

CURRICULUM VITAE

Federico ACCORNERO

Born in Asti-Italy on June 6, 1983

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EDUCATION

Doctoral Degree in Structural Engineering, Politecnico di Torino, Torino-Italy, 2014

Master of Science in Building Engineering, Politecnico di Torino, Torino-Italy, 2009

CURRENT POSITIONS

Associate Professor of Structural Mechanics, Department of Civil Engineering and Intelligent Construction, Shantou University, Shantou-China, 2023-present

PREVIOUS POSITIONS

Adjunct Professor of Structural Mechanics, SUISS-National School of the Italian Army, Torino-Italy, 2018-2023

Post-doc Fellow, Department of Structural, Geotechnical, and Building Engineering, Politecnico di Torino, Torino-Italy, 2015-2022

TEACHING ACTIVITIES

(1) “Fracture Mechanics of Concrete Structures”, 2023-present

Doctoral School, Shantou University, Shantou-China

(2) “Advanced Computational Mechanics”, 2023-present

Doctoral School, Shantou University, Shantou-China

(3) “Computational Mechanics”, 2023-present

**Graduate School of Civil Engineering, Shantou University,
Shantou-China**

(4) “Structural Mechanics”, 2018-2023

SUISS-National School of the Italian Army, Torino-Italy

(5) “Arch, Cable-stayed, and Suspension Bridges”, 2014-2016

Doctoral School, Politecnico di Torino, Torino-Italy

As assistant of Prof. Alberto CARPINTERI:

“Fracture Mechanics”, 2020

**Graduate School of Civil Engineering, Shantou University, Shantou-
China**

“Fracture & Plasticity”, 2014-2023

**Graduate School of Civil Engineering, Politecnico di Torino, Torino-
Italy**

COMMISSIONS OF TRUST

**(1) Member of the National Commission for the Assessment of the
Scientific Research Quality in Higher Education (VQR), Ministry of
University and Research, Italy, 2024-present**

- (2)Member of Commission WP 2.4.1 “Modelling of Fibre-reinforced Concrete Structures”, International Federation for Structural Concrete (FIB), 2022-present**
- (3)Member of the Editorial Board, “Journal of Intelligent Construction” (Tsinghua University Press), 2023-present**
- (4)Member of the Editorial Board, “Smart Construction and Sustainable Cities” (Springer), 2023-present**
- (5)Member of the Topical Advisory Panel, “Buildings” (MDPI), 2021-present**
- (6)Member of the Editorial Board, “Buildings” (MDPI), 2020-2021**
- (7)Member of the Board, China Center, Politecnico di Torino-Italy, 2023-present**
- (8)Member of the Scientific Committee, 8th World Congress on Civil, Structural, and Environmental Engineering (CSEE'23), Lisbon-Portugal, 2023**
- (9)Member of the Organizing Committee, 2nd Italian Workshop on Shell and Spatial Structures (IWSS2023), Turin-Italy, 2023**
- (10) Member of the Expert Panel of the Evaluation Committee for the attainment of the position of Lieutenant of the Engineering Corps (SPE, Permanent Service), Ministry of Defence (Italy), 2018-2019**

INTERNATIONAL HONOURS AND AWARDS

- (1)Outstanding Talent Scholarship, Shantou University, Guangdong-China, 2022**
- (2)Best-cited Paper Award, Curved and Layered Structures, De Gruyter, Berlin-Germany, 2022**

(3)Top Downloaded Paper, Structural Concrete, Wiley, New Jersey, USA, 2021

SUPERVISION OF MSc THESES & PhD DISSERTATIONS

Supervisor of 27 MSc Theses in Civil Engineering (Topics: acoustic emission testing, masonry arch bridges, steel-bar reinforced, FRP-bar reinforced and fibre-reinforced concrete structures) and of two PhD Dissertations in Civil and Environmental Engineering (Topic: fracture mechanics of concrete structures)

SCIENTIFIC ACTIVITIES AND MAJOR ACHIEVEMENTS

H-Index (Google Scholar) = 16

Total Citations (Google Scholar) = 848

H-Index (Scopus) = 16

Total Citations (Scopus) = 734

Author of 78 publications, of which 43 are papers appeared in Refereed International Journals, on the following research topics: fracture mechanics, scale effects, reinforced concrete, masonry arch bridges, structural monitoring and fracto-emissions, membranes and shells, instability phenomena and hysteresis

