

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name, Surname	<b>Adriana Bernardi</b>
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Nationality	Italian
Place and Date of birth	Cittadella (Padova, Italy), 14 December 1955

## WORK EXPERIENCE

### **Head of Unit of Institute of Atmospheric Sciences and Climate in Padua (Italy)**

**Research Director** at CNR-Institute of Atmospheric Sciences and Climate

Moreover:

- Coordinator of 6 EU projects of FP6, FP7 and H2020 and Scientific Responsible in other 6 projects of EU FP6, FP7 and H2020. Participants of EU projects since FP1.
- Contract Professor at the University of Ferrara from 2000 to 2017, Faculty of Mathematical, Physical and Natural Sciences, Degree course in "Sciences and technologies for Cultural Heritage" (degree of II level) and "Technologies for Cultural Heritage" (degree of I level)
- Contract Professor at the University of Catania between 2005 and 2007 Degree course in "Science and Advanced Technologies applied to the conservation and restoration of Cultural Heritage".
- Responsible of other international (10) and national (14) research projects
- Promoter of a spin-off in the field of environmental monitoring and use of renewable energy in buildings, in particular historical ones. Actually shareholder.
- Coordinator of WG 4 "Energy and Environment" within Focus Area Cultural Heritage (FACH) of the European platform ECTP and representative of FACH within ECTP-PPP-E2B (Energy efficient buildings)
- Coordinator of Heritage and Regeneration (H&R) in ECTP European Platform
- Coordinator of the European Cluster NanomeCH "Nano and advanced materials for cultural heritage" since 2016
- Member of national and international committees for Standards on Cultural Heritage (UNI and CEN)
- Member of the Italian Consultation Panel for JPI on Cultural Heritage and global change
- Evaluator for the European Commission during FP5 and H2020.
- Evaluator for the Italian Ministry
- Editor of a national journal (Bollettino Geofisico) until 2016 and member of the editorial board of an international journal (Journal of Cultural Heritage)
- Teacher in numerous other specialist courses / masters / seminars in national and international private / public bodies
- Supervisor of numerous thesis of Master degree and PhD

## EDUCATION AND TRAINING

1978-79  
University of Padua - Degree in Physics

## LANGUAGES

Italian mother-tongue  
English optimum level  
French Optimum level

## RESEARCH ACTIVITIES

### Research sectors

Climate and indoor and outdoor microclimate, energy efficiency in historic buildings, environmental impact on materials, historical buildings management and conservation, human comfort technologies for the assessment and monitoring of material degradation, materials/technologies for the protection of Cultural Heritage.

### Recent Scientific Activities

#### European projects

- *Coordinator* of H2020 EU project “Most Easy, Efficient and Low Cost Geothermal Systems for Retrofitting Civil and Historical Buildings (GEO4CIVHIC)”. H2020- LCE 17 – 2017. (GA n.792355) 2018-2022
- *Coordinator* of H2020 EU project “Innovative pre-fabricated components including different waste construction materials reducing building energy and minimising environmental impacts” (InnoWEE) (GA no. 723916), (2016-2020)
- *Coordinator* of H2020 EU project “Cheap and Efficient Application of reliable Ground Source Heat exchangers and Pumps” (Cheap-GSHPs) (GA no. 657982), (2015-2019)
- *Coordinator* of FP7 EU project “Nano-systems for the conservation of immovable and moveable polymaterial Cultural Heritage in a changing environment” (NANOMATCH) (GA no. 2183182), (2011-2014)
- *Coordinator* of FP7 EU project “Technologies and tools to prioritize Assessment and diagnosis of air pollution impact on immovable and movable Cultural Heritage” (TeACH) (GA no. ENV-2007-212458), (2008-2011)
- *Coordinator* of FP5 EU project 2001-2004 “Determination of Conditions to Prevent Weathering due to Condensation, Particle Deposition and Micro-Organism Growth on Ancient Stained Glass Windows with Protective Glazing” (VIDRIO) (GA no. EVK4-CT-2001-00045), (2001-2004)

