

CURRICULUM VITAE



PERSONAL INFORMATION

First name / Surname **Gloria Pignatta**

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Nationality **Italian**

Date of birth **21/06/1986**

Gender **Female**

Website https://www.researchgate.net/profile/Gloria_Pignatta
<https://scholar.google.it/citations?user=8l7g04AAAAJ&hl=it>
https://www.linkedin.com/in/gloria-pignatta-1b919444?trk=nav_responsive_tab_profile_pic
<http://censam.mit.edu/people/Pages/Gloria%20PIGNATTA.aspx>

WORK EXPERIENCE

Postdoctoral Researcher in Building Construction at Singapore-MIT Alliance for Research and Technology (SMART) with CENSAM group in Singapore. Working on “COOLING SINGAPORE” project (25/01/2017 - present).

Lecturer for the CPD (Professional Development, Training and Education) program “Design and Optimization of Zero Energy Consumption Buildings” (2016 - 2017).

Postdoctoral Researcher in Building Physics at CIRIAF - Inter-university research center in Perugia, Italy. Working on “ZERO-PLUS” and “INPATH-TES” H2020 projects, research and teaching in the field of Building Physics and Energy Efficiency in Buildings (01/01/2016 - 01/11/2016).

Technical consultant for private companies in Italy from (01/10/2015 – present).

PhD in Energy Engineering at University of Perugia, CIRIAF - Inter-university research center in Perugia, Italy (01/11/2013 – 21/01/2016).

During the Ph.D. in Energy Engineering, my research activities mainly focused on energy efficiency in buildings and optimization strategies by enhanced solutions of operations and management, innovative materials for buildings envelope, cool materials, retro-reflective materials, reflectance assessment (albedo impact) of the buildings envelope as innovative strategy for improving indoor and/or outdoor thermal comfort and reducing building environmental impact, investigation of passive and active strategies for building energy efficiency, renovation and indoor monitoring of heritage museum buildings, steady-state and dynamic numerical simulation of thermal-energy performance of buildings, PCMs, continuous monitoring of indoor-outdoor environmental parameters, microclimate analysis, LCA analysis, LEED certification, cluster analysis, sensitivity analysis, Energy Poverty, Urban Heat Island (UHI), renewable energy technologies, net zero energy buildings and settlements, natural ventilation techniques, sustainable development, thermal and acoustic measurements.

Main projects:

- "European Energy Poverty: Agenda Co-Creation and Knowledge Innovation" H2020 on-going project, positive evaluated and funded by the EC (2017).
- "COOLING SIGNAPORE" on-going project, positive evaluated and funded by the National Research Foundation (NRF) Singapore (2017). UHI expert from SMART.
- "ZERO-PLUS" H2020 European on-going project, positive evaluated and funded by the EC (2015). Main contact person for the Italian group (i.e. construction company and academic).
- "INPATH-TES" H2020 European on-going project, positive evaluated and funded by the EC (2015). Contact person for the UNIPG group.
- "MATTCARBC" national on-going project founded by the Minister of the Environment (2015).
- "CHAMAELEON RISE" Marie Curie project, positively evaluated, but not allowed to funding by the EC. Contact person of the project (2014).
- LUIGI METELLI S.P.A cooperation convention to characterize and optimize the thermal-optical properties of natural highly reflective gravel stone for building roofs and urban outdoor pavement applications (2015 - 2016).
- CVR cooperation convention to implement innovative envelope high performance materials. Supported by CVR industries (2013 - 2016).
- MANINI PREFABBRICATI cooperation convention to investigate and predict the environmental impact of existing and new industrial prefabricated buildings. The carbon and energy footprint analysis based on an LCA approach was carried out for MANINI PREFABBRICATI industries (2013).

Additional professional experiences:

- Team member of three academic-industry R&I projects.
- Development of experimental monitoring campaigns (both in-field and in-lab) and material-product testing for private companies in the field of energy efficiency and building environmental sustainability.
- Team member of the Testroom Lab for continuous indoor-outdoor environmental monitoring at CIRIAF (www.testroomlab-ciriaf.weebly.com).
- Reviewer for Energy and Buildings Journal papers' and others. Energy and Buildings is an international journal publishing articles with explicit links to energy use in buildings.

Teacher and tutor of math at engineering faculty, University of Perugia, Italy (2014).

Teacher of construction at Valenti's contemporary cultural center in Perugia, Italy (2012).

Internship at "IPASS S.C.A.R.L.", Perugia, Italy. Research and development activities integrated to the course "Technician for energy and environmental management" (10/12/2012 – 22/04/2013).

