

Nicholas Fantuzzi

office: +39 051 2093494

email: nicholas.fantuzzi@unibo.it

website: <https://www.unibo.it/sitoweb/nicholas.fantuzzi/en>

Education

- 05/04/2018 - 05/04/2024: Italian National Academic Qualification as Associate Professor in Mechanics of Solids and Structures (Scienza delle Costruzioni, ICAR/08).
- From December 2018, Senior Assistant Professor (RTD-B), University of Bologna, Italy.
- From June 2017 to November 2018, Junior Assistant Professor (RTD-A), University of Bologna, Italy.
- From February 2017 to May 2017, Adjunct Professor at the School of Engineering and Architecture, University of Bologna, Italy.
- From June 2013 to January 2017, Research Assistant at DICAM Department, University of Bologna, Italy.
- From 2010 January to June 2013, PhD student in Structural and Hydraulics Engineering, University of Bologna, Italy.
- 2009 January, Degree (MSc) cum Laude, Civil Engineering, University of Bologna, Italy.
- 2006 October, Degree (BSc) cum Laude, Civil Engineering, University of Bologna, Italy.

Research Interests

- Modeling of offshore structures and offshore structural components.
- Structural theories of plates and shells and applied mathematical modelling.
- Mechanics of solids and structures.
- Study of composite laminated structures and advanced composite materials.
- Fracture mechanics and crack propagation and initiation.
- Applied numerical methods such as finite element method, differential quadrature technique and mesh free element method.

Computer Skills

- OSs: MS Windows, Mac OS X, and Linux, including most common office packs, web browsing and vectorial image editing (e.g. PhotoShop, GIMP).
- Programming languages: MATLAB, Octave, C, C++, FORTRAN, Python, Bash, HTML, Java, LaTeX, Swift, FISH, R, Julia.
- FEM programming: Straus 7, SAP 2000, ABAQUS, Altair HyperWorks, ANSYS, Bentley SACS, Code Aster/Salome Meca.
- CAD software: AutoCAD, Rhinoceros, Grasshopper.

Advanced courses

- 2021 May – Comparing experiences of online and blended teaching - Esperienze a confronto di didattica on line e mista (University of Bologna).
- 2021 March – Methods and strategies for evaluating university knowledge - Metodi e strategie per la valutazione degli apprendimenti universitari (University of Bologna).

- 2021 January – Disciplinary teaching tools to analyze students' involvement in STEM service teaching - Strumenti di didattica disciplinare per analizzare il coinvolgimento degli studenti in insegnamenti di servizio in ambito STEM (University of Bologna).
- 2021 January – Specific training (first part) of workers on Safety and Health. Modulo 2 - Formazione specifica (parte prima) dei Lavoratori su Sicurezza e Salute (University of Bologna). According to D.Lgs 81/08 and G.U. N°8 of 11/01/2012.
- 2021 January – General training of workers on Safety and Health. Modulo 1 - Formazione generale dei Lavoratori alla Salute e Sicurezza (University of Bologna). According to D.Lgs 81/08 and G.U. N°8 of 11/01/2012.
- 2020 September – “Blended Synchronous Learning” by Prof. Matt Bower, Macquarie University, Australia, Strumenti e Strategie per la Didattica Mista (University of Bologna)
- 2016 May – “Corso base di introduzione alla modellazione CAD 3D per l'industrial design” @Angolo3D (Bologna, Italy).
- 2014 November – “Corso iOS8 base in Swift” by Objective Code (Bologna, Italy)
- 2014 September – “Python for Computational Science” @CINECA (Bologna, Italy)
- 2013 December – “An Introduction to Interactive Programming in Python” @Coursera (Rice University, USA)
- 2013 April – “Introduction to Scientific and Technical Computing in C++” @CINECA (Bologna, Italy)
- 2012 January – Altair RADIOSS 1st module @Altair (Turin, Italy)
- 2011 December – “C language introduction and scientific programming”
- 2010 June – Altair HyperMesh 2nd module @Altair (Turin, Italy)
- 2010 April – Altair HyperMesh 1st module @Altair (Turin, Italy)

