

## CURRICULUM VITAE OF DR. ANNA LAURA PISELLO

Assistant professor in Applied Physics at University of Perugia, Italy

PhD in Energy Engineering



LEED Green Associate

Master Degree in Building Engineering

Professional Engineer

### Personal data

Name Anna Laura Pisello

Date of birth May 3<sup>rd</sup>, 1985

Position Post-doc researcher in Applied Physics

Office CIRIAF – Interuniversity research center - Department of Engineering

University of Perugia,

Via G. Duranti 67

06125, Perugia (Italy)

### Contact information

Phone (+39) 075 585 3796

Fax (+39) 075 515 3321

e-mail [pisello@crbnet.it](mailto:pisello@crbnet.it) - [annalaura.pisello@gmail.com](mailto:annalaura.pisello@gmail.com)

skype [anna.laura.pisello](https://www.skype.com/people/anna.laura.pisello)

web <http://scholar.google.it/citations?user=yKLQuV8AAAAJ&hl=it>

[http://www.researchgate.net/profile/Anna\\_Laura\\_Pisello/publications/](http://www.researchgate.net/profile/Anna_Laura_Pisello/publications/)

<https://unnipg.academia.edu/AnnaLauraPisello>

**Bibliometry Information:**

- Italian professorship qualification Indicator N.1 "Number of peer review indexed journal papers": 45  
(median in scientific sector 09/C2: 10, median plus 40%: 14)
- Italian professorship qualification Indicator N.2 "Number of citations of overall scientific production": 21  
(median in scientific sector 09/C2: 3.08, median plus 40%: 4.31)
- Italian professorship qualification Indicator "Hirsch index (actualized)": 7  
(median in scientific sector 09/C2: 3, median plus 40%: 4.2)

**EDUCATIONAL BACKGROUND (RESEARCH WORKING EXPERIENCES)**

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|--------------|---|----------------------|
| 2014-present | <b>Assistant Professor in Applied Physics, Department of Engineering</b>  | Perugia, Italy       |
|              | <ul style="list-style-type: none"><li>▪ Main Teaching and research activity: energy efficiency in buildings, dynamic thermal-energy simulations, building energy certification, new materials and techniques for building retrofits.</li></ul>              |                      |
| 2014-present | <b>Professor in national summer courses for PhD students in Applied Physics</b>   | Benevento, Italy     |
|              | <ul style="list-style-type: none"><li>▪ Main Teaching activity: energy efficiency in buildings, dynamic thermal-energy simulations, building energy certification, new materials and techniques for building retrofits.</li></ul>                           |                      |
| 2012-present | <b>Professor in graduate master classes - University of Perugia</b>   | Perugia, Italy       |
|              | <ul style="list-style-type: none"><li>▪ Main Teaching activity: energy audit, energy efficiency in buildings, building energy certification, new materials and techniques for building retrofits.</li></ul>   |                      |
| 2013-present | <b>Post-doc research fellow University of Perugia</b>   | Perugia, Italy       |
|              | <ul style="list-style-type: none"><li>▪ Main Research Focus: buildings energy efficiency, building dynamic simulation, building envelope materials and optimization, urban environment, building thermal-energy monitoring, cool and green roofs.</li></ul> |                      |
| 2012-present | <b>Research contributor, Virginia Tech University</b><br>Project Network Dynamics Lab (Dr. Taylor's Lab)  | Blacksburg, Virginia |
|              | <ul style="list-style-type: none"><li>▪ Main Research Focus: buildings network energy dynamic simulation, evaluation of derivative Inter-Building impact on indoor thermal performance.</li></ul>   |                      |
| 2009-2013    | <b>PhD student in Energy Engineering, University of Perugia</b>   | Perugia, Italy       |
|              | <ul style="list-style-type: none"><li>▪ Main Research Focus:</li></ul>  |                      |

- Buildings energy efficiency assessment through building dynamic simulation analysis, also considering the Inter-building effect;
  - buildings' energy dynamic simulation;
  - envelope reflectance assessment (albedo impact) as innovative strategy for improving indoor comfort and reducing building environmental impact;
  - microclimate and meteorological in field monitoring of advanced technologies neighborhoods and calibration of numerical models.
- Buildings' energy consultant and construction designer in urban planning initiatives aimed at improving environmental quality, supported by Planning Commission at "Central Park New City", PG, Italy.
  - Winner of the competition for the assignment of a 3-years PhD scholarship.
  - Winner of the national grant competition 2010 for the research project BAIO - "Environmental comfort indoor and outdoor" supported by Fondazione Cassa di Risparmio di Perugia, Italy (private bank foundation).
  - Principal contributor to the following activities related to energy&buildings:
    - Albedo Project, supported by Italian Environmental Ministry ([www.albedocontrol.it](http://www.albedocontrol.it));
    - ABCD: Albedo, green Buildings, global warming Control, Desertification, supported by Italian Environmental Ministry;
    - BAIO project: Indoor And Outdoor Building comfort, supported by Cassa di Risparmio di Perugia Foundation, winner project 2011;
    - BOMA project: Building energy Operation Management and Automation, supported by Italian Environmental Ministry;

