

Alessandro Della Corte

CV

Personal information:

Name: Alessandro

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Nationality: Italian

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Scopus *h*-index: 17

Academic titles:

- Master Degree in Mathematics
110/110 *cum laude*
Università degli studi di Napoli Federico II, Italy
MD Thesis on Differential Geometry
MD Thesis Title: *Whitney's theorem and its meaning*
Supervisor: Alessandro De Paris
- PhD in Theoretical and Applied Mechanics
Joint title at Sapienza Università di Roma (Italy) and Université de Toulon (France), *cum laude*.
PhD Thesis on Continuum Mechanics, Gamma-convergence, Calculus of Variations.
PhD Thesis Title: *Lattice structures with pivoted beams: rigorous homogenization and nonlinear elasticity results*.
Supervisors:
Francesco dell'Isola (Department of Structural and Geotechnical Engineering, Sapienza Università di Roma, Italy).
Pierre Seppecher (Institut de Mathématiques, Université de Toulon, France).
- Associate professor habilitation (*Abilitazione Scientifica Nazionale*) in Mathematical Physics.
- *Diploma di Pianoforte* (Piano Master Degree) at Conservatorio S.Cecilia, Rome, Italy.

Work and research experiences:

- 11/2011 - 06/2013:** Cooperation as consultant for biomathematics with the group headed by Dr. Andrea Savarino, Istituto Superiore di Sanità, Rome.
- 02/04/2012 - 27/04/2012:** Cooperation with Medisoft Sistemi Informatici srl.
- 01/2012 - 06/2016:** Cooperation with De Agostini Scuola S.P.A.
- 11/2014-12/2017:** Doctoral School in Theoretical and Applied Mechanics, Department of Mechanical and Aerospace Engineering, Sapienza University of Rome.
- 11/2015-12/2017:** Doctoral School at Institute de Mathématiques de Toulon (IMATH), University of Toulon (France), in co-tutorship with La Sapienza.

- 2015/2016:** Tutorship for students within the course of structural mechanics, Department of Structural and Geotechnical Engineering, Sapienza University of Rome.
- 2017/2018 (2nd semester):** Teaching assignment for the course of Laboratory of Applied Mathematics, Bachelor in Energetic Engineering, Sapienza Università di Roma.

Linguistic knowledge:

Italian (native), English (proficient), French (intermediate).

Scientific Publications:

Source: *Scopus*

1. Della Corte, A., dell'Isola, F., Esposito, R., Pulvirenti, M.
Equilibria of a clamped Euler beam (*Elastica*) with distributed load: Large deformations
(2017) *Mathematical Models and Methods in Applied Sciences*, 27 (8), pp. 1391-1421.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85020727945&doi=10.1142%2fS0218202517500221&partnerID=40&md5=c4913faf64eae4efc5948e121c2b763>

DOI: 10.1142/S0218202517500221

DOCUMENT TYPE: Article

SOURCE: Scopus

2. Alibert, J.-J., Della Corte, A., Giorgio, I., Battista, A.
Extensional *Elastica* in large deformation as Γ -limit of a discrete 1D mechanical system
(2017) *Zeitschrift für Angewandte Mathematik und Physik*, 68 (2), art. no. 42, . Cited 1 time.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85014618346&doi=10.1007%2fs00033-017-0785-9&partnerID=40&md5=db90eed1a5d115001c19562266c2a7a2>

DOI: 10.1007/s00033-017-0785-9

DOCUMENT TYPE: Article

SOURCE: Scopus

3. dell'Isola, F., Cuomo, M., Greco, L., Della Corte, A.
Bias extension test for pantographic sheets: numerical simulations based on second gradient shear energies
(2017) *Journal of Engineering Mathematics*, 103 (1), pp. 127-157. Cited 1 time.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979547586&doi=10.1007%2fs10665-016-9865-7&partnerID=40&md5=8213a70b68630e4f2cd463cefdb8dd83>

DOI: 10.1007/s10665-016-9865-7

DOCUMENT TYPE: Article

SOURCE: Scopus

4. Giorgio, I., Della Corte, A., dell'Isola, F.
Dynamics of 1D nonlinear pantographic continua
(2017) *Nonlinear Dynamics*, 88 (1), pp. 21-31.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85000613339&doi=10.1007%2fs11071-016-3228-9&partnerID=40&md5=3006af1949194cfbe4f2faea3c4dc028>

