

Annarita Ferrante

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Education / Academic Degree	Degree in Architecture, PhD in Engineering and Architecture		
Current Occupation	Associate Professor in the University of Bologna (DA)		
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1. Brief presentation

- European Union award winning for 4 EU research projects as principal investigator/coordinator. Visualize, theorize, and coordinate research projects that effectively reinforced Ferrante's position within the research team in the Department of Architecture of Bologna and in the international context.
- Valued and creative leader of research groups (PhD) students/researchers/professors in the 25 years of academic and research experience.
- Respected leader of built environment design and planning teams in the 18 years of professional experience in the building design and construction companies.

1.1. Key Skills

- Relevant knowledge and strategic vision for the implementation of a sustainable and productive environment;
- Proven communication abilities of reinforcing researchers' position through coaching/communication/management;
- Creative design and research team leadership;
- Ability to envision and implement high-quality strategies/methods/solutions in line with the industrial requirements;
- Flexibility, problem solving abilities, and creativity;
- Development of training/communication materials for research and education purpose and for career development;
- Research outputs' implementation capability (research grants/funding, publications, etc.)
- Interest and ability in the development of new/innovative yet technically and economically feasible ideas in training, research, industry;
- Personal skills and interests: artistic and communicational (painting-poetry-writing);
- Computer software: (MS Office -Word, Excel, PowerPoint), AutoCAD, Sketch Up, Photoshop.

1.2. Awards and Grants

EU Grant: H2020: Pro-GET-onE: Proactive synergy of inteGrated Efficient Technologies on buildings' Envelopes. Project funded in the Call: **EE-10-2016-IA- Innovation action** (Scientific Coordinator).

EU Grant: ABRACADABRA_ Assistant Buildings' addition to Retrofit, Adopt, Cure And Develop the Actual Buildings up to zeRo energy, Activating a market for deep renovation. Project funded in the Call: H2020-EE-2015-MarketUptake Coordination and support actions (Scientific Coordinator).

Research Grant: URBAN RECREATION: Energy efficient retrofit for carbon zero and socio-oriented urban environments; Marie Curie Research Project funded by the EU in the framework of FP7-PEOPLE-2012-IEF - Project number 326060. National and Kapodistrian University of Athens (NKUA), 2013-2015.

National and International Architectural Competition Awards (*Sasso Marconi*, 1996; *Rubiera*, 2001; *Waterford*, 2002; *Fiume Veneto*, 2004, *Bologna*, 2008) – *International Competitions in Architecture and Urban Planning listed in paragraph 4.*

Research Grant: Water, Green and Selected Passive Techniques to Improve Microclimate and Reduce Pollution in the Urban Contexts. (EU TMR Research Programme. Directorate G. XII, Science, Research and Development) for Post Doctoral Research Activity in the University of Athens, Department of Applied Physics, 1997-1999.

2. Profile description

Annarita Ferrante started her research on the wide subject of sustainability in architecture and urban contexts in 1980, when the interest for ecological and climate change-city related issues originated. (Her final MSc thesis, in 1988, which has been also published twice, dealt with the use of natural elements to structure the urban plan and the architectural design of buildings' settings).

Her research studies have been multi-scalar, multi-criteria and interdisciplinary in approach – ranging from landscape to city environment as well as building design at the technological scale; she has developed over the years a holistic approach, due to a personal aptitude and to a rational belief towards the integration among apparently different areas/disciplines.

Ferrante's current research focuses on the urban (re)-design and on the future challenges of the smart cities as a frontier open to a technological and innovative approach, combining the multiple instances of preserving the original identities and adapting them to the sustainable requirements in terms energy performance, safety, social attractiveness, cost-benefit, comfort and benefit for users and citizens. In this context, the technical-economic feasibility is channelled within a design strategy that identifies the economic, social and environmental values of the built environment as the key and interlinked factors for an updated response to the challenges of the city of tomorrow.

Ferrante has developed her research studies along often-unexplored paths in which many different directions of investigation coexist and feed each other; the levels of investigation range from the reflection on the technological nature of the architectural object to that on its compliance with performance, up to a context-related design associated with the general urban configuration. Her research opens up to favour a multidisciplinary contamination –indeed an essential prerogative of research- and finds, in its ultimate purpose, the formulation of criteria, methods and tools for the sustainable built environment in its different scales. In this context, the two projects funded under the EU Horizon 2020 Program (ABRACADABRA and Pro-GET-onE) constitute an unquestionable recognition by the international scientific community of her scientific approach.

Although she is a very experienced and internationally recognized researcher, her recent work and activities have been mostly national and EU based. She is therefore **orienting her efforts towards working in an excellent university environment** and contributing in the interdisciplinary teams of Australia's Group of Eight leading Universities in the challenging role as a Deputy/Dean/Head of Department in the UNSW, where she could offer her creative and far-sighted vision for the Faculty.

3. Academic Experience

Ferrante developed cross networking with regional, municipal and International Bodies (i.e. the EU umbrella Associations of Private Owners –UIPI- of Architects –ACE- of Social Housing, etc.) within the frame of urban rehabilitation programs, in particular, social housing, urban areas, large dismissed areas, rural areas throughout different regional and international contexts. Besides these networks with public bodies, she activated Industrial agreements and research projects with several national and international Small and Medium Enterprises SMEs (i.e. the industrial and construction SMEs in the renewable energy sources –RES- like Photovoltaic and micro-Aeolian energy production for the integration of sun and micro-wind generation within the urban environment).

Through her experience Ferrante has acquired both research operative skills and **research management expertise**, like the ability to successfully identify and secure possible sources of funding for personal and team research through the management of proposals and tenders work programming, supervision, deadlines and delivery control. Here a selection of the main achievements in this context.