2010-2012	<b>Visiting graduate research assistant, Columbia University</b>	New York, U.S.A.
	Project Network Dynamics Lab (Dr. Taylor's Lab)	
	<ul style="list-style-type: none"><li>▪ Main Research Focus (1): buildings network energy efficiency and thermal behavior assessment through dynamic simulation, evaluation of derivative Inter-Building impact on indoor thermal performance.</li><li>▪ Main Research Focus (2): study of possible innovative strategies for reducing energy use improving occupants' awareness about energy and environmental issue.</li><li>▪ Selected by the Honors Center of Italian Universities - H2CU for supporting her International academics activities.</li></ul>	
2011-2012	<b>Visiting graduate research assistant, Baruch College</b>	New York, U.S.A.
	Building Performance Lab (Dr. Bobker's Lab)	
	<ul style="list-style-type: none"><li>▪ Main Research Focus (1): building energy efficiency and optimization strategies by enhanced solutions of operations &amp; management. Evaluation of innovative control systems to the Vertical Campus – Baruch City College building in Manhattan, NYC (dynamic simulation, model calibration, in field monitoring)</li><li>▪ Main Research Focus (2): buildings' commissioning and thermal-energy dynamic simulation of complex multifunction buildings;</li><li>▪ Selected by the Honors Center of Italian Universities - H2CU for supporting her International academics activities.</li></ul>	

- 2009                    **Master Degree in Building Engineering**                    Milan, Italy  
Polytechnic University of Milan Building Engineering  
*Summa cum laude*  
GPA: 4.0/4.0 (top one percent of students nationally)
- Defended thesis on the structural dynamic analysis to evaluate seismic performance of precast industrial buildings.
  - Main focuses: Integrated building design and architectural technology; Building physics (thermodynamics, acoustics, illuminating engineering); Energetic systems and environmental suitability; Building energy equipment - theory and design; Construction materials; Structural design; Seismic building analysis and adapting, Architecture history and city planning; Project finance and management; Urban design and city planning.
- 2008                    **Bachelor of Science in Building Engineering**                    Milan, Italy  
Polytechnic University of Milan Building Engineering  
  
*109/110*  
GPA: 4.0/4.0 (top one percent of students nationally)
- Defended thesis on the structural dynamic behavior and seismic contemporary theories.
  - Main focuses: Integrated building design; Building structural analysis and design; Building physics (thermodynamics, acoustics, illuminating engineering); Building elements technologies; Construction materials; Contemporary building history; Buildings pathology and diagnostics.
- 2003                    **Scientific Diploma**, Scientific Lyceum "G. Galilei"                    Perugia, Italy  
  
*100/100 cum laude*  
  
GPA: 4.0/4.0 (top one percent of students nationally)
- Main subjects: mathematics, physics, international history, philosophy, Italian literature, chemistry, biology, English as a second language, English literature, International art (painting, architecture, sculpture).

## PROFESSIONAL EXPERIENCE

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Licensed Building Engineer by Italian Institute of Engineers

Registration code: A-3248 from May 2010

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|--------------|--|----------------|
| 2013-present | FONDAZIONE PER L'ISTRUZIONE AGRARIA IN PERUGIA<br>(Agriculture foundation of University of Perugia)<br><i>Coordinator of a LEED certification and related activities' project.</i> <ul style="list-style-type: none"><li>▪ Elaboration of LEED certification, charrettes' coordinator for the property of the historical building.</li></ul>   | Perugia, Italy |
| 2012-2013    | TECNEXUM GmbH<br><i>Technology, innovative solutions and development consultant</i><br><i>Coordinator of Italian scientific projects concerning new envelope sustainable solutions for buildings</i> <ul style="list-style-type: none"><li>▪ Ideation and management of research projects</li><li>▪ Management of commercial activity of sustainable solutions for buildings in Italian and European market</li><li>▪ Data analysis and results' elaboration for research reports and sales promotion</li><li>▪ Communications with clients and Institutions</li><li>▪ International management of project partnership.</li></ul>  | Essen, Germany |
| 2013-present | University of Perugia<br><i>Technology, innovative solutions and development consultant</i><br><i>Manager and principal investigator of innovative solution for green buildings</i> <ul style="list-style-type: none"><li>▪ International management of project partnership in the United States and in Europe</li><li>▪ Consulting for start-up companies in the energy field</li><li>▪ Life Cycle Assessment evaluations</li><li>▪ Optimization of innovative materials and technologies for building energy saving</li><li>▪ Monitoring systems and smart control of building operations</li><li>▪ Energy audit and commissioning</li><li>▪ Ideation and management of new research projects</li><li>▪ Data analysis and results' elaboration for research reports and sales promotion</li><li>▪ Communications with clients and Institutions</li></ul> | Perugia, Italy |
| 2011-present | GBCI – Green Building Council Italia<br><i>Scientific committee for LEED for Existing Building and LEED for Historical Buildings</i> <ul style="list-style-type: none"><li>▪ National referent for the Energy and Atmosphere category in the development of the new protocol LEED for Historic Buildings</li><li>▪ National cooperation to implement Italian LEED GBCI protocols</li><li>▪ Selected to be official framer in accredited GBCI courses</li></ul>   | Italy          |
| 2009-2012    | University of Perugia<br>Biomass Research Center   | Perugia, Italy |