RESEARCH TOPICS AND CUTTING-EDGE RESULTS

Different specific topics have been considered in the framework of fracture mechanics and structural engineering, always giving them a personal and original contribution, with an innovative focus on next-

generation reinforced materials. Among these peculiar aspects, it is significant to recall the following ones:

- (1) Investigation of the structural effects due to reinforcement, slenderness, and scale in the design of fibre-reinforced polymer bar (FRP-bar) reinforced concrete (RC) structures, leading to an effective development of innovative standard guidelines. In this framework, the transition between tensile cracking and compression crushing failures occurring in FRP-bar RC beams is described together with their structural ductility**
- (2) Solution to the problem of minimum reinforcement in fibre-reinforced concrete (FRC) or hybrid-reinforced concrete (HRC) structures. Their behaviour is proved to be mainly influenced by fibre volume fraction and steel-bar reinforcement percentage coupled with their characteristic structural size. This dominant scale effect appears to be crucial to thoroughly understand FRC or HRC structural behaviour under flexural loading or low-cycle fatigue**
- (3) Formulation of a comprehensive theoretical framework for high-performance prestressed concrete (HPPC) structures. The correct estimation of scale effects on minimum and maximum reinforcement percentages requires a thorough knowledge of the complex phenomena characterizing the tensile cracking and compression crushing failures, leading to define the field in which HPPC structures can develop a safe ductile behaviour. New standard requirements for an effective structural design are formulated**

**MAJOR INVITED PRESENTATIONS AT INTERNATIONAL
CONFERENCES AND ADVANCED SCHOOLS**

- (1) Distinguished Lecture on “Next-generation reinforced concrete structures”, National Facility for Earthquake Engineering Simulation, Tianjin-China, 2024**
- (2) Invited Lecture on “FRP-bar reinforced concrete: Brittle behaviour and Fracture Mechanics assessment”, Department of Hydraulic Engineering, Tsinghua University, Beijing-China, 2024**
- (3) Invited Lecture on “Next-generation reinforced concrete: Brittle behaviour and Fracture Mechanics assessment”, School of Civil Engineering, The Hong Kong University of Science and Technology, Hong Kong-China, 2024**
- (4) Keynote Lecture on “Modelling fibre-reinforced brittle-matrix composites: Cohesive (single-phase) vs bridged (multi-phase) crack options”, 11th International Conference on Fracture Mechanics of Concrete and Concrete Structures (FRAMCOS11), Bangalore-India, 2023**
- (5) Invited Lecture on “A fracture mechanics approach to the design of fibre-reinforced and hybrid-reinforced concrete beams”, Special Session "The use of fibre reinforcement for more durable, sustainable and resilient built environment", FIB Symposium 2023, Istanbul-Turkey, 2023**
- (6) Keynote Lecture on “Fibre-reinforced and hybrid-reinforced concrete: An updated Bridged Crack Model with softening pull-out forces”, 7th World Congress on Civil, Structural, and Environmental Engineering (CSEE'22), Lisbon-Portugal, 2022**
- (7) Invited seminars on “Next-generation Reinforced Concrete”: (1) “High-performance Prestressed Concrete Structures”; (2) “FRP-bar**

Reinforced Concrete Structures”; (3) “Fibre-reinforced or Hybrid-reinforced Concrete Structures”. College of Engineering, Shantou University, Guangdong-China, 2021

(8)Invited Lecture on “Influence of mechanical instabilities on acoustic emission signal processing in progressive microcracking coalescence”, 7th 269-IAM RILEM Meeting on Damage Assessment in Consideration of Repair/Retrofit-Recovery in Concrete and Masonry Structures by Means of Innovative NDT, Turin-Italy, 2019

(9)Keynote Lecture on “The Bridged Crack Model with multiple fibres: Scale effects and local instabilities”, 10th European Solid Mechanics Conference (ESMC10), Bologna-Italy, 2018

MAJOR RESEARCH GRANTS

The following research grants were coordinated as Project Leader:

(1)STU Outstanding Talent Research Grant N. 140-09423016, 2023-2026, 800k RMB (120k €)