3.1. A selection of the main academic and research achievements (Funding “ID”)

2017	Full Professor - National Qualification (see attached file)
2014 - present	Associate Professor at the Department of Architecture, University of Bologna
2016 - present	EU Grant H2020: Pro-GET-onE : <u>Pro</u> active synergy of <u>inte</u> Grated <u>Eff</u> icient <u>Technologies</u> on buildings' <u>Env</u> elopes. Project funded in the Call: EE-10-2016-IA- Innovation action (Scientific Coordinator) EU funds allocated ~ € 3.900.000,00.
2015 - present	EU Grant H2020: ABRACADABRA : Assistant <u>B</u> uildings' addition to <u>R</u> etrofit, <u>A</u> dopt, <u>C</u> ure <u>A</u> nd <u>D</u> evelop the <u>A</u> ctual <u>B</u> uildings up to <u>ze</u> Ro energy, <u>A</u> ctivating a market for deep renovation. Project funded in the Call: H2020-EE-2015-MarketUptake Coordination and support actions (Scientific Coordinator). EU funds allocated ~ € 2.000.000,00
2015 - 2016	Grant for the PROJECT UN-HABITAT (Bando Rep. N. 95/2015 prot. 649, 19/11/2105), in the framework of the research for the REGIONAL BUILDING REGULATION: Proposal of a new building regulation for the Kurdistan Region of Iraq Republic. UN funds allocated ~ \$90.000,00. Funded and finalized project.
2013 - 2015	EU Senior researcher GRANT for the project: URBAN RECREATION (fellowship) Energy efficient retrofit for carbon zero and socio-oriented urban environments; a Marie Curie Research Project funded by the European Commission in the framework of FP7-PEOPLE-2012-IEF Funding scheme - Marie Curie Actions — Intra-European Fellowships (IEF)- Project number 326060. National and Kapodistrian University of Athens (NKUA). EU funds allocated ~ € 250.000,00
2011 - 2012	<i>Grant for Research and Industrial cooperation CEPA_WIND Agreements, and Minister of Environment</i> ; Scientific responsible of the Research Agreement between CIRI (University of Bologna dedicated industrial research and technology transfer Structure - Interdepartmental Centre for Industrial Research - CIRI) and the Industries CEPA and WIND (€ 3.000,00). Scientific coordinator of a research grant on the study on wind micro-generation within the urban environment in collaboration with the Dept. of Mechanical Engineering (funds allocated by the Minister~ € 150.000).
2010 - 2012	Scientific responsible of a Research Agreement between DAPT UNIBO and the Municipality of Bologna for the sustainable rehabilitation on abandoned urban areas. (Funds allocated € 8.000,00)
2007 - 2009	Proposal idea theorization and active participation in the program PRIN 2007-2009 (National Coordinator Prof. C. Fianchino; Dell'Acqua at DAPT Bologna). The research focused on the development of strategies to achieve the best cost/effective ratio solutions in each different building type and for different urban contexts (~ € 18.000).
2007	Awarded as the “A” category by the Athenaeum Observatory for scientific production and called to take part in the scientific Board of Ph.D. Doctoral Committee in Architecture.
2005 - 2006	Awarded with a national grant for the Research: “The Urban Site Development and Construction.” DAPT, Department of Architecture and Urban Studies, Bologna.
2003 - 2005	24 months Post Doctoral Research Activity in the University of Bologna, DAPT selected and funded in the framework of the National Programme, to develop the Research: “Environmental Methodology for investigation and retrofitting in the urban contexts”.

- 1997 - 1999:** **EU GRANT:** 24 months Post Doctoral Research Activity in the University of Athens, Department of Applied Physics selected and funded in the framework of EU TMR Research Programme. Directorate G. XII, SRD. Water, Green and Selected Passive Techniques to Improve Microclimate and Reduce Pollution in the Urban Contexts.
- 1996** **AWARD** for a post-graduate full grant in CIENE, Athens (Prof. Santamouris) for the Advanced Training Course On Passive Cooling Techniques (funded by EU TMR Programme).
AWARD (as the Design leader of her interdisciplinary group) the final competition on the “Best Design Building” among seven teams.
- 1993 - 1996:** **PHD IN TERRITORIAL URBAN PLANNING AND ARCHITECTURE, FACULTY OF ENGINEERING, DEPARTMENT OF ARCHITECTURE, UNIVERSITY OF BOLOGNA, 1993-1966.** Ph.D. on Building Design and Urban Planning Engineering at DAPT, Department of Architecture and Urban Planning, Faculty of Engineering, University of Bologna. *Environmental compatibility in the rehabilitation processes of urban contexts. Investigation methods and design criteria*, Ph.D. Dissertation, DAPT-UNIBO. (Supervisor: Professor A. Dell’Acqua), February 1996. Final Exam, 21th October 1996.
- 1983 - 1988** **UNIVERSITY MASTER DEGREE IN ARCHITECTURE, UNIVERSITY OF FLORENCE – Firenze-, 1983-1988** Bellaria-Igea Marina: Urban Systems on the water, Final Dissertation and Project for the Architecture University Diploma, Department of Architectural Design, Faculty of Architecture, University of Florence, (Supervisor: Prof. L. Macci), November 1988. Graduated with high honours (**110/110 Cum laude**).

3.2. Publications

A selection of publications is provided (among more than 100 contributions in papers, conference proceedings, book’s chapters).

