

# NICOLA COLANINNO

Ph.D., Research Fellow

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 www.linkedin.com/in/nicola-colaninno  
 www.researchgate.net/profile/Nicola\_Colaninno2

## Politecnico di Milano

Laboratorio di Simulazione Urbana Fausto Curti  
 Dept. of Architecture and Urban Studies (DASU)

### EARLY ACHIEVEMENTS TRACK RECORD

An architect by education, and PhD *cum laude* in Urban and Architectural Management and Valuations at Polytechnic University of Catalonia (UPC), Spain; I am currently (since 2017) a Research Fellow at Politecnico di Milano and adjunct Professor in Analysis of the City and Territory (2020/2021). My research interests and main achievements focus on Urban Studies and GIScience, with a special focus on Urban Climate Analysis, Planning and Design. In 2021, I achieved a H2020 Marie Skłodowska-Curie Individual/Global Fellowship Action (MSCA) for the project MultiCAST: Multiscale Thermal-related Urban Climate Analysis and Simulation Tool, to be developed from 2022 to 2025 with Politecnico di Milano, as beneficiary, and MIT as host institution.

During my current position at Politecnico di Milano, I have designed an effective methodology for modelling Near-Surface Air Temperature (NSAT) combining weather station data and satellite-derived optical and thermal imagery. NSAT has been effectively used for Urban Climate planning and design as microclimate modelling approach for assessing the impact of urban forestation and NBS integration into the urban environment, and to inform decision making. Besides, I have supported the mainstreaming of climate adaptation into spatial planning tools for the Metropolitan City of Milan.

After graduating, I achieved a postgraduate Master's in urban management and Valuations at UPC, financed by the Regional Government of Puglia (Italy), through a scholarship grant for European Masters abroad. Then, I developed my Ph.D. at UPC under different national projects, financed through a 4-years scholarship grant by the Spanish Government.

During the Ph.D., I developed my research at the Virtual City Modelling Lab (LMVC-UPC) under the Centre of Land Policy and Valuations (CPSV). I also obtained additional funding for the secondment stage of the Ph.D. to be undertaken as visiting researcher at the Dept. of Geography, Planning, and International Development Studies of University of Amsterdam (UvA), Netherlands, during the academic year 2009/2010. My main achievements during the Ph.D. are the setting up of an original method for Land Cover classification through satellite-derived remotely sensed data and an approach for automatically clustering different urban patterns based on morphometrics.

From 2013 to 2016, I was self-Employed in the field of Technical Services of Engineering, and Specialist in Remote Sensing (RS), Geographical Information Systems (GIS), and spatial analysis. During this period, I explored the private sector as possible exploitation of my work. I used my method for Land Cover classification, and Open-Source software, to support different works, including the UN-Habitat City Prosperity Index; and the development of a Base Plan for the city of Jacmel, Haiti, based on the model for base planning developed within the UIA-CIMES Programme and the UNESCO Chair on Intermediate Cities, in coordination with UN-Habitat.

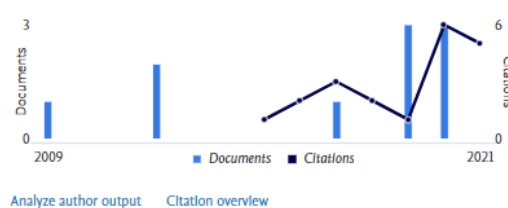
#### Metrics overview

10  
Documents by author

20  
Citations by 20 documents

4  
h-Index: [View h-graph](#)

#### Document & citation trends



#### Most contributed Topics 2015–2019

Remote Sensing Image; Landsat 7; Thematic Mapper (LANDSAT)  
2 documents

Heat Islands; Land Surface Temperature; Urban Climate  
1 document

Solar Energy; Photovoltaic System; Urban Form  
1 document

[View all Topics](#)

Scopus Profile

### EDUCATION

#### 2016 **Ph.D. in Urban and Architectural Management and Valuation**

*Excellent cum Laude | International Mention*

Polytechnic University of Catalonia (UPC)-BarcelonaTECH, Barcelona, Spain

International Standard Classification: ISCED 6

*Thesis: Semi-automatic land cover classification and urban modelling based on morphological features. Remote sensing, geographical information systems, and urban morphology: defining models of land occupation along the Mediterranean side of Spain.*

