

Rossella Franchino

Civil Hydraulic Engineer and PhD, since December 2010 she is Associate Professor for the disciplinary scientific sector ICAR 12 (Technology of Architecture) at the Department of Architecture and Industrial Design - Università degli Studi della Campania "Luigi Vanvitelli".

From March 2001 to November 2010, she was a University Researcher for the disciplinary scientific sector ICAR 12 (Technology of Architecture) at the Faculty of Architecture - Seconda Università degli Studi di Napoli.

Scientific profile

She carries out research in the areas of environmental systems design and construction systems for sustainable architecture. She mainly deals with the reading and controlling of the quality and characteristics of the environment, with the verification of the degradation phenomena determined by anthropic activities, along with the identification of the means and intervention strategies for environmental recovery, redevelopment and protection.

These studies have resulted the following specific outcomes:

- environmental control issues with particular importance to the analysis of the building-context relationship in the urban redevelopment interventions with attention to the characteristics of the settlement and the infrastructural quality of the services;
- use of integrated photovoltaic systems in buildings and interrelated with the environment through the preliminary definition of the energy audit of various types of buildings;
- identification of tools for the rehabilitation of sites affected by previous anthropic activities with particular regard to the study of remediation techniques for the control of the main phenomena of induced pollution and the characterization of the systems to be used in relation to the purposes of reuse for the definition of environmentally friendly recovery solutions;
- recycling of construction and demolition materials that considers not only the inert components present in the architectural building but also the plant engineering systems referring to both traditional and innovative systems according to the sustainable design approach aimed not only at energy containment but also at design for recycling;
- development of the concept of an environmental network as an extension of the infrastructural network model developed in a first phase from a critical-conceptual point of view and subsequently applied to specific sensitive contexts;
- system of environmental networks to support the use of archaeological sites located in areas of natural value;
- study of the relationship water resource - architecture through the identification of strategies for the management and control of the water collection and reuse process in the context of urban transformation projects for a correct and sustainable territorial development. This control is dealt with both regarding recovery using the principles of nature as a management model, stimulating the hydrological potentials not developed by the site, as well as for the possibility of reuse by analysing the structure of the entire network of the water (supply, distribution and final treatment) both at the building and the territorial scales, replacing or adding to the traditional infrastructures the green and blue infrastructures if possible;
- pursuit of environmental protection in low energy rural buildings through the design of innovative energy systems using renewable sources and energy-saving techniques;

- analysis of the characterization, execution and functioning of the plant networks in order to contribute to a more advanced building-plant relationship, which is one of the main purposes of the progressive regulation of energy efficiency in the built environment.

Since 1991, she has been taking part to national and international Congresses with presentation of scientific contributes.

She published books, contribution in texts and papers in scientific journals and proceedings of national and international Congresses.

Research activity

2015-2016, Member of the research group of the Department of Architecture and Industrial Design of the Seconda Università degli Studi di Napoli of the research project "Guidelines for the energy and functional upgrading of school buildings in the Mediterranean area" L.R. N.5 Campania Region - year 2007 - Scientific Director: prof. arch. Sergio Rinaldi.

2013-2015, Member of the research group of the Department of Architecture and Industrial Design of the Seconda Università degli Studi di Napoli of the CAMPUS Project: "Urban Ecotourism for the sustainable use of Cultural Heritage in Campania" - POR Campania 2007/2013 - Benecon SC.aR.L. - Scientific Director: prof. arch. Carmine Gambardella. She was also a tutor for an annual project collaboration entitled: Study of technological systems for the redevelopment in an eco-oriented key of archaeological areas with particular reference to eco-systemic analysis as a support for the construction of ecological networks.

2012-2015, Member of the Research Group of the Seconda Università degli di Napoli of the PRIN Project: "The defense of the landscape between conservation and transformation. Economy and beauty for sustainable development" - National Coordinator prof. arch. Carlo Truppi. Local Unit theme: "Sustainable building site" - Local Scientific Director prof. arch. Francesca Muzzillo.

2011-2013, Member of the research group of the Department of Architecture and Industrial Design of the Seconda Università degli Studi di Napoli of the research project "S.E.E.M. Solar Eco-Efficient Envelope Model" funded by the Italian Ministry for the Environment and Protection of the Territory and the Sea - Entities involved: TECN .AV. srl, BENECON S.c.ar.l, Department of Architecture and Industrial Design of the Seconda Università di Napoli - Coordinator/Proposer: Stefano Albrizio - TECNAV Srl; Scientific coordinator: prof. arch. Francesca Muzzillo.