3.2.1. Publication in major international peer-reviewed scientific journals

- √ Semprini G., Marinosci C., Ferrante A., Predari G., Mochi G., Garai M., Gulli R., (2016). Energy management in public institutional and educational buildings: The case of the school of engineering and architecture in Bologna. *ENERGY AND BUILDINGS*, vol. 126, p. 365-374, ISSN: 0378-7788, doi: 10.1016/j.enbuild.2016.05.009.
- √ Ferrante A., Boiardi L., Fotopoulou A. (2014). On the viability of nearly zero energy buildings in the Mediterranean urban contexts. *ADVANCES IN BUILDING ENERGY RESEARCH*, vol. <http://dx.doi.org/10.1080/17512549.2014.941008>, p. 1-34, ISSN: 1751-2549.
- √ Ferrante A., Energy retrofit to nearly zero and socio-oriented urban environments in the Mediterranean climate A., *Sustainable Cities and Society* 13 (2014) 237–253.
- √ Ferrante A. (2012). Zero- and low-energy housing for the Mediterranean climate in *Advances in Building Energy Research*, ABER, Taylor & Francis, Vol. 6, No. 1, May 2012, pp. 81–118.
- √ Ferrante A., Cascella M.T., Zero Energy balance and zero on-site CO2 emission housing development in the Mediterranean Climate in *Journal Energy & Buildings*, 2011, pp. 2002-2010. *ENERGY AND BUILDINGS*, vol. 43, p. 2002-2010, ISSN: 0378-7788, doi: 10.1016/j.enbuild.2011.04.008.
- √ Masotti C., Ferrante A., Boiardi L., Fabbri C., Self-help retrofitting technologies for low-cost housing construction. The case study of Vila Novo Ouro Preto, Brasil. *Procedia Engineering*, 2011, *PROCEDIA ENGINEERING*, vol. *Procedia Engineering* 00 (2011), p. 625-632, ISSN: 1877-7058. www.elsevier.com/locate/procedia.
- √ Ferrante A., Mochi G., Gulli R., Cattani E., Retrofitting and adaptability in urban areas. *PROCEDIA ENGINEERING*, vol. 21, p. 795-804, ISSN: 1877-7058, doi: 10.1016/j.proeng.2011.11.2080.
- √ Ferrante A., Semprini G., Building energy retrofitting in urban areas. vol. 21, p. 968-975, ISSN: 1877-7058, doi: 10.1016/j.proeng.2011.11.2101.
- √ Ferrante A., Bettazzi M. B. (2011). Historic preservation and innovative building design for the sustainable rehabilitation of Urban Areas. The case study of Sani-Casaralta Area in Bologna.. *IN BO*, p. 23-42, ISSN: 2036-1602.

- √ Ferrante, A., Mihalakakou, G., The influence of water, green and selected passive techniques on the rehabilitation of historical industrial buildings in urban areas in *Journal Solar Energy*, Vol. 70, No 3, pp. 245-253, 2001. ISSN: 0038-092X; Citations n. 8. I.F. 1,607.
- √ Mihalakakou, G., Ferrante, A., Energy Conservation and Potential of a sunspace - sensitivity Analysis, in *Energy Conversion and Management* 41 (2000), pp. 1247-1264. Citations n. 3. I.F. 1,813.
- √ Mihalakakou, G., Ferrante, A. and Owen Lewis, J., The cooling potential Investigation of a metallic nocturnal radiator, in *Energy and Buildings* 28 (1998), pp. 251-256. Citations n. 10. I.F. 1,59.
- √ Ferrante, A., Mihalakakou G., and Odolini, C., The Rehabilitation Investigation of a Historical Urban Area, in *Renewable Energy*, Vol.10 No.4, pp. 577-584, 1997; Citations n. 5. I.F. 1,663.

3.2.2. Publications in international peer-reviewed conference proceedings

- √ Ferrante A (2014). Nearly Zero Energy in Existing Buildings: a socio-economical evaluation of possible retrofitting strategies. In: International Centre for Sustainable Development of Energy, Water and Environment System. 9th Conference on Sustainable Development of Energy, Water and Environment System. vol. 1, University of Zagreb, Venezia-Instambul, 20-27 September 2014.
 - √ Cattani E, Ferrante A, Gulli R (2014). Integrated design strategies for envelope skins: user-driven adaptive design solutions to improve sustainability and energy efficiency in social housing. . In: (a cura di): In: AA.VV.: N. Marchettini C.A. Brebbia R. Pulselli and S. Bastianoni, *The Sustainable City IX Urban Regeneration and Sustainability*. p. 1037-1048, siena: WIT Press, Siena, 2014.
 - √ Ferrante A, Cattani E (2014). Adaptability, Sustainability, Energy retrofitting: socio-oriented design strategies for zero-energy re-design of existing urban districts. In: EAAE-ISUF International Conference, *New Urban Configurations*. p. 299-303, Delft: TU Delft - Faculty of Architecture, ISBN: 9781614993650, Delft, 2012.
- Ferrante A, Fotopoulou A, Cattani E, Santamouris M (2013). URBAN RECREATION: Energy Efficient retrofit for carbon zero and socio-oriented urban environments. In: 34th AIVC Conference, www.aivc.org, Energy conservation technologies for mitigation and adaptation in the built environment. vol. 1, p. 195-198, Athens, 25-26 September 2013.
- √ Ferrante A, Cattani E, Boiardi L (2013). Variability and modularity for envelope retrofitting strategies: a comparative evaluation of the energy performance for multiple design and technical solutions. In: CESB-IISBE, *Central Europe towards sustainable building 2013*. vol. 1, p. 47-51, CESB, ISBN: 9788024750156, Praga, 26-28 June 2013.
 - √ Ferrante A., Masotti C. (2012). Building re-cladding and rehabilitation in urban areas. The case of study of existing social housing in Bologna. In: *Improving the Quality of existing Suburban Building Stock*. 9788896463086. vol. 1, p. 1-6, FERRARA: UnifePress, Ferrara, April 2012.
 - √ A. Ferrante. Technical innovation in socio-oriented urban environments for transitional pathways towards low carbon cities. A conceptual framework. Accepted for publication in: *ISUF Proceedings, International Seminar on Urban Form*, Montreal, 2011.
 - √ A. Ferrante, A. C. Dell'Acqua, *Historic Preservation VS Innovative Design. The Role of Urban Morphology in the Urban Retrofitting Processes*. In: *ISUF Proceedings, International Seminar on Urban Form*, Hamburg-Lubeck, 2010.
 - √ C. Masotti, A. Ferrante, *Containers for Low-cost, Temporary and Energy Saving Housing Design*. In: *World Congress on Housing, XXXVII IAHS Santander, Spain, 2010*. In: *DESIGN TECHNOLOGY, REFURBISHMENT AND MANAGEMENT OF BUILDINGS*. p. 1-10, SANTANDER: Universidad De Cantabria, ISBN: 978-84-693-6655-4, SANTANDER (SPAIN), 26-29 OCTOBER 2010.
 - √ A. Ferrante, M.T. Cascella, *Tradition and innovation in Zero energy balance and Zero CO2 emission housing development*. 5th Dubrovnik Conference on the Sustainable Development of ENERGY, WATER AND ENVIRONMENT SYSTEMS. UNESCO sponsored conference. 30th September, 4th October 2009. ISBN: 978-953-6313-98-3 (invited presentation).
 - √ C. Masotti, L. Masotti, A. Ferrante, *Small Water and Wastewater Systems and Emergency Settlements*. 5th Dubrovnik Conference on Sustainable Development of Energy Water and Environment systems, UNESCO sponsored conference. Dubrovnik, 2009. ISBN: 978-953-6313-98-3.