and

- *Scientific responsible* (partner) within the H2020 EU project “Development of a multi-stakeholder dialogue platform and Think tank to promote innovation with Nature based solutions” (ThinkNature). H2020- SC5-10-2016. (GA n. 730338), (2016-2019)
- *Scientific responsible* (partner) within the FP7 EU project “Energy efficient & Cost competitive retrofitting solutions for Shopping buildings” (ECOSHOPPING) (GA no. NMP2-LA-2013-609180), (2013-2017)
- *Scientific responsible* (partner) within the FP7 EU project “Energy Efficiency for EU Historic Districts Sustainability” (EFFESUS) (GA no. 314678), (2012-2016)
- *Scientific responsible* (partner) within the FP7 EU project “Multi-source Energy Storage System Integrated in Buildings” (MESSIB) (GA no. NMP-2007-211624), (2009-2013)
- *Scientific responsible* (partner) within the FP7 EU project “Advanced Infrastructure for Knowledge Based Services for Buildings Restoring” (H-KNOW) (GA no. NMP-2007-214567), (2009-2011)
- *Scientific responsible* (partner) within the FP6 EU project “Advanced Infrastructure for Knowledge Based Services for Buildings Restoring” ENV-2006-044208, (2006)

#### Other international projects

- *Scientific responsible* of “Analysis of the data of the microclimatic monitoring at the Cathedral of Santiago de Compostela”. (2009-2011)
- *Scientific responsible* of “Caractérisation dynamique des paramètres du microclimat sur les sites de prelevement à la grotte de Lascaux (France), (2008-2009)
- *Scientific responsible* of “Technical assistance for the collection of Environmental data at Hagr Quin and Mnajdra Temples, Qrendi, Malta”, (2005-2006)
- *Scientific responsible* of “Study of the thermo-hygro-metrical exchanges between environmental air stocked bags”, (2005-2006)
- *Scientific responsible* of “Microclimatic study of overseas shipments of packaged goods” (2004-2006)
- *Scientific responsible* of “Microclimatic study of bulk transport and unloading of crystalline dextrose” (2004-2005)
- *Scientific responsible* of “Microclimatic study of bulk transport and unloading of modified starches” (2004-2005) “Microclimatic study of the crystalline dextrose process” (2004-2005)

- *Scientific responsible* of CRAFT project “Production and control of heating systems suitable for the well-being of people and for the conservation of the works of art preserved in churches”, (1998-1999)

#### **National projects**

- *Scientific responsible* of “Microclimatic monitoring of the cupola of the S. Bernardino basilica– L’Aquila (Italy)”. (2016-2017)
- *Scientific responsible* of “Microclimatic monitoring at Tempietto Longobardo in Cividale del Friuli (Italy)”, (2008-2012)
- *Scientific responsible* of “Microclimatic monitoring at the Museum of Opera di Santa Croce – Florence (Italy)” (2009-2011)
- *Scientific responsible* of project “Spin-off for the construction of innovative meteorological and microclimatic sensors for monitoring in extreme environment”. (2006-2010)
- *Scientific responsible* of project “Microclimatic measurements at the Petrarca Tomb in Arquà Petrarca (PD) (Italy)”, (2003-2004)
- *Scientific responsible* of project “Microclimatic measurements at the courtyard of Michelozzo in Palazzo Vecchio (Florence- Italy)”, (2004)
- *Scientific responsible* of project “Construction and validation of innovative instruments for temperature and humidity” (2000)
- *Scientific responsible* of “Project on effects on microclimate after an installation of a heating system in the S. Giovanni Evangelista Church in Lecce (Italy)”, (1998-2000)
- *Scientific responsible* of project “Interaction between pollutants, environment and cultural heritage (1990-1993)
- *Scientific responsible* of project “Pollutants transport across the Alps”, Strategic Project EUROTRAC. (1987-1988)
- *Scientific responsible* of project “Analysis of the meteorological maps in occasion of special pollution episodes at Porto Marghera-Mestre and Venice”. (1983)