*PhD in Energy Engineering*

- Building thermal-energy dynamic simulation.
- Sustainability assessment and LEED protocol implementation.
- Research projects developer and manager.
- Managed research project and experimental activity regarding local climate and energy monitoring in residential buildings, to validate numerical models.
- Managed the research project "Environmental comfort indoor and outdoor" after winning the public competition promoted by Bank Foundation of Perugia, Italy.
- Managed of project BOMA – Building Operation Management and Automation, for improving energy efficiency of existing buildings through buildings' operations, with the final aim of realizing a software-hardware support for designers.
- Participated as envelope and energy designer in the Central Park New City project: energy saving and environmental study of a new Low Carbon City, Perugia, Italy.
- Participated in international project activity regarding "AlbedoControl" strategy against global warming.
- Participated in international research projects as "ABCD: Albedo, green Buildings, global warming Control and Desertification" involving University of Perugia, Italy, Italian Environmental Ministry, Tunisia Government and Energy Department.
- Participated in several research projects and experimental activities regarding building energy monitoring and assessments.
- Participated in several EEOCI Research Project: "Energy Efficiency Optimization of Ceramic Industry".
- Collaborated in teaching Engineering physics, Building equipment, Environmental law, and Urban planning administration.
- Collaborated and provided highly specialized lectures to engineering students regarding building energy plants design, efficiency strategies assessment, buildings' envelope improvement, and buildings' energy efficiency law evolution and implementation into design procedures.
- Supervised engineering doctors and Ph.D. students in undertaking research and experimental activity and in managing thesis works and final dissertations.

2008-2009	Italconstruzioni S.p.A. General Contractor <i>Executive Integrated Designer, project manager</i>	Perugia, Italy
	<ul style="list-style-type: none"><li>▪ Project manager and integrated designer.</li><li>▪ Main skills: architectural design, building envelope technology design, building yard designer and yard activities planner.</li></ul>	
2008-2009	Polytechnic University of Milan - Building Engineering Building Engineering school, Structural Engineering Department <i>International research project developer</i>	Milan, Italy
	<ul style="list-style-type: none"><li>▪ Participated in RELUIS Research Project in Seismic Engineering with the task to study and evaluate modeling procedures for describing the industrial buildings seismic behavior, in cooperation with Professor Alessandro Palermo and Giandomenico Toniolo, Dept. of Structural Engineering, Polytechnic University of Milan, Italy.</li></ul>	
2007-2008	Polytechnic University of Milan - Building Engineering	Milan, Italy

Structural Engineering Department

*Assistant teacher*

- Cooperated in teaching Structural Design in cooperation with Professor Alessandro Palermo and Giandomenico Toniolo, Dept. of Structural Engineering, Polytechnic University of Milan, Italy.

## LANGUAGES

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- Italian - native speaker
- English - excellent

## PUBLICATIONS

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### Original Journal Papers:

1. **Pisello A.L.**, Asdrubali F., 2014. Human-based energy retrofits in residential buildings: a cost-effective alternative to traditional physical strategies. Accepted. Applied Energy APEN5473. DOI: 0.1016/j.apenergy.2014.07.049
2. **Pisello A.L.**, Pignatta G., Castaldo V.L., Cotana F., 2014. Experimental Analysis of Natural Gravel Covering as Cool Roofing and Cool Pavement. Sustainability 2014, 6, 4706-4722; doi:10.3390/su6084706.
3. Rosso F., **Pisello A.L.**, Ferrante M., Cotana F., 2014. Integrated Thermal Energy Analysis Of Innovative Translucent White Marble For Building Envelope Application. Accepted. Sustainability. doi:10.3390/su6085439
4. Cotana F., **Pisello A.L.**, Moretti E., Buratti C., 2014. Multipurpose characterization of glazing systems with silica aerogel: In-field experimental analysis of thermal-energy, lighting and acoustic performance. Buildings and environment. DOI: 10.1016/j.buildenv.2014.06.014.
5. **Pisello A.L.**, Cotana F., Nicolini A., Buratti C., 2014. Effect of dynamic characteristics of building envelope on thermal-energy performance in winter conditions: in field experiment. Energy and Buildings, Vol. 80, pp. 218–230. DOI: 10.1016/j.enbuild.2014.05.017.
6. **Pisello A.L.**, Rossi F., Cotana F., 2014, Summer and winter effect of innovative cool roof tiles on the dynamic thermal behavior of buildings. Energies. Vol. 7, pp. 2343-2361. DOI: 10.3390/en7042343
7. **Pisello A.L.**, Castaldo V.L., Taylor J.E., Cotana F., 2014, Expanding Inter-Building Effect Modeling to Examine Primary Energy for Lighting. Energy and Buildings. DOI: 10.1016/j.enbuild.2014.02.081
8. **Pisello A.L.**, 2014. Optic-Energy Performance of Innovative and Traditional Materials for Roof Covering in Commercial Buildings in Central Italy. Advanced Materials Research. Vol. 884, pp. 685-688. DOI: 10.4028/www.scientific.net/AMR.884-885.685
9. **Pisello A.L.**, Santamouris M., Cotana F., 2013. Active cool roof effect: impact of cool roofs on cooling system efficiency. Advances in Building Energy Research. Vol. 7, Issue 2, pp. 209-221. DOI: 10.1080/17512549.2013.865560.