Academic Activities

PhD Courses

- 2021 22nd Sep – Seminar held for the PhD program at DISG Department, Sapienza University of Rome entitled “Material symmetries in homogenized hexagonal-shaped composites as Cosserat continua”. https://phd.uniroma1.it/web/course---multiscale-modelling-in-composites_nS2652EN_EN.aspx
- 2021 25th, 29th Mar – Short Course held for the PhD program at DISG Department, Sapienza University of Rome entitled “Modelling of offshore structures”. https://phd.uniroma1.it/web/corso---modeling-of-offshore-structures_nS2419IT_IT.aspx
- 2020 18-19th Feb – Short Course held for the PhD program at DISG Department, Sapienza University of Rome entitled “Modelling of offshore structures”. https://phd.uniroma1.it/web/corso-breve---modeling-of-offshore-structures-dr-nicholas-fantuzzi-università-alma-mater-bologna_nS1446IT_IT.aspx
- 2016 April-May – Teacher of the PhD course held at DICAM Department, University of Bologna, Italy entitled “Modelling and analysis of composite materials for the virtual product design”.
- 2015 May – Seminar for PhD Program held at DICAM Department, University of Bologna, Italy entitled “Strong form finite elements: formulation and applications”.

Graduate Courses

- 2018, 2019, 2020 September-December – Teacher of the course “Advanced Structural Mechanics” (in English), Historical Building Rehabilitation International degree, DA Department, University of Bologna, Italy.
- 2017, 2018, 2019, 2020 September-December – Teacher of the course “Modelling of Offshore Structures” (in English), Civil Engineering International degree, DICAM Department, University of Bologna, Italy.
- 2017 February-June – Teacher of the course “Modelling of Offshore Structures” (in English),

Civil Engineering International degree, DICAM Department, University of Bologna, Italy.

- 2016 April-June – Teacher of the course “Complementi di Scienza delle Costruzioni”, Dipartimento dell’Innovazione, University of Salento, Lecce, Italy.

Undergraduate Courses

- 2017 September-December – Teacher of the course “Meccanica dei Materiali T”, Electrical Energy Engineering, DEI Department, University of Bologna, Italy.

Tutoring (Teaching Assistant)

- 2015 September-December – Tutor of Master II level “ENI Oil & Gas”
- 2015 September-December – Tutor of “Piastrine e Gusci”
- 2015 March-June – Tutor of “Teoria delle Strutture”
- 2014 February-June – Tutor of “Computational Mechanics” (in English)
- 2014 September-December – Tutor of Master II level “ENI Oil & Gas”
- 2013 September-December – Tutor of Master II level “ENI Oil & Gas”
- 2012 September-December – Tutor of Master II level “ENI Oil & Gas”
- 2012 March-June – Tutor of “Meccanica delle Strutture”, Civil Engineering degree, Faculty of Engineering, University of Bologna, Italy.
- 2011 March-June – Tutor of “Teoria delle Strutture”
- 2011 September-December – Tutor of Master II level “ENI Oil & Gas”
- 2010 September-December – Tutor of Master II level “ENI Oil & Gas”

Other Courses & Seminars

- 2020 17th Apr (post-poned due to Covid19) – Seminar held at the Croatian Society of Mechanics, Rijeka, Croatia entitled “Practical considerations in offshore scaffolding design using an equivalent beam model”.
https://csm.hr/?pg=vijest_detalji&lng=hr&vijest_id=331&lnk=hdm
- 2019 May – Seminar held at Zhejiang University, Hangzhou, China entitled “Structural mechanics applications in offshore engineering”.
- 2019 May – Seminar held at Chongqing University, Chongqing, China entitled “Mechanics of composite materials and structures in engineering analysis and design”.
- 2019 7-10th May – Speaker at International Offshore Structures Design Course 2019 (IOSD 2019), University of Porto, Portugal (<https://web.fe.up.pt/~offshore/index.php>).
- 2019 27 Feb – Seminar held at Pegaso University, Naples, Italy entitled “Theoretical modelling and design of structures in off-shore environment”.
- 2018 March – Seminar held at City University of Hong Kong (CityU), Hong Kong, China entitled “Structural mechanics and modelling in off-shore environment”.
- 2016 November – Seminar held at Texas A&M University, Texas, USA entitled “Differential and Integral Quadrature Methods. Strong and Weak Formulation Finite Element Methods”.
- 2016 November – Seminar held at University of Strathclyde, Glasgow, UK entitled “Strong form finite element formulation for investigating structural mechanics problems”.