#### **Other**

- Member for the National standards UNI GL4 (Beni Culturali - Ambiente)
- Member of European standards CEN/TC 346/WG8 and CEN/TC 346/WG 12
- Editorial Director of the journal Bollettino Geofisico until 2016
- Member of the Editorial Advisory Board of the international Journal of Cultural Heritage

**Publications only from 2010:**Papers on ISI journals

- G. Dalla Santa, A. Galgaro, M. Cultrera, R. Sassi, P. Scotton, J. Mueller, D. Bertermann, D. Mendrinis, R. Pasquali, R. Perego, S. Pera, E. Di Sipio, G. Cassiani, M. De Carli, A. Bernardi (2020). An updated ground thermal properties database for GSHP applications. *Geothermics* 85:101758
- M. De Carli, A. Galgaro, G. Cadelano, F. Cicolin, S. Bobbo, J. Urchueguía, G. Mezzasalma, R. Pasquali, F. Poletto, A. Castelruiz Aguirre, A. J. Romanowsk, D. Poletto, D. Bertermann, R. Gavriluc, D. Mendrinis, D. Righini, B. Sanner, J. Vercruysse, L. Rossi, M. Vavallo, L. Mulè Stagno, M. Belliardi, A. Bernardi, (2019). The H2020 project GEO4CIVHIC (Most Easy, Efficient and Low Cost Geothermal Systems for Retrofitting Civil and Historical Buildings). In *REHVA Journal*, 4, 2019, 41-46
- Sergio Bobbo, Laura Fedele, Marco Curcio, Anna Bet, Michele De Carli, Giuseppe Emmi, Fabio Poletto, Andrea Tarabotti, Dimitris Mendrinis, Giulia Mezzasalma and Adriana Bernardi (2019) Energetic and Exergetic Analysis of Low Global Warming Potential Refrigerants as Substitutes for R410A in Ground Source Heat Pumps. *Energies* 2019, 12, 3538; doi:10.3390/en12183538
- Dalla Santa, G, Galgaro, Sassi R., A, Cultrera, M., Di Sipio, E., Sassi, R., Scotton, P., Mueller, J., Bertermann, D., Mendrinis, D., Pasquali, R., Pera, S., Perego, R., G. Cassiani, De Carli, M., Bernardi, A.(2019). An updated ground thermal properties database for GSHP applications. *Geothermics* 85 (2020) 101758
- L. Carnieletto, B. Badenes, M. Belliardi, A. Bernardi, S. Graci, G. Emmi, J. F. Urchueguía, A. Zarrella, A. Di Bella, G. Dalla Santa, A. Galgaro, G. Mezzasalma, M. De Carli, 2019 : A European database of building energy profiles to support the design of ground source heat pumps. *Energies* 2019, 12(13), 2496; <https://doi.org/10.3390/en12132496>
- D. Quaggiotto, A. Zarrella, G. Emmi, M. De Carli, L. Pockelé, J. Vercruysse, M. Psyk, D. Righini, A. Galgaro, D. Mendrinis, A. Bernardi, 2019: A simulation-based comparison between the thermal behaviour of coaxial and double U-tube borehole heat exchangers, *Energies* 2019, 12, 2321; doi:10.3390/en12122321
- 3.Perego R., Pera S., Galgaro A., Dalla Santa G., Cultrera M., and De Carli M., Emmi G., Bertermann D., Müller J., Mendrinis D., Karytsas C., Vercruysse J., Pasquali R., O'Neill N., Bernardi A., 2019 Economic, geological and technical potential mapping test for GSHP systems in Europe, European Geothermal Congress 2019
- G. Goli, F. Becherini, M. C. Di Tuccio, A. Bernardi and M. Fioravanti, 2019. Thermal expansion of wood at different equilibrium moisture contents, *Journal of Wood Science*, Springer open, <https://doi.org/10.1186/s10086-019-1781-9>
- D. Bertermann, A. Bernardi, L. Pockelé, A. Galgaro, M. Cultrera, M. De Carli, J. Müller, 2018 European project "Cheap-GSHPs": installation and monitoring of newly designed helicoidal ground source heat exchanger on the German test site, *Environmental Earth Sciences*, Springer Nature, <http://link.springer.com/article/10.1007/s12665-018-7343-4/fulltext.html>
- A. Galenda, F. Visentin, R. Gerbasì, M. Favaro, A. Bernardi, N. El Habra, 2018 Evaluation of self-cleaning photocatalytic paints: Are they effective under actual indoor lighting systems? *Applied Catalysis B: Environmental*, Volume 232, 15 September 2018, Pages 194–204
- M. De Carli , A. Bernardi, M. Cultrera, G. Dalla Santa, A. Di Bella, G. Emmi, A. Galgaro, S. Graci, D. Mendrinis, G. Mezzasalma, R. Pasquali, S. Pera, R. Perego and A. Zarrella, 2018: A Database for Climatic Conditions around Europe for Promoting GSHP Solutions. *Geosciences* 2018, 8, 71; doi:10.3390/geosciences8020071
- F. Becherini, E. Lucchi, A. Gandini, M. Casado Barrasa, A. Troi, F. Roberti, M. Sachini, M. C. Di Tuccio, L. Garmendia Arrieta, L. Pockelé, A. Bernardi, 2018: Characterization and thermal performance evaluation of infrared reflective coatings compatible with historical buildings, *Applied catalysis. B, Environmental (Print)*, Elsevier 194-2014. ISSN: 0926-3373 [10.1016/j.apcatb.2018.03.052](https://doi.org/10.1016/j.apcatb.2018.03.052) Elsevier BV <https://api.elsevier.com/content/article/PII:S0360132318301069?httpAccept=text/xml>
- F. Becherini, L. Del Favero, M. Fornasiero, A. Guastoni, A. Bernardi, 2018 Preventive conservation of big fossils against pyrite decay: the case study of the Palm trees Hall in Padova, Italy. *Minerals*, 8, 40
- J. Müller, A. Galgaro, G. Dalla Santa, M. Cultrera, C. Karytsas, D. Mendrinis, S. Pera, R. Perego, N. O'Neill, R. Pasquali, J. Vercruysse, L. Rossi, A. Bernardi and D. Bertermann, 2018