10. Bonamente, E., Rossi, F., Coccia, V., **Pisello, A.L.**, Nicolini, A., Castellani, B., Cotana, F., (...), Santamouris, M. An energy-balanced analytic model for urban heat canyons: comparison with experimental data. *Advances in Building Energy Research* Vol. 7(2), pp. 222 – 234, 2013. DOI: 10.1080/17512549.2013.865561
11. **Pisello A.L.**, Cotana F., 2014. The thermal effect of an innovative cool roof on residential buildings in Italy: Results from two years of continuous monitoring. *Energy and Buildings* Vol. 69, pp 154-164, DOI: 10.1016/j.enbuild.2013.10.031
12. Rossi F., **Pisello A.L.**, Nicolini A., Filipponi M., Palombo M., 2014. Analysis of retro-reflective surfaces for urban heat island mitigation: a new analytical model. *Applied Energy* Vol. 114, pp. 621-631, 2014. DOI: 10.1016/j.apenergy.2013.10.038.
13. **Pisello A.L.**, Castaldo V., Poli T., Cotana F., 2014. "Simulating buildings' thermal-energy performance at urban scale: evaluation of Inter-Building Effect in different urban configurations". *Journal of Urban Technology*. Vol. 21 (1) 2014 DOI:10.1080/10630732.2014.884386.
14. Xu X., Taylor J.E., **Pisello A.L.**, 2014. Network synergy effect: establishing a synergy between building network and peer network energy conservation effects. *Energy and Buildings*; 68, Part A: 312–320.
15. **Pisello A.L.**, Cotana F., Brinchi L., 2013. On a cool coating for roof clay tiles: development of the prototype and thermal-energy assessment. *Energy Procedia*: 45: 453-462.
16. Cotana, F., Petrozzi, A., **Pisello, A.L.**, Coccia, V., Cavalaglio, G., Moretti, E. 2013. An innovative small sized anaerobic digester integrated in historic building. *Energy Procedia*; 45: 333-341.
17. Cotana, F., Belardi P., Manciola, P., Tamagnini, C., Materazzi, A.L., Fornaciari, M., Petrozzi, A., **Pisello, A. L.** et al. TIAR: Renewable energy production, storage and distribution; a new multidisciplinary approach for the design of rural facility. *Energy Procedia*; 45: 323-332.
18. Cotana F., .....; **Pisello A.L.**, et al., 2013. TIAR: Renewable energy production, storage and distribution; a new multidisciplinary approach for the design of rural facility. *Energy Procedia* 45 (2014) 323 – 332.
19. Cotana F., Petrozzi A., Coccia V., Cavalaglio G., **Pisello A.L.**, Merico M.C., Pertosa M., Moretti E., 2013. An innovative small sized anaerobic digester integrated in historic building *Energy Procedia* 45 (2014) 333 – 341
20. Cotana F., Rossi F., Nicolini A., Filipponi M., **Pisello A.L.**, 2013. "Energetic Analysis of Solar-Supplied Processes for Methane, Biogas and Wood Chip Production". *Advanced Materials Research*. Vol. 772 (2013) pp 720-724; doi:10.4028/www.scientific.net/AMR.772.720
21. **Pisello A.L.**, Cotana F., Nicolini A., Brinchi L., 2013. "Development of Clay Tile Coatings for Steep-Sloped Cool Roofs". *Energies*. Vol. 6(8), pp. 3637-3653; doi:10.3390/en6083637.
22. **Pisello A.L.**, Bobker M., Cotana F., 2012. "A Building Energy Efficiency Optimization Method by Evaluating the Effective Thermal Zones Occupancy". *Energies*. Vol. 5, pp. 5257-5278 (2012). DOI:10.3390/en5125257.
23. **Pisello A.L.**, Taylor J.T., Xu X., Cotana F., 2012. "Inter-Building Effect: modeling the impact of a network of buildings on the energy performance of single building". *Building and environment*. Vol. 58 (2012), pp. 37-45. DOI:10.1016/j.buildenv.2012.06.017
24. Xu X., Taylor J.E., **Pisello A.L.**, Culligan P., 2012. "The impact of place-based affiliation networks on energy conservation: An holistic model that integrates the influence of buildings, residents and the neighborhood context". *Energy and buildings*. (2012), DOI: 10.1016/j.enbuild.2012.09.013



25. **Pisello A.L.**, Xu X., Taylor J.T., Cotana F., 2012. "Network of buildings' impact on indoor thermal performance". SASBE - Smart and Sustainable Built Environment" International Journal. Vol. 1, Iss: 1, pp. 73-86. DOI: 10.1108/20466091211227061
26. **Pisello A.L.**, Goretti M., Cotana F., 2011. "A method for assessing buildings' energy efficiency by dynamic simulation and experimental activity". Applied energy, Vol. 97, pp. 419-429, DOI:10.1016/j.apenergy.2011.12.094.
27. Cotana F, **Pisello A.L.**, 2011, "Un metodo per la valutazione del comportamento termico in regime dinamico degli edifici. Parte 1: formulazione" (In Italian). "A Method to Evaluate the Building Thermal Dynamic Behavior. Part I: Formulation". La Termotecnica. Vol.1(2011), pp. 53-59.
28. Cotana F, **Pisello A.L.**, 2011, "Un metodo per la valutazione del comportamento termico in regime dinamico degli edifici. Parte 2: casi di studio" (In Italian) - "A Method to Evaluate the Building Thermal Dynamic Behavior. Part II: Case studies". La Termotecnica. Vol.2(2011), pp. 50-57.
29. Cotana F., Rossi F., Filipponi M., **Pisello A.L.**, 2010, "Progetto "Albedo control": una risposta sostenibile al riscaldamento globale" (In Italian) - "Albedo-Control project: a sustainable strategy against global warming". Ambiente e Sicurezza. Vol.5(2010), pp. 48-58.