Structural Engineer at "L.A. COST S.R.L." company, Perugia, Italy (02/04/2012 – 24/06/2012).

Structural Engineer at "Studio tecnico Biancalana", Perugia, Italy (01/10/2011 – 30/03/2012).

External technical authorized for earthquake emergency, Italy (May 2012).

EDUCATION AND TRAINING

Date	2016
Title of qualification awarded	Ph.D. in Energy Engineering
University	University of Perugia – CIRIAF
Title of the final PhD thesis	“Thermal-energy and environmental analysis of innovative and sustainable cool skins for building roofs”
Date	2011
Title of qualification awarded	Master’s degree in Civil and Environmental Engineering – Structures
Grade	110/110 cum laude
University	University of Perugia – Engineering
Date	2008
Title of qualification awarded	Bachelor’s degree in Civil/Building Engineering
Grade	108/110
University	University of Perugia – Engineering
Date	2005
Title of qualification awarded	Diploma Liceo Scientifico
Grade	100/100
High school	Istituto Tecnico per Attività Sociali Giordano Bruno

Publications

- G. Pignatta, A.L. Pisello, F. Cotana (2017). *Comparative analysis on the environmental impact associated to the production of different cool roof typologies*. Solar Energy, Under review.
- G. Pignatta, C. Chatzinikola, G. Artopoulos, C.N. Papanicolas, D.K. Serghides, M. Santamouris (2016). *Winter analysis on the indoor environmental quality in low income Cypriot households*. Energy and Buildings, In Press.
- A.L. Pisello, G. Pignatta, C. Piselli, V.L. Castaldo, F. Cotana (2016). *Investigating the Dynamic Thermal Behavior of Building Envelope in Summer Conditions By Means of in-Field Continuous Monitoring*. American Journal of Engineering and Applied Sciences 9 (3), 505-519. doi:10.3844/ajeassp.2016.505.519
- A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana (2015). *Integrated numerical and experimental methodology for thermal-energy analysis and optimization of heritage museum buildings*. Building Services Engineering Research and Technology 37 (3), 334-354. doi:10.1177/0143624415609910
- A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana, M. Santamouris. *Experimental in-lab and in-field analysis of waterproof membranes for cool roof application and urban heat island mitigation*, Energy and Buildings 114, 180-190. doi:10.1016/j.enbuild.2015.05.026
- M. Perino, A.L. Pisello, V.L. Castaldo, C. Piselli, G. Pignatta, F. Cotana (2015). *Combined Thermal Effect of Cool Roof and Cool Façade on a Prototype Building*. Energy Procedia 78, 1556-1561. doi:10.1016/j.egypro.2015.11.205
- V.L. Castaldo, V. Coccia, F. Cotana, G. Pignatta, A.L. Pisello, F. Rossi. *Thermal-energy analysis of natural "cool" stone aggregates as passive cooling and global warming mitigation technique*, Urban Climate 14 (2), 301-314. doi:10.1016/j.uclim.2015.05.006
- A.L. Pisello, G. Pignatta, V.L. Castaldo, F. Cotana. *The impact of local microclimate boundary conditions on building energy performance*, Sustainability 7(7), 9207-9230. doi:10.3390/su7079207
- A.L. Pisello, G. Pignatta, V.L. Castaldo, F. Cotana. *Experimental analysis of natural gravel covering as cool roofing and cool pavement*, Sustainability 6(8), 4706-4722. doi:10.3390/su6084706
- E. Bonamente, M.C. Merico, S. Rinaldi, G. Pignatta, A.L. Pisello, F. Cotana, A. Nicolini. *Environmental impact of industrial prefabricated buildings: carbon and energy footprint analysis based on an LCA approach*. Energy Procedia 61, 2841-2844. doi:10.1016/j.egypro.2014.12.319

