
Curriculum vitae et studiorum

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Education

2005- Degree of "Laurea" cum laude in Civil Engineering at the University of Basilicata, Potenza, Italy.

2009 - Ph.D. degree in "*Methods and Mathematical Models for Dynamic Systems*" at the University of Basilicata, Potenza, Italy.

Professional Experience

2010-2012. Research fellowship grant at the Department of Structures, Geotechnics and Applied Geology (DiSGG), University of Basilicata, Potenza, Italy on the project "*Evaluation of RC structures capacity. Design, analysis and retrofitting of membratures under axial load and bending moment*". Project responsible: prof. M. Laterza.

2013-2016. Research fellowship grant at the Department of European and Mediterranean Cultures: Architecture, Environment, Cultural Heritage (DiCEM), University of Basilicata, Matera, Italy, on the project "*FEM modelling of the joint panel for nonlinear analyses of existing RC structures with inadequate seismic capacity*". Project responsible: prof. M. Laterza.

From 2016. Assistant professor (Fixed-term Type A) on Structural Engineering at the Department of European and Mediterranean Cultures: Architecture, Environment, Cultural Heritage (DiCEM), University of Basilicata, Matera, Italy.

Main expertises

- Structural engineering
- Seismic vulnerability of reinforced concrete and masonry structures,
- Techniques of structural strengthening,
- Seismic isolation, confinement of concrete,
- Non-linear modelling of reinforced concrete and masonry structures,
- Analysis of natural and anthropic risks of cultural heritage,
- Dam structures.

Teaching activities

2009-2012. Course of "*Principles and Structural Systems for Architecture*" at the Engineering Faculty of University of Basilicata, Potenza, Italy.

From 2012. Course of "*Principles and Structural Systems for Architecture*" at the Architecture Faculty of University of Basilicata, Matera, Italy.

From 2014. Course of "*Mechanics of Materials and of Structures*" at the Architecture Faculty of University of Basilicata, Matera, Italy.

From 2018. Course of "*Reinforced Concrete Structures*" at the Architecture Faculty of University of Basilicata, Matera, Italy.

2015. Visiting Professor at "*Caledonian University*" of Glasgow (Scotland) (ERASMUS+ Mobility of STAFF in higher education). A series of key Lectures titled "*Seismic response of ancient italian masonry structures: learning from recent earthquakes*".

2016 and 2017. Visiting Professor at "*Univesidade de la Laguna*" of Tenerife (Spain) (ERASMUS+ Mobility of STAFF in higher education). A series of key Lectures titled "*Protection of Culturage Heritages: the new possible challenge*".

2018. Visiting Professor at "*Aristotle University*" of Thessaloniki (Greece) (ERASMUS+ Mobility of STAFF in higher education). A series of key Lectures titled "*Seismic risk of cultural heritage in the Mediterranean area*".

2019. Visiting Professor at "*Escuela Tècnica Superior de Arquitectura de Madrid*" (Spagna) (ERASMUS+ Mobility of STAFF in higher education). A series of key Lectures titled "*New perspectives for protection of Cultural Heritages area*".

Participation to research projects

2012. Participation with activity of structural controls to the agreement between the Department of Engineering and Environmental Physics (DIFA) of the University of Basilicata and the Transportation Department of Potenza Province "*Valutazione del rischio idrogeologico combinato (frane ed alluvioni) e del relativo grado di esposizione della rete stradale della Provincia di Potenza*".

2013 – 2014. Agreement between the Department of European and Mediterranean Cultures: Architecture, Environment, Cultural Heritage (DiCEM) of the University of Basilicata and the Transportation Department of Matera Province "*Verifica Statica del ponte sul fiume Cavone al km 7+00 della S.P. ex ss n. 176 ai fini della valutazione della sicurezza*". Project responsible: prof. M. Laterza.

From 2014. Agreement between the Department of European and Mediterranean Cultures: Architecture, Environment, Cultural Heritage (DiCEM) of the University of Basilicata and the Consorzio di Bonifica del Bradano e del Metaponto: "*CONVENZIONE PER LA VALUTAZIONE DELLA SICUREZZA SISMICA DELLO SBARRAMENTO, DELLE OPERE ACCESSORIE E DELLE SPONDE DEGLI INVASI DI SAN GIULIANO E DI GANNANO*". Project responsible: prof. M. Laterza.

Assistant of the local coordinator of the project "EU-NICE" ("Euroasian University Network for International Cooperation in Earthquakes"), Local coordinator: prof. M. Laterza, University of Basilicata, Matera, Italy.