Visiting

- 2020-2021 – Visiting Professor at University of Rijeka, Rijeka, Croatia.
- 2020 April-June – Visiting Professor at Chongqing University, Chongqing, China. Teacher of the courses “Theory of Elasticity” and “Finite Element Fundamentals”.
- 2019 May-June – Visiting Professor at Chongqing University, Chongqing, China. Teacher of the courses “Theory of Elasticity” and “Finite Element Fundamentals”.
- 2018 Feb-Mar – Visiting Scholar at City University of Hong Kong (CityU), Hong Kong, China.

PhD Students

1. Feb 2021-Feb 2023 (visiting PhD, in progress) – Farui Shi, Chongqing University, China.
2. Jun 2021-Jun 2022 (visiting PhD, in progress) – Shakiba Zolfaghari, Isfahan University of Technology – Iran.
3. Jan 2021 (in progress) – Marco Colatosti, Sapienza University of Rome, Italy. Advisor: P. Trovalusci; Co-Advisor: N. Fantuzzi.
4. Sep 2019 (in progress) – Paulo J.S.C. Mendes, University of Porto, Portugal. Supervisor: José A.F.O. Correia; Co-Supervisor: N. Fantuzzi.

Master Students

1. 2021 October (to appear) – Saaranya Kumar Dasari, *Computational morphogenesis of spatial structures by structural optimization using finite element method and a genetic algorithm*, Master Thesis in Historic Building Rehabilitation, University of Bologna. Co-Advisors: Patrizia Trovalusci and Roberto Panei, Sapienza University of Rome, Italy.
2. 2021 July – Samsam Rasekhafshar, *Global fatigue assessment of a decommissioned jacket platform for a sustainable reuse as an offshore wind turbine*, Master Thesis in Offshore Engineering (Structural Curriculum), University of Bologna. Co-Advisors: José Antonio F.O. Correia and Paulo J.S.C. Mendes, University of Porto, Portugal.
3. 2021 July – Sina Saberi, *Analysis of unreinforced and reinforced tubular t-joints structures with open source finite element software*, Master Thesis in Offshore Engineering (Structural Curriculum), University of Bologna.
4. 2021 July – Abdallah Alhajali, *Analysis of existing offshore structures considering structural damage*, Master Thesis in Civil Engineering (Offshore curriculum), University of Bologna
5. 2021 July – Mattia Ruini, *Damping effect of a bubble curtain for offshore installations*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisor: Massimiliano Formenti, SA Offshore, The Netherlands
6. 2021 February – Emanuele Lobosco, *Profili tubolari laminati in FRP: analisi numerica e modello di trave spaziale per applicazioni civili*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisor: Stefano de Miranda, University of Bologna, Italy.
7. 2021 February – Hasan Saeed, *Numerical framework for fatigue lifetime prediction of an offshore jacket structure*, Master Thesis in Civil Engineering (Offshore curriculum), University of Bologna. Co-Advisor: Wim De Waele, University of Ghent, Belgium.
8. 2021 February – Hasan Hamadi, *Structural analysis of an offshore steel monotubular platform 'Morena-1' and fatigue assessment of leg-boat landing connection joint*, Master Thesis in Civil Engineering (Offshore curriculum), University of Bologna. Co-Advisor: Maurizio Montanari, PROGRA Company, Ravenna.
9. 2020 December – Francesco Laricchia, *Study of offshore flexible pipelines with analytical and numerical methods*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna.
10. 2020 December – Ahmed Fowzi Fatah Alghazzawi, *Improving the Performance of Existing Offshore Jacket Platforms by Means of Fluid and Liquid Dampers*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Advisor: Michele Palermo; Co-Advisor: Nicholas Fantuzzi.
11. 2020 October – Marco Colatosti, *Numerical analysis of homogenized hexagonal-shaped composite as Cosserat continua*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisor: Patrizia Trovalusci, Sapienza University of Rome, Italy.
12. 2020 October – Ali Aidibi, *Stress concentration factor and fatigue life evaluation in offshore tubular KT-Joints*, Master Thesis in Offshore Engineering (Structural Curriculum), University of Bologna. Co-Advisor: José Antonio F.O. Correia, University of Porto, Portugal.
13. 2020 July – Althea Rustico, *Dynamic actuation model for vibration reduction in offshore cranes*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Massimiliano Formenti, SA Offshore, The Netherlands.
14. 2020 July – Sadegh Takavar, *Investigation of Vertical Axis Wind Tower Installation on*