SCIENTIFIC PUBLICATIONS

International Peer-reviewed Journals

- 1) A. Carpinteri, G. Lacidogna, F. Accornero, A. Mpalaskas, T. Matikas, D. Aggelis, “Influence of damage in the Acoustic Emission parameters”, *Cement and Concrete Composites*, 2013, 44:9-16. **[I.F.: 7.586]**
- 2) A. Carpinteri, G. Lacidogna, S. Invernizzi, F. Accornero, “The Sacred Mountain of Varallo in Italy: Seismic risk assessment by Acoustic Emission and structural numerical models”, *The Scientific World Journal*, 2013, 170291. **[I.F.: 2.103]**

- 3) G. Niccolini, O. Borla, F. Accornero, G. Lacidogna, A. Carpinteri, "Scaling in damage by electrical resistance measurements", *Rendiconti Lincei*, 2014, 26:203-209. **[I.F.: 1.627]**
- 4) A. Carpinteri, G. Lacidogna, F. Accornero, "Evolution of the fracturing process in masonry arches", *Journal of Structural Engineering (ASCE)*, 2015, 141:04014132. **[I.F.: 3.312]**
- 5) A. Carpinteri, G. Lacidogna, F. Accornero, S. Invernizzi, "Numerical simulation of the fracturing processes in masonry arches", *Proceedings in Applied Mathematics and Mechanics*, Vol. 15 (2015), 131-132.
- 6) F. Accornero, G. Lacidogna, A. Carpinteri, "Evolutionary fracture analysis of masonry arches: Effects of shallowness ratio and size scale", *Comptes Rendus Mécanique*, 2016, 344:623-630. **[I.F.: 2.086]**
- 7) A. Carpinteri, F. Accornero, "Multiple snap-back instabilities in progressive microcracking coalescence", *Engineering Fracture Mechanics*, 2018, 187:272-281. **[I.F.: 4.406]**
- 8) F. Accornero, G. Lacidogna, A. Carpinteri, "Medieval arch bridges in the Lanzo Valleys, Italy: Incremental structural analysis and fracturing benefit", *Journal of Bridge Engineering (ASCE)*, 2018, 23(7):05018005. **[I.F.: 3.066]**
- 9) A. Carpinteri, G. Lacidogna, F. Accornero, "Fluctuations of 1/f noise in damaging structures analyzed by Acoustic Emission", *Applied Sciences*, 2018, 8:1685. **[I.F.: 2.679]**
- 10) G. Lacidogna, F. Accornero, "Elastic, plastic, fracture analysis of masonry arches: A multi-span bridge case study", *Curved and Layered Structures*, 2018, 5:1-9. **[I.F.: 1.680]**
- 11) G. Lacidogna, F. Accornero, A. Carpinteri, "Influence of snap-back instabilities on Acoustic Emission damage monitoring", *Engineering Fracture Mechanics*, 2019, 210:3-12. **[I.F.: 4.406]**
- 12) A. Carpinteri, F. Accornero, "Rotation versus curvature fractal scaling in bending failure", *Physical Mesomechanics*, 2019, 22:46-51. **[I.F.: 1.850]**

