Renewable Energy Congress X, held in Glasgow, Scotland, from 19 to 25 July 2008. Title of the speech: "ELaR, Ecodynamic Land Register. A proposal to assess the" strong sustainability "of design alternatives according to the local context conditions" in the Low Energy Architecture session). From 19-07-2008 to 19-07-2008.
- PLEA 2006, 23rd International conference on passive and low energy architecture. Clever design and affordable comfort. A Challenge for Low Energy Architecture and Urban Planning, held in Geneva from 6 to 8 September 2006. Title of speech: "Design Strategies in steady-state systems". From 07-09-2006 to 07-09-2006.

Grants

- 2023 – 2025 Partner of the research project BizeUrFarm (Building Integrated Zero Emission Urban Farming towards sustainable Farmscape in Milan and Singapore), in collaboration with the Singapore Institute of Technology and the University of Bologna (Department of Agricultural and Food Sciences) within of the Projects of Great Relevance of the Italian Ministry of External Affairs and Cooperation.
- 2020-2023 involved in the EU project H2020 – MSCA ITN EID SOLOCLIM – Solutions for outdoor climate adaptation (<https://soloclim.eu/>).
- 2020-2021 Member of the research group within the UNPARK project (www.unpark.it), admitted for funding on the basis of the competitive call for peer review POLISOCIAL, of the Politecnico di Milano, research manager Paolo Carli (DASTU).
- 2019-2020 Member of a research group characterized by collaborations at national level within the TIG research project "The Imitation Game, the game as an experience of participation, knowledge, evaluation and sharing of the project" financed through ex-FARB funds (University Funds for Basic Research, based on competitive calls for peer review), responsible prof. Alessandro Rogora, Department of Architecture and Urban Studies, Politecnico di Milano. The aim of the research is to propose the game as a way of interaction between designers, citizens and public administrations to encourage the formation of shared choices in sustainable transformation processes of the built environment.
- 2016-2012 Member of a research group characterized by collaborations at national level in the field of research called "Progetto Bioregione" funded by the Cariplo foundation. Full title of the research: "Promoting the sustainable development of local supply chains through the territorial organization of the demand and supply of agri-food products based on the

collective consumption system" (www.bioregione.eu). The candidate was involved from October 2014 to the end of September 2016 with the main objective of transferring the know-how gained in integrated environmental design oriented towards self-sustainability of smaller settlements and neighborhoods to the sustainable design of local food chains. In particular, the support tools for self-sufficient / self-centered design developed in previous researches have been adapted and implemented in collaboration with the other disciplines involved in the research (plant production, agricultural economics, analysis of collective consumption and transformation processes) in order to develop support tools for integrated supply chain design.

- 2011-2010 Member of a research group characterized by collaborations at national level as part of a PRIN 2008 research (effective 2010 - 2012) funded by the Ministry of Education and University (MIUR) entitled "The systemic integration of technologies from renewable sources in the built environment". Research units of the Politecnico di Milano (general coordinator: prof. Gianni Scudo). The research aims to define tools to aid in the design of systems for the use of renewable energy sources, integrated in buildings or located in public spaces. The candidate's work within the research was funded with a research grant called: "Development of a method for assessing the energy potential from renewable energy sources through integrated technologies at a micro-urban scale and construction". The activity carried out investigates the potential offered by territorial information tools (GIS), in the elaboration and communication of the renewable potential at the building and micro-urban scale, with particular attention to the solar source.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English

Job-related skills Research activities dealing with tools to support sustainable design at the building / neighborhood scale and to support the development of local self-sufficiency scenarios at the territorial scale. Application of open source tools in order to support local actors in self-sustainable territorial regeneration processes, with particular attention to design strategies oriented towards the local circular economy. Development of scenarios of local self-sufficiency, with the aim of formulating guidelines for the reduction of CO₂ emissions in minor municipal districts. Managing climatic variables in the design of sustainable urban metabolism through the use of Geographic Information Systems, with particular attention to Solar Energy. Implementation and development of support solutions for sustainable urban and peri-urban agricultural supply chains.

Digital skills Cad, Open source GIS (GRASS. QuantumGis)

Publications 2023

- M. Migliore, M. Clementi, G. Paganin, Potential use of proximity resources in the built environment, in "Recycling, proceedings of the 5th international conference", Editor A. Baratta, L. Calcagnini, A. Magarò.
- L. Mastrolonardo, M. Clementi, "Industry 4.0 and local development. Opportunities for the production of a sustainable built environment", in "Architecture and Design for Industry 4.0. Theory and Practice", Springer (under publication).
- M. Clementi, F. Bruschi : Mapping opportunities and criticalities, open geo data as tools to support analysis, public engagement and design Matteo Clementi and Francesco Bruschi", in "Prosuming public space: the Unpark project. The role of urban infrastructures in the regeneration of the in-between spaces" Editor Paolo Carli, Maggioli.
- M. Clementi, L. Belladelli: Generative Environmental Design tools to support circular economy at the local scale". In Mediterranean Architecture and the Green-Digital Transition] edited by: Ali Sayigh], Springer. Under publication in the book series "Innovative Renewable Energy".

2022

- M. Romano, M. Clementi, A. Rogora: TRAcES: experimental processes to simulate "carbon neutral" urban habitats. TECHNE, Journal of Technology for Architecture and Environment, n. 24 (ISSN: 2239-0243)
- M. Clementi : "Le risorse e la produzione locale", in M.C. Forlani, "Progettare per l'ambiente costiero", Edicom Edizioni.
- M. Clementi : "Strategie per uno sviluppo locale sostenibile", in M.C. Forlani, monografia sul Piano di Ricostruzione di Caporciano (AQ), Gangemi International Edizioni.