Under the Supervision of Josep Roca Cladera, Full Professor at UPC

#### 2009/2010 **Pre-Doctoral Research Visiting (PhD Secondment)**

Department of Geography, Planning and International Development Studies

University of Amsterdam (UvA). Amsterdam, Netherlands

- 2009 **Postgraduate Course: Introduction to Digital Images and Digital Analysis Techniques**  
GIS-STUDIO, Institute for biodiversity and ecosystem dynamics  
University of Amsterdam (UvA). Amsterdam, Netherlands
- 2007 **Master's Degree in Urban Management and Valuation**  
Polytechnic University of Catalonia (UPC)-BarcelonaTECH, Barcelona, Spain  
International Standard Classification: ISCED 5B  
*Main Covered Subjects:*
- *Urban and regional planning*
  - *Sustainable city and regional development*
  - *Land and housing policy*
  - *Quantitative instruments of urban and regional analysis*
  - *ICT for spatial analysis: GIS, Remote Sensing, 3d modelling and virtual reality.*
- 2005 **Degree in Architecture Graded with 110/110**  
LAUREA SPECIALISTICA IN ARCHITETTURA | Classe 4/S Architettura e Ingegneria Edile  
School of Architecture "Ludovico Quaroni", at Sapienza University of Rome, Italy  
International Standard Classification: ISCED 5A

## WORK EXPERIENCE

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- 2019-2021 **Technical consultant, expert in Spatial Data Processing and Design**  
Città Metropolitana di Milano | Project - LIFE METRO ADAPT: enhancing climate change adaptation strategies and measures in the Metropolitan City of Milan  
LIFE Program | Climate Change Adaptation  
Tasks: Climate change analysis and vulnerability assessment; Mainstreaming adaptation; Monitoring.
- 2017-current **Research Fellow**  
Laboratorio di Simulazione Urbana (LABSIMURB) | Dept. of Arch. and Urban Studies (DASU)  
Politecnico di Milano (POLIMI)  
Tasks: Thermal-related Urban Climate analysis and Modelling; Tree-Canopy cover mapping and assessing; Mainstreaming adaptation; Climate Planning; GIS.  
Participation to writing of competitive national and international research projects: H2020, PRIN, CARIPLO, UIA.
- 2013-2016 **Self-Employed - Specialized Services of Engineering**  
Barcelona, Spain  
Remote Sensing | GIS | Digital Cartography. Sector: Professional, scientific, technical activities  
Tasks: Satellite-derived Land Cover classification, and Digital Mapping, for Spatial Planning.
- 2008-2013 **Researcher Fellow**  
Virtual City Modelling Lab (LMVC) | Centre of Land Policy and Valuations (CPSV)  
Polytechnic University of Catalonia (UPC)-BarcelonaTECH  
Tasks: Urban Morphology; GIS; Remote Sensing; Digital Mapping; Spatial Analysis.
- 2006 **Internship in European Projects**  
TECLA – Assoc. for local and European trans-regional cooperation/ UPI - union of Italian provinces  
Brussels  
Project: RCSM - Network of Small Historical Centres (*Rete di Centri Storici Minori*)  
Program: Interreg III B MEDOCC  
Tasks: Analysis and mapping of urban features in historic centers

## R&D PROJECTS/RESEARCH EXPERIENCE

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- 2022-2025 **MultiCAST: Multiscale Thermal-related Urban Climate Analysis and Simulation Tool**  
*Principal Investigator* | Politecnico di Milano - Massachusetts Institute of Technology (MIT)  
Research Fields: Spatial and regional planning (including landscape and land management)  
GIS  
Earth observations from space/remote sensing  
Urbanization and urban planning, cities  
Funded: HORIZON 2020 Marie Skłodowska-Curie actions call H2020-MSCA-IF-2020, Global Fellowship (GF), EUROPEAN COMMISSION
- 2020-2022 **AP+A\PRODUCTION AREAS, PRO-ADAPTIVE AREAS**  
*AP+A\AREE PRODUTTIVE, AREE PRO-ADATTIVE*  
*Research Fellow* | Politecnico di Milano  
Area: Civil Engineering and Architecture | Discipline: Urban and regional planning - ICAR/20  
Funded: MINISTRY OF ECOLOGICAL TRANSITION | *MINISTERO DELLA TRANSIZIONE ECOLOGICA* (MiTE)