Scientific coordinator of the project "Euro-Latin America partnership in natural Risk mitigation and protection of the Cultural Heritage" ("ELARCH" project, Ref. N. 552129-EM-1-2014-1-IT-ERA MUNDUS-EMA21). www.elarch.org., University of Basilicata, Matera, Italy.

Scientific responsible of the International Agreement between:

- Universidad de Chile (Cile) and University of Basilicata;
- Universidad Tecnologica de La Habana "José Antonio Echeverria" and University of Basilicata;
- Colombian Ministry of Culture, Universidad de Cartagena de Indias (Colombia) and University of Basilicata.

Scientific coordinator of the research project "Sustainable management of bamboo cane with a center of innovation in anti-seismic building in Manabì -Ecuador", agreement between Universidad Particular San Gregorio de Portoviejo (Ecuador) and University of Basilicata.

Scientific coordinator of the experimental laboratory of "Structures and experimental diagnostics project "Experimental laboratory for experimental diagnostics of natural and built environments, materials and structures", of the University of Basilicata, campus of Matera.

Scientific coordinator of the research project of the site-school "Cantiere Scuola", for the investigation of the excavated houses within the local calcarenite.

Master Theses published

1. Final defense on 19/10/2017. "*Sonic testing for the characterization of Masonry walls*". Candidate: Guillermo Yhor Kuchin Rumak. Supervisors: L. Ramos, M. D'Amato. Master of II Level SAHC- Structural Analysis of Monuments and Historical Constructions - Edition 2016-2017, University of Minho (Portugal).
2. Final defense on 19/10/2017. "*Seismic assessment of the Matera Cathedral*". Candidato: Josè Eduardo Ramirez Caparò. Supervisors: P. Lourenco, M. D'Amato. Master of II Level SAHC- Structural Analysis of Monuments and Historical Constructions - Edition 2016-2017, University of Minho (Portugal).
3. Final defense on 25/06/2018. "*Statistical analysis of structural damage detected in churches in south-central Mexico affected by the September 2017 earthquake*". Candidate: Pilar A. Baquedano Julià. Supervisors: M. D'Amato, M. Laterza. Master of II Level "P&P- Patrimoni & Progetto Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
4. Final defense on 25/06/2018. "*Seismic evaluation of th Church of Purgatory (Matera, Italy) and the Ancient temple of San Francisco (Cartagena, Colombia)*".

- Candidate: Cabrera Cabrera Melissa. Supervisors: M. D'Amato, M. Laterza, D. Oliveira. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
5. Final defense on il 25/06/2018. "*Characterization of 'Tufo' masonry of the Sassi of Matera, by the means of destructive and non-destructive tests*". Candidate: Guillermo Yhor Luchin Rumak. Supervisors: M. Laterza, M. D'Amato, L. Ramos. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 6. Final defense on 25/06/2018. "*Seismic vulnerability analysis: San Pietro Caveos Church (Matera)*". Candidate: Helena Somer Maccarini. Supervisors: M. Laterza, M. D'Amato, D. Oliveira. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 7. Final defense on 25/06/2018. "*Seismic safety assessment in the San Francesco D'Assisi church in Matera*". Candidate: Valeria Andrea Ortiz Gutierrez. Supervisors: M. Laterza, M. D'Amato. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 8. Final defense on 25/06/2018. "*Evaluation of the seismic safety of the San Giovanni Battista church (Matera, Italy)*". Candidate: Edwin Yair Ulloque Cuadros. Supervisors: M. D'Amato, M. Laterza, P. Lourenco. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 9. Final defense on 25/06/2018. "*A convective fractional & probabilistic inelastic damage constitutive model for double-leaf stone masonry under cyclic loads*". Candidate: Fernando M. Valdivia-Vilca. Supervisors: M. D'Amato, M. Laterza. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 10. Final defense on 25/06/2018. "*Seismic safety assessment of the church of Sant'Agostino*". Candidate: Eliseo Jahdiel Villafuerte Oporto. Supervisors: M. Laterza, M. D'Amato. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 11. Final defense on 03/07/2018. "*Estimation of main frequencies of historic masonry churches using experimental and analytical data*". Candidate: Saulo Yoel Lopez Montalban. Supervisors: M. D'Amato, M. Laterza, L. Ramos. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).
 12. Final defense on 03/07/2018. "*Limit and numerical analysis of Matera Cathedral*". Candidate: Josè Eduardo Ramirez Caparò. Supervisors: M. D'Amato, M. Laterza, P. Lourenco. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione

e recupero del Patrimonio Architettonico e del Paesaggio” - Edition 2017-2018, University of Basilicata (Italy).