Conferences

- G. Pignatta, Li X., L.K. Norford. *Mitigate the UHI phenomenon to improve thermal comfort in outdoor areas of tropical Singapore*. Workshop on Urban Microclimate: from Research to Application, Singapore, 26 April 2017.
- G. Pignatta, Li X., L.K. Norford. *Goals and approach of the "Cooling Singapore" project*. 17th CIRIAF National Congress, Perugia, 6-7 April 2017.
- G. Artopoulos, G. Pignatta, M. Santamouris. *From the sum of Near-Zero Energy buildings to the whole of a Near-Zero Energy housing settlement: the role of communal spaces in performance-driven design*. Living and Sustainability: An Environmental Critique of Design and Building Practices, Locally and Globally. AMPS, London, 9-10 February 2017.
- G. Pignatta, C.K. Chatzinikola, G. Artopoulos, C.N. Papanicolas, D. Serghides, M. Santamouris. *Winter survey on the indoor environmental quality in low and very low income households in Cyprus*. 4th IC2UHI, Singapore, 30-31 May and 1 June 2016.
- C.K. Chatzinikola, G. Pignatta, D. Serghides, M. Santamouris. *Winter Indoor Thermal Comfort in Low Income Households in Cyprus*. 5th International Conference on RES and EE, Nicosia, Cyprus, 5-6 May 2016.
- A.L. Pisello, C. Piselli, G. Pignatta, C. Fabiani, F. Ubertini, F. Cotana, M. Santamouris. *Net Zero Energy settlement in Europe: first findings of the Zero-Plus Horizon 2020 project*. 16th CIRIAF National Congress, Assisi, Italy, 7-9 April 2016.
- G. Pignatta, A.L. Pisello, F. Cotana. *Analisi ambientale di "cool skins" innovative e sostenibili per tetti di edifici*. 16th CIRIAF National Congress, Assisi, Italy, 7-9 April 2016.

- A. Aquino, M. Barbanera, E. Belloni, F. Bianchi, C. Buratti, P. Cappellini, V.L. Castaldo, F. Castellani, V. Coccia, F. Cotana, S. Cotana, M. Goretti, E. Moretti, F. Piscini, A.L. Pisello, D. Palladino, M. Pertosa, A. Petrozzi, G. Pignatta, A. Presciutti, A. Rotili, M. Vergoni. *Energy performance certification of offices and education buildings: the case study of the University of Perugia*. 33° Convegno Nazionale AICARR, Bologna, Italy, 15 October 2015.
- A.L. Pisello, G. Pignatta, V.L. Castaldo, C. Piselli, F. Cotana. *Combined thermal effect of cool roof and cool facade on a prototype building*. 6th IBPC2015, Turin, Italy, 14-17 June, 2015.
- F. Rosso, A.L. Pisello, G. Pignatta, V.L. Castaldo, C. Piselli, F. Cotana, M. Ferrero. *Outdoor thermal and visual perception of natural cool materials for roof and urban paving*. ICSDEC2015, Chicago, USA, 5 May 2015.
- A.L. Pisello, G. Pignatta, V.L. Castaldo, F. Cotana. *The impact of local microclimate boundary conditions on building thermal-energy performance*, 15th CIRIAF National Congress, Perugia, Italy, 9-11 April 2015.
- A.L. Pisello, G. Pignatta, C. Piselli, V.L. Castaldo, F. Cotana. *Effect of dynamic characteristics of building envelope on thermal performance in summer conditions: in field experiment*, 15th CIRIAF National Congress, Perugia, Italy, 9-11 April 2015.
- G. Pignatta, V.L. Castaldo. *Materiali tradizionali ed innovative per l'efficientamento energetico degli edifici e la mitigazione climatica: ottimizzazione ed industrializzazione*. Incontro tra Aziende e Mondo della Ricerca, Rocca di Casalina, Deruta (PG), Italia, 14 Novembre, 2014.
- A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana. *Evaluation of the thermal-energy performance of naturally "cool" gravel covering for cool roof and cool pavement application: a case study*. 3rd IC2UHI, Venice, Italy, 13-15 October 2014.
- A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana. *Experimental analysis of the thermal-optical properties of polyurethane waterproof liquid membranes for cool roof application*. 3rd IC2UHI, Venice, Italy, 13-15 October 2014.
- A.L. Pisello, G. Pignatta, V.L. Castaldo, F. Cotana. *The effect of lake microclimate on thermal-energy behavior of buildings*. 15th World Lake Conference, Perugia, Italy, 1-5 September 2014.
- F. Cotana, A.L. Pisello, S. Cotana, A. Petrozzi, G. Pignatta, G. Cesari, E. Colauta. *Energy use and enhancement of biomasses around water resources*. 15th World Lake Conference, Perugia, Italy, 1-5 September 2014.
- A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana. *Experimental analysis of natural gravel covering as cool roof and cool pavement*. 14th CIRIAF National Congress, Perugia, Italy, 4-5 April 2014.
- F. Rossi, F. Cotana, V. Coccia, A.L. Pisello, E. Bonamente, M. Palombo, G. Pignatta, and E. Morini. *Modelling of Urban Canyon: Analytical and experimental remarks*, 34th AIVC Conference: Energy conservation technologies for mitigation and adaptation in the built environment: The role of ventilation strategies and smart materials, pp. 293-296, Athens, Greece, 25-26 September 2013.