- 2020-2021 **AIR BREAK: Urban, climate and environmental planning for urban health and well-being**  
*Research Fellow* | Politecnico di Milano  
 Area: Civil Engineering and Architecture | A-08  
 Funded: URBAN INNOVATIVE ACTIONS (UIA), European Commission
- 2019-2020 **Towards climate-proof landscapes for living and working: Adaptation to climate change and improvement of the human comfort in public spaces and work areas in the peri-urban places of Milan**  
*Research Fellow* | Politecnico di Milano  
 Area: Civil Engineering and Architecture | A-08  
 Funded: Fondazione CARIPLLO
- 2018-2019 **Towards the Metropolitan Park of Milan. Spatial analysis, environmental assessment, and implementation strategy of the forestation project**  
*Research Fellow* | Politecnico di Milano  
 Area: Civil Engineering and Architecture | A-08  
 Funded: Fondazione Falk, Sistemi Urbani-Gruppo ferrovie dello stato italiane
- 2017-2018 **Climate Change and Territory: Guidelines and operational proposals for the Metropolitan City of Milan**  
*Research Fellow* | Politecnico di Milano  
 Area: Civil Engineering and Architecture | A-08  
 Funded: Fondazione CARIPLLO
- 2016-2018 **Urban-CLIMPLAN - The urban heat island: effects on climate change and modelling for territorial and urban planning strategies. Application to the metropolitan area of Barcelona**  
*Adjunct Research Staff* | Polytechnic University of Catalonia (UPC)  
 Funded: Europ. Regional Develop. Fund (ERDF) | Gov. of Spain. Ref.: BIA2015-68623-R
- 2017 **Economic geographies of the Lodi territory region: Analysis and perspective**  
*Analisi e prospettive delle geografie economiche del territorio lodigiano*  
*Research Fellow* | Politecnico di Milano  
 Contractor: ASSOLOMBARDA
- 2015 **City Prosperity Index (CPI): UN-Habitat's urban development indicator for 136 municipalities in Mexico**  
*Adjunct Research Staff - External consultant*  
 Funded: UN-Habitat | Mexican federal institute for housing (Infonavit)  
<http://infonavit.janium.com/janium/Documentos/56640.pdf>
- 2014 **PARAMFROG: An effective methodological approach for environment monitoring and growth dynamics. Nuevo León y Monterrey (México) as case study.**  
*Adjunct Research Staff - External consultant*  
 Funded: Consejo Nacional de Ciencia y Tecnología (CONACyT) | Registro Nacional de Instituciones y Empresas Científicas y Tecnológicas (RENECYT), México. Ref.: Nmx-Gt-002-Imnc-2008
- 2013 **Base Plan for the city of Jacmel in Haiti**  
 Based on the methodological model developed by *Unión Internacional de Arquitectos (UIA)*, and the UNESCO Chair on Intermediate Cities (CIMES), coordinated with UN-HABITAT.  
*Adjunct Research Staff - External consultant*  
 UNESCO Chair in Intermediate Cities at the University of Lleida (UdL), Spain.
- 2013 **Urban regeneration project for the city of Jacmel: Mayard district. Haiti**  
*Projet d'amélioration urbaine de la ville de Jacmel: quartier du Mayard. Haiti*  
*Research Staff* | Universitat Politècnica de Catalunya  
 Participants: Asociación Catalana de Universidades Públicas (ACUP), Cátedra UNESCO CIMES, Universidad Politécnica de Cataluña (UPC), and Universidad Autónoma de Barcelona (UAB)  
 Funded: Barcelona City Council and Obra Social "la Caixa"
- 2012 **Delimitation and diagnosis of the marginal peripheral neighborhoods of Santo Domingo, RD**  
*Delimitación y diagnóstico de barrios periféricos marginales de Santo Domingo, República Dominicana*  
*Research Staff* | Universitat Politècnica de Catalunya (UPC)  
 Funded: Centro de Cooperación para el Desarrollo (CCD-UPC), Inst. Dominicano de Desarrollo Integral (IDDI)
- 2010-2012 **Towards a system of polycentric metropolises?: Evolution, characterization and influence of metropolitan sub-centers on the efficiency of the urbanization**  
*¿Hacia un sistema de metrópolis policéntricas?: Evolución, caracterización e influencia de los subcentros metropolitanos sobre la eficiencia de la urbanización*  
*Research Staff* | Universitat Politècnica de Catalunya (UPC)  
 Funded: Government of Spain - Ministry of Science and Innovation  
 Reference: CS02009-07218