- Generalized Pan-European Geological Database for Shallow Geothermal Installations. *Geosciences* 2018, 8, 32;
- E. Lucchi, F. Becherini, M.C. Di Tuccio, A. Troi, J. Frick, F. Roberti, C. Hermannp, I. Fairnington, G. Mezzasalma, L. Pockel , A. Bernardi, 2017. Thermal Performance Evaluation and Comfort Assessment of Advanced Aerogel as Blown-In Insulation for Historic Buildings. *Building and Environment*, 122 (2017), 258,268
- E. Bourguignon, P. Tomasin, V. Detalle, J. Vallet, M. Labour , I. Olteanu, M. Favaro, M.A. Chiurato, A. Bernardi, F. Becherini, 2017 Calcium alkoxides as alternative consolidants for wall paintings: evaluation of their performance in laboratory and on site, on model and original samples, in comparison to conventional products. *Journal of Cultural Heritage*. <http://dx.doi.org/10.1016/j.culher.2017.07.008>
- 11.G. Dalla Santa, F. Peron, A. Galgaro, M. Cultrera , D. Bertermann, J. Mueller and A. Bernardi, 2017. Laboratory Measurements of Gravel Thermal Conductivity: A New Methodological Approach. *Energy Procedia* (on line). 125, 671-677. Elsevier. 10.1016/j.egypro.2017.08.287
- J. Turk, A.M. Pranjic, P. Tomasin, L.Škrlep, J. Antelo, M. Favaro, A. Sever Škapin & A. Bernardi, J. Ranogajec, M. Chiurato, 2017: Environmental performance of three innovative calcium carbonate-based consolidants used in the field of built cultural heritage. *Int J Life Cycle Assess* DOI 10.1007/s11367-017-1260-8
- A. Galgaro, G. Dalla Santa, M. Cultrera, D. Bertermann, J. Mueller, M. De Carli, G. Emmi, A. Zarrella, M. Di Tuccio, L. Pockel , G. Mezzasalma, M. Psyk, D. Righini, M. Bernini and A. Bernardi, 2017, EU project "Cheap-GSHPs": the geoexchange field laboratory. *Energy Procedia* (2017) pp. 511-519 DOI information: 10.1016/j.egypro.2017.08.175
- G. Dalla Santa, F. Peron, A. Galgaro, M. Cultrera , D. Bertermann, J. Mueller and A. Bernardi (2017) Laboratory Measurements of Gravel Thermal Conductivity: A New Methodological Approach. *Energy Procedia*. [www.sciencedirect.com](http://www.sciencedirect.com)
- A .Zarrella, G. Emmi, S. Graci, M. De Carli, M. Cultrera, G. Dalla Santa, A. Galgaro, D. Bertermann, J. M ller, L. Pockel , G. Mezzasalma, D. Righini, M. Psyk and A. Bernardi, 2017, Thermal Response Testing Results of Different Types of Borehole Heat Exchangers: An Analysis and Comparison of Interpretation Methods. *Energies* 2017, 10, 801; doi:10.3390/en10060801