DOI: 10.1007/s11071-016-3228-9

DOCUMENT TYPE: Article

SOURCE: Scopus

5. Placidi, L., Giorgio, I., Della Corte, A., Scerrato, D.
Euromech 563 Cisterna di Latina 17-21 March 2014 Generalized continua and their applications to the design of composites and metamaterials: A review of presentations and discussions
(2017) *Mathematics and Mechanics of Solids*, 22 (2), pp. 144-157.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85011617667&doi=10.1177%2f1081286515576948&partnerID=40&md5=cdebf0b46835595d>

8ba6f1c04fa96631

DOI: 10.1177/1081286515576948

DOCUMENT TYPE: Review

SOURCE: Scopus

6. Della Corte, A., Battista, A., dell'Isola, F., Giorgio, I.

Modeling deformable bodies using discrete systems with centroid-based propagating interaction: Fracture and crack evolution

(2017) *Advanced Structured Materials*, 69, pp. 59-88. Cited 1 time.

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85015977282&doi=10.1007%2f978-981-10-3764-1_5&partnerID=40&md5=7599fed0bfb72442a17fcf406d383a02

DOI: 10.1007/978-981-10-3764-1_5

DOCUMENT TYPE: Conference Paper

SOURCE: Scopus

7. Alibert, J.-J., Della Corte, A., Seppecher, P.

Convergence of Hencky-type discrete beam model to euler inextensible elastica in large deformation: Rigorous proof

(2017) *Advanced Structured Materials*, 69, pp. 1-12. Cited 1 time.

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85015873417&doi=10.1007%2f978-981-10-3764-1_1&partnerID=40&md5=dcfa37c122065e97d28eb18a33153e8b

DOI: 10.1007/978-981-10-3764-1_1

DOCUMENT TYPE: Conference Paper

SOURCE: Scopus

8. Placidi, L., Barchiesi, E., Della Corte, A.

Identification of two-dimensional pantographic structures with a linear d4 orthotropic second gradient elastic model accounting for external bulk double forces

(2017) *Advanced Structured Materials*, 69, pp. 211-232.

https://www.scopus.com/inward/record.uri?eid=2-s2.0-85015810585&doi=10.1007%2f978-981-10-3764-1_14&partnerID=40&md5=09d6552d951a16162d9d165b62f7e0c7

DOI: 10.1007/978-981-10-3764-1_14

DOCUMENT TYPE: Conference Paper

SOURCE: Scopus

9. Bersani, A.M., Della Corte, A., Piccardo, G., Rizzi, N.L.

An explicit solution for the dynamics of a taut string of finite length carrying a traveling mass: the subsonic case

(2016) *Zeitschrift fur Angewandte Mathematik und Physik*, 67 (4), art. no. 108, . Cited 2 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84982094882&doi=10.1007%2fs00033-016-0703-6&partnerID=40&md5=2d60e880270b3399c0a19a6c2059876c>

DOI: 10.1007/s00033-016-0703-6

DOCUMENT TYPE: Article

SOURCE: Scopus

10. Giorgio, I., Della Corte, A., dell'Isola, F., Steigmann, D.J.

Buckling modes in pantographic lattices

(2016) *Comptes Rendus - Mecanique*, 344 (7), pp. 487-501. Cited 14 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84961997857&doi=10.1016%2fj.crme.2016.02.009&partnerID=40&md5=1696a2555ba6a4dc a5ef1a1890297647>

DOI: 10.1016/j.crme.2016.02.009

DOCUMENT TYPE: Article

SOURCE: Scopus

11. Scerrato, D., Giorgio, I., Della Corte, A., Madeo, A., Dowling, N.E., Darve, F.
Towards the design of an enriched concrete with enhanced dissipation performances
(2016) *Cement and Concrete Research*, 84, pp. 48-61. Cited 8 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84961743126&doi=10.1016%2fj.cemconres.2016.03.002&partnerID=40&md5=35e0cee17541a9b03871078b0cb72871>

DOI: 10.1016/j.cemconres.2016.03.002

DOCUMENT TYPE: Article

SOURCE: Scopus

12. dell'Isola, F., Della Corte, A., Esposito, R., Russo, L.
Some cases of unrecognized transmission of scientific knowledge: From antiquity to gabrio piola's peridynamics and generalized continuum theories
(2016) *Advanced Structured Materials*, 42, pp. 77-128. Cited 3 times.
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964394248&doi=10.1007%2f978-3-319-31721-2_5&partnerID=40&md5=873c56f93872691794936e60c949e723

