Francesco Fabbrocino

CURRICULUM VITAE

Email : ***francesco.fabbrocino@unipegaso.it***

Personal Web-page: ***www.unipegaso.it/website/corsi-di-laurea/ingegneria-civile***

PhD and Lecturing in Mechanics of Solids, Solid and Structural Mechanics, Structural Engineering and BigData Analytics and Strategies for Civil Engineering

University of NAPLES Federico II and Pegaso University

TOP 5 MOST CITED PAPERS:

- A tensegrity approach to the optimal reinforcement of masonry domes and vaults through fiber-reinforced composite materials, F Fraternali, G Carpentieri, M Modano, F Fabbrocino, RE Skelton, Composite Structures, 134, 247-254, August 2015, DOI: 10.1016/j.compstruct.2015.08.087, *Citations: Scopus 42*

Current Academic Position:

Since 2019 **Associate Professor** of Mechanics of Solids and Solid and Structural Mechanics, Department of Engineering, Pegaso University, Italy

Past Academic Position:

2000 - 2014 **Adjunct Lecturer** of Mechanics of Solids and Solid and Structural Mechanics, Department of Structural Engineering, University of Naples Federico II, Naples, Italy

PROFESSIONAL COMMITTEES AND ACTIVITIES (SELECTED):

Since **2014** **Member** of the Italian Association of Theoretical and Applied Mechanics **AIMETA** (http://www.aimeta.it/).

Mail: francesco.fabbrocino@unipegaso.it

Tel.: *+39 08119138300*

2015 **Organizing Committee** on "The 14th International Conference on Intelligent Software Methodologies, Tools and Techniques", Monumental Complex of St. Chiara, Naples, Italy

2015 **Organizing and Scientific Committee** on "International Workshop Big Data Analytics for Smart Strategy Specialisation in Civil Engineering", Pegaso University, Rome, Italy

2015 **Organizing and Scientific Committee** on "The stairs in the building of the historical center of Old Naples - Reading typological, morphological and structural", University of Naples Federico II and Pegaso University, Napoli, Italy

2015 **Organizing and Scientific Committee** on "Problems of Seismic Engineering in the City of Naples", University of Naples Federico II, University Parthenope of Naples and Pegaso University, Napoli, Italy

Since **2015** **Main proponent and Scientific Coordinator** of one fundamental strategic thematic groups of the Pegaso University on **"3DCEL Spin Off UniPegaso: Virtual Modeling and Additive Manufacturing (3D printing) for Advanced Materials"**

Since **2015** **Coordinator** of the **Scientific Program in "Big Data Strategy in Civil Engineering and 3D Advanced Materials"**, program also involved in CESMA University of Naples Federico II and OSDxE, Spin Off of Oxford University, EN

Since **2015** **Scientific Coordinator** of the High Formation and Master Academy. Engineering Area of Pegaso University, Italy

2016 **Scientific Committee** on "The International Conference CONCRETE 2016", University of Molise, Italy

Since **2016** **Director** of the **"Computational Mechanics and Advanced Materials"** joint Center, between University of Tor Vergata, Rome, Italy and Pegaso University, Italy

Since **2016** **Scientific Coordinator** of the **"School of Urban and Environmental Regeneration",** founder prof. Bianchi Alessandro, Rector UniPegaso, High Formation Center of Pegaso University, Italy

2016 **Scientific Committee** on "Multiscale Innovative Materials and Structures – MIMS16", Oct. 28-30, 2016, Cetara (Amalfi Coast), Italy

Since **2016** **Visiting Professor with research fellowship** at EPU – European Polytechnical University in Bulgaria

Since ***2016*** **Committee Member of Industrial Liaison Office** (ILO) in Pegaso University, Rector's Decree n. 29/2016.

Since **2016** **Member** of the European Mechanics Society EUROMECH (http://www.euromech.org/).

Since **2017** **Member** of the International Masonry Society IMS (http://masonry.org.uk/).

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2017 National Academic Qualification as **Associate Professor** by MIUR (Ministry of Education University and Research).

Since **2018** ***Scientific Director*** of the Engineering Editorial Series of Giapeto Publisher.