- 13) N. Viale, F. Accornero, G. Lacidogna, G. Ventura, "AE characterization of brick masonry walls mechanical behavior: The case-study of Alessandria and Boves barracks", *Key Engineering Materials*, 2019, 817:563-570. **[I.F.: 0.350]**
- 14) A. Carpinteri, F. Accornero, "Static-kinematic duality in the shells of revolution: Historical aspects and present developments", *Archive of Applied Mechanics*, 2019, 89:2313-2320. **[I.F.: 1.976]**
- 15) A. Carpinteri, F. Accornero, "The Bridged Crack model with multiple fibres: Local instabilities, scale effects, plastic shake-down, and hysteresis", *Theoretical and Applied Fracture Mechanics*, 2019, 104:102351. **[I.F.: 4.017]**
- 16) F. Accornero, C. Bertolini, S. Invernizzi, T. Marzi, A. Spanò, "Retrofitting and conservation of the timber choir loft of the sanctuary Beata Vergine Maria del Monte Carmelo in Colletto, Pinerolo, Italy", *Transsylvania Nostra*, 2019, 13(1): 53-60. **[I.F.: 0.024]**
- 17) A. Carpinteri, F. Accornero, "Residual crack opening in fibre-reinforced structural elements subjected to cyclic loading", *Strength, Fracture and Complexity*, 2020, 12(2-4):63-74. **[I.F.: 0.227]**
- 18) A. Grazzini, F. Accornero, G. Lacidogna, S. Valente, "Acoustic emission and numerical analysis of the delamination process in repair plasters applied to historical walls", *Construction and Building Materials*, 2020, 236:117798. **[I.F.: 6.141]**
- 19) F. Accornero, A. Rubino, A. Carpinteri, "Ductile-to-brittle transition in fibre-reinforced concrete beams: Scale and fibre volume fraction effects", *Material Design & Processing Communications*, 2020, 2(6):e127. **[I.F.: 2.019]**
- 20) G. Lacidogna, G. Piana, F. Accornero, A. Carpinteri, "Multi-technique damage monitoring of concrete beams: Acoustic Emission, Digital Image Correlation, Dynamic Identification", *Construction and Building Materials*, 2020, 242:118114. **[I.F.: 6.141]**
- 21) F. Accornero, G. Lacidogna, "Safety assessment of masonry arch bridges considering the fracturing benefit", *Applied Sciences*, 2020, 10:3490. **[I.F.: 2.679]**
- 22) F. Accornero, R. Cafarelli, A. Carpinteri, "Cracking and crushing in prestressed concrete beams", *Structural Journal (ACI)*, 2021, 118(2):101-109. **[I.F.: 1.744]**

- 23) E. Verstrynge, G. Lacidogna, F. Accornero, A. Tomor, "A review on acoustic emission monitoring for damage detection in masonry structures", *Construction and Building Materials*, 2021, 268:121089. **[I.F.: 6.141]**
- 24) A. Carpinteri, F. Accornero, "Dimensional analysis of critical phenomena: Self-weight failure, turbulence, resonance, fracture", *Physical Mesomechanics*, 2021, 24(4):459-463. DOI: 10.1134/S102995992104010X **[I.F.: 1.850]**
- 25) F. Accornero, A. Carpinteri, "Funicularity in elastic domes: Coupled effects of shape and thickness", *Curved and Layered Structures*, 2021, 8:181-187. **[I.F.: 0.412]**
- 26) A. Carpinteri, F. Accornero, R. Cafarelli, "Scale-dependent maximum reinforcement percentage in RC beams", *Structural Concrete (FIB)*, 2021, 22:2155-2166. DOI: 10.1002/(ISSN)1751-7648 **[I.F.: 3.131]**
- 27) F. Accornero, A. Carpinteri, "Ponti ad arco in muratura: Analisi evolutiva del processo di fessurazione", *Archi*, 2021, 5:9-11.
- 28) F. Accornero, R. Cafarelli, A. Carpinteri, "The Cohesive/Overlapping Crack Model for plain and reinforced concrete beams: Scale effects on cracking and crushing failures", *Magazine of Concrete Research*, 2022, 74(9):433-450. DOI: 10.1680/jmacr.20.00260 **[I.F.: 2.503]**
- 29) Z. Zhu, P. Gui, H. Teng, F. Accornero, "Analysis of secondary stresses in bridge orthotropic decks induced by solar radiation thermal gradient", *Engineering Mechanics (Gong Cheng Li Xue)*, 2022, 39(8):158-171. DOI: 10.6052/j.issn.1000-4750.2021.04.0313 **[I.F.: 1.800]**
- 30) A. Carpinteri, F. Accornero, R. Cafarelli, "Scale effects in prestressed concrete structures: Maximum reinforcement percentage to avoid brittle crushing", *Engineering Structures*, 2022, 255(5):113911. DOI: 10.1016/j.engstruct.2022.113911 **[I.F.: 4.471]**
- 31) F. Accornero, A. Rubino, A. Carpinteri, "Post-cracking regimes in the flexural behaviour of fibre-reinforced concrete beams", *International Journal of Solids and Structures*, 2022, 248:111637. DOI: 10.1016/j.ijsolstr.2022.111637 **[I.F.: 3.900]**
- 32) F. Accornero, A. Rubino, A. Carpinteri, "Ultra-low cycle fatigue (ULCF) in fibre-reinforced concrete beams", *Theoretical and Applied Fracture Mechanics*, 2022, 120:103392. DOI: 10.1016/j.tafmec.2022.103392 **[I.F.: 4.017]**