DOI: 10.1007/978-3-319-31721-2_5

DOCUMENT TYPE: Book Chapter

SOURCE: Scopus

13. dell'Isola, F., Della Corte, A., Giorgio, I., Scerrato, D.
Pantographic 2D sheets: Discussion of some numerical investigations and potential applications
(2016) *International Journal of Non-Linear Mechanics*, 80, pp. 200-208. Cited 15 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84949035361&doi=10.1016%2fj.ijnonlinmec.2015.10.010&partnerID=40&md5=eb979e4e9bb5db1c9b2ddadef2adae5d>

DOI: 10.1016/j.ijnonlinmec.2015.10.010

DOCUMENT TYPE: Article

SOURCE: Scopus

14. Della Corte, A., Battista, A., dell'isola, F.
Referential description of the evolution of a 2D swarm of robots interacting with the closer neighbors: Perspectives of continuum modeling via higher gradient continua
(2016) *International Journal of Non-Linear Mechanics*, 80, pp. 209-220. Cited 12 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84941000328&doi=10.1016%2fj.ijnonlinmec.2015.06.016&partnerID=40&md5=cdb32b7de737a8b235e5db5fd3c426f3>

DOI: 10.1016/j.ijnonlinmec.2015.06.016

DOCUMENT TYPE: Article

SOURCE: Scopus

15. dell'Isola, F., Della Corte, A., Greco, L., Luongo, A.
Plane bias extension test for a continuum with two inextensible families of fibers: A variational treatment with Lagrange multipliers and a perturbation solution
(2016) *International Journal of Solids and Structures*, 81, pp. 1-12. Cited 23 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84956614739&doi=10.1016%2fj.ijsolstr.2015.08.029&partnerID=40&md5=9b61d09507a940>

9e8faad1756704afab

DOI: 10.1016/j.ijsolstr.2015.08.029

DOCUMENT TYPE: Article

SOURCE: Scopus

16. Enakoutsa, K., Della Corte, A., Giorgio, I.

A model for elastic flexoelectric materials including strain gradient effects

(2016) *Mathematics and Mechanics of Solids*, 21 (2), pp. 242-254. Cited 4 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84952360216&doi=10.1177%2f1081286515588638&partnerID=40&md5=8f0df4b64d439c99cdfaa3e723934308)

[84952360216&doi=10.1177%2f1081286515588638&partnerID=40&md5=8f0df4b64d439c99cdfaa3e723934308](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84952360216&doi=10.1177%2f1081286515588638&partnerID=40&md5=8f0df4b64d439c99cdfaa3e723934308)

DOI: 10.1177/1081286515588638

DOCUMENT TYPE: Article

SOURCE: Scopus

17. Berezovski, A., Giorgio, I., Della Corte, A.

Interfaces in micromorphic materials: Wave transmission and reflection with numerical simulations

(2016) *Mathematics and Mechanics of Solids*, 21 (1), pp. 37-51. Cited 11 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84956683915&doi=10.1177%2f1081286515572244&partnerID=40&md5=1246ed41232ab34ae3614526453d21f9)

[84956683915&doi=10.1177%2f1081286515572244&partnerID=40&md5=1246ed41232ab34ae3614526453d21f9](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84956683915&doi=10.1177%2f1081286515572244&partnerID=40&md5=1246ed41232ab34ae3614526453d21f9)

DOI: 10.1177/1081286515572244

DOCUMENT TYPE: Article

SOURCE: Scopus

18. Abd-Alla, A.N., Alshaikh, F., Giorgio, I., Della Corte, A.

A mathematical model for longitudinal wave propagation in a magnetoelastic hollow circular cylinder of anisotropic material under the influence of initial hydrostatic stress

(2016) *Mathematics and Mechanics of Solids*, 21 (1), pp. 104-118. Cited 2 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84961242300&doi=10.1177%2f1081286515582883&partnerID=40&md5=9f7dcd5c1a824cc8c80631461f7aa2e5)

[84961242300&doi=10.1177%2f1081286515582883&partnerID=40&md5=9f7dcd5c1a824cc8c80631461f7aa2e5](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84961242300&doi=10.1177%2f1081286515582883&partnerID=40&md5=9f7dcd5c1a824cc8c80631461f7aa2e5)

DOI: 10.1177/1081286515582883

DOCUMENT TYPE: Article

SOURCE: Scopus

19. Placidi, L., Andreaus, U., Corte, A.D., Lekszycki, T.

Gedanken experiments for the determination of two-dimensional linear second gradient elasticity coefficients

(2015) *Zeitschrift für Angewandte Mathematik und Physik*, 66 (6), pp. 3699-3725. Cited 30 times.

