

CURRICULUM VITAE OF PAOLA ANTONACI

PERSONAL INFORMATION

<i>Family name, First name</i>	Antonaci, Paola
<i>Date of birth</i>	April, 23 rd , 1976
<i>Nationality</i>	Italian
<i>Researcher unique identifier(s)</i>	Scopus Author ID 8731025900, orcid.org/0000-0002-3146-9106
<i>URL for web site</i>	http://www.diseg.polito.it/personale/scheda/%28nominativo%29/paola.antonaci

EDUCATION

<i>2007</i>	PhD in Engineering Structures Dept. of Structural and Geotechnical Engineering, Politecnico di Torino
<i>2001</i>	2001 Master of Science in Building Engineering First Faculty of Engineering, Politecnico di Torino

ACADEMIC POSITIONS

<i>2006-today</i>	Assistant Professor Dept. of Structural, Geotechnical and Building Engineering, Politecnico di Torino
<i>2002-2006</i>	Assistant Professor with time contract Dept. of Structural and Geotechnical Engineering, Politecnico di Torino

RESEARCH INTERESTS AND MAJOR COLLABORATIONS

<i>2014-today</i>	<ul style="list-style-type: none">• Processing and mechanical investigation of sustainable geopolymers (in collaboration with prof. P. Palermo, Dept. of Appl. Sci. and Tech., Politecnico di Torino)
<i>2012-today</i>	<ul style="list-style-type: none">• Development and characterization of self-healing cementitious composites (in collaboration with Dr. F. Canonico, Dr. S. Irico and Dr. G. Gastaldi, Buzzi UNICEM SpA, Casale Monferrato, Italy)• Non destructive characterization of cracking in cement-based materials by nonlinear ultrasounds (in collaboration with Dr. M. Griffa, Swiss Federal Lab. for Materials Science and Technology – EMPA – ETH Domain, Switzerland)
<i>2011-today</i>	<ul style="list-style-type: none">• Encapsulation techniques for healing agents in self-healing systems. Smart concretes for civil engineering applications (in collaboration with Prof. JM. Tulliani and Dr. A. Formia, Dept. of Applied Sci. and Tech., Politecnico di Torino)• Bio inspired materials and systems (in collaboration with Prof. N. Pugno and Dr. E. Lepore, Dept. of Civil, Environmental and Mechanical Engineering, University of Trento)• Modeling and FEM simulation of evolutionary systems (in collaboration with Dr. F. Borgia, Dept. of Physics, Università di Torino)• Structural mechanics in biomedical systems (in collaboration with Prof. C. Surace, Dept. of Struct., Geotech. and Building Eng., Politecnico di Torino)
<i>2007-today</i>	<ul style="list-style-type: none">• Nonlinear acoustic techniques for detection, characterization and monitoring of damage in consolidated granular media (in collaboration with Prof. M. Scalerandi and Prof. A. Gliozzi, Dept. of Appl. Sci. and Tech., Politecnico di Torino)
<i>2002-today</i>	<ul style="list-style-type: none">• Non destructive testing of materials and structures (in collaboration with Prof. P. Bocca, Dept. of Struct., Geotech. and Building Eng., Politecnico di Torino)

TEACHING ACTIVITY

2011-2015	Lecturer – Static and Stability of Masonry Buildings Master of Science in Building Engineering, Politecnico di Torino
2010-2011	Lecturer – Testing of Materials, Models and Structures Master of Science in Building Engineering, Politecnico di Torino
2005-2006	Invited Lecturer – Postgraduate Professional Course “La Formazione ad Arte” Progetto Mestieri Reali, Fondazione CRT, Torino
2013-today	Assistant Lecturer – Structural Bio and Nano Mechanics Master of Science in Biomedical Engineering, Politecnico di Torino
2002-today	Assistant Lecturer – Testing of Materials, Models and Structures Master of Science in Building Engineering, Politecnico di Torino
2004-2010	Assistant Lecturer – Static and Stability of Masonry Buildings Master of Science in Building Engineering, Politecnico di Torino
2009-2010	Assistant Lecturer – Structural Mechanics Items Bachelor/Master of Science in Building Engineering, Politecnico di Torino
2007-2010	Assistant Lecturer – Structural Mechanics Bachelor of Science in Building Engineering, Politecnico di Torino
2002-2003	Assistant Lecturer – Theory of Structures Master of Science in Building Engineering, Politecnico di Torino

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2002-today	19 MSc students in Building Engineering, Politecnico di Torino 4 MSc students in Civil Engineering, Politecnico di Torino 1 MSc student in Mechanical Engineering, Politecnico di Torino 1 MSc student in Biomedical Engineering, Politecnico di Torino
2015-2016	1 visiting PhD student, Tarbiat Modares University, Teheran (Iran)
2012-2013	1 Postdoc, Dept. of Structural, Geotechnical and Building Engineering, Politecnico di Torino