- √ A. Ferrante, M. T. Cascella, Energy saving design in the rehabilitation processes of abandoned urban areas. In: 3 CIB International Conference on Smart and Sustainable Built Environments, TU DELFT. 15-19, June 2009. (vol. 1, pp. 1-13).
- √ A. Ferrante, V. Degli Esposti, Built landscape, natural resources and energy saving between evolution and tradition, Napoli, University Federico II. 13/05/2009. (pp. 281 - 288). ISBN: 88-6026-099-X, Luciano ed.
- √ A. Ferrante, Peri-urban areas and environmental resources. In AA.VV. Il progetto nel contesto storicizzato. (vol. 1, pp. 131-136). ISBN: 978-88-6055-455-0. Alinea Editrice, Firenze, 2008.
- √ A. Ferrante, A. C. Dell'Acqua, On the rehabilitation processes of abandoned urban areas, Isuf, ESCOLA DE ARQUITETURA DA UFMG, UNIVERSIDADE FEDERAL DE OURO PRETO. Section: New Urban Forms in the Twenty-first Century. Brasil. 28-31 August 2007. (vol. 82, pp. 82-1 - 82-14). ISBN: 978-85-98261-0304. Invited presentation.
- √ A. Ferrante, G. Mochi, G. Mihalakakou, Low cost and energy saving housing design, Sustainable Building South Europe. International Conference, Turin, Italy, 7-8 June 2007. (vol. 1, pp. 203 - 210). ISBN: 10 88-7661-748-5. Environmental Park, Science Tech Park. Invited presentation.
- √ A. Ferrante, Changing in the complexity: the building stock resources in urban areas (pp. 193 - 203). ISBN: 88-7661-718-3. TORINO: CELID, 2007.
- √ A. Ferrante. The design parameters' contribution to improve microclimate in educational buildings. YPE CUPERUS. BOLOGNA DELFT: First Meeting for knowledge exchange. Bologna, 2005. (vol. 1, pp. 49 - 58). Delft University of Technology, 2005.
- √ A. FERRANTE (2006). Criteri analitici e metodi di intervento nella riqualificazione di comparti urbani plurifunzionali. In: ARTEC. Intersezioni e mutazioni nei rapporti tra Architettura e Tecnica. vol. 1, p. 1-10, NAPOLI: LucianoEditore, ISBN: 88-6026-035-3, Università degli studi de "La Sapienza", Roma, 3-4/12/2004.
- √ A. Ferrante, A. Barozzi, C. Masotti, A. Maver and G. Mihalakakou, Urban Environment: constraints and opportunities towards a sustainable quality, 843-847, Proceedings of the 19th International Conference, Toulouse, France, July 2002.
- √ A. Ferrante, G. Mihalakakou, M. Santamouris, Natural Devices in the Urban Spaces to Improve Indoor Air Climate and Air Quality of Existing Buildings, in: International Conference of Indoor Air 99, Edinburgh, Scotland, 8-13 Aug. 1999.
- √ A. Ferrante, M. Santamouris, I. Koronaki, G. Mihalakakou and N. Papanikolau, The Design Parameters' contribution to Improve Urban Microclimate: An extensive analysis within the frame of POLIS Research Project in Athens, proceedings of THE JOINT MEETING OF the 2nd Eu Conference on Energy Performance and Indoor Climate In Buildings and 3rd International Conference on IAQ, Ventilation and Energy Conservation. Lyon, 19-21/11/1998. Invited presentation in the plenary session.
- √ A. Ferrante, G. Mihalakakou, M. Santamouris, Passive energy in Traditional Architecture. Raw Earth Construction in Abruzzo, published in the proceedings of TIA, 2° International Conference for Teachers of Architecture 16-17-18 October 1997. Alinea Editrice, Florence 1998.
- √ A. Ferrante, F. Bazzocchi and G. Mihalakakou, The Energy Efficiency Investigation of Rural Buildings, Proceedings TIA, Firenze 28-30 Settembre, Invited presentation in the plenary session, 1995.
- √ A. Ferrante, G. Mihalakakou and J. Owen Lewis, The Energy Efficiency investigation of historical industrial buildings, Proceedings of HEALTHY BUILDINGS, an international Conference on healthy buildings in mild climate, Milan, 11-14 September 1995.
- √ A. Ferrante, G. Mihalakakou and J. Owen Lewis, On the rehabilitation of historical industrial buildings, Proceedings REBUILD - Rebuilding the European City, Kerkira, 1995.

3.2.3. Monographs (Books)

- Ferrante A. (2016). Towards nearly Zero Energy. Urban settings in the Mediterranean Climate. p. 1-283, Oxford; Cambridge: Elsevier Ltd., ISBN: 9780081007358, doi: 10.1016/B978-0-08-100735-8.00005-2 (file attached in the application).

- Ferrante A. (2012). *A.A.A: Adeguamento, Adattabilità, Architettura_ Teorie e metodi per la riqualificazione architettonica, energetica ed ambientale del patrimonio edilizio esistente* (trans. = A.A.A: Adaptation, Adaptability, Architecture_ Theories and methods for the architectural, energy and environmental upgrading of existing buildings), pp. 1-238, Milano: Bruno Mondadori, ISBN: 9788861598560.
- A. Ferrante (2007). *Progetti di Paesaggio, Idee ed esperienze nella programmazione regionale* (trans. = Landscape Design Projects, Ideas and experience in the Regional Program framework); Program and Territorial Development Division, Cooperation in the System of Autonomies. Landscape and minor centres preservation. Emilia-Romagna Region (author of the seven chapters in the publication (pp. 58-79, 84-101, 106-127, 132-153, 158-175, 180- 199, 204-227, Artistic and graphical design, Cover and pages' design); <http://www.regione.emilia-romagna.it/paesaggi/ptpr/>;
- A. Ferrante (2006). *La città a pezzi, o i pezzi di città nella costruzione sostenibile dei luoghi urbani* (trans.= The city in pieces; or the pieces of city for the sustainable design of the urban spaces). (pp. XII+174). ISBN: 88-8372-337-6. BOLOGNA: Alberto Perdisa - Airplane S.r.l.