- 33) F. Accornero, A. Rubino, A. Carpinteri, "A fracture mechanics approach to the design of hybrid-reinforced concrete beams", *Engineering Fracture Mechanics*, 2022, 275:108821. DOI: 10.1016/j.engfracmech.2022.108821 **[I.F.: 4.898]**
- 34) A. Carpinteri, F. Accornero, A. Rubino, "Scale effects in the post-cracking behaviour of fibre-reinforced concrete beams", *International Journal of Fracture*, 2023, 240(1):1-16. DOI: 10.1007/s10704-022-00671-x **[I.F.: 2.635]**
- 35) F. Accornero, R. Cafarelli, A. Carpinteri, A. Nanni, "Scale effects in GFRP-bar reinforced concrete beams", *Structural Concrete (FIB)*, 2023, 24:2817-2826. DOI: 10.1002/SUCO.202200676 **[I.F.: 2.793]**
- 36) R. Cafarelli, F. Accornero, A. Carpinteri, "Size-scale effects in high-performance reinforced and prestressed concrete T-beams", *Structural Concrete (FIB)*, 2023, 24:5649-5663. DOI: 10.1002/suco.202200673 **[I.F.: 2.793]**
- 37) A. Carpinteri, O. Borla, F. Accornero, "Gypsum and quartz specimens in compression failure: Fracto-emissions and related stoichiometric balances", *Engineering Fracture Mechanics*, 2023, 284:109202. DOI: 10.1016/j.engfracmech.2023.109202 **[I.F.: 4.898]**
- 38) A. Carpinteri, G. Niccolini, F. Accornero, "Analogy between turbulent-to-vortex shedding flow transition in fluids and ductile-to-brittle failure transition in solids", *Fluids*, 2023, 8:114. DOI: 10.3390/fluids8040114
- 39) A. Rubino, F. Accornero, A. Carpinteri, "Flexural behaviour and minimum reinforcement condition in hybrid-reinforced concrete beams", *Structural Concrete (FIB)*, 2023, 24(4): 4767–4778. DOI: 10.1002/suco.202200674 **[I.F.: 2.793]**
- 40) R. Cucuzza, A. Aloisio, F. Accornero, A. Marinelli, E. Bassoli, G. Marano, "Size-scale effects and modelling issues of fibre-reinforced concrete beams", *Construction and Building Materials*, 2023, 392:131727. DOI: 10.1016/j.conbuildmat.2023.131727 **[I.F.: 7.693]**
- 41) F. Accornero, A. Carpinteri, G. Marano, A. Rubino, "Il calcestruzzo fibro-rinforzato per uso strutturale: Capacita' portante ed effetti di scala sulla minima armatura", *Ingenio*, 20.03.2023.
- 42) R. Cafarelli, F. Accornero, A. Carpinteri, "Failure-mode scale transitions in RC and PC beams", *Smart Construction and Sustainable Cities*, 2024, 2:5. DOI: 10.1007/s44268-024-00026-6

- 43) A. Rubino, F. Accornero, A. Carpinteri, "Fracture mechanics approach to minimum reinforcement design of fibre-reinforced and hybrid-reinforced concrete beams", *International Journal of Damage Mechanics*, In print [I.F.: 4.200]

[Total I.F.: 121.047]