2010-2011, Scientific Responsible for Environmental Networks in the International Research Project "Guang-Fu South Road, Plan of Protection of Historic and Cultural Buildings" on the theme of the redevelopment of the Guang-Fu district (Canton) - Ministerial Convention Italy-China - Mediterranean Platform (Coordinator Seconda Università degli Studi di Napoli Prof. Carlo Manzo).

2008-2009, Member of the research group on "Integrated Actions for the implementation of guidelines in waste materials - action: supply of exemplary activities" in the framework of the agreement between the Department of Restoration and Construction of Architecture and Environment - Seconda Università degli Studi di Napoli and Campania Region - Education sector) - Scientific director prof. arch. M. Isabella Amirante.

2005-2006, Member of the Research Group of the Seconda Università degli Studi di Napoli PRIN Project: "The Environmental Management System and the assessment of the compatibility of the use destinations in the redevelopment of abandoned areas" - Scientific director local operating unit prof. arch. M. Isabella Amirante. "Environmental compatibility in the redevelopment and reconversion of abandoned areas"- National Coordinator prof. arch. M. Isabella Amirante.

2001, Member of the research group: "Analysis of the potential of photovoltaic in building redevelopment interventions" in the framework of the agreement between ENEA and the Department of Restoration and Construction of Architecture and Environment - Seconda Università degli Studi di Napoli, funded under the "Progetto Integrato Portici" part of the program agreement between the Renewable Sources Division - ENEA and MURST for the interventions to be carried out in the South - Scientific director research unit prof. arch. M. Isabella Amirante.

2000, Coordinator of the research: "Recovery of infrastructural systems in relation to the building system" - External collaboration with the Department of Configuration and Implementation of the Università di Napoli "Federico II" in the context of the P.O.P. Molise 94/99. Scientific director prof. arch. Carmine Gambardella.

International research and teaching activities

Visiting Scholar at Rutgers University - Edward J. Bloustein School of Planning and Public Policy (New Jersey - USA) invited by prof. David Listokin (2017, April, 20/27).

Lecture titled: "Eco-oriented regeneration of anthropized contexts; the case study of Pompei area" at Rutgers University - Edward J. Bloustein School of Planning and Public Policy (New Jersey - USA) (2017, April, 25).

Lecture titled: "Pompeii World Heritage site. The networks system management to improve the ecological and environmental quality" at PhD Program in Architecture, College of Architecture - Illinois Institute of Technology in Chicago (USA) invited by prof. Michelangelo Sabatino, Director PhD Program in Architecture (2017, April, 28)

Lecture titled: "Green+bleu resources and environmental design" in the course "International Historic preservation" - spring 2018 organized by Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey (USA) and Benecon SCaRL (Italy) (2018, February, 27).

Research and international relations activities at University of California, Berkeley (USA) invited by prof. J. Theodore Pena (2018, March, 19/23).

Lecture titled: "Estrategias de Regeneracion de Espacios Urbanos Abiertos en la Region de la Campania, Italia" at Facultad de Arquitectura y Urbanismo - Universidad Nacional de La Plata - Argentina (2018, May, 02).

Lecture titled: "The redevelopment of urban open spaces through urban farming" in the course "International Historic preservation" - spring 2019 organized by Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey (USA) and Benecon SCaRL (Italy) (2019, March, 07).

Research and international relations activities at University of California, Berkeley (USA) invited by prof. Rita Lucarelli (2019, March, 13/20).

Lecture titled: "3D Modelling and Development of Cultural Heritage and Environmental Assets" at Archaeological Research Facility - University of California, Berkeley (USA) (2019, March, 15).

Prizes awarded for scientific activity

1st Prize II PAN Edition (Landscape, Architecture, Nature) Ardito Desio 2011 - Scientific relevance or planning section - for scientific work "Environmental networks in the management of the complexity of the urban landscape", authors R. De Martino, R. Franchino presented at the XVI International Interdisciplinary Conference: The Landscape-Cultural Mosaic in Transition: Dynamics, Disenchantments, Fades, Udine 22nd and 23rd September 2011 organized by IPSAPA and University of Udine.