- Existing Offshore Platforms*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna.
15. 2020 July – Marziyeh Zarifkar, *Investigation of Horizontal Axis Wind Tower Installation on Existing Offshore Platforms*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna.
 16. 2020 July – Giovanni Tocci Monaco, *Analisi di nano piastre composite con effetti piezo-elettro-magneto-igrotermici e teoria non locale: teoria e applicazioni*, Master Thesis in Ingegneria Civile, University of Bologna.
 17. 2020 July – Tancredi Longavita, *Design of a Pipe Rack in lightweight concrete: fireproofing's evaluation, analysis of the lifting process for entire monolithic frames and cost-benefit analysis compared to the traditional solution*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisors: Valerio Colone, Francesca Sindici, TechnipFMC, Italy.
 18. 2020 July – Alberto Dovesi, *Gusci cilindrici in regime di assial-simmetria secondo la teoria del terzo ordine*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisor: Erasmo Viola, University of Bologna, Italy.
 19. 2020 March – Alessandro Sorrentino, *Dynamic analysis of mono and tri-suction pile supported offshore wind turbines*, Master Thesis in Environmental Engineering (Earth Resources Engineering Curriculum), University of Bologna. Co-Advisor: Oene Jeljer Dijkstra, Ponlawich Arjnoi, SPT Offshore, The Netherlands.
 20. 2020 March – Antonio Segreto, *Retrofitting analysis of a subsea trencher using composite materials*, Master Thesis in in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Massimiliano Formenti, SA Offshore, The Netherlands.
 21. 2020 March – Lorenzo Corelli, *Analisi e consolidamento di un edificio in muratura interessato da dissesto fondale*, Master Thesis in Ingegneria Civile, University of Bologna. Co-Advisor: Luigi Pio Guerra, AlmaV Project, Italy.
 22. 2020 March – Daniel Gnoli, *Studio di profili tubolari in FRP: omogeneizzazione e modello trave equivalente*, Master Thesis in Ingegneria Civile, University of Bologna.
 23. 2019 December – Alessio Caiafa, *Decommissioning of a tension leg platform – possible removal options for a challenging project in the Gulf of Mexico*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Carlos Henrique Friederichs, Fabio Coppetti, Eni S.p.A., Italy.
 24. 2019 December – Andrea Piglionica, *Structural analysis and re-design of SPM platform in the Adriatic sea*, Master Thesis in Environmental Engineering (Earth Resources Engineering Curriculum), University of Bologna. Co-Advisor: Jak Albagli, Alex Dottore, Tecon Company, Milano, Italy.
 25. 2019 July – Dario Tornatore, *Characterization of damping properties of lattice cells fabricated by means of Selective Laser Melting process*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Marco Montemurro, University of Bordeaux, France.
 26. 2019 July – Maria Luisa Barbiero, *Cover cracking of concrete slabs induced by rebar corrosion*, Master Thesis in Engineering of Building Processes and Systems (Historic Building Rehabilitation Curriculum), University of Bologna. Co-Advisor: Weiping Zhang, Tongji University, Shanghai, China.
 27. 2019 March – Rafael Righi Bento Pereira, *Dynamic Analysis and Fatigue Assessment of a Jacket-type Offshore Platform*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisors: Rui Calçada, José Antonio F.O. Correia, University of Porto, Portugal.
 28. 2019 March – Tannaw Rai, *Parametric study of offshore structures with magneto-rheological tuned liquid column damper*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna.
 29. 2019 March – Rita Cipullo, *Numerical Models of Offshore Pipelines Reinforced by Carbon Nano Tubes*, Master Thesis in Civil Engineering (Offshore Curriculum), University of