INSTITUTIONAL RESPONSIBILITIES

2013-today	Responsible for Examination Sessions and Lectures Timetables – Building Engineering Programme, Politecnico di Torino
2012-today	Member of the Board of Teachers – Building Engineering Programme, Politecnico di Torino
2010-today	Member of the Space Committee – Dept. of Structural, Geotechnical and Building Engineering, Politecnico di Torino

OTHER RESPONSIBILITIES

2012-today	Co-director of the Laboratory of Bio-inspired Nano-mechanics – Dept. of Structural, Geotechnical and Building Engineering, Politecnico di Torino (Italy)
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COMMISSIONS OF TRUST

2015-today	Member of the Editorial Board – Civil Engineering Journal
2014-today	Review Editor – Frontiers in Materials
2014-today	Reviewer – Current Advances in Civil Engineering; Automation in Construction; International Journal of Microstructure and Materials Properties; Structural Control and Health Monitoring
2012-today	Reviewer – Ultrasonics; Engineering Structures
2010-today	Reviewer – International Journal of Architectural Heritage
2007-today	Reviewer – Structural Engineering and Mechanics

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2003, 2005, 2007-2010 Member of the Italian Association of Stress Analysis (AIAS)

ORGANISATION OF SCIENTIFIC MEETINGS

2010 Coordinator of the Organizing Committee – XV ICNEM, 15th International Conference on Nonlinear Elasticity in Materials, July 4-11, 2010, Otranto (Italy)

INVITED PRESENTATIONS

2011 SSM measurements on reinforced concrete in presence of corrosion – XVI ICNEM – 16th International Conference on Nonlinear Elasticity in Materials, Prague (Czech Republic), June 5-11, 2011

2009 Nonlinear behaviour of discontinuities in concrete under compressive loads – XIV ICNEM – 14th International Conference on nonlinear Elasticity in Materials, Lisbona (Portugal), June 1-5, 2009

PRIZES AND AWARDS

2014 Winner of the reward “Premio pubblicazioni 2012”, sponsored by Politecnico di Torino (1,921.53 €)

2012 Co-author of the poster entitled “Nonlinear Mesoscopic Elasticity and microstructural developments in cement-based materials due to micro-damage processes”, awarded with the SOFT MATTER POSTER PRIZE by the scientific committee of the International Conference SoftCem 2012, Centro Stefano Franscini, Monte Verità (Switzerland), August 12-16, 2012

2011 Winner of the prize “Intervento a favore dei giovani ricercatori”, sponsored by Politecnico di Torino (3,000 €)

2011 Winner of the reward “Premio pubblicazioni 2009-10”, sponsored by Politecnico di Torino (1,598.30 €)

2009 Winner of the reward “Premio pubblicazioni 2007-08”, sponsored by Politecnico di Torino (1,276.97 €)

2008 Winner of the prize “Intervento a favore dei giovani ricercatori”, sponsored by Politecnico di Torino (3,000 €)

GRANTS AND FUNDING

2015-2017 Principal Investigator of the Research Project “SHEcrete – Advanced Self-HEaling concrete systems with improved reliability and durability”, funded by CRT in the frame of the Call La Ricerca dei Talenti, by Politecnico di Torino

2013-2016 Team Member of the Research Project “MIND – Engineering physiologically and pathologically relevant organ Models for the INvestigation of age related Diseases”, funded by MIUR

2012-2014 Work Package Leader of the Research Project “DUALCEM – Development of self-healing cementitious materials with high durability”, funded by Piedmont Region

2010-2012 Team Member of the Research Project “REFRESCOS – Preservation, safeguard and valorisation of masonry decorations in the architectural historical heritage of Piedmont”, funded by Piedmont Region

2008-2010 Team Member of the Research Project “Monitoring, inverse analysis, diagnostics and structural safety assessment of existing concrete dams”, funded by MIUR

2007-2011 Team Member of the Research Project “REMUUCK – Innovative methods for the eco-compatible and sustainable recycling of muck from tunnel excavation, also considering the potential content of noxious minerals”, funded by Piedmont Region

2004-2006 Team Member of the Research Project “Non-destructive methods for the identification and diagnosis of materials and structures”, funded by MIUR