#### Papers in Conference Proceedings:

1. **Pisello A.L.**, Castaldo V.L., Cotana F., Dynamic thermal-energy performance analysis of a prototype building with integrated phase change materials. ATI 2014 - 69° Milano, Italy, September 10-12, 2014.
2. Cotana F., Cavalaglio G., Coccia V., **Pisello A.L.**, Petrozzi A., Gelosia M., Simultaneous saccharification and fermentation of common reed (*Phragmites Australis*) at high solid loading. World Lake Conference. Perugia, Italy. September 1-5, 2014.
3. Petrozzi A., **Pisello A.L.**, Cavalaglio G., Coccia V., Gelosia M., Castaldo V.L., Pertosa M., Energy enhancement of marsh reed as biofuel for thermal boiler. World Lake Conference. Perugia, Italy. September 1-5, 2014.
4. **Pisello A.L.**, Coccia V., Cavalaglio G., Di Francesco S., Aquino A., Petrozzi A., Water heat pumps using water from lakes. State of the art and case study. World Lake Conference. Perugia, Italy. September 1-5, 2014.
5. **Pisello A.L.**, Castaldo V.L., Pignatta G., Cotana F., The effect of lake microclimate on thermal-energy behavior of building. World Lake Conference. Perugia, Italy. September 1-5, 2014.
6. Petrozzi A., Di Francesco S., **Pisello A.L.**, Aquino A., A new model for photovoltaics integration with hydropower: a case study. World Lake Conference. Perugia, Italy. September 1-5, 2014.
7. **Pisello A.L.**, Petrozzi A., Castaldo V.L., Cotana F., Energy refurbishment of historical buildings with public function: parametric optimization and pilot case proposal. The 6th International Conference on Applied Energy – ICAE2014.
8. Bonamente E., Merico M.C., Pignatta G., **Pisello A.L.**, Cotana F., Environmental impact of industrial prefabricated buildings: Carbon and Energy Footprint analysis based on an LCA approach. The 6th International Conference on Applied Energy – ICAE2014.
9. Boarin P., Guglielmino D., **Pisello A.L.**, Cotana F., Sustainability assessment of historic buildings: lesson learnt from an Italian case study through LEED® rating system. The 6th International Conference on Applied Energy – ICAE2014.
10. Cotana F., Petrozzi A., Cavalaglio G., Coccia V., **Pisello A.L.**, A batch digester plant for biogas production and energy enhancement of organic residues from collective activities. The 6th International Conference on Applied Energy – ICAE2014.
11. **Pisello, A.L.**, Castaldo V.L., Pignatta G., Cotana, F., Experimental analysis of natural gravel covering as cool roof and cool pavement. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.

12. Moncada Lo Giudice G., Bianchi F., **Pisello A.L.**, Baldinelli G., Asdrubali F., Infrared thermography assessment of thermal bridges in building envelope: experimental validation in a test room setup. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.
13. Pertosa M., **Pisello, A.L.**, Castaldo V.L., Cotana, F., Environmental sustainability concept applied to historic buildings: the experience of LEED international protocol in the stable of Sant'Apollinare fortress in Perugia. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.
14. Rosso F., **Pisello A.L.**, Cotana F., Ferrero M., Integrated thermal-energy analysis of innovative translucent white marble for building envelope application. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.
15. **Pisello A.L.**, Castaldo V.L., Castellini I., Cotana F., Experimental evaluation of the indoor thermal environment of an Italian historical subterranean museum space. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.
16. Cotana F., Barbanera M., **Pisello A.L.**, Castaldo V.L., Castellini I., Strategie di impiego del materiale ligneo depositato sugli arenili. 14th CIRIAF National Congress. Perugia, Italy. April 4-5, 2014.
17. **Pisello A.L.**, Cotana F., 2014. Thermal-energy performance of high reflective tiles in historic buildings. AICARR International conference. Rome, Italy, 26th – 28th February.
18. **Pisello, A.L.**, Petrozzi, A., Castaldo V.L., Cotana, F., On an innovative integration strategy of renewable energy system in historic building with public function. AICARR International conference. Rome, Italy, 26th – 28th February.
19. F.Rossi, A.Nicolini, E.Bonamente, **A.L.Pisello**, V.Coccia, B.Castellani, E.Morini, "A scale model for the Urban Canyon Effect quantification: preliminary data analysis", International Sustainable Built Environment Conference, Doha, Qatar, 28-30 January 2014.
20. **Pisello A.L.** 2013. ENERGY EFFICIENCY OF BUILDINGS AT INTER-BUILDING SCALE: REVIEW OF STRATEGIES FOR PERFORMANCE ANALYSIS AND OPTIMIZATION. Proceedings of the 2013 Winter Simulation Conference. 44<sup>th</sup> INTERNATIONAL CONGRESS & EXHIBITION ON HEATING, REFRIGERATION AND AIR CONDITIONING. Belgrade, Sava Center, December 4–6.
21. **Pisello A.L.**, Taylor J.T., Cotana F., 2013. Simulating the effect of urban morphology on indoor thermal behavior: an Italian case study. Proceedings of the 2013 Winter Simulation Conference. December 8-11. Washington DC.
22. Cotana F., Petrozzi A., Di Francesco S., Manciola P., Biscarini C., Nardi F., Nicolini A., Pisello A.L., Coccia V., Cavalaglio G., Merico M.C. 2013. Environmental hydraulics rural tower for the energy production and accumulation from renewable sources. International Conference on Applied Energy ICAE 2013, Jul 1-4, Pretoria, South Africa.
23. Cotana F., Rossi F., Coccia V., Pisello A.L., Bonamente E., Petrozzi A., Cavalaglio G., 2013. Albedo control as an effective strategy to tackle global warming: a Tunisian case study. International Conference on Applied Energy ICAE 2013, Jul 1-4, Pretoria, South Africa.
24. **Pisello A.L.**, Santamouris M., Cotana F., 2013. On the analysis of cool roofs for cooling system efficiency. 2013 AIVC - TightVent - Cool Roof's - venticool Conference. Athens, September 25-26.
25. Rossi F., Cotana F., Coccia V., **Pisello A.L.**, Bonamente E., Palombo M., Pignatta G., Morini E., 2013. Modelling of urban canyon: analytical and experimental remarks. 2013 AIVC - TightVent - Cool Roof's - venticool Conference. Athens, September 25-26.
26. **Pisello A.L.**, Cotana F., Brinchi L., 2013. On a cool coating for roof clay tiles: development of the prototype and thermal-energy assessment. 68 Congresso Nazionale Associazione Termotecnica Italiana. Bologna, 11-13 Settembre.
27. Cotana F., .....; **Pisello A.L.**, et al., 2013. TIAR: Renewable energy production, storage and distribution; a new multidisciplinary approach for the design of rural facility. 68 Congresso Nazionale Associazione Termotecnica Italiana. Bologna, 11-13 Settembre.
28. Cotana F., Petrozzi A., Coccia V., Cavalaglio G., **Pisello A.L.**, Merico M.C., Pertosa M., Moretti E., 2013. An innovative small sized anaerobic digester integrated in historic building. 68 Congresso Nazionale Associazione Termotecnica Italiana. Bologna, 11-13 Settembre.