- Bologna. Co-Advisor: Mokhtar Awang, Petronas Technical University, Malaysia.
30. 2019 February – Sajjad Babamohammadi, *Mechanical Assessment of Fiber Reinforced Composite Hollow Circular Beams*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Graziano Lonardi, COSMI Company, Ravenna.
 31. 2018 December – Francesco Cornacchia, *Theoretical and numerical models of innovative cross-sections for flexible pipelines in research and design*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Yong Bai, Zhejiang University.
 32. 2018 December – Venkata Raja Sekhar Reddy Ravipati, *Design and modelling of boat landing for jacket platforms in the Adriatic sea*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Maurizio Montanari, PROGRA Company, Ravenna.
 33. 2018 October – Lorenzo Alessi, *Design of wind towers in existing offshore platforms*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: John Macdonald, University of Bristol, UK.
 34. 2018 July – Snehith Dharasura, *Buckling analysis of H Beam-Columns using Finite Element Analysis, Eurocode, and British Standards*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Paul Davidson, University of Aberdeen, UK.
 35. 2017 December – Mattia Bianchi, *Deterministic and spectral fatigue analysis of the Additional Living Quarter platform in the North Field Bravo*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Giulio Pascolini, Tecon Company, Milano.
 36. 2017 December – Fabio Borgia, *Kinematic optimization of an overboarding chute mechanism*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna. Co-Advisor: Massimiliano Formenti, F.Ili Righini Company, Ravenna.
 37. 2017 December – Slimane Ouakka, *On the static strength of reinforced joints*, Master Thesis in Civil Engineering (Offshore Curriculum), University of Bologna.

Bachelor Students

1. 2019 July – Romano Pellegrin, *Il sistema costruttivo Xlam in un edificio di civile abitazione*. Bachelor Thesis in Building Engineering (In Italian: Ingegneria Edile), University of Bologna.

PhD Commissions

- Since January 2021 – Member of the Advisory board of the PhD Program “Engineering and information technology for structural and environmental monitoring and risk management - EIT4SEMM”, University of Bologna.
- 11th June 2021 – Invited by Vilnius Tech (former Vilnius Gediminas Technical University (VGTU)) Doctoral Committee as a Member of PhD Defense Committee.
- April 2021 – Invited by University of Brescia (Italy) Doctoral Committee as a Member of PhD Defense Committee.
- 8th November 2019 – Invited by Vilnius Gediminas Technical University (VGTU) Doctoral Committee as a Member of PhD Defense Committee.
- 14th October 2019 – Invited by Bristol University Doctoral Committee as a Member of PhD Defense Committee.
- 9th November 2018 – Invited by Vilnius Gediminas Technical University (VGTU) Doctoral Committee as a Member of PhD Defense Committee.

Master Degree Commissions

- July 2021, October 2020, July 2020 – Master Degree in Offshore Engineering, University of Bologna.

- July 2019, February 2019, October 2018 – Master Degree in Historical Building Rehabilitation, University of Bologna.
- July 2021, February 2021, December 2020, July 2020, March 2020, July 2019, March 2019, December 2018, June 2018, March 2018, February 2018, June 2017 – Master Degree in Civil Engineering, University of Bologna.