TEACHING

2014 - 2017 Mechanics of Solids → 10 ECTS,

2014 - 2017 Solid and Structural Mechanics → 15 ECTS,

ACTIVE RESEARCH GRANTS:

2015 - 2018 "***METRICS*** - *Methodologies and technologies for the management and rehabilitation of historic centers and its ancient buildings*", funded by the **European Community** and **MIUR (Italian Department of University Research)**, *Assistant of Project Leader*

2014 -2015 "***PON R&C – METROPOLIS*** - *Methodologies and Technologies for Sustainable and Integrated adaptation and of Urban Systems Security*", funded by the **MIUR (Italian Department of University Research)**, *Research Unit*

2014 -2020 "**OSDE** (**EEIG**), Spin Out della Oxford University (UK),- Satellite Technology for Environmental Monitoring, **European Community UK n. 16789/14**, *Principal Investigator*

2016 -2018 "**ENEL & Pegaso Univ.,** - New design guidelines applicable, in the medium term, for interventions of energy efficiency that concern both Industrial Buildings and buildings used of P.A., by ENEL Italy, *Principal Investigator*

2016 -2018 "**Aeffe/BOSCH Enterprise & Pegaso Univ.,** - Computational Methods and Innovative Materials in Civil and Structural Engineering, by BOSCH, EU, *Principal Investigator*

2016 -2018 "**Delmare Group/BOSCH Enterprise & Pegaso Univ., -** Advanced Computational Methods in the Analysis of Existing Structures according to the new DM n. 58 of 28.02.2017 of MIT "SISMABONUS, by BOSCH, EU, *Principal Investigator*

2016 -2020 "**3D Markers Ltd & Pegaso Univ.,** - 3D Printing of Innovative Materials - Mechanical and physical characterizations, by H2020, EU, *Principal Investigator*

2017 -2020 "**CeSMA – Industria 4.0** - Innovative Enabling Technologies for Industry 4.0", funded by the **MIUR (Italian Department of University Research)**, *Research Unit*

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2018 -2020 **PON Research and Innovation 2014-2020**, "Advanced systems for monitoring of civil infrastructures and urban construction" Scientific Leader: Prof. Edoardo Cosenza, Structure: CeSMA - Advanced Metrology and Technology Services Center,*Research Unit*

PAST INSTITUTIONAL TEACHING ACTIVITIES (SELECTED):

- **Mechanics of Solids and Structures**, Civil Engineering program, Pegaso University, Italy
- **Structural Engineering**, Civil Engineering program, Pegaso University, Italy

MEMBERSHIPS TO EDITORIAL BOARD OF JOURNALS:

Since **2016** Editorial Adjunct Board member for the "*Ingegneria Sismica – International Journal of Earthquake Engineering*" (http://ingegneriasismica.org/it/)

Since **2017** Editorial Board Member for "*The Open Materials Science Journal*" Bentham Open Ed. (https://benthamopen.com/TOMSJ/editorial-board/)

Since **2017** Editorial Board Member for "*International Journal of Computer Sciences and its Applications*" DEStech Publications, Inc., USA, (http://www.destechpub.com/product/ijcsa/)

PROFESSIONAL COMMITTEES AND ACTIVITIES (SELECTED):

Since 2015 Proponent and coordinator of one of the strategic thematic groups of the Pegaso University on "3D CEL Laboratory: Virtual Modeling and Additive Manufacturing (3D printing) for Advanced Materials"

Since 2016 Director of the "Computational and Mechanics and Advanced Materials Laboratory" in BENECON Center

Since 2016 Member of ILO Industrial Liaison Office of Pegaso University

RESEARCH TOPICS (SELECTED):

- **Material constitutive modeling**: static and dynamic response for low and high number of cycles (metals, polymers, rubbers), advanced materials (shape memory alloys and self-diagnosing materials)
- **Mixed finite elements**: development and analysis of finite element methods for Reissner-Mindlin plates, laminates, shells, locking problems in small and large deformation regimes
- **Isogeometric analysis**: structural mechanics problems in small and large deformations

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- **Fast/impact dynamics:** development of meshless numerical techniques, smoothed particle hydrodynamics (**SPH**) methods
- **Advanced materials for the reduction of seismic risk**: development of innovative devices
- **Masonry, historical constructions,** structural analysis, limit analysis, FEM, homogenisation theory, FRP reinforcement, genetic algorithms (GA), rubber vulcanization, elastomeric seismic isolators
- **Theoretical and applied computational mechanics,** structures, experimental testing, constitutive laws, associated and non associated plasticity

PUBLICATIONS

***Scopus Author ID**: 56816961000*
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