Book Chapters

- 1) F. Accornero, S. Invernizzi, G. Lacidogna, A. Carpinteri, "The Sacred Mountain of Varallo renaissance complex in Italy: Damage analysis of decorated surfaces and structural supports", in: *Acoustic, Electromagnetic, Neutron Emissions from Fracture and Earthquakes*, Chapter 17, Editors: A. Carpinteri, G. Lacidogna, A. Manuello, Springer, Heidelberg (2015), 249-264.
- 2) G. Lacidogna, A. Manuello, G. Niccolini, F. Accornero, A. Carpinteri, "Acoustic emission wireless monitoring of structures", in: *Acoustic Emission and Related Non-destructive Evaluation Techniques in the Fracture Mechanics of Concrete*, Chapter 2, Editor: M. Ohtsu, Woodhead Publishing, Cambridge (2015), 15-40.
- 3) G. Lacidogna, F. Accornero, A. Carpinteri, "Masonry structures", in: *Innovative AE and NDT Techniques for On-site Measurement of Concrete and Masonry Structures*. RILEM Bookseries, Chapter 3, Editor: M. Ohtsu, Springer, Heidelberg (2016), 27-46.
- 4) G. Lacidogna, S. Invernizzi, F. Accornero, A. Carpinteri, "Il Sacro Monte di Varallo: Valutazione del rischio sismico tramite monitoraggio con le Emissioni Acustiche e modelli numerici strutturali", in: *Il Patrimonio Pittorico Murale dei Sacri Monti: Monitoraggio, Valorizzazione e Recupero*, Capitolo 5, Editor: A. Carpinteri, Aracne, Roma (2017), 61-84.
- 5) F. Accornero, S. Invernizzi, G. Lacidogna, A. Carpinteri, "Analisi del danneggiamento delle murature affrescate tramite la tecnica delle Emissioni Acustiche", in: *Il Patrimonio Pittorico Murale dei Sacri Monti: Monitoraggio, Valorizzazione e Recupero*, Capitolo 6, Editor: A. Carpinteri, Aracne, Roma (2017), 85-108.
- 6) G. Niccolini, O. Borla, F. Accornero, G. Lacidogna, A. Carpinteri, "Proprietà di scala del danneggiamento da misure di resistenza elettrica: Un'applicazione alle statue in

- terracotta del Complesso rinascimentale del Sacro Monte di Varallo”, in: *Il Patrimonio Pittorico Murale dei Sacri Monti: Monitoraggio, Valorizzazione e Recupero*, Capitolo 7, Editor: A. Carpinteri, Aracne, Roma (2017), 109-120.
- 7) A. Grazzini, G. Lacidogna, S. Valente, F. Accornero, “Detachment Monitoring of Repair Mortar Applied to Historical Masonry Stone by Acoustic Emission Technique”, in: *Structural Analysis of Historical Constructions*, RILEM Bookseries, Editors: R. Aguilar, D. Torrealva, S. Moreira, M.A. Pando, L.F. Ramos, vol 18. Springer, Cham (2019), 2197-2205.
 - 8) G. Lacidogna, G. Niccolini, F. Accornero, A. Carpinteri, “Acoustic emission wireless monitoring of structures” in: *Acoustic Emission and Related Non-Destructive Evaluation Techniques in the Fracture Mechanics of Concrete*, Second Edition, Chapter 2, Editor: M. Ohtsu, Woodhead Publishing (2021), DOI: 10.1016/B978-0-12-822136-5.00002-2
 - 9) G. Lacidogna, G. Piana, F. Accornero, A. Carpinteri, “Multitechnique damage monitoring: application to concrete beams” in: *Acoustic Emission and Related Non-Destructive Evaluation Techniques in the Fracture Mechanics of Concrete*, Second Edition, Chapter 14, Editor: M. Ohtsu, Woodhead Publishing (2021), DOI: 10.1016/B978-0-12-822136-5.00014-9
 - 10) E. Verstrynge, G. Lacidogna, F. Accornero, ““AE in Masonry”, in: *Acoustic Emission Testing*, Chapter 15, Editors: C.U. Grosse et al., Springer, Heidelberg (2021), 361-402.
 - 11) A. Carpinteri, F. Accornero, “Failure of high-performance reinforced concrete: Brittle behaviour and fracture mechanics assessment”, in: *Comprehensive Structural Integrity*, Second Edition, Chapter 2.10, Elsevier (2022), 252-270. DOI: 10.1016/B978-0-12-822944-6.00034-7

Conference Proceedings

- 1) F. Accornero, S. Invernizzi, G. Lacidogna, A. Carpinteri, “Acoustic Emission and damage analysis of decorated surface structural supports”, *19th European Conference on Fracture: Fracture Mechanics for Durability, Reliability and Safety, ECF 2012*, 2012.