- 2010-2012 **MODELCOSTA: Development of a platform for prospective modelling of urbanization processes in coastal areas**  
*Adjunct Research Staff* | Polytechnic University of Catalonia (UPC)  
 Funded: Gov. of Spain: Ministry of Science and Innovation - Ref.: CS02009-09057
- 2006-2009 **Mediterranean Coast: The process of urbanization on the Mediterranean Coast: Towards an unsustainable land occupation model? A retrospective (1956-2006) and prospective (2006-2026) analysis** - *Costa Mediterránea: El proceso de urbanización en la Costa Mediterránea: ¿Hacia un modelo insostenible de ocupación del suelo? Un análisis retrospectivo (1956-2006) y prospectivo (2006-2026)*  
*Research Staff* | Universitat Politècnica de Catalunya (UPC)  
 Funded: Government of Spain - Ministry of Education and Science  
 Reference: SEJ2006-09630/GEOG

## TEACHING EXPERIENCE

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- Spring 2021 **Adjunct Professor**  
*Analysis of the City and Territory - Urban Planning Studio I*  
 Bachelor in ARCHITECTURAL DESIGN  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano
- Fall 2020 **Teaching Assistant**
- Fall 2019 *Sustainable Urban Design - Energy Climate and Urban Planning Studio*
- Fall 2018 M.Sc. in URBAN PLANNING AND POLICY DESIGN  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano
- Spring 2020 **Teaching Assistant**
- Spring 2019 *Sustainable Urban Design - Elements of Environmental Design*  
 Bachelor in PLANNING: CITY, ENVIRONMENT, LANDSCAPE  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano
- Fall 2018 **Tutorship of Ph.D. candidates**  
*Ph.D. in Architecture, Built Environment and Construction Engineering*  
*Course: DIGITAL MAPPING AND SPATIAL DATA ANALYSIS*  
 PhD School Politecnico di Milano  
 Department of Architecture, Built environment and Construction engineering – ABC
- Spring 2017 **Teaching Assistant**  
*Analysis of the City and Territory - Urban Planning Studio I*  
 Bachelor in ARCHITECTURAL DESIGN  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano
- Fall 2013 **Invited Lecturer**
- Fall 2012 *GIS and Remote Sensing for Spatial Analysis and Planning*  
 Master's degree in Urban Planning and Sustainability  
 School of Professional & Executive Development | Polytechnic University of Catalonia (UPC)
- Spring 2011 **Teaching Assistant**  
 Research Workshop  
*GIS and Remote Sensing Applied to the Spatial Analysis*  
 Master's Degree in Urban Management and Valuation at Polytechnic Univ. of Catalonia (UPC)
- Spring 2009 **Teaching Assistant**
- Spring 2008 Research Workshop  
*Theory of urban and regional planning*  
 Master's Degree in Urban Management and Valuation at Polytechnic Univ. of Catalonia (UPC)

## M.SC. THESIS (CO-)SUPERVISED SO FAR – A SELECTION OF

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- 2021 **Thermal-related urban climate analysis: assessing thermal stress hotspots in the city of Milan**  
 Author: Zendeli, Doruntina  
 Supervisor: Morello, E.  
 Co-Supervisor(s): Colaninno, N.  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano  
 M.Sc. in Urban Planning and Policy Design
- 2020 **Urban climate modelling using WRF and WUDAPT model: a case of Milan**  
 Author: Panchagnula, Krishna Dutt  
 Supervisor: Morello, E.  
 Co-Supervisor(s): Colaninno, N.  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano  
 M.Sc. in Urban Planning and Policy Design

- 2020 **In the time of climate change, embrace the unpredictable future with resilience: an experimental green infrastructure assessment in Lombardy Region.**  
 Author: Han, Dong  
 Supervisor: Morello, E.  
 Co-Supervisor(s): Colaninno, N., Previtali, M.  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano  
 M.Sc. in Urban Planning and Policy Design
- 2018 **Urban climate modelling. Proposal for automatic retrieving key measures to assess and mitigate the urban heat island effect at the local and the city scale: the case study of Milan**  
 Author: Eldesoky, Ahmed Hazem Mahmoud  
 Supervisor: Morello, E.  
 Co-Supervisor(s): Colaninno, N.  
 School of Architecture, Urban Planning, Construction Engineering AUIC | Politecnico di Milano  
 M.Sc. in Urban Planning and Policy Design