LIST OF SELECTED PUBLICATIONS

- 2016 A. Formia, S. Irico, F. Bertola, F. Canonico, P. Antonaci, N.M. Pugno, J.M. Tulliani, Experimental analysis of self-healing cement-based materials incorporating extruded cementitious hollow tubes, *Journal of Intelligent Material Systems and Structures*, (online March 2016), pp. 1-20.
- 2015 P. Palmero, A. Formia, P. Antonaci, S. Brini, J.M. Tulliani, Geopolymer technology for application-oriented dense and lightened materials. Elaboration and characterization, *Ceramics International*, vol. 41, no. 10, part A (2015), pp. 12967-12979
- 2015 A. Formia, S. Terranova, P. Antonaci, N.M. Pugno, J.M. Tulliani, Setup of extruded cementitious hollow tubes as containing/releasing devices in self-healing systems, *Materials*, vol. 8, no. 4 (2015), pp. 1897-1923
- 2014 A. Formia, J.M. Tulliani, P. Antonaci, M. Sangermano, Epoxy monomers consolidant for lime plaster cured via a redox activated cationic polymerization, *Journal of Cultural Heritage*, vol. 15, no. 6 (2014), pp. 595-601
- 2014 C.C. Chou, E. Lepore, P. Antonaci, N. Pugno, M.J. Buehler, Mechanics of trichocyte alpha-keratin fibers: Experiment, theory, and simulation, *Journal of Materials Research*, vol. 30, no. 1 (2014), pp. 26-35
- 2013 M. Scalerandi, M. Griffa, P. Antonaci, M. Wyrzykowski, P. Lura, Nonlinear elastic response of thermally damaged consolidated granular media, *Journal of Applied Physics* vol. 113 (2013) 154902 (9pp)
- 2013 P. Antonaci, C.L.E. Bruno, M. Scalerandi, F. Tondolo, Effects of corrosion on linear and nonlinear elastic properties of reinforced concrete, *Cement and Concrete Research*, vol. 51 (2013), pp. 96-103
- 2013 A.S. Gliozzi, M. Scalerandi, P. Antonaci, One-channel time-reversal acoustics in highly attenuating media, *Journal of Physics D: Applied Physics* vol. 46 (2013) 135502 (8pp)
- 2012 P. Antonaci, P. Bocca, D. Masera, Fatigue crack propagation monitoring by Acoustic Emission signal analysis, *Engineering Fracture Mechanics*, vol. 81 (2012), pp. 26-32
- 2012 M. Scalerandi, A.S. Gliozzi, C.L.E. Bruno, P. Antonaci, Nonequilibrium phenomena in damaged media and their effects on the elastic properties, *Journal of the Acoustical Society of America* vol. 131, no 6 (2012), pp. 4304-4315
- 2010 P. Antonaci, C.L.E. Bruno, A.S. Gliozzi, M. Scalerandi, Monitoring evolution of compressive damage in concrete with linear and nonlinear ultrasonic methods, *Cement and Concrete Research*, vol. 40, no. 7 (2010), pp. 1106-1113
- 2010 P. Antonaci, C.L.E. Bruno, P.G. Bocca, M. Scalerandi, A.S. Gliozzi, Nonlinear ultrasonic evaluation of load effects on discontinuities in concrete, *Cement and Concrete Research*, vol. 40, no. 2 (2010), pp.340-346
- 2010 P. Antonaci, C.L.E. Bruno, A.S. Gliozzi, M. Scalerandi, Evolution of damage-induced nonlinearity in proximity of discontinuities in concrete, *International Journal of Solids and Structures*, vol. 47, issues 11-12 (2010), pp. 1603-1610
- 2010 Scalerandi M., Gliozzi A.S., Bruno C.L.E., Antonaci P., Non-equilibrium and elastic hysteresis in solids: disentangling conditioning from nonlinear elasticity, *Physical Review B*, vol. 81, no. 10 (2010), 104114 (17pp)
- 2009 C.L.E. Bruno, A.S. Gliozzi, M. Scalerandi, P. Antonaci, Analysis of elastic nonlinearity using the scaling subtraction method, *Physical Review B*, vol. 79, no. 6 (2009), pp. 064108 (13pp)
- 2006 P. Antonaci, P. Bocca, A. Grazzini, Long mechanical interaction between strengthening materials and preexisting structures, *Journal of Materials in Civil Engineering*, vol. 18, no. 5 (2006), 634-640
- 2005 P. Antonaci, P. Bocca, Experimental study for the evaluation of creep in concrete through thermal measurements, *Cement and Concrete Research*, vol. 35, no. 9 (2005), pp. 1776-1783

PATENTS

- 2015 (submitted) Processing of dense and lightened building materials by means of alkali activation of stone powder sludge – Authors: P. Palmero, A. Formia, M. Marian, M. Cerutti, J.M. Tulliani, M. Zerbinatti, P. Antonaci (application no. 102015000056183)