29. F. Cotana, A. Petrozzi, V. Coccia, M. Gelosia, G. Cavalaglio, **A. L. Pisello**. AN INNOVATIVE BIO-DIGESTER FOR BIOGAS PRODUCTION AND ENERGETIC ENHANCEMENT IN A LITTLE SIZED ENGINE. European Biomass Conference and Exhibition (EU BC&E). Hamburg 23-23 June 2013.
30. **Pisello A.L.**, Rossi F., Cotana F., 2012. "On the impact of cool roofs in Italian residential buildings: experimental assessment of summer and winter performance". Proceedings of International Conference Sustainable Energy in Buildings and Urban Areas, October 14-20, Kusadasi, Turkey.
31. **Pisello A.L.**, Rossi F., Cotana F., 2012. "Thermophysical impact of reflecting roof tiles: year-round continuous monitoring" (In Italian: "Impatto termo fisico di tegole riflettenti: monitoraggio in continuo estivo ed invernale"). Proceedings of ATI Conference, September 13-17, Trieste, Italy.
32. **Pisello A.L.**, Thiemann A., Santamouris M., Cotana F., 2012. "Analysis of a cool roof system for reducing cooling loads and improving cooling system efficiency". Rehva International Conference CLIMA 2013, June 16-19, Prague.
33. **Pisello A.L.**, Rossi F., Cotana F., 2011. "Increasing roof albedo: a retrofitting strategy for buildings and environment". Proceedings of 48<sup>th</sup> International AICARR Conference on Energy Retrofitting of Existing Buildings – 22-23 September – Baveno, Italy.
34. **Pisello A.L.**, Goretti M., Cotana F., 2011. "Building energy efficiency assessment by integrated strategies: dynamic simulation, sensitivity analysis and experimental activity". Proceedings of Third International Conference on Applied Energy - 16-18 May 2011 - Perugia, Italy.
35. Cotana F, **Pisello A.L.**, 2010, "Sul comportamento termico di edifici residenziali al variare della configurazione architettonica" (in Italian), - "Buildings thermal behavior analysis varying architectural layout". Proceedings of ATI Conference, September 13-17, Cagliari, Italy.
36. **Pisello A.L.**, 2010, "Sul comportamento termico in regime dinamico di edifici passivi: ruolo della configurazione architettonica e dell'involucro edilizio" (In Italian) – "Dynamic thermal behavior of free-running buildings: architectural layout and envelope design role". Poster presentation. Summer School of Applied Physics, July 5-9, Benevento, Italy.
37. Xu X., **Pisello A.L.**, Taylor J. E., 2011. "Inter-Building Energy Efficiency simulation with occupants networks". Proceedings of the 2011 Winter Simulation Conference – 11-14 December 2011 – Phoenix, Arizona.
38. F. Cotana, A. Petrozzi, V. Coccia, M. Gelosia, G. Cavalaglio, **A. L. Pisello**, 2013. "An innovative bio-digester for biogas production and energetic enhancement in a little size engine". International Biomass Conference. June 2013, Copenhagen.

#### Chapters in books:

1. **A.L. Pisello**, F. Cotana, M. Filippi, E. Fabrizio, 2012. "Introduction to the thermoenergy dynamic simulation of buildings. D. Residential building" (In Italian: "Introduzione alla simulazione termoenergetica dinamica degli edifici. D. Edificio residenziale"). Chapter in a book. Published by Editoriale Delfino, pp. 119-125.
2. **A.L. Pisello**, F. Cotana, 2013. "Existing Buildings' Energy Upgrade: An Economical and environmentally Sustainable Opportunity". Chapter in a book "Corporate Sustainability", pp. 265-280. Springer Editions.