- 2) A. Carpinteri, S. Invernizzi, G. Lacidogna, F. Accornero, "Acoustic Emission monitoring of frescos degradation in a XVII Century chapel of the Sacred Mountain of Varallo (Italy)", In: J. Jasienko (Ed), *Structural Analysis of Historical Constructions*, Wroclaw, Poland, 2012.
- 3) G. Lacidogna, F. Accornero, M. Corrado, A. Carpinteri, "Crushing and fracture energies in concrete specimens monitored by Acoustic Emission", *Proceedings of the 8th International Conference on Fracture Mechanics of Concrete and Concrete Structures*, FraMCoS 2013, 2013, 1726-1736.
- 4) A. Carpinteri, G. Lacidogna, A. Manuello, G. Niccolini, F. Accornero, "Correlation between Acoustic Emission and Seismicity in the Sacred Mountain of Varallo Renaissance Complex in Italy", *Proceedings of the 13th International Conference on Fracture (ICF13)*, Beijing, China, 2013.
- 5) F. Accornero, G. Lacidogna, S. Invernizzi, A. Carpinteri, "Stability assessment of masonry arches by evolutionary fracturing process analysis", *Proceedings of the 21st Congress of the Italian Society of Theoretical and Applied Mechanics (AIMETA XXI)*, Turin, Italy, 2013.
- 6) G. Lacidogna, S. Invernizzi, F. Accornero, A. Carpinteri, "The Sacred Mountain of Varallo Complex in Italy: Correlation between structural damage and local seismicity", *Proceedings of the 21st Congress of the Italian Society of Theoretical and Applied Mechanics (AIMETA XXI)*, Turin, Italy, 2013.
- 7) G. Niccolini, O. Borla, F. Accornero, G. Lacidogna, A. Carpinteri, "Mechanical damage of historical terracotta statues analyzed by electrical resistance measurements", *Proceedings of the 21st Congress of the Italian Society of Theoretical and Applied Mechanics (AIMETA XXI)*, Turin, Italy, 2013.
- 8) E. Di Battista, G. Lacidogna, S. Invernizzi, F. Accornero, O. Borla, A. Carpinteri, "Acoustic Emission and fracture energy dissipation in notched concrete beams subjected to three-point bending tests", *Proceedings of the 21st Congress of the Italian Society of Theoretical and Applied Mechanics (AIMETA XXI)*, Turin, Italy, 2013.
- 9) G. Lacidogna, P. Cutugno, F. Accornero, S. Invernizzi, A. Carpinteri, "Evaluation of seismic risk in regional areas by AE monitoring of historical buildings", *Proceedings of*

the 6th International Conference on Emerging Technologies in NDT (6th ETNDT), Brussels, Belgium, 2015, 433-439.

- 10) F. Accornero, G. Lacidogna, A. Carpinteri, "Influence of mechanical instabilities on acoustic emission signal processing for natural materials in compression", *Proceedings of the 14th International Conference on Fracture (ICF 2017)*, Rhodes; Greece, 2017, 2:1192-1193
- 11) S. Invernizzi, G. Lacidogna, B. Montrucchio, F. Accornero, A. Carpinteri, "Experimental analysis of ultrasound vibrations induced in solids", *Proceedings of the 14th International Conference on Fracture (ICF 2017)*, Rhodes; Greece, 2017, 2:65-66
- 12) G. Lacidogna, G. Piana, F. Accornero, A. Carpinteri, "Experimental investigation on crack growth in pre-notched concrete beams", *Proceedings of the 8th International Conference on Experimental Mechanics (ICEM18)*, Brussels, Belgium, 2018, DOI:10.3390/ICEM18-05287.
- 13) A. Grazzini, G. Lacidogna, S. Valente, F. Accornero, "Delamination of plasters applied to historical masonry walls: Analysis by acoustic emission technique and numerical model", *Proceedings of the International Conference on Material Strength and Applied Mechanics, MSAM 2018*, Kitakyushu City, Japan, 2018. IOP Conference Series: Materials Science and Engineering, Volume 372, Issue 1, 12 June 2018, Paper N. 012022, DOI: 10.1088/1757-899X/372/1/012022.
- 14) A. Carpinteri, F. Accornero, "Ductile-to-brittle transition in fiber-reinforced brittle-matrix composites: Scale and fiber volume fraction effects", *Proceedings of the 10th International Conference on Fracture Mechanics of Concrete and Concrete Structures (FraMCoS-X)*, Bayonne, France, 2019, DOI: 10.21012/FC10.234076.
- 15) F. Accornero, A. Carpinteri, "Ductile-to-brittle transition in fiber-reinforced brittle-matrix composites: Discontinuous phenomena and optimization of the components", In: A. Carcaterra, A. Paolone, G. Graziani (Eds), *Proceedings of XXIV AIMETA Conference 2019 (AIMETA 2019)*, 550-557. *Lecture Notes in Mechanical Engineering*, Springer, Cham. DOI: 10.1007/978-3-030-41057-5_45.
- 16) A. Carpinteri, F. Accornero, R. Cafarelli, "Ductile-to-brittle transition in RC and PC beams: Scale effects on minimum and maximum reinforcements", In: B. Zhao, X. Lu (Eds), *Proceedings of the FIB Symposium 2020*, Shanghai, China, 2020, 1155-1162.