- 10. Emmi G.; Zarrella A.; De Carli M.; S. Moretto, A. Galgaro, M. Cultrera M, M. Di Tuccio, A. Bernardi, 2017 Ground source heat pump systems in historical buildings: Two Italian case studies. *Energy procedia* (Online). Elsevier, 183-194. ISSN: 1876-6102. 10.1016/j.egypro.2017.09.383
- F. Becherini, J. Cassar, M. Galea, A. Bernardi, 2016, Evaluation of the Shelters over the Prehistoric Megalithic Temples of Malta: Environmental Considerations, *Environmental Earth Sciences*, 75: 1-13
- A. Bernardi A., 2016: Book review of "UNESCO in Southeast Asia World Heritage Sites in Comparative Perspective Edited by Victor T. King NIAS press 2016. *Journal of Cultural Heritage*. ISBN: 978-87-7694-173-4
- F. Becherini, A. Bernardi, M.C. Di Tuccio, A. Vivarelli, L. Pockel , S. De Grandi, S. Fortuna, A. Quendolo, 2016, Microclimatic monitoring for the investigation of the different state of conservation of the stucco statues of the Longobard Temple in Cividale del Friuli (Udine, Italy). *Journal of Cultural Heritage*, 18, 375-379
- A. Bernardi, F. Becherini, M.D. Romero-Sanchez, A. Lopez-Buendia, A. Vivarelli, L. Pockel , S. De Grandi, 2013: Evaluation of the effect of Phase Change Materials technology on the thermal stability of Cultural Heritage objects. *Journal of Cultural Heritage*, 15, 470-478.
- F. Becherini, A. Bernardi, A. Vivarelli, L. Pockel , S. De Grandi, A. Gandini, O. Garc a, M. Zubiaga, J. C. Espada Su rez, B. Sperandio, 2013: Environmental Risk Assessment and Preventive Conservation Strategy for the Porch of the Glory, Santiago of Compostela Cathedral. *Journal of Environmental Science and Engineering B2*, 299-303.
- A. Bernardi, F. Becherini, M. Verit , P. Ausset, M. Bellio, U. Brinkmann, H. Cachier A. Chabas, F. Deutsch, M.P. Etcheverry, F. Geotti Bianchini, R.H.M. Godoi, V. Kontozova-Deutsch, R.A. Lef vre, T. Lombardo, P. Mottner, C. Nicola, I. Pallot Frossard, S. R lleke, H. R mich, G. Sommariva, M. Vallotto, R. Van Grieken, 2013: Conservation of stained glass windows with protective glazing: main results from the European VIDRIO research programme. *Journal of Cultural Heritage*, 14, 527-536.
- Bernardi A., Becherini F., De Grandi S., Pockel  L., 2012: Conservation of stained glass windows: an innovative user-friendly portable device coming from the EU-VIDRIO Project. *Journal of Environmental Science and Engineering B*, 1B, 4, 2012, 519-526.
- A. Bernardi, M. Favaro, T. Nijland, O. Garc a, V. Detalle, K. Wittstadt, M. D. Romero Sanchez, L. Pockel , B. Kunday, B. Verhey, U. Brinkmann, G. de' Micheli, M. Labour , B. Mueller, I. D. Olteanu, 2012. Nanomatch: A European Project to Develop Consolidants Through the Synthesis