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#### NATIONAL AND INTERNATIONAL RESEARCH PROJECT

1. Programma CIRIAF per l'UNESCO "Chair Water Resource Management and Culture".
2. UMBRA ARTIS: Tecnologie impiantistiche di monitoraggio e protezione delle opere d'arte e degli ambienti ipogei (in Italian). Energy technologies for monitoring and protecting artworks and subterranean environment.

3. ABCD Albedo, Building green, Control of global warming and Desertification. Supported by Italian Ministry of Environment.
4. BAIO: Indoor and Outdoor thermal comfort. Supported by private banking foundation Fondazione Cassa di Risparmio di Perugia, Call 2011.
5. TIAR: Tower hydraulic-Architectural-energetic. Supported by the Italian Ministry of Agriculture.
6. Green BOMA: Green Building Operation, Management, and Automation. Innovative solutions for energy saving based on the operation management. Enel and Italian Ministry of Economy and Finance.
7. SCER (Development of a new system for air-conditioning in buildings in urban areas with renewable energy sources)
8. ELIOS–Envelope Layers for Interactive Optimized Systems. Selected by Italian Ministry of Environment as strategic proposal @Greening Camp competition.
9. DAIKIN group: optimization of cooling systems through cool roof installation and monitoring. Supported by Daikin Chemicals and Tecnexum company.
10. CVR cooperation convention to implement innovative envelope high performance materials. Supported by CVR industries.
11. TECNEXUM: optimization of optical energy properties of coatings for chiller envelope.
12. TECNEXUM: analysis of the solar reflection index in dynamic thermal-energy calculation.
13. Institutional convention between CRB and Italian Ministry of the Environment, with title "Recupero e valorizzazione energetica di biomasse legnose".
14. Institutional convention between Italian Ministry of the Environment, University of Perugia and Foundation for the Agricultural Education (FIA) with title "Riqualficazione energetica della Rocca di Casalina".

Selected under-evaluation proposals

- ENI AWARD 2014: Cool roofs and the energy performance of residential buildings: experimental optimization, numerical analysis and field tests

TEACHING EXPERIENCE

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- Teaching associate (co-teacher) of "Energy plants of buildings and renewable sources of energy" at the faculty of Engineering, graduate students of Architectural engineering. Academic years: 2010-11, 2011-12, 2012-13, 2013-14.
- Teaching associate (co-teacher) of "Applied physics" at the faculty of Engineering, graduate students of Mechanical engineering. Academic years: 2010-11, 2011-12.
- Teacher in several post-lauream courses of "Energy efficiency in buildings", "New materials for building energy efficiency", "Innovative construction technologies" since 2011.
- Teacher of Green Building Council Italy courses for LEED exam preparation since 2012.

ACTIVITY AS INVITED LECTURER IN INTERNATIONAL SEMINARS

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- Title: Energy opportunities from water resources: first results of multipurpose research in Italian territory. Unesco Chair «Water Resources Management and Culture» Inaugural Meeting 11 MARZO 2014. University for Foreigners of Perugia - Palazzo Gallenga Sala Goldoniana.
- Title: New Strategies for Performance Analysis and Optimization for Energy Efficiency in Buildings. Sponsored by H2CU International research center. October 23<sup>rd</sup>, 2013 @ La Sapienza University of Rome, Italy.
- Title: Energy Efficiency of Buildings: New Strategies for Performance Analysis and Optimization. Sponsored by NYU Poly, Department of Civil and Environmental Engineering. October 16<sup>th</sup>, 2013 @ NYU Poly in New York.

- Title: Impact of inter-building effects on the accuracy of building energy performance predictions: the role of urban morphology, meso-climate context, and place-based affiliation networks. Co-sponsored by EARTH SYSTEM AND ENVIRONMENTAL ENGINEERING PROGRAM, NOAA-CREST, CIUS BUILDING PERFORMANCE LAB. May 10<sup>th</sup>, 2013 @ CUNY New York City.
- Title: Impact of inter-building effects on the accuracy of building energy performance predictions: the role of urban morphology, meso-climate context, and place-based affiliation networks. Sponsored by H2CU International research center. May 17<sup>th</sup>, 2013 @ Italian Cultural Institute in New York.
- Title: Impact of inter-building effects on the accuracy of building energy performance predictions: the role of urban morphology, meso-climate context, and place-based affiliation networks. Sponsored by Civil Engineering Networks Dynamics Lab. May 13<sup>th</sup>, 2013 @ Virginia Tech, Blacksburg, VA, USA.

#### ACTIVITY AS CHAIRMAN AND INVITED SPEAKER

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- Invited speaker at UNESCO and WATER: UNESCO Chair in Water Resources Management and Culture. University for Foreigners, Perugia, Italy. 2014, March 11<sup>st</sup>.
- Invited speaker (paid) at 44<sup>th</sup> International Congress and Exhibition on HVAC&R Integrated Design and Healthy Zero CO2 Emission Buildings Belgrade, 4<sup>th</sup>–6<sup>th</sup> December 2013.
- Chairman at 2013 AIVC - TightVent - Cool Roof's - venticool Conference. Athens, September 25<sup>th</sup> - 26<sup>th</sup>.
- CLIMA 2013. Presentation of an original paper. June 17<sup>th</sup>, 2013. Prague. Session title: Long oral presentation session- The role of cool materials in the urban context.
- Program Technical Committee participant at 3<sup>rd</sup> ScienceOne International Conference on Environmental Sciences ICES 2014, January 2014, Dubai.
- Conference Co-chair at Third International Conference on Countermeasures to Urban Heat Island, Venice, October 13-15, 2014.
- Chairman at 6<sup>th</sup> International Conference on Applied Energy – ICAE2014. Taipei, Taiwan. May 2014.