- M. Clementi, M. Romano: "FOS GIS to support regenerative design processes in urban areas", PLEA STGO 2022, Will cities Survive?, Conference Proceedings.
 - M. Romano, M. Clementi, A. Rogora: TIG: uno strumento open source per simulare scenari abitativi "carbon neutral", In *Techne* 24, Ri-Innovare l'Abitare
- 2021**
- Michele Morganti, Matteo Clementi, Alessandro Rogora "Open-Source Integrated Mapping of Urban Form and Solar Radiation for Environmental Design", in "Sustainability in Energy and Buildings 2021 (ISBN: 978-981-16-6268-3; 978-981-16-6269-0), John Littlewood, Robert J. Howlett, Lakhmi C. Jain, Springer.
 - T.H. Kim, B.R. An, M. Clementi: "Phytoremediation as Adaptive Design Strategy to Improve Indoor Air Quality. Experimental Results Relating to the Application of a Vertical Hydroponic Biofilter", in "Sustainability in Energy and Buildings 2020" (ISBN: 978-981-15-8783-2), John Littlewood, Robert J. Howlett, Lakhmi C. Jain, Springer
 - G. Pereira, V. Moredia, V. Dessi, M. Clementi: "A simplified procedure to improve the usability of hydrodynamic modelling software in regenerative urban design", in *JOURNAL OF PHYSICS. CONFERENCE SERIES* (ISSN: 1742-6596), V. 2042.
 - M. Clementi, E. Labrozzi : "GED-TOOLKIT: Open Geospatial Data and Tools to support Generative Economy Processes in local communities", in *INTERNATIONAL ARCHIVES OF THE PHOTOGRAMMETRY, REMOTE SENSING AND SPATIAL INFORMATION SCIENCES* (ISSN: 2194-9034), V. XLVI-4.
- 2020**
- Matteo Clementi, Carlotta Fontana, Maria Cristina Forlani (2020). Geo-lifecycle design tools for supply chain integration in fragile areas. In: (a cura di): Lorenzo Pignatti, *Territori Fragili.. STUDI E RICERCHE DI ARCHITETTURA*, p. 801- 810, Roma: GANGEMI INTERNATIONAL, ISBN: 978-88-492-3668-2.
 - M. Clementi, M. C. Forlani, L. Mastrodonardo: "Le cooperative di comunità nelle aree interne: buone pratiche per un distretto conviviale in Abruzzo", in "Territori e comunità. Le sfide dell'autogoverno comunitario" (ISBN: 978-88-940261-8-4), Maria Rita Gisotti, Maddalena Rossi, SDT Edizioni.
 - Clementi, M.; Belladelli, L. From waste to locally sourced building materials. Tools to support a prosuming community, SUM2020 / 5TH SYMPOSIUM ON URBAN MINING AND CIRCULAR ECONOMY, 18 – 20 Novembre 2020. Proceedings.
 - M. Clementi, G. Scudo : "La progettazione ambientale delle filiere alimentari orientata allo sviluppo bioregionale". In *TERRITORIO*, V. 93.
- 2019**
- Clementi M., Fontana C. (2019). The systemic approach in sustainable environmental planning: References to the ecology of living systems. *TECHNE*, vol. 17, p. 143-151, ISSN: 2239-0243, doi: 10.13128/Techne-2402
 - Clementi, Matteo; Cristina Forlani, Maria; Mastrodonardo, Luciana, Dalla Strategia d'Area Basso Sangro-Trigno (SNAI Abruzzo), possibili implementazioni per un modello replicabile orientato all'autosostenibilità locale per il Comune di Caporciano (AQ), in Elisa Butelli, Giampiero Lombardini e Maddalena Rossi, *Dai territorio di resistenza alle comunità di patrimonio: percorsi di autorganizzazione e autogoverno per le aree fragili* (ISBN: 978-88-940261-6-0), SdT edizioni, pag 213 – 225.
 - Clementi, Matteo; Fontana, Carlotta; Cristina Forlani, Maria, OPEN TOOLS TO SUPPORT SUPPLY CHAIN INTEGRATED DESIGN IN FRAGILE AREAS, IFAU 2018. Second international forum on architecture and urbanism. Fragile territories, Landscape Cities Architecture. Proceedings. Pag 1182 – 1189.
 - Carli, P.; Dessi, V.; Clementi, M.; Kim, T. H., Design strategies to improve water resilience in urban areas. Good practices for an open-data culture of the urban environment, IFAU 2018. Second international forum on architecture and urbanism. Fragile territories, Landscape Cities Architecture. Proceedings. Pag 1158 – 1165.
- 2018**
- M. Clementi, C. Fontana, A. Rogora, "Open Network for local self sustainability, boosting bioregional development through an open data sharing system" in *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XLII-4/W8, 2018.
- 2017**
- Scudo, M. Clementi (2017). The Bioregion and Eco-efficiency. In: (a cura di): Angela Colucci Marcello Magoni Scira Menoni, *Peri-Urban Areas and Food- Energy-Water Nexus. Sustainability and Resilience Strategies in the Age of Climate Change.. Springer Tracts in civil Engineering*, p. 145-151, Springer, ISBN: 9783319410203, ISSN: 2366-259X, doi: 10.1007/978-3-319-41022.
- 2016**
- P. Caputo, M. Clementi, C. Ducoli, S. Corsi, G. Scudo, "Food Chain Evaluator, a tool for

analyzing the impacts and designing scenarios for the institutional catering in Lombardy (Italy)", in Journal of Cleaner Production, June 2016, Elsevier

2014

- P. Caputo, C. Ducoi, M. Clementi, "Strategies and Tools for Eco-Efficient Local Food Supply Scenarios", in Sustainability 6, 2014, pag 631-651, MDPI, ISSN 2071-1050