13. Final defense on 03/07/2018. "*Proposal for the rehabilitation and refunctionalization of the building 'Cantuere scuola' in Matera (Italy)*". Candidate: Andres Camargo Bocanegra. Supervisors: M. D'Amato, M. Laterza, G. Andrisani. Master of II Level "P&P- Patrimoni & Progetto_Tutela, conservazione e recupero del Patrimonio Architettonico e del Paesaggio" - Edition 2017-2018, University of Basilicata (Italy).

Doctoral Theses published

1. Final defense on 02/03/2015. "*Assessment of old gravity designed RC frame structures*". Candidate: Suman Narsingh Rajbhandari. Supervisors: M. Laterza, M. D'Amato. Doctorate in "Seismic risk, structural and geotechnical engineering", XXVIII cycle, University of Basilicata (Italy).
2. Final defense on 02/03/2015. "*Ductile behavior of confined RC primary sections*". Candidate: Laksiri Pradeep Thanthirige. Supervisors: M. Laterza, M. D'Amato. Doctorate in "Seismic risk, structural and geotechnical engineering", XXVIII cycle, University of Basilicata (Italy).
3. Final defense on 20/02/2018. "*Masonry behavior subjected to cyclic load: theoretical aspects and fatigue assessment methods*". Candidate: Casamassima Vito Michele. Supervisors: M. D'Amato, M. Laterza, Doctorate in "Cities and Landscapes" XXX cycle, University of Basilicata (Italy).
4. Final defence on 21/03/2019. "*Religious heritage against seismic danger in Latin America: methodology for seismic risk assessment through a territorial approach and by learning from the Italian experience. Application in Chile, Mexico and Italy*". Candidate: Daniela Diaz Fuentes. Supervisor: M. D'Amato, Doctorate in "Cities and Landscapes" XXX cycle, University of Basilicata (Italy).
5. Final defence on 21/03/2019. "*Seismic behavior of the Italian Ancient Castles*". Candidate: Edgar Laguna Parra. Supervisor: M. D'Amato, Doctorate in "Cities and Landscapes" XXX cycle, University of Basilicata (Italy).

Proceeding papers published in national and international congresses

- 1) Braga F., Gigliotti R. e Laterza M., D'Amato M., 2007. "*Valutazione analitica degli effetti del confinamento sulla capacità di pilastri e travi in c.a. di strutture esistenti e di nuova progettazione*". XII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pisa, Polo Carmignani, 10-14 Giugno 2007). ISBN: 978-88-8492-458-2.
- 2) D'Amato M., Gigliotti R., Laterza M., 2007. "*Indagini distruttive e non distruttive su edifici in c.a. esistenti secondo l'OPCM 3274/3431: evidenze sperimentali e significatività dei risultati*". XII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pisa, Polo Carmignani, 10-14 Giugno 2007). ISBN: 978-88-8492-458-2
- 3) Braga F., Gigliotti R., Laterza M., D'Amato M., Kunnath S., 2009. "*Analisi non lineari di strutture in c.a.: implementazione in OpenSees del modello BGL di calcestruzzo confinato*". XIII Convegno Nazionale "L'Ingegneria Sismica in Italia".