3.2.4. Chapter in Books

- Ferrante A. (2016). (Chapter) in: Technologies and socio-economic strategies to nZEB in the building stock of the Mediterranean Area. In: AA.VV: S. N. Boemi O. Irulegi M. Santamouris, Energy Performance of Buildings. vol. 1, p. 123-163, London: Springer, ISBN: 978-3-319-20830-5.
- Ferrante A., Gualandi S., Manferdini A., Massaretti P., Santolini F. (2014). (Chapter) SPAZI IN DIVENIRE. In: Progetto STAVECO. Un nuovo polo universitario tra centro storico e collina. p. 119-131, Bologna: Compositori, ISBN: 9788877948397.
- Ferrante A., Boiardi L. (2013). Esperienze di riqualificazione architettonica e urbana. In: Valorizzazione e Gestione Integrata del territorio. p. 43-58, MILANO: Sole24ore, ISBN: 978-88-324-8405-2.
- Cattani, E., Ferrante, A., Boiardi, L. (2012). A 'learning from informality' approach for socio-oriented and sustainable built environments. In: UNICAMP_UFES_CIB international. Vanessa Gomes, Maristela da Silva, SASBE: Smart And Sustainable Built Environments_ EMERGING ECONOMIES. p. 147-154, SAO PAULO: UniCAMP_Campinas_Brazil, ISBN: 9788565823050.
- Ferrante A., Boiardi L., Gulli R. (2012). Riqualificazione energetica del patrimonio edilizio recente. In: F. GOTTARD, Direttiva 31.2010.CE. p. 52-57, MONFALCONE: Edicom, ISBN: 9788896386200.
- Ferrante A. (2011). Adeguamento energetico e qualificazione architettonica. Casi di studio e sperimentazioni progettuali nell'edilizia sociale. In: (a cura di): AA.VV., Caratteri tipologici del costruito e criteri di adeguamento tecnologico e ambientale. p. 47-77, FIRENZE: Alinea Editrice, ISBN: 9788860556448.
- Ferrante A. (2011). HIC Manebimus Optime. Una rete di pianure. La riqualificazione e il disegno dei margini periurbani. In: AA.VV. Regione Lombardia.. PAESAGGI PERIURBANI. Linee Guida Paesaggistiche per il governo del territorio. vol. 3, p. 53,54-64,65, MILANO: Regione Lombardia, ISBN: 9788890358616.
- Semprini G., Ferrante A. (2011). Analisi delle relazioni tra elementi tipologico-costruttivi e fattori di rendimento energetico. L'edilizia residenziale e sociale. In: (a cura di): A.C. DELL'ACQUA V. DEGLI ESPOSTI A. FERRANTE G. MOCHI, Caratteri tipologici del costruito e criteri di adeguamento tecnologico e ambientale. p. 79-88, FIRENZE: Alinea Editrice, ISBN: 9788860556448.
- Dell'Acqua A.C., Ferrante A. (2009). Modelli abitativi fra continuità, integrazione ed identità ambientale. In: Low Cost, Low Energy, Quality Architecture. Una nuova stagione per l'Housing. p. 64-73, MILANO: BE-MA Editrice, ISBN: 978-88-7143-295-3.
- Dell'Acqua A.C., Ferrante A., Mochi G. (2009). Adeguamento ambientale ed energetico in relazione alla lettura tipologica degli insediamenti residenziali: dal patrimonio storico all'edilizia contemporanea. In: Materiali e procedimenti innovativi per la sostenibilità in edilizia. p. 25-39, ROMA: ANABIBLO Edizioni S.r.l., ISBN: 978-88-96542-02-6.
- Dell'Acqua A.C., Ferrante A., (2008). Adeguamento energetico e riqualificazione ambientale nei borghi storici. In: + QUALITA' – ENERGIA PER COSTRUIRE SOSTENIBILE. p. 65-73, MILANO: BEMA editrice, ISBN: 978-88-7143-291-5.

- Ferrante A. (2008). Sperimentare nella tradizione: restauro e riuso degli edifici in terra cruda. In: AA.VV.. Linguaggio edilizio e sapere costruttivo. Culture tecniche fra continuità ed evoluzione. p. 225-247, Monfalcone: EdicomEdizioni, ISBN: 978-88-86729-67-3.
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- Ferrante A., Manfredini G. (2006). Asilo Nido e Scuola dell'infanzia. In: AA.VV.. Edifici Scolastici Ecocompatibili; progetti per una scuola sostenibile. p. 68-71, UDINE: Edicom-Edizioni, ISBN: 88-86729-68-5.
- Ferrante A. (2006). Il privilegio dell'attesa. In: AA.VV. Città in competizione. p. 283-289, MILANO: BE-MA. ISBN: 978-88-7143-280-9.

3.3. Invited presentations and chairing to peer-reviewed, internationally established conferences and/or international advanced schools