of New Inorganic Nanomaterials for the Conservation of Built Heritage. *International Journal of Heritage in the Digital Era*, 1, 2012, 307-312.

- Becherini F., Bernardi A., Frassoldati E., 2010. Microclimate inside a semi-confined environment: valuation of suitability for the conservation of heritage materials. *Journal of Cultural Heritage*, 11, 471-476. ISSN: 1296-2074, DOI: 10.1016/j.culher.2010.01.005.

- Nava S., Becherini F., Bernardi A., Bonazza A., Chiari M., García Orellana I., Lucarelli F., Ludwig N., Migliori A., Sabbioni C., Udisti R., Valli G., Vecchi R., 2010: An integrated approach to assess air pollution threats to cultural heritage in a semi-confined environment: The case study of Michelozzo's Courtyard in Florence (Italy). *Science of the total environment*, 408, 1403-1413.

#### Papers on peer reviewed journals

- I. Natali, P. Tomasin, F. Becherini, A. Bernardi, C. Ciantelli, M. Favaro, O. Favoni, V.J. Forrat Pérez, I.D. Olteanu, M.D. Romero Sanchez, A. Vivarelli, A. Bonazza, 2015: Innovative consolidating products for stone materials: field exposure tests as a valid approach for assessing durability. VIII Congresso Nazionale di Archeometria, Scienze e Beni Culturali: stato dell'arte e prospettive, Bologna 5 - 7 February 2014. *Heritage Science* 2015, 3:6.

- M.C. Di Tuccio, N. Ludwig, A. Bernardi, 2015: Indagini termografiche del quadro fessurativo della statua in materiale composito: il Ratto delle Sabine. VIII Congresso Nazionale di Archeometria, Scienze e Beni Culturali: stato dell'arte e prospettive, Bologna 5 - 7 February 2014. *Heritage Science* 2015, 3:10.

#### Books:

- Bernardi A., 2008: *Microclimate inside Cultural Heritage Buildings*. Il Prato. 171 pp. ISBN 978-88-6336-032-5

- Bernardi A., 2003: *Conservare opere d'arte: Il microclima negli ambienti museali*. Il Prato. 143 pp. ISBN 88-87243-61-1

#### Book's chapter

- A. Bernardi, 2016, *Indoor Climate and Energy Requirements in Historical Buildings*, *Cultural Heritage from Pollution to Climatic Change*, Ed. Lefevre and Sabbioni, Edipuglia 2016

- M. Favaro, M. Chiurato, P. Tomasin, F. Ossola, N. El Habra, I. Svensson, E. Beckers, V.J. Forrat Pérez, M.D. Romero Sanchez, A. Bernardi, 2014: Calcium and magnesium alkoxides for conservation treatment of stone and wood in built heritage. Proceedings "Built Heritage: Monitoring Conservation Management", Milan, 18-20 November 2013, L.Toniolo, M. Boriani and G. Guidi Editors, Springer 2014, 413-422.

#### Conference proceedings

- A. Galgaro, G.Dalla Santa, M. De Carli, G. Emmi, D. Bertelman, J. Mueller, A. Castelruiz, R. Perego, S. Pera, G. Mezzasalma, A. Bernardi, 2019, New tools to support the designing of efficient and reliable ground source heat exchangers: the Cheap-GSHPs databases and maps. In: Proceedings of the European Geothermal Union 2019, Vienna, Austria (7-12 April 2019)