- (Bologna, Palazzo Re Enzo, 28 Giugno-2 Luglio 2009). ISBN: 978-88-904292-0-0.
- 4) Braga F., Gigliotti R., Laterza M., D'Amato M., 2009. "*Modellazione non lineare di strutture esistenti in c.a.: confronti con risultati sperimentali*". XIII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Bologna, Palazzo Re Enzo, 28 Giugno-2 Luglio 2009). ISBN: 978-88-904292-0-0.
 - 5) Braga F., Gigliotti R., Laterza M., D'Amato M., 2011. "*Progettazione dell'armatura trasversale in funzione della duttilità di curvatura richiesta: prima formulazione di base*". XIV Convegno Nazionale "L'Ingegneria Sismica in Italia". (Bari, 18-22 Settembre 2011). ISBN: 978-88-7522-040-2.
 - 6) Braga F., Gigliotti R., Laterza M., D'Amato M., 2011. "*Valutazione della capacità per il miglioramento e l'adeguamento di edifici esistenti in c.a.*". XIV Convegno Nazionale "L'Ingegneria Sismica in Italia". (Bari, 18-22 Settembre 2011). ISBN: 978-88-7522-040-2.
 - 7) Braga F., Gigliotti R., Laterza M., D'Amato M., Kunnath S., 2012. "*The OpenSees BGL model for non-linear analyses of confined concrete elements*". I Convegno Italiano "OpenSees Days" (Roma 24 e 25 Maggio 2012). ISBN:9788890874543.
 - 8) Braga F., Gigliotti R., Laterza M., D'Amato M., Kunnath S., 2012. "*Non-linear analyses of reinforced concrete elements with pronounced slips of longitudinal bars*". I Convegno Italiano "OpenSees Days" (Roma 24 e 25 Maggio 2012). ISBN:9788890874543.
 - 9) Braga F., Gigliotti R., Laterza M., D'Amato M., L.P. Thanthirige, 2013. "*Critical regions of RC primary elements detailed in according to provisions rules for curvature ductility: comparisons and numerical analyses*". XV Convegno Nazionale "L'Ingegneria Sismica in Italia". (Padova, 30 Giugno-4 Luglio 2013). Padova University Press, ISBN:9788897385592.
 - 10) Braga F., Gigliotti R., Laterza M., D'Amato M., S.N. Rajbhandari, 2013. "*Modeling of longitudinal passing bars within the joint panel in poor anchorage condition*". XV Convegno Nazionale "L'Ingegneria Sismica in Italia". (Padova, 30 Giugno-4 Luglio 2013). Padova University Press, ISBN:9788897385592.
 - 11) Thanthirige L.P., Braga F., Gigliotti R., Laterza M., D'Amato M., 2013. "*Analytical cyclic constitutive model for confined concrete implementation in Open Sees: ConfinedConcrete02*". 4th ICSECM (International Conference on Structural Engineering & Construction Management), 13rd-15th December 2013, Kandy (Sri Lanka).
 - 12) Guida A., Laterza M., D'Amato M., Pagliuca A., 2015. "*Knowledge and qualification of three ancient masonry churches in Pomarico (Italy)*", 14th International Conference on Studies, Repairs and Maintenance of Heritage Architecture, STREMAH 2015, In WIT TRANSACTIONS ON THE BUILT ENVIRONMENT - ISSN:1746-4498 vol. 153.
 - 13) Laterza M., D'Amato M., Casamassima, 2015. "*Fatigue assessment of old existing masonry arch bridges: critical review of research and application to a case study*". XVI Convegno Nazionale "L'Ingegneria Sismica in Italia". (L'Aquila, 13-17 Settembre 2015). ISBN: 978-88-940985-6-3.

- 14) Laterza M., D'Amato M., Casamassima, 2015. "*Seismic assessment of old existing masonry arch bridges: an application to a case study*". XVI Convegno Nazionale "L'Ingegneria Sismica in Italia". (L'Aquila, 13-17 Settembre 2015). ISBN: 978-88-940985-6-3.
- 15) Thanthirige L.P., Deegala A. I., Laterza M., D'Amato M., 2016. "*Evaluation of seismic behavior of old reinforced concrete structures based on ductility limit*". ACEPS 2016 (International Symposium on Advances in Civil and Environmental Engineering Practices for Sustainable Development), Galle (Sri Lanka), 3rd March 2016. ISBN: 9772279132003. ISSN: 2279-1329.
- 16) Laterza M., D'Amato M., Diaz D., 2016. "*A simplified procedure for risk assessment of cultural heritage: definition and application to religious architecture*", Proceedings of the 7th International Conference on Safety and Durability of Structures - ICOSADOS 2016 (10th – 12nd May 2016, UTAD, Vila Real, Portugal). ISBN: 978-989-20-6676-9.
- 17) Laterza M., D'Amato M., Casamassima V.M., 2016. "*Fatigue behavior of old masonry arch bridges*", Proceedings of the 7th International Conference on Safety and Durability of Structures - ICOSADOS 2016 (10th – 12nd May 2016, UTAD, Vila Real, Portugal). ISBN: 978-989-20-6676-9.
- 18) Laterza M., D'Amato M., Diaz D., 2016. "*A simplified procedure for risk assessment of cultural heritage: definition and application to case studies*", Proceedings of the International Conference on Urban Risks - ICUR 2016 (30th June – 2nd July 2016, Lisbon, Portugal), pp. 51-58. ISBN: 978-989-95094-1-2.
- 19) Guida A., Laterza M., Pagliuca A., D'Amato M., Diaz D., Chietera M., 2016. "*Technological characterization for the mitigation of seismic risk. The case study of churches of 'Sassi di Matera'*", Proceedings of the Ar.Tec. Conference – Colloqui.AT.e 2016 (12nd – 15th October 2016, Matera, Italy). ISBN:978-88-492-3311-7.
- 20) Laterza M., D'Amato M., Casamassima V.M., 2016. "*Seismic performance evaluation of multi-span existing masonry arch bridge*", Proceedings of the 14th International Conference of Numerical Analysis and Applied Mathematics - ICNAAM 2016 (19th-25th September 2016, Rodos Palace Hotel, Rhodes, Greece), ISBN: 978-0-7354-1538-6, Theodore Simos and Charalambos Tsitouras, Article number 450010 Vol. 1863 of AIP Conference Proceedings, Published on 21 July 2017, <http://doi.org/10.1063/1.4992144>.
- 21) Laterza M., D'Amato M., Casamassima V.M., 2016. "*Fatigue behavior and residual service life of existing masonry arch bridge*", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 170. ISBN: 978-972-752-203-3.
- 22) Laterza M., D'Amato M., Diaz D., 2016. "*Ancient masonry cathedrals in Matera landscape: seismic assessment and risk mitigation*", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 159. ISBN: 978-972-752-203-3.