- √ Invited keynote speaker in the Conference "Be part of the future - Deep Energy Renovations". "Towards Nearly Zero Energy, Urban Settings in the Mediterranean Climate", Athens on December 5th, 2015.
- √ Invited lecturer in the EU Project conference: OPTIMUS (Optimizing energy Use in Cities through Smart Decision Support Systems), Innovative solutions for Smart Energy Cities: the OPTIMUS Decision Support System. Title of the contribution: Practical guidance and lessons learnt on smart data analysis and measures to optimize energy use in buildings. May 31, 2016, Sant Cugat del Vallès (Barcelona), Spain.
- √ Invited speaker and panel discussion in the International Conference "Local Renewables Conference 2016: Energising the smart city and region, in the session "Constructing a sustainable future through the built environment", 27 October 2016, Freiburg-Basel, Germany. Title of the contribution: "The added value: RES and add-ons for NZEBs- ABRACADABRA project". <http://local-renewables-conference.org/programme/>
- √ Invited lecturer in TCD, Trinity College Dublin, 8 October 2014. Lesson: On the Techno-Economic and Social Feasibility of Energy Retrofitting towards Nearly Zero Energy Buildings.
- √ Invited as the co-chair in the session 4E of the 34th AIVC Conference, www.aivc.org, Energy conservation technologies for mitigation and adaptation in the built environment: Long oral presentation session- Trends and directions in buildings' energy efficiency, 25-26 September 2013, Athens, Greece.
- √ Invited speaker in the conference: Urban Morphology and the Post-Carbon City, Concordia University a Montréal, Canada, 26 – 29 August 2011. Title of contribution: "Technical innovation in socio-oriented urban environments for "transitional pathways" towards low carbon cities. A conceptual framework". A. Ferrante (2011).
- √ Invited speaker in the Green Buildings Sustainable Cities GBSC 2011 Congress (15.09.2011 - 16.09.2011) Bologna, Ravenna 15-16. Title of contribution: Building energy retrofitting in urban areas.
- √ Invited as the chair in the session VI.2 Urban Morphology and Climate Change, 17TH ISUF 2010 Hamburg.

Invited speaker in the International ISUF Conference, 2010 Hamburg: "FORMATION AND PERSISTENCE OF TOWNSCAPE". University of Hamburg, Hamburg, 20th August 2010 – 23rd August 2010. Historic Preservation VS Innovative Design. The Role of Urban Morphology in the Urban Retrofitting Processes.

√ Invited speaker in the PLENARY SESSION, CIB International Conference on Smart and Sustainable Built Environments, DELFT. ENERGY SAVING DESIGN IN THE REHABILITATION PROCESSES OF ABANDONED URBAN AREAS. TU University of Delft, 15-19 June 2009.

√ Invited speaker in the 5th Dubrovnik Conference on the sustainable development of ENERGY, WATER AND ENVIRONMENT SYSTEMS. Tradition and innovation in zero energy balance and zero CO2 emission housing development; Dubrovnik, 30th September, 4th October 2009.

√ Invited speaker in the 5th Dubrovnik Conference on the sustainable development Energy Water and Environment systems, UNESCO sponsored conference. Dubrovnik, 2009. Small Water and Wastewater Systems and Emergency Settlements. 30th September, 4th October 2009.

√ Invited member in the Jury of the Competition in Participative and Communication Project Design INU WWF ANCI ANCI Emilia-Romagna, Third Edition 2005-2006.

√ Invited from Prof. Sernando Alvarez in the A.I.C.I.A. Energy Engineering Department, University of Siviglia, as lecturer within the International team of the GREENCODE project, a planning tool system, funded from the EU in the Altener Programme.

√ Invited speaker and presentation in the conference: Sustainable Building South Europe: Low cost and energy saving housing design, Environmental Park, Science Tech Park, Torino, 7-8 June 2007.

√ Invited speaker and presentation BOLOGNA-DELFT: First Meeting for knowledge: The design parameters' contribution to improve microclimate in educational buildings. Bologna, November 2005.

√ Invited speaker and presentation in the Plenary session of the second International Conference Ferrante, M. Santamouris, I. Koronaki, G. Mihalakakou and N. Papanikolaou, The Design Parameters' contribution to Improve Urban Microclimate: An extensive analysis within the frame of POLIS Research Project in Athens, proceedings of THE JOINT MEETING OF the 2nd Eu Conference on Energy Performance and Indoor Climate In Buildings and 3rd International Conference on IAQ, Ventilation and Energy Conservation. Lyon, 19-21/11/1998.

√ Invited speaker and presentation in the conference: TIA, Teaching in Architecture. The Energy Efficiency Investigation of Rural Buildings, Firenze 28-30 September 1995.

√ Invited lecturer from Prof. Sernando Alvarez in the A.I.C.I.A. Energy Engineering Department, University of Siviglia, as lecturer within the International Team in the frame of GREENCODE, a planning tool system, funded from the EU in the Altener Programme. Seville, 28-03-1999 - 30-03-1999.

3.4. Organisation and responsibility of International Conferences and Events

- Organization, coordination and management of the first International Workshop "Challenges and Opportunities of Add-Ons in deep renovation of existing buildings" and Joint EU Sustainable Energy Day in the framework of the Energy Sustainable Week of the European Commission. Palazzo Magnani, Via Zamboni 20, Bologna, 23-24 June 2016.
- Organization, coordination and participation of the first and third national meetings in the framework of the Abracadabra Project. Regione Emilia Romagna, May 2016. Rome, February 2017.
- Organisation and presentation of the exhibition: BOLOGNINA, PROGETTI IN CORSO, Ideas from The University to the City. Supported and sponsored by: Regione Emilia-Romagna, Comune di Bologna, Quartiere Navile, DAPT. Department of Architecture, 22 -26 October 2012.
- Organization, coordination and participation for the student's exhibition: A school for the Epera. University of Bologna, 22-24 January 2010.

3.5. Organization, coordination of and participation in research groups/activities assigned by Research/Public and Industrial bodies