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84948714728&doi=10.1007%2fs00033-015-0588-9&partnerID=40&md5=9536e4a8e8f708ab9900fbb4e58fc3d4)

[84948714728&doi=10.1007%2fs00033-015-0588-9&partnerID=40&md5=9536e4a8e8f708ab9900fbb4e58fc3d4](https://www.scopus.com/inward/record.uri?eid=2-s2.0-84948714728&doi=10.1007%2fs00033-015-0588-9&partnerID=40&md5=9536e4a8e8f708ab9900fbb4e58fc3d4)

DOI: 10.1007/s00033-015-0588-9

DOCUMENT TYPE: Article

SOURCE: Scopus

20. dell'Isola, F., Seppecher, P., Della Corte, A.

The postulations á la D'Alembert and á la Cauchy for higher gradient continuum theories are equivalent: A review of existing results

(2015) Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 471 (2183), art. no. 20150415, . Cited 24 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84948799011&doi=10.1098%2frspa.2015.0415&partnerID=40&md5=a7a9308e28a16a98c7035619e3206e28>

DOI: 10.1098/rspa.2015.0415
DOCUMENT TYPE: Review
SOURCE: Scopus

21. dell'Isola, F., Steigmann, D., Della Corte, A.

Synthesis of Fibrous Complex Structures: Designing Microstructure to Deliver Targeted Macroscale Response

(2015) Applied Mechanics Reviews, 67 (6), art. no. 060804, . Cited 38 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84954306123&doi=10.1115%2f1.4032206&partnerID=40&md5=5cd626778d5169fb1ab8adc43795f8fc>

DOI: 10.1115/1.4032206
DOCUMENT TYPE: Article
SOURCE: Scopus

22. Alibert, J.-J., Della Corte, A.

Second-gradient continua as homogenized limit of pantographic microstructured plates: a rigorous proof

(2015) Zeitschrift für Angewandte Mathematik und Physik, 66 (5), pp. 2855-2870. Cited 51 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84944355659&doi=10.1007%2fs00033-015-0526-x&partnerID=40&md5=98412938e2954c6328b134871d3440f5>

DOI: 10.1007/s00033-015-0526-x
DOCUMENT TYPE: Article
SOURCE: Scopus

23. Giorgio, I., Galantucci, L., Della Corte, A., Del Vescovo, D.

Piezo-electromechanical smart materials with distributed arrays of piezoelectric transducers: Current and upcoming applications

(2015) International Journal of Applied Electromagnetics and Mechanics, 47 (4), pp. 1051-1084. Cited 23 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84931471904&doi=10.3233%2fJAE-140148&partnerID=40&md5=9f53c6934db5701ce738378841fd4705>

DOI: 10.3233/JAE-140148

DOCUMENT TYPE: Review

SOURCE: Scopus

24. Madeo, A., Della Corte, A., Greco, L., Neff, P.

Wave propagation in pantographic 2D lattices with internal discontinuities [Laineleivi kahemõõtmelises sisemiste katkevustega pantograafilises võres]

(2015) Proceedings of the Estonian Academy of Sciences, 64 (3), pp. 325-330. Cited 14 times.

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84940502972&doi=10.3176%2fproc.2015.3S.01&partnerID=40&md5=1e6075291fd1c4275d2e90913066b66a>

DOI: 10.3176/proc.2015.3S.01
DOCUMENT TYPE: Article

DOI: 10.3176/proc.2015.3S.01

DOCUMENT TYPE: Article

SOURCE: Scopus

25. Scerrato, D., Giorgio, I., Della Corte, A., Madeo, A., Limam, A.
A micro-structural model for dissipation phenomena in the concrete
(2015) International Journal for Numerical and Analytical Methods in Geomechanics, 39 (18),
pp. 2037-2052. Cited 18 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84944510729&doi=10.1002%2fnag.2394&partnerID=40&md5=679977b7bf3f0310c7144421082c34b8>