- 23) Laterza M., Guida A., D'Amato M., Pagliuca A., Diaz D., Chietera M., 2016. "Technical and Technological qualification of ancient buildings. The case of churches in 'Sassi di Matera'", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 241. ISBN: 978-972-752-203-3.
- 24) Laterza M., D'Amato M., Laguna E., 2016. "ELARCH Project: Prioritization of threats of cultural heritage for the development of a hazard map. The case study of Aragon's Castle, Venosa (Italy)", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 250. ISBN: 978-972-752-203-3.
- 25) Bernardo G., Laterza M., D'Amato M., Andrisani G., Diaz D., Laguna E., 2016. "ELARCH Project: the use of innovative product based on the nanotechnologies for the protection of architectural heritage", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 255. ISBN: 978-972-752-203-3.
- 26) Laterza M., Andrisani G., D'Amato M., Tonin T., Laguna E., 2016. "ELARCH Project: interdisciplinary and experimental studies in the field of cultural heritage", Proceedings of the XII Congresso International Sobre Patologia e Reabilitacao de Estruturas – CINPAR 2016 (26-29 October 2016, FEUP, Porto, Portugal). Paper n. 246. ISBN: 978-972-752-203-3.
- 27) Laterza M., D'Amato M., Gigliotti R., 2017. "Nonlinear seismic analysis of gravity designed RC structures". COMPDYN 2017, 6th ECOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, M. Papadrakakis, M. Fragiadakis (eds.), National Technical University of Athens, Rhodes Island, Greece, 15-17 June 2017. Vol. 1, Pages 1645-1655. Paper conference Id: 17613. ISBN: 978-618828441-8. doi: 10.7712/120117.5519.17613
- 28) Laterza M., D'Amato M., Casamassima V.M., 2017. "Modeling with fiber beam elements for load capacity assessment of existing masonry arch bridges". OpenSees Days Europe 2017, 1st European Conference on OpenSees, Porto, Portugal, 19-20 June 2017, Published by Faculty of Engineering, University of Porto (Portugal). Paper n. 34. ISBN:978-972-752-221-7.
- 29) Laterza M., D'Amato M., Diaz D., 2017. "Technical characterization and seismic assessment of historic buildings: the case of the churches in Sassi of Matera". Poster presentato al XXXI Salon Tecnologico de la Construction – EXCO 2017, 22-24 Febbraio 2017, organizzato dalla Escuela Técnica Superior de Ingeniería de la Edificación de la Universitat Politècnica de València (ETSIE-UPV), evento internazionale itinerante della XXXI International Itinerant Exhibition of the Construction Technologies - EXCO 2017, Matera (Italy), 3-11 Luglio 2017 (https://exco.webs.upv.es/en/exco_press/).
- 30) Laguna E., Bernardo G., Laterza M., D'Amato M., Diaz D., 2017. "Limes improved with graphene nanoparticles: a composite material for the protection of the architectural heritage". Poster presentato al XXXI Salon Tecnologico de la Construction – EXCO 2017, 22-24 Febbraio 2017, organizzato dalla Escuela Técnica Superior de Ingeniería de la Edificación de la Universitat Politècnica de

