

## CURRICULUM VITAE ET STUDIORUM

CONTACT INFORMATION		PERSONAL INFORMATION	
Name	Chiara Ciantelli	Citizenship	Italian
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### SCIENTIFIC BACKGROUND

- **January 2014 → April 2017**

Doctorate in Earth Sciences at the University of Ferrara in collaboration with the Italian National Research Council - Institute of Atmospheric Sciences and Climate (CNR-ISAC), Bologna. Research topic: "Impact of climate and pollution changes on Cultural Heritage sites in Latin America: characterization and risk assessment". Title: "*ENVIRONMENTAL IMPACT ON UNESCO HERITAGE SITES IN PANAMA*". Supervisors: Dr Alessandra Bonazza e Dr Carmela Vaccaro.

- **May 2012 → December 2013**

Traineeship at the CNR-ISAC Bologna, within the Group: Natural, environmental and anthropic hazards of cultural heritage

([http://www.isac.cnr.it/en/research\\_groups/natural-environmental-and-anthropic-hazards-cultural-heritage](http://www.isac.cnr.it/en/research_groups/natural-environmental-and-anthropic-hazards-cultural-heritage)).

Main Activities: Characterization of ancient hydraulic mortars belonging to archaeological sites of the Mediterranean Basin. Analyses performed: Polarized Light Microscopy (PLM), X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM) coupled with Energy Dispersive X-Ray Spectrometer (EDX) and Differential Thermal Gravimetric Analyses (DTA-TGA).

Chemical and mineralogical characterization of degradation products due to the pollution impact on architectural surfaces: sampling and investigation of different areas of the facade of the Milan Cathedral (HERMES project).

- **2007 → 2010**

Master degree in Conservation and Restoration Sciences and Technologies of Cultural Heritage, at University of Bologna (Italy). Thesis on "Laboratory experimental diagnosis of historic masonry by acoustic methods", carried out at the Department of Civil, Environmental and Materials Engineering, University of Bologna. Supervisor: Prof. Ing. Giovanni Pascale, Co-Supervisor: Prof. Arch. Camilla Colla. Graduation mark: 110 cum laude.

- **2003 → 2007**

Bachelor degree in Conservation and Restoration Technologies of Cultural Heritage, University of Bologna (Italy). Thesis on "Mineralogical and petrographic characterization of construction materials belonging to ancient well-curbs in Bologna", carried out at the Department of Geological Sciences, University of Bologna. Supervisor: Prof. Gian Carlo Grillini, Co-Supervisor: Prof. Vanna Minguzzi. Graduation mark: 110 cum laude.

### PUBLICATIONS and SCIENTIFIC WORKS

#### PUBLICATIONS

- Grillini G. C., Minguzzi V., **Ciantelli C.**, Secchi C., 2017. "Le vere da pozzo nella città di Bologna - Studio dei materiali e stato conservativo", *Kermes* n.99, Lexis.
- Bonazza A., Vidorni G., Natali I., **Ciantelli C.**, Giosuè C., Tittarelli F., 2017. "Durability assessment to environmental impact of nano-structured consolidants on Carrara marble by field exposure tests," *Science of the Total Environment*, Volume 575, p.23-32, DOI: 10.1016/j.scitotenv.2016.10.004.
- Natali I., Tomasin P., Becherini F., Bernardi A., **Ciantelli C.**, Favaro M., Favoni O., Forrat Pérez V. J., Olteanu I.D., Romero Sanchez M.D., Vivarelli A. and Bonazza A., 2015. "Innovative consolidating products for stone materials: field exposure tests as a valid approach for assessing durability." *Heritage Science* 2015:3:6. DOI: 10.1186/s40494-015-0036-3.
- Zanasi A., De Nuntiis P., Mazzolini M., **Ciantelli C.**, Alemanni M., Ierna C. M., Mastroberto M., Nardi E. and Morselli-Labate, A. M., 2015. "Can an ozone system generator reduce indoor triggers in asthmatic patient?" *J Exp Integr Med*, 5 (3), 128-136. doi:10.5455/jeim.160715.or.134.
- Bonazza A., **Ciantelli C.**, Sardella A., Pecchioni E. Favoni O., Natali I., Sabbioni C., 2013. "Characterization of hydraulic mortars from archaeological complexes in Petra", *Periodico di Mineralogia Special Issue "Ancient and Modern Mortars in Cultural Heritage"*, 82, 2, 459-475, DOI: 10.2451/2013PM0027.
- Daltri A, Negrini D. (Archivio Storico Alma Mater) con la collaborazione di Alongi S., Carburì P., **Ciantelli C.**, Fanti S., Fernus F., Greco V., Mantovani F., 2012. CD-Rom within the text: "La facoltà di lettere e filosofia dell'Università di Bologna" a cura di Carla Giovannini, Bononia University Press.

#### PROCEEDINGS

- **Ciantelli C.**, Pascale G., Colla C., 2017. "Diagnostica delle murature storiche con prove soniche: sperimentazione in laboratorio", in «I giovani e il restauro Arte nel tempo: significato, trasformazione e conservazione » edited by

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Daphne De Luca, February, 24-26, 2016, Palazzo Massimo Roma, Il Prato, pp. 232 ISBN 978-88-6336-332-6.