Forum, Courses and Seminars

Registration to the Umbria Region list of the “Expert technicians in environmental Acoustics” (December 2014)

Buildings Energy performance’s certifier (November 2013).

Licensed civil and environmental engineer (license no. A3489).

Expert technician in energy and environmental management, FORMA.Azione (June 2012).

Expert technician in accessible design, ZEROBARRIERE (June 2012).

Course in specific professional risks, according to article 22 comma 1 of D. Lgs. 626/94.

ECDL (European Computer Driving Licence), exams:

- Basic concepts of IT
- Use of computers – File management
- Word processing
- Spreadsheet
- Database
- Presentation
- Computer networks - Internet

JOB EXCHANGE:

- Lessons: 20 hours at ITIS A.Volta
- Stage: 160 hours at CDP s.p.a. (Concessionaria De Poi) - Ellera di Corciano, Perugia

Experiences abroad

Erasmus+ Programme attended at the National and Kapodistrian University of Athens – Physical department, Athens, Greece. Tutor Prof. M. Santamouris. Main research focus: Energy Poverty, LCA analysis, and building energy efficiency (10/06/2015 – 10/08/2015).

Erasmus Placement Programme attended at The Cyprus Institute – EEWRC centre, Nicosia, Cyprus. Tutor Prof. M. Santamouris. Main research focus: “Freezing of Pools” in Cyprus, monitoring and analysis of the indoor microclimate conditions of low income families’ buildings in Cyprus (05/03/2014 – 05/06/2014).

I studied in EC school in London for a month (August 2011) in a family accommodation.

International honours and awards

- June, 2016. IC2UHI Award: Award to Italy at the 4th International Conference on Countermeasures to Urban Heat Island in Singapore. In recognition of continuously conducting research and outreach in urban heat island related topics, “*Outstanding UHI Group of Researchers Award*”.
- October, 2014. IC2UHI Award: Best paper award at the 3rd International Conference on Countermeasures to Urban Heat Island in Venice, Italy, for the paper “Experimental analysis and optimization of polyurethane waterproof liquid membrane for cool roof application” by A.L. Pisello, V.L. Castaldo, G. Pignatta, F. Cotana. Prize for the “*Unique experimental approach for the UHI countermeasures*”.

PERSONAL SKILLS AND COMPETENCES

Native language	Italian
Other languages	English (Upper Intermediate)
Social and organizational skills	Mediation skills. Goals focused. Team worker. Work well in multicultural environment. Teaching skills. Listening skills. Systematic learning. Fast learner. High accountability. Problem-solving skills.
Technical skills	Good knowledge of the most important programming languages. Excellent knowledge of civil design techniques. Good knowledge of physics and math-logic. Programming languages: <ul style="list-style-type: none">• Matlab• Fortran• Visual Basic Technical engineering programs: <ul style="list-style-type: none">• Sap2000• Ansys• Hyperworks (Hypermesh, Radioss, Hyperview)• Hec-ras• AutoCAD (2D-3D)• EneyPlus - DesignBuilder - OpenStudio• SimaPro• ENVI-Met• Q-Gis• SPSS• WUFI• Termus ACCA Generic programs: <ul style="list-style-type: none">• OpenOffice• Microsoft Office package• PinnacleStudio14• Sketchup• 3D Studio• Cinema 4D• CorelDRAW• Photoshop• Photopaint Operating systems: <ul style="list-style-type: none">• Windows• MacOS• iOS

Equipments:

- Portable emissometer
- UV-VIS-NIR Spectrophotometer with integrated sphere
- Climatic chamber
- Environmental sensors (T, Tsurf, RH, Heat flux, CO₂, etc..)
- Anemometer
- Rain gauge
- Albedometer and radiometer
- Black globe thermometer
- Infrared thermocamera
- Luxmetro
- Phonometer or sound level meter
- Globothermometer

Personal profile

I was born in Perugia (PG) on June 21th, 1986.

I am interested in sustainability, building energy efficiency, optimization of innovative materials, energy management, and education.

My main interests are music, foreign cultures, travelling and math. I like reading and playing the piano. I have a great concern for the environment and its preservation.

Willing to relocate.

Licence

B (car owner)

FURTHER INFORMATION

The undersigned authorizes the use of personal data according to the law 196/03.