DOI: 10.1002/nag.2394

DOCUMENT TYPE: Article

SOURCE: Scopus

26. Shytaj, I.L., Chirullo, B., Wagner, W., Ferrari, M.G., Sgarbanti, R., Della Corte, A.,
LaBranche, C., Lopalco, L., Palamara, A.T., Montefiori, D., Lewis, M.G., Garaci, E.,
Savarino, A.
Investigational treatment suspension and enhanced cell-mediated immunity at rebound
followed by drug-free remission of simian AIDS
(2013) Retrovirology, 10 (1), art. no. 71, . Cited 17 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84880096840&doi=10.1186%2f1742-4690-10-71&partnerID=40&md5=8263a24da7d2bca1e5a66f315dc34faa>

DOI: 10.1186/1742-4690-10-71

DOCUMENT TYPE: Article

SOURCE: Scopus

27. Shytaj, I.L., Norelli, S., Chirullo, B., Della Corte, A., Collins, M., Yalley-Ogunro, J.,
Greenhouse, J., Iraci, N., Acosta, E.P., Barreca, M.L., Lewis, M.G., Savarino, A.
A highly intensified ART regimen induces long-term viral suppression and restriction of the
viral reservoir in a simian AIDS model
(2012) PLoS Pathogens, 8 (6), art. no. e1002774, . Cited 38 times.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84864051807&doi=10.1371%2fjournal.ppat.1002774&partnerID=40&md5=f214e1bb40c4c29cd4220153025c7381>

DOI: 10.1371/journal.ppat.1002774

DOCUMENT TYPE: Article

SOURCE: Scopus

Books:

- *Giacomo Leopardi. Il pensiero scientifico.* Firenze Athenaeum, 2008.
- Claudio Giunta, *Cuori intelligenti. Mille anni di letteratura.* De Agostini Scuola, 2016.
[ADC has taken care of the sections concerning scientific authors].
- *La bottega dello scienziato. Introduzione al metodo scientifico* (with Lucio Russo). Il Mulino, 2016.

Talks, seminars and memberships:

- Della Corte, A., A Model for internal friction in standard and enriched concrete

(*International Conference on Porous Media*, 18-21/05/2015, Padova, Italy)

- Della Corte, A., Fracture and spontaneous crack formation modeled with lattice systems with finite-range interaction. (*Regularised Models of Brittle Fracture*, 02/05/2016, University Pierre et Marie Curie in Central Paris, Paris, France)
- Della Corte, A., Battista, A., Modeling deformable bodies with swarm robots. Part I: description of the model and basic results. (*Going down to the microscale in multiphysics problems from seismic driven risks to petroleum geomechanics*. Bilateral French-Italy Workshop, 4-6/05/2015, Arpino)
- Della Corte, A., Battista, A., dell'Isola, F., Fracture in deformable bodies using swarm robot modeling: basic ideas and results (Euromech Colloquium: *Stability and Control of Nonlinear Vibrating Systems*, 24-28/05/2015 Sperlonga)
- Invited speech within the event *Biennale Democrazia*. Title: *Il pensiero vivo della scoperta. Istruzioni d'emergenza*. Turin (Italy), 30/03/2017.
- Della Corte, A., Equilibria of a clamped Euler beam under distributed load: large deformations. Euromech Colloquium 579, Arpino, Italy, 3-8/4/2017.
- Della Corte, A., Fracture and spontaneous crack formation modeled with lattice systems with propagating interactions. Second Bilateral French-Italy Workshop Open issues and emerging approaches in geo-environmental mechanics Arpino, Italy, 2-4/5/2017
- Della Corte, A., Modeling synthesis and resorption phenomena in bones by means of mixture models enhanced with computational population dynamics. Part 2: models of bone cells population dynamics. France-Italy Workshop *Bone biomechanics: multiscale and multiphysical aspects* Giuliano di Roma, Italy, 26-28 September 2017.
- Seminar (3 days) to MD students from Warsaw University of Technology within the course *Introduction to Analytical Continuum Mechanics and Computational Mechanics*. Subject: *Foundations of Mathematics and Set Theory*. 17,19,20/7/2017, International Research Center on Mathematics and Mechanics of Complex Systems, Giuliano di Roma (FR), Italy.
- Member of the Local Scientific Committee of the 5th International Conference on Material Modeling (ICMM5), 14-16 June, 2017, Rome, Italy.