- R. Perego, S. Pera, A. Galgaro, G. Dalla Santa, M. Cultrera, and M. De Carli, G. Emmi, D. Bertermann, J. Müller, D. Mendrinos, C. Karytsas, J. Vercruysse, R. Pasquali, N. O'Neill, A. Bernardi (2019). - Economic, geological and technical potential mapping test for GSHP systems in Europe. In: Proceedings of the European Geothermal Congress 2019, The Hague, The Netherlands (11-14 June 2019)

- M. De Carli, A. Castelruiz Aguirre, A. Zarrella, L. Cardoso, S. Noyé, R. Gast, S. Graci, G. Emmi, D. Bertermann, J. Müller, A. Galgaro, G. Dalla Santa, F. Poletto, G. Mezzasalma, S. Contini, J. Urchueguía, M. Belliardi, R. Pasquali, A. Bernardi, 2019, A Decision Support System (DSS) and a design tool for helping stakeholders and designers in the choice of GSHPs. European Geothermal Congress. 11-14 June 2019, The Hague, The Netherlands

- A. Bernardi, L. Pockelé, B. Sanner, F. Cicolin, S. Bobbo, M. De Carli, A. Galgaro, J. Urchueguía, G. Mezzasalma, R. Pasquali, F. Poletto, A. Castelruiz Aguirre, D. Ulrich, D. Poletto, - R. Gavriiliuc, D. Mendrino, D. Righini, J. Vercruysse, L. Rossi, M. Vallo, L. Mule'Stagno, M. Belliardi and D. Bertermann, 2019, Innovative drilling methods, heat pumps and tools to address shallow geothermal in the built environment: H2020 project - GEO4CIVHIC. In: Proceedings of the European Geothermal Congress 2019, The Hague, The Netherlands (11-14 June 2019)

-M. De Carli, A. Castelruiz Aguirre, A. Zarrella, L. Cardoso, S. Noyé, R. Gast, S. Graci, G. Emmi,

- D. Bertermann, J. Müller, A. Galgaro, G. Dalla Santa, F. Poletto, G. Mezzasalma, S. Contini, J. Urchueguía, M. Belliardi, R. Pasquali, A. Bernardi, 2019, Two software tools for facilitating the choice of ground source heat pumps by stakeholders and designers. CLIMA, 26-19 May 2019, Bucharets, Romania.
- Luc Pockelé, Burkhard Sanner, Adriana Bernardi, 2018: A new effort to address shallow geothermal energy supply in the built environment: H2020-Project GEO4CIVHIC. ISEC 2018. 1-5 October 2018, Graz (Austria)
- A. Bernardi, S. Tamburini, C. Failla, S. Signorini, F. Sonzogni, 2018: The project InnoWEE: from waste to Energy efficiency. ICD Italian Concrete Days Congress- Lecco June 2018
- R. Perego, s. Pera, A. Galgaro, G. Dalla Santa, M. Cultrera, M. De Carli., G. Emmi, D. Bertermann, J. Müller, D. Mendrinós, C. Karytsas, J. Vercruyssen, R. Pasquali, N. O'Neill, A. Bernardi, 2018, Mapping the techno-economic potential of closed-loop geothermal systems: a Europe-tested method. Swiss Geoscience Meeting 2018, 30 November- 1 December, Bern, Switzerland.  
[https://geoscience-meeting.ch/sgm2018/wp-content/uploads/abstracts/Perego\\_Rodolfo\\_09-03-18-10-14-23.pdf](https://geoscience-meeting.ch/sgm2018/wp-content/uploads/abstracts/Perego_Rodolfo_09-03-18-10-14-23.pdf)
- V. Ducman, A. Frankovič, S. Kramar, S. Tamburini, M. Natali and A. Bernardi, 2018: Durability Assessment of Geopolymer Façade Panels based on CDW, IV International Conference Progree of Recycling in the Built Environment. 11-12 October 2018-Lisbon Portugal, 307-314
- N. Knez, F. Knez, V. Ducman, S. Tamburini, M. S. Natali, A. Bernardi, 2018: Reaction to Fire Properties of CDW-Based Geopolymer Panels. IV International Conference Progree of Recycling in the Built Environment. 11-12 October 2018-Lisbon Portugal, 488-495
- A. Bernardi, S. Tamburini, C. Failla, S. Signorini, F. Sonzogni: Il progetto InnoWEE: dai materiali di scarto all'efficienza energetica. Convegno ICD 2018
- A. Bernardi, M. De Carli, F. Fellin, A. Galgaro, G. Mezzasalma, L. Pockelé, G. Alessio, M. Marchesin, 2017, Diagnosi energetica e proposte di intervento per l'efficientamento della rete di teleriscaldamento e teleraffrescamento dell'Area CNR di Padova. Atti convegno AICARR, 21 giugno 2017
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## PATENTS