#### NATIONAL AND INTERNATIONAL MEETING PRESENTATIONS

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- 14<sup>th</sup> CIRIAF National Congress. Energy, Environment and Sustainable Development Perugia, Italy. April 4-5, 2014
- 49<sup>th</sup> International Conference by AICARR. HISTORICAL AND EXISTING BUILDINGS. DESIGNING THE RETROFIT. An overview from energy performances to indoor air quality. Roma 2014, 26<sup>th</sup> – 28<sup>th</sup> February.
- 44<sup>th</sup> INTERNATIONAL CONGRESS & EXHIBITION ON HEATING, REFRIGERATION AND AIR CONDITIONING. Belgrade, Sava Center, December 4–6.
- AIVC conference in 2013 in Athens, Greece, 25-26 September 2013
- 2013 AIVC - TightVent - Cool Roof's - venticool Conference. Athens, September 25-26.
- 68 Congresso Nazionale Associazione Termotecnica Italiana. Bologna, 11-13 Settembre.
- CLIMA 2013. Presentation of an original paper. June 17<sup>th</sup>, 2013. Prague.
- Seminar at Virginia Tech, VA to the PhD School of Civil Engineering, 2013, May 12<sup>th</sup>.
- Event co-sponsored by Earth System and Environmental Engineering program NOAA-CREST, Cius, Building Performance Lab. 2013, May 10<sup>th</sup>.
- SEBUA 2012 Conference: Sustainable Energy in Buildings and Urban Areas, 2012, October 14<sup>th</sup>-20<sup>th</sup>, Kusadasi, Turkey.
- ATI Conference, 2012, September 13<sup>th</sup>-17<sup>th</sup>, Trieste, Italy.
- Winter Simulation Conference (WSC) on Simulation for a Sustainable World – 2011, December 11<sup>th</sup> - 14<sup>th</sup> – Phoenix, Arizona.
- 48<sup>th</sup> Aicarr International Conference on Energy refurbishment of existing buildings - which solutions for an integrated System: Envelope, Plant, Control – 2011, September 22<sup>nd</sup> -23<sup>rd</sup> – Baveno, Italy.
- 3<sup>rd</sup> International Conference on Applied Energy – 2011, May 16<sup>th</sup> -18<sup>th</sup> - Perugia, Italy.
- ATI Conference, 2010, September 13<sup>th</sup> -17<sup>th</sup>, Cagliari, Italy.

- Summer School of Applied Physics, 2010, July 5<sup>th</sup> -9<sup>th</sup>, Benevento, Italy.

#### ACTIVITY AS MEMBER OF EDITORIAL BOARD

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##### International Journals:

- International Journal of Energy Science (Science and Engineering Publishing Company)
- Energy Science & Engineering (Society of Chemical Industry and John Wiley & Sons, Ltd)
- Guest editor in the Special Issue "Building Energy Performance Modelling and Simulation" in the Modelling and Simulation in Engineering Journal (Hindawi Publishing Corporation)
- American Journal of Engineering and Applied Science (Science Publications)

#### ACTIVITY AS REFEREE

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##### International Journals:

- Applied Energy, Elsevier
- Energy and Buildings, Elsevier
- Energy Efficiency, Springer
- International Journal of Low-Carbon Technologies, Oxford Journals
- British Journal of Applied Science & Technology, SCIENCEDOMAIN international (SDI)
- Solar energy, Elsevier
- Smart and Sustainable Built Environment, Emerald
- Energy Research & Social Science, Elsevier

##### International Conference:

- ICAE 2014, Taiwan
- 25<sup>th</sup> ECOS 2012 Conference, Perugia, Italy.

#### MENTORSHIP

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- Giovanna Sanna, University of Perugia, Italy (2013-14)
- Valeria Berellini, University of Perugia, Italy (2013-14)
- Francesca Lia, University of Perugia, Italy (2013-14)
- Serena Sensi, University of Perugia, Italy (2013-14)
- Cristina Piselli, University of Perugia, Italy (2013-14)
- Giorgia Agostinelli, University of Perugia, Italy (2013-14)
- Dr. Veronica Castaldo, Polytechnic University of Milan, Italy (2012-present)
- Dr. Jessica Romanelli, University of Perugia, Italy (2012-13)
- Dr. Roberto Barone, University of Perugia, Italy – Baruch College, NYC (2010-2011)
- Dr. Vanessa Romagna, University of Perugia, Italy – Baruch College, NYC (2010-2011)
- Dr. Massimo Palombo, University of Perugia, Italy (2010-2011)
- Dr. Tania Ghilardi, University of Perugia, Italy (2010)
- Dr. Emanuele Chiodini, University of Perugia, Italy (2012-13)

#### INFORMATICS SKILLS

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- Office
- Autocad
- EnergyPlus
- DesignBuilder (dynamic simulation and CFD analysis)
- Matlab

- Photoshop CS

## INTERESTS

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- Climbing
- Traveling
- Photography
- Historical and Contemporary Architecture
- Interior design
- Impressionist and European avan-garde painting