Other Commissions

- July 2021 – Commission for Internationalization, DICAM Department, University of Bologna.
- May 2021 – Commission for Study abroad grants, Offshore Engineering, University of Bologna.
- July 2020, February 2018 – Commission for TOLC exams, University of Bologna.
- September 2019 – Commission for the Test of Italian Language for not-EU students, University of Bologna
- March 2019 – Commission for general student aid, support and tutoring admission in the Civil Engineering International Master Degree, University of Bologna.
- September 2018 – Commission for general student aid, support and tutoring admission in the Offshore Engineering International Master Degree, University of Bologna.
- Since January 2018 – Commission for the student admission in the Offshore Engineering International Master Degree, University of Bologna.
- Since June 2017 – Commission for the student admission in the Civil Engineering International Master Degree, University of Bologna.

State Certification Exam Commissions (as Expert Member)

- I Session, Spring 2021 – Civil Engineering.
- I Session, Spring and II Session, Fall 2020 – Civil Engineering.
- I Session, Spring and II Session, Fall 2019 – Civil Engineering.
- I Session, Spring and II Session, Fall 2018 – Civil Engineering.
- I Session, Spring and II Session, Fall 2017 – Civil Engineering.
- I Session, Spring and II Session, Fall 2016 – Civil Engineering.
- I Session, Spring and II Session, Fall 2015 – Civil Engineering.
- II Session, Fall 2014 – Civil Engineering.

Memberships

- 2020 – Member of ATENA (Italian Association of Naval Design – Ravenna section).
- 2018 – Member of COMSE (Center for Off-shore and Marine Systems Engineering) – Department DICAM, University of Bologna.
- 2018 – Member of Committee on Publication Ethics (COPE) publicationethics.org
- 2018 – Member of European Mechanics Society (EUROMECH) www.euromech.org
- 2017 – Member of Italian Society of Structural Mechanics (Società Italiana di Scienza delle Costruzioni – SiSCo) www.scienzadellecostruzioni-segreteria.it
- 2016 – Member of Italian Association of Theoretical and Applied Mechanics (Associazione Italiana di Meccanica Teorica e Applicata – AIMETA) www.aimeta.it
- 2011 – Member of the Scientific Committee, Promoter and Secretary of CIMEST Center, Center for Studies and Research on the Identification of Materials and Structures – “Michele Capurso” – Department DICAM, University of Bologna. <http://www.dicam.unibo.it/it/Ricerca/Centri/CIMEST>

Interests

- Certificate of Proficiency in English (CPE) self-student.

- Beginner in French language self-student.
- Object oriented programming languages. Hardware and software in general.
- Travelling abroad; running; food, health and cooking.

Foreign Language

- English (fluent: speak, write, read, translate)
- French (basic knowledge: speak, write, read)
- 2011 June – First Certificate in English, Grade B