- València (ETSIE-UPV), evento internazionale itinerante della XXXI International Itinerant Exhibition of the Construction Technologies - EXCO 2017, Matera (Italy), 3-11 Luglio 2017 (https://exco.webs.upv.es/en/exco_press/).
- 31) Laterza M., Andrisani A., D'Amato M., Laguna E., Tonin T., 2017. "*From history of art to engineering: cultural heritage under an interdisciplinary perspective – The 'ELARCH' project*". Poster presentato al XXXI Salon Tecnológico de la Construcción – EXCO 2017, 22-24 Febbraio 2017, organizzato dalla Escuela Técnica Superior de Ingeniería de la Edificación de la Universitat Politècnica de València (ETSIE-UPV), evento internazionale itinerante della XXXI International Itinerant Exhibition of the Construction Technologies - EXCO 2017, Matera (Italy), 3-11 Luglio 2017 (https://exco.webs.upv.es/en/exco_press/).
- 32) Laterza M., D'Amato M., Casamassima V. M., 2017. "*Seismic assessment of old existing masonry arch bridges*". Poster presentato al XXXI Salon Tecnológico de la Construcción – EXCO 2017, 22-24 Febbraio 2017, organizzato dalla Escuela Técnica Superior de Ingeniería de la Edificación de la Universitat Politècnica de València (ETSIE-UPV), evento internazionale itinerante della XXXI International Itinerant Exhibition of the Construction Technologies - EXCO 2017, Matera (Italy), 3-11 Luglio 2017 (https://exco.webs.upv.es/en/exco_press/).
- 33) Laterza M., D'Amato M., Diaz D., 2017. "*Seismic assessment of masonry churches in Matera landscape*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-2. ISBN: 978-886741. ISSN 2532-120X.
- 34) Laterza M., D'Amato M., Casamassima V.M., Signorelli M., 2017. "*A study of local collapse mechanisms of an ancient church in Matera*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-12. ISBN: 978-886741. ISSN 2532-120X.
- 35) Laterza M., D'Amato M., Laguna E., 2017. "*Seismic vulnerability of old Italian fortifications*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-23. ISBN: 978-886741. ISSN 2532-120X.
- 36) Laterza M., D'Amato M., Casamassima V.M., 2017. "*Fatigue behavior of ancient masonry arch bridges: residual service life evaluation using stress-life curves method*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-36. ISBN: 978-886741. ISSN 2532-120X.
- 37) Laterza M., D'Amato M., Martinez G., Mendez O., Casamassima V.M., Signorelli M., Laguna E., 2017. "*Seismic vulnerability of an existing RC building: comparison between Italian and Mexican design codes*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-36. ISBN: 978-886741. ISSN 2532-120X.
- 38) Laterza M., D'Amato M., Diaz D., Chietera M., 2017. "*Seismic analysis methods of ancient churches in Matera*". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-76. ISBN: 978-886741. ISSN 2532-120X.

- 39) Laterza M., D'Amato M., Martinez G., Ortega N., Casamassima V.M., Signorelli M., 2017. "A comparative study between the Italian and Mexican design code for seismic assessment of old RC buildings". Proceedings of XVII Convegno Nazionale "L'Ingegneria Sismica in Italia". (Pistoia, 17-21 Settembre 2017). Paper n. SS11-97. ISBN: 978-886741. ISSN 2532-120X.
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- 41) Ramirez E., Lourenco P. B., D'Amato M., 2018. "Seismic assessment of the Matera Cathedral", Proceedings of SAHC 2018, 11th International Conference on Structural Analysis of Historical Constructions (Cusco, Perú, 11-13 Settembre 2018). RILEM Bookseries 18, pp. 1346-1354, 2019. Paper n. 144. https://doi.org/10.1007/978-3-319-99441-3_144.
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- 43) Diaz D., Laterza M., D'Amato M., 2018. "Seismic risk assessment of historic constructions: comparative analysis of masonry and adobe churches in Italy and Chile", Proceedings of YOCOCU 2018 (Matera, Italia, 23-25 Maggio 2018).
- 44) Laguna E., D'Amato M., Laterza M., 2018. "Seismic risk of Basilicata castles", Proceedings of YOCOCU 2018 (Matera, Italia, 23-25 Maggio 2018).
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- 53) Braga F., D'Amato M., Gigliotti R., Laterza M., 2019. "*Analytical model for concrete confined by steel stirrups and/or FRP Jackets in rectangular sections*", COMPDYN 2019, 7th ECOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, M. Papadrakakis, M. Fragiadakis (eds.), Crete, Greece, 24-26 June 2019. Published.