- 17) R. Cafarelli, F. Accornero, A. Carpinteri, "Scale-dependent minimum and maximum reinforcement ratios in RC and PC beams", *Proceedings of the FIB Symposium 2021*, Lisbon, Portugal, 2021, 1588-1597.
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April 2024



Ministero dell'Università e della Ricerca

SEGRETARIATO GENERALE

Direzione generale delle istituzioni della formazione superiore

N: 4447

Gent.le
Federico ACCORNERO
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OGGETTO: ASN 2018/2020 - Attestazione di avvenuto conseguimento dell'Abilitazione Scientifica Nazionale alle funzioni di professore universitario di Seconda Fascia nel Settore Concorsuale 08/B2 - SCIENZA DELLE COSTRUZIONI.

Con la presente si attesta che Federico ACCORNERO, nato a Asti (AT) il giorno 06/06/1983, ha conseguito, all'esito delle procedure di Abilitazione Scientifica Nazionale bandite con decreto direttoriale n. 2175/2018, l'Abilitazione Scientifica Nazionale alle funzioni di professore universitario di seconda fascia nel Settore Concorsuale 08/B2 - SCIENZA DELLE COSTRUZIONI.

La validità dell'Abilitazione è di dieci anni¹ a decorrere dal 11/01/2022 e avrà scadenza il 11/01/2032².

Roma, 29/04/2022

La Dirigente
Dott.ssa Maria Giovanna Zilli³

¹ Termine prorogato ai sensi dell'art. 6, co. 4 bis del D.L. 30 dicembre 2021, n. 228, coordinato con la legge di conversione 25 febbraio 2022, n. 15, recante: «*Disposizioni urgenti in materia di termini legislativi*».

² Gli elenchi dei candidati abilitati sono sempre consultabili sul sito <https://abilitazione.miur.it>, sezione "CANDIDATI E RISULTATI", cliccando sull'anno della tornata di interesse, link "Risultati".

³ Firma autografa sostituita a mezzo stampa ai sensi e per gli effetti dell'art. 3, co.2, D. Lgs. n.39/1993.

Il Responsabile del procedimento: La Dirigente Dott.ssa Maria Giovanna Zilli

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Courtesy translation of the original document in Italian language.

We hereby certify that Federico ACCORNERO, born in Asti (AT) on 06/06/1983, achieved the National Scientific qualification as associate in the Italian higher education system, in the call 2018/2020 (Ministerial Decree n. 2175/2018) for the disciplinary field of 08/B2 - Structural mechanics. (Academic Recruitment Field 08/B - Structural and geotechnical engineering, according to the national classification).

The validity of the qualification is ten years¹, starting from the 11/01/2022 and will expire on the 11/01/2032².

Rome, 29/04/2022

La Dirigente
Dott.ssa Maria Giovanna Zilli³

¹ Termine prorogato ai sensi dell'art. 6, co. 4 bis del D.L. 30 dicembre 2021, n. 228, coordinato con la legge di conversione 25 febbraio 2022, n. 15, recante: «*Disposizioni urgenti in materia di termini legislativi*».

² The list of qualified candidates are always available on the website <https://abilitazione.miur.it>, "CANDIDATI E RISULTATI" section, by clicking on the year of the session of interest, link "Risultati".

³ Firma autografa sostituita a mezzo stampa ai sensi e per gli effetti dell'art. 3, co.2, D. Lgs. n.39/1993.

Il Responsabile del procedimento: La Dirigente Dott.ssa Maria Giovanna Zilli

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