- Scientific coordinator of the PROJECT UN-HABITAT (Bando Rep. N. 95/2015 prot. 649, 19/11/2105), in the framework of the research for the REGIONAL BUILDING REGULATION: Proposal of a new building regulation for the Kurdistan Region of Iraq Republic. Funded and finalized project (2015-2016).
- Coordinator of a large territorial project for the landscape rehabilitation: project HICMO (Hic Manebimus Optime), funded by the Region Emilia-Romagna and assigned by the Union of Municipalities "Terre di Pianura" (Municipalities of Baricella, Budrio, Granarolo dell'Emilia, Malalbergo, Minerbio, Molinella). Coordination of focus groups, workshops and participative processes involving different stakeholders and social associations to individuate, implement and promote innovative solutions for energy integration in the landscape design, for the valorisation of the cultural and natural heritage, for the economic development and the competitiveness of the urban areas in search for new identities. The project has been selected for Exhibition in the frame of Pays Med-Team members: Annarita Ferrante (Principal Coordinator of the Institutional/Technical Group): Bruno Alampi, Michele Gentilini, Manuela Capellini, Tiziana Draghetti, Valentina Ballotta, Paolo Severi, Mario Teodoro, Chiara Girotti, Massimo Monacelli, Vittorio Degli Esposti, Valentina Belotti, Vittoria Montaletti, Matteo Bergamini, Rachele Bria, Beatrice Rondinelli (2010-2011).
- Coordinator and developer of a research assigned by the Region Emilia Romagna for the Best Practices in the urban and territorial planning (resulted in the publication: PROGETTI DI PAESAGGIO: Idee ed esperienze nella programmazione regionale. Bologna, Servizio di Valorizzazione del Paesaggio: Regione Emilia-Romagna <http://territorio.regione.emilia-romagna.it/paesaggio/pubblicazioni-1/progetti-di-paesaggio>)
- Scientific coordinator of the research: Building type and energy saving between innovation and tradition: Grant assigned by a Private enterprise to the Department of Architecture 2011-2012.
- Scientific coordinator (in collaboration with Giovanni Semprini) of the Grant research assigned by the Municipality of Bologna for the analysis, the diagnosis and the retrofitting strategy for the architectural and energy qualification of the existing building stock in the social housing PEEP Corticella, Bologna. 2012-2016
- Scientific coordinator for the research "Energy Micro-generation" Industrial Cepa-WIND collaboration. 2009
- Scientific coordinator (in collaboration with Vittorio Degli Esposti) of the research grant on the Rehabilitation of the ex- military area "Caserma Sani a Bologna" assigned by the Municipality of Bologna. 2006-2007

3.6. Memberships

- Member of scientific board of Architecture Doctorate of Bologna
- Member of the Energy Round Table representing the ALMA MATER STUDIORUM University of Bologna in the network of the Italian University for the Sustainability (RUS Rete Italiana delle Università per la Sostenibilità)
- President of the Committee for Internships and Final Degree Master in the Master Degree of Architecture and Engineering (2011, 2012, 2013)
- Member of the international committee SDEWEDS
- Member of the editorial board ARTEC Tema
- Reviewer in many international journals (Building & environment, Energy & Buildings, Sustainable Cities and Society, etc.)
- Guest Editor in Energy and Building, Special Issue on Nearly zero Energy in existing buildings.

3.7. Teaching and coaching experience

2012 - 2017	Teaching professor in the University of Bologna DA for the course of (Course of Technical Architecture II – attended by about 100 fourth year Engineering students each year)
2016 - 2017	Professor in the teaching course of Sustainable Building construction (in English for foreign students in Engineering and Architecture, Course of Civil Engineering)
2015 - present	Teaching professor DA for the course of Sustainable Building Design
2006 - 2012	Assistant Professor in Technical Architecture (attended by 120 fourth year Engineering students each year)
2013 - 2016	Third level coaching (PhD supervision and coordination): Ph.D: Anastasia Fotopoulou. Ph.D thesis: 'Energy and Architectural Retrofitting on the urban scale: Athens As A Case Study. Final dissertation 1 st June 2016
2013 - 2016	Third level coaching (Ph.D supervision and coordination): Ph.D, <i>Doctor Europaeus</i> : Elena Cattani. Ph.D thesis: "User-Oriented Methodologies and Techniques for Energy Retrofitting In Social Housing: The Add-ons' strategy based on multiple variables". Final dissertation 1 st June 2016
2012 - 2006	Teaching Professor in "Technology of Architecture", DAPT, University of Bologna
2011 - 2014	Third level (PhD supervision and coordination): Ph.D Barbolini Fausto, Doctorate in Architecture. Supervisor of the PhD research: Theory and practise in the solar architecture. Morphology, performance, design strategy, 2014
1999 - 2005	Contract Professor at the DAPT, Department of Architecture and Urban Studies, Bologna (Course of Technical Architecture II –attended by 130 fourth year Engineering students each year)
1995 - 1996	Lectures at the advanced training course at post-graduate level in the Faculty of Engineering in Bologna on Bio-Architecture
1994 - 1995	Lectures in the 4th and 5th year students of Architecture in the University of Florence - Urban planning and Architecture Course, Prof. L. Macci - on Architecture and Urban Design, Ecological Architecture, Passive Solar Systems and related inter-action with Building Design and Urban Planning
1994 - 1995	Lectures in the Training Course: (trans.=To build for the environment), co-financed by EU and Region Emilia Romagna, Bologna, COFIMP, Training Consortia SME
1995	Lectures in the Training Course: (trans.=The hydraulic and electric plants in bio-ecologic Architecture), financed by Region Emilia Romagna, Building School in Ravenna
1992 - 1993	Lectures in the Training Course: (trans.=Bio-Architecture, Traditional technologies and Energy saving), co-financed by EU and Region Emilia Romagna, Bologna, COFIMP, Training Consortia SME
1989 - 1994	Research and teaching experience as assistant in the 4th and 5th year students of Architecture in the University of Florence – Course of Urban planning and Architecture

Furthermore, in her quite long academic carrier (2003 - 2017) Annarita Ferrante has supervised more than 70 Graduation thesis for the Final Degree in Architecture and Engineering; a selection among the others: E. Cappelletti, Energy Saving Technologies and Systems. 2007-2008; S. Mattioli, Energy retrofitting: a case study within the urban area of Bologna. 2008-2009; V. Belotti, Housing, energy efficiency and sustainability: a case study in Tricase (LE). 2008-2009; F. Guidi, Energy retrofitting and historical heritage. A case study in Bologna. 2008-2009; F. Zambelli, Residential structures in wooden frame: design of a new, low carbon prototype building. 2008-2009; R. Bria, The analysis and the design of an APEA (Ecological Productive areas). 2008-2009; S. Romito: Social Housing, energy retrofitting design for urban rehabilitation. 2008/09; E. Baldessarro, Tesi di Laurea: Zero Consumi e Zero Emissioni nella riqualificazione di comparti urani dismessi. Un caso di studio a Bologna. A. A. 2008/09; E. Di Girolamo: Integrated Design of Multi-Purpose Technologies in Existing Buildings: a case study within the frame of “Plan for a more Sustainable New York” with Alexandros Washburn AIA, NYC Dept. of City Planning. A. A. 2009/10; V. Vaselli: Container Technology: Project and Construction of the poli-functional module “Proteo”, 2009/10; V. Gualdi: Social Housing and Urban rehabilitation: the case study of “Popolarissime” in Rimini, 2009/10.