### Patents:

- National patent "Rilevatore di condensa e metodo per la rilevazione di condensa su una superficie" (publication no. 0001355070 of 20/02/2009) extended to international patent



“Condensate detector and method for detecting condensate on a surface” (publication no. WO 2005/078421 of 25/08/2005)

- National patent no. PD2014A000301 of 11/11/2014 “Metodo per la preparazione di sospensioni di particelle di alcossidi di metalli alcalino-terrosi” (Favaro, Chiurato, Tomasin, Ossola, Bernardi)

## MAIN MONUMENTS STUDIED

### International:

- Sistina Chapel, Rome (Italy) (UNESCO)
- British Museum, London (UK)
- Louvre Museum, Paris (France)(UNESCO)
- Museo dell' l'Orangerie Museum, Paris (France) (UNESCO)
- Sveti Stephan Church, Nassebar, (Bulgaria) (UNESCO)
- Royal Museum of Fine Arts, Antwerp (Belgium) (UNESCO)
- Sainte Chapelle, Paris (France)( UNESCO)
- Cologne Cathedral (Germania)( UNESCO)
- Saint Eustache Church - Paris (France)( UNESCO)
- Hagar Qim and Mnajdra Temples (Malta)(UNESCO)
- Kunsthistorisches Museum, Vienna (Austria)
- Basilique Saint Urbain de Troyes (France) (UNESCO)
- Lascaux caves (France)(UNESCO)
- Santiago de Compostela Chathedral (UNESCO)
- Stavropoleos Monastery, Bucharest (Romania)
- Oviedo Chathedral (Spain)
- Technical Museum Nikola Tesla, Zagreb (Croatia)
- Serbian orthodox Bodani Monastery , Bodany (Serbia)
- Bosnia Historical Museum, Sarajevo (Bosnia and Herzegovina)

### National:

- Last Supper , Milano (UNESCO)
- Uffizi Galleries, Florence (UNESCO)
- Palazzo Chiericati, Vicenza (UNESCO)
- Museo Correr, Venezia (Lista UNESCO)
- Biblioteca Marciana, Venezia UNESCO)
- Aureliana Column, Rome (UNESCO)
- Traiana Column, Rome (UNESCO)
- Ducal Palace, Urbino (UNESCO)
- Ara Pacis, Rome (UNESCO)
- Pisa Tower (UNESCO)
- Palazzo Vecchio – Florence (UNESCO)
- Palazzo Diamanti (Ferrara) (UNESCO)
- Santa Croce Church – Florence (UNESCO)
- Chatedral, Orvieto
- S. Maria Foris Portas, Castel Seprio, Varese
- Petrarca Tomb – Arquà Petrarca, Padoue
- Anatomico Theatre, Padoue
- Sala dei Giganti, Palazzo dei Carraresi, Padoue
- S. Giovanni Evangelista Church - Lecce”
- S. Salvatore Church- Copertino, Lecce”
- Museo Civico, Pistoia
- Zandonai Theater – Rovereto (TN)
- Studio del Vasari – Florence
- S. Croce Church – Florence (UNESCO)
- Museo di S. Croce Museum – Florence (UNESCO)
- Museo del Duomo – Florence (UNESCO)
- Longobard Temple, Cividale del Friuli (UD) (UNESCO)
- San Bernardino Basilica – L'Aquila
- Ca' Rezzonico and Ca' Lupelli (Venice)