## **PUBLICATIONS**

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- 2020 **Urban greenery management and energy planning: A GIS-based potential evaluation of pruning by-products for energy application for the city of Milan**  
 Authors: Ferla, G., Caputo, P., Colaninno, N., Morello, E.  
*Renewable Energy*  
 SCOPUS Indexed. SJR: 2.05
- 2020 **Testing a combined multispectral-multitemporal approach for getting cloudless imagery for Sentinel-2**  
 Authors: Colaninno, N., Marambio, A., Roca, J.  
*ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*  
 SCOPUS Indexed. SCImago Journal Rank (SJR): 0.474
- 2020 **Mapping urban ventilation corridors and assessing their impact upon the cooling effect of greening solutions**  
 Authors: Eldesoky, A.H.M., Colaninno, N., Morello, E.  
*ISPRS International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*  
 SCOPUS Indexed. SJR: 0.367
- 2020 **For a climate governance of the Metropolitan City of Milan: Context exploration, knowledge building and operational proposals**  
 Authors: Morello, E., Musco, F., Colaninno, N., Magni, F., Maragno, D.  
*Urbanistica*, INU edizioni  
 ANVUR Class A
- 2019 **Modelling the impact of green solutions upon the urban heat island phenomenon by means of satellite data**  
 Authors: Colaninno, N., Morello, E.  
*Journal of Physics: Conference Series (JPCS)*, Vol. 1343(1)  
 SCOPUS Indexed. SJR: 0.23
- 2019 **Tree canopy cover estimation by means of remotely sensed data for large geographical areas: overview, available data, and proposal.**  
 Authors: Colaninno, N., Eldesoky, A.H.M., Morello, E.  
*Conference Paper - Proc. International Conference Virtual City and Territory (CTV)*, vol. 0, num. 13  
 DOI10.5821/ctv.8650 | ISSN: 2604-6512
- 2019 **Improving Local Climate Zones Automatic Classification Based on Physic-Morphological Urban Features**  
 Authors: Eldesoky, A.H.M., Colaninno, N., Morello, E.  
*Conference Paper - Proc. International Conference Virtual City and Territory (CTV)*, vol. 0, num. 13  
 DOI10.5821/ctv.8663 | ISSN: 2604-6512
- 2019 **An integrated, agile approach for estimating solar radiation on building facades in complex urban environments**  
 Authors: Eldesoky, A.H.M., Colaninno, N., Morello, E.  
*Journal of Physics: Conference Series (JPCS)*, Vol. 1343(1)  
 SCOPUS Indexed. SJR: 0.23
- 2019 **Exploring a combined multispectral multitemporal approach as an effective method to retrieve cloudless multispectral imagery**  
 Authors: Colaninno, N., Marambio, A., Roca, J.  
*Journal of Applied Remote Sensing* 13(2)  
 SCOPUS Indexed. SJR: 0.49