4. Professional Experience

4.1. A selection of the professional achievements

As a former member and responsible of architectural design and site constructions in her SME Engineering and Consultancy Company EUBIOS Ltd., Ferrante has been awarded of various architectural recognitions in architectural competitions. Here a selection of the main achievements.

- “99 links”, project for the International Competition for the Urban Retrofitting in the Fiera District of Bologna. 2008. “A square for Bologna and the Emilia Romagna”. Best “ten projects”, exhibition in the Emilia-Romagna cities. A. Ferrante, S. Mostardi, G. Manfredini, C. Ghedini. Team leader: A. Ferrante.
- “A green path for reflection”. UIA International Competition Ex Cotonificio Olcese Fiume Veneto (PN). 2004. 1st mentioned and awarded project among 154. Team leader: A. Ferrante. Team: A. Ferrante, M. Faccani, G. Manfredini, S. Mostardi. Prized and published. <http://www.fiumeveneto.com/classifica.html>
- International Competition for the rehabilitation of two urban areas in the Municipality of Sasso Marconi (1999). A bio-climatic project for the urban rehabilitation. 1st mentioned and awarded project among 110. Team leader: A. Ferrante. Team: A. Ferrante, G. Manfredini.
- International Competition for the new school complex in Sasso Marconi. 2002. 9th mentioned project among 99. Team leader: A. Ferrante. Team: A. Ferrante, M. Faccani, G. Manfredini, C. Masotti, S. Mostardi.
- International Competition for the Piazze del Popolo, Gramsci, XXIV Maggio in Rubiera (RE). 2001. Municipality. 3rd mentioned and awarded project. Team leader: A. Ferrante. Team: A. Ferrante, M. Faccani, G. Manfredini, C. Masotti, S. Mostardi.
- International Competition “Waterford North Quays”, Waterford, Ireland. 2002. Mentioned and Published. Team leader: A. Ferrante. Team: A. Ferrante, M. Faccani, G. Manfredini, J. Rzeszotarska, F. Giulianelli.

4.2. A Brief Selection of other professional activities

2008 - 2010	<i>Hic Manebimus Optime (HICMO): A flatland network through the peri-urban fringes of the countryside for the landscape rehabilitation and promotion of the local economy</i>
2005:	<i>Environmental and functional rehabilitation, and accessibility for all in the sport facilities. Municipality of Montefiorino (RE)</i>
2004 - 2005	<i>Preliminary and executive design for a new school complex (Primary and nursery school) in the Municipality of Gatteo</i>
2001 - 2005	<i>Preliminary, executive and site construction for different buildings and interventions (retrofitting and volumetric additions, restoration and conservation, etc.) assigned by different property owners and landlords</i>
2002 - 2004	<i>Preliminary, executive design and site construction supervision/coordination for the new Mondadori library in the historical medieval building of Corte and Torre De' Galluzzi, Centre of Bologna (in collaboration with G. Manfredini). Historical conservation and new technological solution in metal and glass for the vertical connections between spaces around the medieval tower inside the building</i>

- 2003 - 2004** | *Preliminary and executive design, for a new residential complex (about 40 units) in the municipality of Castenaso, Bologna. Designed according to bio-climatic principles and re-elaborating the building types in the existing contexts around the new buildings*
- 2002 - 2003** | *Consultancy and elaboration of strategies for the National Program "PROGRAMMA DI SPERIMENTAZIONE ECOSOSTENIBILE" (trans= Experimental actions for sustainability" funding programme for new design projects "Contatti di Quartiere" in Pianoro e San Lazzaro (consultancy for Federcasa, the National association of Social Housing, ROMA), for Ferrara, Codigoro, Bondeno (consultancy for ACER FERRARA).*
- 1996 - 1999** | *Preliminary, executive and site construction supervision/coordination for the Restoration and rehabilitation of the ancient building complex "HYDRA" in Via D'Azeglio n. 57 and 59, Historical city center of Bologna.*
- 1997:** | *Preliminary and definitive design project for the public main square in Bentivoglio (BO). Project supported by the Emilia Romagna Region Programme for the rehabilitation of historical and public spaces*
- 1996:** | *Preliminary design project assigned by the Municipality of Malalbergo for the urban rehabilitation of Public spaces and buildings, District of Bologna. Project funded by the L. R. 6 of the Emilia-Romagna Region. In collaboration with: T. Squeri, G. Manfredini.*
- 1992 - 1996** | *Design and technical assistance to building construction companies for the site construction of different rehabilitation works in building estate complexes and palaces in the historical centre of Bologna (Palazzo Hydra, urban complex in Vicolo Facchini and Via Marsala 33, Apartments in Via San Vitale, etc.)*
- 1996:** | *Design for an Agricultural Park. A feasibility project for a Public Green Area in the Municipality of Bentivoglio (District of Bologna)*
- 1994:** | *Urban Planning Project for the urban rehabilitation in the Municipalities of Malalbergo, S. Pietro in Casale, San Giorgio di Piano, in the District of Bologna. Project funded by the Region E. Romagna. In collaboration with: T. Squeri, G. Manfredini*
- 1993-1994** | *New Paths for living in the urban eco-systems: interests and wishes. Research and study for the environmental parameters and indicators in selected quarters of Bologna. Council of Health responsible for the Municipality of Bologna*
- 1992- 1993** | *A water path towards the Po delta. Landscape, river environments and historical-productive settlements in the Municipalities of Bentivoglio, Malalbergo, Baricella e Molinella: A landscape and territorial project funded by the Region E. Romagna. In collaboration with: G. Manfredini*
- 1992:** | *Building Regulations, Ecologic Architecture and Environmental protection, Guidelines for sustainability in urban regulation, Municipality of Bologna. In collaboration with: D. DelVecchio, G. Manfredini*
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