- **Ciantelli C.**, Bonazza A., Sardella A., Sabbioni C., Vaccaro C., Favoni O., Tittarelli F., A., R. A. Suñé Martínez, Suñé Martínez R.A., 2016. "The Panamanian Fort of San Lorenzo: State of conservation of construction materials due to environmental impact" paper accepted by HERITAGE 2016 International Conference, July, 12-15, 2016.
- **Ciantelli C.**, Déqué M., Palazzi E., Vaccaro C., von Hardenberg J., Bonazza A., 2016. "Impact of a Changing Environment on Panamanian UNESCO sites for a Sustainable Culture", Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 40 (2016) 88° Congress SGI, Napoli 2016 © Società Geologica Italiana, Roma 2016, p. 856.
- **Ciantelli C.**, Bonazza A., Sabbioni C., Suñé Martínez R.A., Vaccaro C., 2015. "San Fernando Batteries in Portobelo - Panama: building materials characterization and environmental impact evaluation", Defensive Architecture of the Mediterranean. XV to XVIII centuries / Vol II / Rodríguez-Navarro (Ed.) © 2015 Editorial Universitat Politècnica de València. 353-356. DOI: <http://dx.doi.org/10.4995/FORTMED2015.2015.1754>

### ORAL PRESENTATIONS

- **Bonazza A.**, **Ciantelli C.**, Sardella A., Vaccaro C., 2017. Evaluation of climate change impact on Panamanian UNESCO sites as contribution to preventive conservation, XXVI Materials Research Congress, 20 - 25 August 2017, Cancún, México ([https://mrs-mexico.org.mx/imrc2017/app\\_abstract-pdf.php?id\\_res=02070](https://mrs-mexico.org.mx/imrc2017/app_abstract-pdf.php?id_res=02070)).
- **Ciantelli C.**, Sardella A., Vaccaro C. and Bonazza A., 2017. "Investigation on construction materials and their environmental interaction at the Panamanian UNESCO sites", TECHNART 2017 conference, Bilbao, May 2 - 6, 2017.
- **Ciantelli C.**, 2016. "Impacto del medio ambiente sobre los sitios UNESCO en Panamá", workshop held at the Panamá Viejo (Panama) 11/10/2016.
- **Ciantelli C.**, 2016. "Patrimonio cultural panameño en un medio ambiente cambiante", conference held at the Panamá Viejo (Panama) 11/10/2016.
- **Ciantelli C.**, Déqué M., Palazzi E., Vaccaro C., von Hardenberg J., Bonazza A., 2016. "Impact of a Changing Environment on Panamanian UNESCO sites for a Sustainable Culture, 88° Congress of the Italian Geological Society, 7-9 settembre 2016, Napoli.
- **Ciantelli C.**, Bonazza A., Favoni O., Tassinari R., Vaccaro C., 2016. The Panamanian UNESCO sites: construction materials and environmental decay", IX AIAR National Congress, Arcavacata di Rende (Cosenza, Italy), March, 9-11, 2016.
- **Ciantelli C.**, Pascale G., Colla C., 2016. "Diagnostica delle murature storiche con prove soniche: sperimentazione in laboratorio", at the "I Giovani e il Restauro" Roma, February, 24-26, 2016.
- **Ciantelli C.**, Bonazza A., Sabbioni C., Suñé Martínez R.A., Vaccaro C. 2015. "San Fernando Batteries in Portobelo - Panama: building materials characterization and environmental impact evaluation". FORTMED - International Conference on Modern Age Fortifications of the Western Mediterranean coast, Valencia, October, 15-17, 2015.
- **Ciantelli C.**, 2014, "Environmental Impact on UNESCO Archaeological Sites in Panamá", at the Patronato de Panamá Viejo.
- Bonazza A., **Ciantelli C.**, Sardella A., Pecchioni E. Favoni O., Natali I., Sabbioni C., 2014, ""Great Temple" e "Garden and Pool Complex" a Petra: Caratterizzazione di malte idrauliche archeologiche", Salone dell'arte del Restauro e della Conservazione dei Beni Culturali e Ambientali, Ferrara.
- **Natali I.**, Becherini F., Bernardi A., **Ciantelli C.**, Favoni O., Forrat Pérez V. J., Olteanu I., Romero Sanchez M. D., Bonazza A., "Innovative consolidating agents for stone materials: climate impact evaluation", VIII National Congress of "Archeometria Scienze e Beni Culturali: stato dell'arte e prospettive", Bologna, February, 5 - 7, 2014.

### POSTERS

- **Ciantelli C.**, Carmela Vaccaro C., Bonazza A., 2016. "El conjunto monumental de Panamá Viejo: impacto del medio ambiente sobre los monumentos". Congreso de Antropología e Historia de Panamá 2016, 7-9/09/2016, Panamá.
- **Ciantelli C.**, Bonazza A., Ma Y., De Nuntiis P., Vaccaro C., Sabbioni C., 2015. "Environmental effects on monuments exposed in the Panamanian Climate: the Archaeological Site of Panamá Viejo". TECHNART International Conference - Catania, 27-30 Aprile 2015.
- Bonazza A., **Ciantelli C.**, De Nuntiis P., Ghedini N., Natali I., Ozga I., Sabbioni C., Vaccaro C., 2014. "Environmental Impact on UNESCO Archaeological Sites in Panama", VIII Congresso Nazionale di Archeometria Scienze e Beni Culturali: stato dell'arte e prospettive, Bologna, February, 5 - 7, 2014.
- **Ciantelli C.**, Bonazza A., Natali I., Favoni O., Sardella A., Morandi V., Pecchioni E., 2013. "Hydraulic reactions characterizing ancient mortars at the archaeological site of Petra". AMMC 7-8/02/2013 - Conference on Ancient and Modern Mortars.

### PERSONAL SKILLS AND COMPETENCES

Other languages: **English: C1 LEVEL; Spanish: A2 LEVEL**