- 2019 **The Air between Buildings: How to fight climate change in urban areas**  
 Authors: Colaninno, N., Morello, E.  
*XXII Triennale di Milano | Broken Nature: Design Takes on Human Survival.*  
*4 ELEMENTS/TAKING CARE, Padiglione Italia*  
 Ed. Bucci, F., Collina, L., Corraini Edizioni, Mantova | ISBN 978-88-7570-788-0
- 2018 **I dati satellitari per l'analisi del fenomeno isola di calore urbano e la valutazione di misure di mitigazione: il caso della Città di Milano**  
 Authors: Colaninno, N., Morello, E., Musco, F., & Maragno, D.  
*Urbanistica Informazioni*, 278 s.i., pp 54–61. ISSN: 2239-4222  
 ANVUR scientific publications S
- 2018 **Milano Città Metropolitana Resiliente: un percorso operativo a supporto della redazione del futuro Piano Territoriale Metropolitan**  
 Authors: Magni, F., Colaninno, N., Maragno, D., Morello, E., Musco, F., & Caserini, S.  
*Urbanistica Informazioni*, 278 s.i., pp 312–316. ISSN: 2239-4222  
 ANVUR scientific publications S
- 2018 **Ondate di calore e resilienza urbana: una proposta metodologica per la valutazione della vulnerabilità della Città Metropolitana di Milano per ciascuna sezione di censimento Istat**  
 Authors: Maragno, D., Ruzzante, F., Morello, E., Colaninno, N., & Musco, F.  
*Urbanistica Informazioni*, 278 s.i., pp 210–214. ISSN: 2239-4222  
 ANVUR scientific publications S
- 2017 **Quick multitemporal approach to get cloudless improved multispectral imagery for large geographical areas**  
 Authors: Colaninno, N., Marambio, A., Roca, J.  
*SPIE Remote Sensing Proc.: Earth Resources and Environm. RS/GIS*  
 SCOPUS Indexed
- 2014 **Síntesis del informe regional para La Barquita: Santo Domingo, República Dominicana**  
 Authors: Romano, Y.; Marambio, A.; Colaninno, N.  
*Planur-e.es. Territorio, Urbanismo, Paisaje, Sostenibilidad y Diseño Urbano*. Num. 3
- 2012 **Sustainable territorial development and urban growth: a critical interaction. The Spanish Mediterranean coast, and Catalonia, during the last two decades**  
 Authors: Colaninno, N.  
*ACE©: Architecture, City and Environment*, Num. 20  
 SCOPUS Indexed. SJR: 0.25
- 2012 **Defining densities for urban residential texture, through land use classification, from Landsat TM imagery: case study of Spanish Mediterranean coast**  
 Authors: Colaninno, N.; Roca, J.; Burns, M.; Alhaddad, B.  
*ISPRS International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*  
 SCOPUS Indexed. SJR: 0.367
- 2011 **Urban models definition through Image processing and morphological features. The case study of Catalonia, Spain**  
 Authors: Colaninno, N.; Alhaddad, B.; Roca, J.  
*Conference Paper - Proc. 7VCT Int. Conference on Virtual Cities and Territories*. Ed.: N. Pinto, et al.  
 ISBN 9789729652462 | 9789899751002
- 2011 **An automatic classification of urban texture: form and compactness of morphological homogeneous structures in Barcelona**  
 Authors: Colaninno, N.; Roca, J.; Pfeffer, K.  
*Conference Paper ersa11p769 - Proc. of ERSA the European Regional Science Association.*  
 51<sup>st</sup> European Congress: New Challenges for European Regions and Urban Areas in a Globalised World. [https://www.econstor.eu/bitstream/10419/120085/1/ERSA2011\\_0769.pdf](https://www.econstor.eu/bitstream/10419/120085/1/ERSA2011_0769.pdf)
- 2011 **Spatial patterns of land use: morphology and demography in a dynamic evaluation of urban sprawl phenomena along the Spanish Mediterranean coast**  
 Authors: Colaninno, N.; Cerda, J.; Roca, J.  
*Conference Paper ersa11p776 - Proc. of ERSA the European Regional Science Association.*  
 51<sup>st</sup> European Congress: New Challenges for European Regions and Urban Areas in a Globalised World. <https://ideas.repec.org/p/wiw/wiwr/ersa11p776.html>
- 2010 **The relation between land occupation, density and spatial fragmentation (Spain 1956-2006)**  
 Authors: Romano, Y.; Colaninno, N.; Cerda, J.; Roca, J.; Burns, M.  
*Conference Paper ersa10p880 - Proc. of ERSA the European Regional Science Association.*  
 50<sup>th</sup> European Congress: Sustainable Regional Growth and Development in the Creative Knowledge Economy. <https://ideas.repec.org/p/wiw/wiwr/ersa10p880.html>

- 2009 **The effectiveness of morphology and street networks in determining models of urban growth at different spatial scales analysis.**  
 Authors: Colaninno, N.; Alhaddad, B.; Roca, J.  
*SPIE Remote Sensing Proc.: RS for Environm. Monitoring, GIS Appl., Geology*  
 SCOPUS Indexed
- 2008 **Modelli di urbanizzazione costiera: morfologia e complessità strutturale, a scala urbana e territoriale, nella Regione Metropolitana di Barcellona**  
 Authors: Colaninno, N.; Roca, J.  
*ACE@: Architecture, City and Environment*, Num. 7

#### CHAPTERS IN COLLECTIVE VOLUMES

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- 2012 **Cataluña, Un desarrollo metropolitano policéntrico: dispersión y compactación, en los procesos de crecimiento urbano, a escala territorial**  
 Authors: Colaninno, N.; Roca, J.  
 In: *De-COASTruction. La Desconfiguración del Litoral Mediterráneo Español*  
 Ed.: Fernando Gaja Díaz | Universidad Politécnica de Valencia, Valencia | ISBN: 9788483637999