Papers published on international journals

- 1) Braga F., Gigliotti R., Laterza M., D'Amato M., 2008. "*An analytical formulation of stress-block parameters for confined concrete*". The Open CONSTRUCTION & BUILDING TECHNOLOGY JOURNAL, vol. 2, p. 156-165, ISSN: 1874-8368, doi: 10.2174/1874836800802010156.
- 2) D'Amato M., Braga F., Gigliotti R., Laterza M., Kunnath S., 2012. "*A numerical general purpose confinement model for non-linear analysis of R/C members*". Elsevier, Computers and Structures Journal, Vol. 102-103, pp. 64-75. ISSN: 0045-7949, doi: 10.1016/j.compstruc.2012.03.007.
- 3) Braga F., Gigliotti R., Laterza M., D'Amato M., Kunnath S., 2012. "*Modified steel bar model incorporating bond-slip for seismic assessment of concrete structures*". ASCE, Journal of Structural Engineering, 138(11), pp. 1342-1350. ISSN: 0733-9445, doi: 10.1061/(ASCE)ST.1943-541X.0000587.
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 - 8) Laterza M., D'Amato M., Braga F., Gigliotti R., 2017. "Extension to rectangular section of an analytical model for concrete confined by steel stirrups and/or FRP jackets". Composites Structures, 176(2017), pp. 910-922, 2017 Elsevier Ltd, ISSN: 0263-8223, doi: <http://dx.doi.org/10.1016/j.compstruct.2017.06.025>.
 - 9) D'Amato M., Laterza M., Casamassima V. M., 2017. "Seismic performance evaluation of a multi-span existing masonry arch bridge". The Open Construction & Building Technology Journal, Vol. 11, Suppl.-5, M11, pagg. 1191-1207. DOI: 10.2174/1874149501711011191.
 - 10) Thanthirige L.P., Laterza M., D'Amato M., 2018. "Determination of transverse R/F requirement for confined concrete column by non-linear analysis". Society of structural engineers – Sri Lanka (SSESL) – MODULUS, Vol. 28 N. 1, pagg. 10-17. ISSN: 1800-4636.
 - 11) D'Amato M., Laterza M., Diaz D., 2018. "Simplified seismic analyses of ancient churches in Matera's landscape". International Journal of Architectural Heritage. Published on line. <https://doi.org/10.1080/15583058.2018.1511000>.
 - 12) Luchin G., Ramos L., D'Amato M., 2018. "Sonic tomography for masonry walls characterization". International Journal of Architectural Heritage. Published on line. <https://doi.org/10.1080/15583058.2018.1554723>
 - 13) Lopez, S., D'Amato, M., Ramos, L., Laterza, M., Lourenço, P. B., 2019. "Simplified formulation for estimating the main frequencies of ancient masonry churches". Frontiers in Built Environment, 5:18. doi: 10.3389/fbuil.2019.00018.
 - 14) D'Amato, M., Gigliotti, R., Laguardia, R., 2019. "Comparative seismic assessment of ancient masonry churches". Frontiers in Built Environment, 5:56. doi: 10.3389/fbuil.2019.00056.
 - 15) Casamassima, V. M., D'Amato, M., 2019. "Fatigue assessment and Deterioration effects on masonry elements. A review of numerical models and their application to a case study". Frontiers in Built Environment, 5:65. doi: 10.3389/fbuil.2019.00065.
 - 16) D'Amato, M., Gigliotti, R., Laguardia, R., 2019. "Seismic isolation for protecting historical buildings: a case study". Frontiers in Built Environment, 5:87. doi: 10.3389/fbuil.2019.00087.

- 17) Diaz, D., Baquedano, P., D'Amato, M., Laterza, M., 2019. "Preliminary seismic damage assessment of Mexican churches after September 2017 earthquakes". Journal of architectural Heritage. Published on-line

Participation to Editorial Board of Scientific International Journal

From March 2018. Editorial Board member of the Journal 'Computers Simulation in Application' <http://ojs.whioce.com/index.php/csa/index>.

From June 2018. Associate Editor of the Journal 'Frontiers in Built Environments – Earthquake Engineering'. <https://www.frontiersin.org/journals/built-environment/sections/earthquake-engineering>.

Reviewer of the following scientific journals in structural engineering:

- International Journal of Masonry Research and Innovation (IJMRI), Inderscience
- The Open Civil Engineering Journal, Bentham Open
- Engineering Structures, Elsevier
- Advances in Civil Engineering, Hindawi
- Journal of Architectural Heritage, Francis and Taylor
- Heritage, MDPI
- Remote sensing, MDPI
- Water, MDPI

Congresses participation

XII National Congress "L'Ingegneria Sismica in Italia", Pisa, 10–14 June 2007, with oral presentations of the two papers:

- "Valutazione analitica degli effetti del confinamento sulla capacità di pilastri e travi in c.a. di strutture esistenti e di nuova progettazione"
- "Indagini distruttive e non distruttive su edifici in c.a. esistenti secondo l'OPCM 3274/3431: evidenze sperimentali e significatività dei risultati"

XIII National Congress "L'Ingegneria Sismica in Italia", Bologna, 28 June – 2 July 2009, with oral presentations of the paper:

- "Analisi non lineari di strutture in c.a.: implementazione in OpenSees del modello BGL di calcestruzzo confinato"

XIV National Congress "L'Ingegneria Sismica in Italia", Bari, 18 – 22 September 2011, with oral presentations of the two papers:

- "Progettazione dell'armatura trasversale in funzione della duttilità di curvatura richiesta: prima formulazione di base"

- "Valutazione della capacità per il miglioramento e l'adeguamento di edifici esistenti in c.a."

2015. University of Cartagena de Indias (Colombia). Key Lecture titled "La modellazione numerica per la valutazione della vulnerabilità sismica delle strutture in c.a."

XV National Congress "*L'Ingegneria Sismica in Italia*", Padova, 30 June - 4 July 2013.

"EU-NICE Closure meeting", 2-3 May 2014, Kathmandu (Nepal). Oral presentation of the closure report of the University of Basilicata within the project "EU-NICE" Erasmus Mundus.

XVI National Congress "*L'Ingegneria Sismica in Italia*", L'Aquila, 13-17 September 2015, with oral presentation of the two papers:

- "Seismic assessment of old existing masonry arch bridges: an application to a case study"

National Congress Colloquia.AT.e -MATER(i)A 2016. University of Basilicata, Matera, Italy, 12-15 October 2016.

CINPAR 2016 - *XII Congresso International Sobre Patologia e Reabilitacao de Estruturas*, FEUP, Porto, Portugal, 26-29 October 2016.

International Congress CINPAR 2016 - *XII Congresso International Sobre Patologia e Reabilitacao de Estruturas*, FEUP, Porto, Portugal, 26-29 October 2016. Chairman of sessions S28-A-3, S28-B-3, S28-C-3.

Participation to XXXI International Itinerant Exhibition of the Construction Technologies - EXCO 2017, Matera (Italy), 3-11 Luglio 2017 (https://exco.webs.upv.es/en/exco_press/), with oral presentations of the works:

"Technical characterization and seismic assessment of historic buildings: the case of the churches in Sassi of Matera". Authors: Laterza M., D'Amato M., Diaz D.

"Limes improved with graphene nanoparticles: a composite material for the protection of the architectural heritage". Authors: Laguna E., Bernardo G., Laterza M., D'Amato M., Diaz D.

"Seismic assessment of old existing masonry arch bridges". Authors: Laterza M., D'Amato M., Casamassima V. M.

XVII National Congress "*L'Ingegneria Sismica in Italia*", Pistoia, 17-21 September 2017. Chairman of the Special Session "*Natural risk mitigation and protection of the cultural heritage - ELARCH Euro Latin America partnership researches*".

Scientific committee member of CICOP 2018 Congress - XIV INTERNATIONAL HERITAGE REHABILITATION CONGRESS-The conservation of artistic, architectural, archaeological and landscape heritage Matera (Italy) - 18-20 June 2018.

Participation to CICOP 2018 - XIV INTERNATIONAL HERITAGE REHABILITATION CONGRESS-The conservation of artistic, architectural, archaeological and landscape heritage. Matera (Italy) - 18-20 June 2018, with oral presentation of the two papers:

"Evaluation of seismic risk of the San Pietro Caveoso Church". Authors: Maccarini H., D'Amato M., Laterza M.

"Seismic evaluation of San Giovanni Battista of Matera", Authors: Ulloque E., D'Amato M., Laterza M.

Scientific committee member of "GVES 2018 Congress- Resilience and sustainability of Cities in Hazardous Enviroments". Naples (Italy)- 26-30 November 2018.

Scientific committee member of "Tecnologie per il recupero del costruito. Umidità nelle costruzioni: diagnosi e metodi di intervento". Matera (Italy)- 4-5 April 2019.

Scientific committee member of "REUSO 2019. Patrimoni in divenire, pensare, costruire, abitare". Matera (Italy)- 24-26 October 2019.

Participation to the Congress "Management, risk and rehabilitation of dams". University of Basilicata, 27/02/2019. Presentation of the key lecture: "Seismic verification of structures in Basilicata Region".

Participation to *COMPDYN 2019, 7th ECOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, Crete, Greece, 24-26 June 2019.

Assistant Prof. PhD. Michele D'Amato

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