#### TECHNICAL REPORTS – A SELECTION OF

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- 2021 **FORESTAMI. La forestazione urbana per la Grande Milano del 2030**  
**'FORESTAMI. Urban forestation for the Greater Milan of 2030'**  
 Contribution to Chapters: Il sistema antropizzato, Il sistema ambientale, Il sistema climatico  
 Authors: Colaninno, N., Morello, E.  
 Project: *ForestaMI* - <https://forestami.org/>  
 Funded: Fondazione Falck e FS Sistemi Urbani
- 2020 **Linee Guida per l'analisi climatica e la gestione della vulnerabilità a scala metropolitana**  
**'Guidelines for climate analysis and vulnerability management on a metropolitan scale'**  
 Authors: Bono, L., Callerio, M., Ciappa, A., Colaninno, N., Corsini, N., Davoli, C., De Vendictis, ...  
 Project: *LIFE METRO ADAPT - enhancing climate change adaptation strategies and measures in the Metropolitan City of Milan*  
 Funded: European Commission - LIFE programme  
<https://www.lifemetroadapt.eu/it/wp-content/uploads/sites/2/2020/05/Linee-Guida-per-analisi-climatica-e-la-gestione-della-vulnerabilit%C3%A0.pdf>
- 2020 **Abaco di azioni di adattamento ai cambiamenti climatici**  
**'Abacus of adaptation actions to climate change'**  
 Scientific Coordination: Musco, F., Maragno, D., Litt, G.  
 Co-authors: Morello, E., Colaninno, N.  
 Project: *Verso paesaggi dell'abitare e del lavorare a prova di clima: adattamento ai cambiamenti climatici e miglioramento del comfort degli spazi pubblici e delle aree produttive nel territorio peri-urbano milanese.*  
 Funded: Fondazione Cariplo, extrabando "Progetti territoriali della Città di Milano e provincia" 2018  
[https://www.academia.edu/44731802/Abaco\\_di\\_azioni\\_di\\_adattamento\\_ai\\_cambiamenti\\_climatici](https://www.academia.edu/44731802/Abaco_di_azioni_di_adattamento_ai_cambiamenti_climatici)

#### CONFERENCES AND INTERNATIONAL EVENTS – A SELECTION OF

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- 2021 **Applied Urban Modelling 2020 (AUM2020): Modelling the New Urban World**  
 Author |Attendee  
 Contribution: *High-resolution air temperature mapping in data-scarce areas by means of low-cost mobile measurements and machine learning*  
 Authors: *Eldesoky, A.H.M., Colaninno, N., Morello, E.*  
 Session: MODELLING METHODS  
 Martin Centre for Architectural and Urban Studies, the University of Cambridge
- 2020 **Greening Cities Shaping Cities - International research symposium**  
 Scientific Committee  
 Co-chair: Spatial challenges of NBS implementation in practice  
 Politecnico di Milano, Milan, Italy
- 2019 **13<sup>th</sup> International Conference Virtual City and Territory - 13CTV, Barcelona, Spain**  
 Author |Attendee  
 Session: Climate Change and urban planning  
 Center of Land Policy and Valuations (CPSV-UPC), Polytechnic Univ. of Catalonia (UPC)
- 2019 **CISBAT 2019 | Climate Resilient Cities – Energy Efficiency & Renewables in the Digital Era**  
 Author |Attendee  
 Session G2: Urban climate modelling: Microclimate  
 EPFL École polytechnique fédérale de Lausanne

- 2019 **ECCA 2019: 4<sup>th</sup> European Climate Change Adaptation conference**  
 Author |Attendee  
 Poster Session: Simulating the effectiveness of greening measures for reducing the urban heat island effect: the case study of Milan
- 2017 **SPIE Remote Sensing**  
 Author |Attendee  
 Session: Earth Resources and Environ. RS/GIS Applications VIII - Processing Methodologies II  
 SPIE - the international society for optics and photonics
- 2013 **9<sup>th</sup> International Congress on Virtual City and Territory - 9VCT, Roma, Italy**  
 Referee | Moderator  
 Session: Virtual models of cities: GIS, 3D models, and HD simulations  
 Centre of Land Policy and Valuations (CPSV-UPC) | Università Roma Tre
- 2011 **7<sup>th</sup> International Congress on Virtual City and Territory - 7VCT, Roma, Italy**  
 Author |Attendee  
 Session: New Technologies in Architecture, Urban Design and e-Planning  
 CPSV-UPC, Univ. Nova of Lisbon (UNL), Univ. of Coimbra UC
- 2011 **51<sup>st</sup> ERSA Congress: New Challenges for European Regions and Urban Areas in a Globalised World**  
 Author |Attendee  
 Special Session: Processes of Urbanization along the European Coastal Areas  
 O Session: Barcelona as a case study  
 European Regional Science Association (ERSA)
- 2010 **50<sup>th</sup> ERSA Congress: Sustainable Regional Growth and Development in the Creative Knowledge Economy**  
 Author |Attendee  
 Session: Geographical Information Systems and Spatial Analysis  
 European Regional Science Association (ERSA)

#### WORKSHOPS/TRAINING ACTIVITIES

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- 06/07/2020 **Planning for climate adaptation: for a procedure from hazard mapping to the co-design of technical solutions**  
 Lecturer  
 Training activity at the Order of Architects of Milan  
 CARIPLO Project: Towards climate-proof landscapes of the living and working
- 17/06/2020 **Strategies and Measures for Adaptation to Climate Change in the Metropolitan City of Milan: From the analysis of climatic vulnerabilities, to NBS adaptation measures**  
 Lecturer  
 Training activity at the Order of Engineers of Milan  
 LIFE METRO ADAPT project
- 02/10/2018 **Urban Vulnerability and Climate Change: An Operational Approach for the Assessment of Urban Risk due to Climate Impacts**  
 Lecturer  
 Workshop: Politecnico di Milano | Metropolitan City of Milan (CMM)
- 11/09/2018 **Climate Change and Urban Planning: Mitigation and Adaptation Strategies for Urban Resilience**  
 Lecturer  
 Workshop: Politecnico di Milano | Metropolitan City of Milan (CMM)
- Spring 2011 **GIS and Remote Sensing Applied to the Spatial Analysis**  
 Tutorship  
 Workshop: Centre of Land Policy and Valuations (CPSV) | Polytechnic Univ of Catalonia (UPC)
- Spring 2009 **The spatial structure of urban systems - An application to the Mediterranean side of Spain**  
 Tutorship  
 Workshop: Centre of Land Policy and Valuations (CPSV) | Polytechnic Univ of Catalonia (UPC)

#### AWARDS

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- 2019 **Gold Paper Award**  
*Scientific Paper: Modelling the impact of green solutions upon the urban heat island phenomenon by means of satellite data*  
 Awarded to: Nicola Colaninno, Eugenio Morello  
 CISBAT 2019 - International Scientific Conference | 4-6 Sep 2019, Lausanne, Switzerland  
 Climate Resilient Cities – Energy Efficiency & Renewables in the Digital Era  
 SCIENTIFIC COMMITTEE: EPFL, MIT, Cambridge University



**2008 Best Poster Presentation***PhD proposal*

Awarded to: Nicola Colaninno

Doctoriales Tranfrontereres: Seminar on career opportunities, directed at Franco-Spanish and European PhD candidates. 19-23 May 2008, Canet en Rosselló, France

**FUNDING RECEIVED SO FAR**

- 2022-2025 **Horizon 2020 Marie Skłodowska-Curie Action call H2020-MSCA-IF-GF-2020**  
 Granted by the EUROPEAN COMMISSION  
 Beneficiary: Politecnico di Milano, Department of Architecture and Urban Studies (DAStU)  
 Hosting Inst.: Massachusetts Institute of Technology (MIT), Dept. of Urban Studies and Planning  
*Purpose: MultiCAST Project Development*  
 Grant: € 251,002.56
- 2008-2012 **PhD Four-years Research Fellowship - Formación Profesorado Universitario (FPU)**  
 Granted by the GOVERNMENT OF SPAIN  
*Purpose: PhD development; Research; Teaching*  
 Grant: € 55,000.00
- 2009/2010 **PhD Ten-months Research Fellowship - FPU Secondment**  
 Granted by the GOVERNMENT OF SPAIN  
 Hosting Institution: Department of Geography, Planning and International Development Studies  
 University of Amsterdam (UvA), The Netherlands  
*Purpose: PhD development*  
 Grant: € 7,000.00
- 2008 **PhD Two-months Research Fellowship - Formación de Investigadores (FI)**  
 Granted by the Agency for Administration of University Aid and Research (AGAUR) | Regional  
 GOVERNMENT OF CATALONIA (*Generalitat de Catalunya*)  
*Purpose: PhD development; Research*  
 Grant: € 2,000.00
- 2006 **One-year Post-graduate Scholarship for Master's Degree**  
 Granted by the REGIONAL GOVERNMENT OF PUGLIA (*Regione Puglia*), Italy  
*Purpose: Master Degree in Urban Management and Valuation, UPC Barcelona, Spain*  
 Grant: € 25,000.00

**LANGUAGES**

Mother tongue	Italian				
Other language (s)	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
Spanish	C2	C2	C2	C2	C2
English	C1	C1	C1	C1	C1

Levels: A1/2: Basic user | B1/2: Independent user | C1/2 Proficient user  
 Common European Framework of Reference for Languages