Publications

International Journal Papers

1. M. Baccocchi, N. Fantuzzi, A.M. Tarantino, R. Luciano, “Linear eigenvalue analysis of laminated thin plates including the strain gradient effect by means of conforming and nonconforming rectangular finite elements”. *Computers and Structures*. (2021). In press.
2. M. Avey, A.H. Sofiyev, N. Fantuzzi, N. Kuruoglu, “Primary resonance of double-curved nanocomposite shells using nonlinear theory and multi-scales method: modeling and analytical solution”. *International Journal of Non-Linear Mechanics*. (2021). In press.
3. F. Shi, N. Fantuzzi, P. Trovalusci, Y. Li, Z. Wei, “The effects of dilatancy in composite assemblies as micropolar continua”. *Composite Structures*. (2021). In press.
4. A. Sikora, M. Gaff, A.K. Sethya, N. Fantuzzi, “Bending work of laminated materials based on densified wood and reinforcing components”. *Composite Structures*. (2021). In press.
5. A. Aidibi, S. Babamohammadi, N. Fantuzzi, J.A.F.O. Correia, L. Manuel, “Stress Concentration Factor Evaluation of Offshore Tubular KT-Joints based on Analytical and Numerical Solutions: A Comparative Study”. *ASCE Practice Periodical on Structural Design and Construction*. (2021). In press.
6. B. Keshtegar, R. Kolahchi, J.A.F.O. Correia, N. Fantuzzi, M.H. Mirabimoghaddam. “Reliability analysis of composite-nanofluid tube using Finite-based Armijo method”. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering* (2021). In press.
7. A. Deniz, N. Fantuzzi, A.H. Sofiyev, N. Kuruoglu, “Modeling and solution of large amplitude vibration problem of construction elements made of nanocomposites using shear deformation theory”. *Materials*. 14, 3843 (2021). <https://doi.org/10.3390/ma14143843>
8. M. Colatosti, N. Fantuzzi, P. Trovalusci, “Dynamic characterization of microstructured materials made of hexagonal-shape particles with elastic interfaces”. *Nanomaterials*, 11, 1781 (2021). <https://doi.org/10.3390/nano11071781>
9. M. Derradji, O. Mehelli, W. Liu, N. Fantuzzi, “Sustainable and Ecofriendly Chemical Design of High Performance Bio-Based Thermosets for Advanced Applications”. *Frontiers in Chemistry*, 9, 412 (2021). [10.3389/fchem.2021.691117](https://doi.org/10.3389/fchem.2021.691117)
10. G. Tocci Monaco, N. Fantuzzi, F. Fabbrocino, R. Luciano, “Semi-analytical static analysis of nonlocal strain gradient laminated composite nanoplates in hygrothermal environment”. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 43, 274 (2021). <https://doi.org/10.1007/s40430-021-02992-9>
11. M. Colatosti, N. Fantuzzi, P. Trovalusci, R. Masiani, “New insights on homogenization for hexagonal-shaped composites as Cosserat continua”. *Meccanica* (2021) <https://doi.org/10.1007/s11012-021-01355-x>
12. N. Fantuzzi, A. Rustico, M. Formenti, A.J.M. Ferreira, “3D active dynamic actuation model for offshore cranes”. *Computer-Aided Civil and Infrastructure Engineering* (2021) 1-14.
13. P. Mendes, J.A.F.O. Correia, J.M. Castro, N. Fantuzzi, A. Aidibi, L. Manuel, “Horizontal And Vertical Axis Wind Turbines On Existing Jacket Platforms: Part 1 - A Comparative Study”. *Structures* (2021) 32, 1069-1080.

14. G. Tocchi Monaco, N. Fantuzzi, F. Fabbrocino, R. Luciano, "Trigonometric solution for the bending analysis of Magneto-Electro-Elastic Strain Gradient nonlocal nanoplates in hygro-thermal environment". *Mathematics* (2021) 9(5), 567; <https://doi.org/10.3390/math9050567>
15. N. Fantuzzi, M. Baccocchi, D. Benedetti, J. Agnelli, "The use of sustainable composites for the manufacturing of electric cars". *Composites Part C* (2021) 4, 100096.
16. G. Tocchi Monaco, G.; Fantuzzi, N.; Fabbrocino, F.; Luciano, L. "Critical Temperatures for Vibrations and Buckling of Magneto-Electro-Elastic Nonlocal Strain Gradient Plates". *Nanomaterials* 2021,11,87. <https://doi.org/10.3390/nano11010087>.
17. P. Mendes, J.A.F.O. Correia, A. Mourão; R. Pereira, N. Fantuzzi, A. De Jesus, R. Calçada, "Fatigue Assessments of a Jacket-Type Offshore Structure Based on Static and Dynamic Analyses". *Practice Periodical on Structural Design and Construction*, 26 (1) 04020054 (2021).
18. G. Tocchi Monaco, N. Fantuzzi, F. Fabbrocino, R. Luciano, "Hygro-thermal vibrations and buckling of laminated nanoplates via nonlocal strain gradient theory". *Composite Structures*, (2020) 113337.
19. M. Baccocchi, N. Fantuzzi, A.J.M.Ferreira, "Static finite element analysis of thin laminated strain-gradient nanoplates in hygro-thermal environment". *Continuum Mechanics and Thermodynamics*. (2020) In Press.
20. O. Mehelli, M. Derradji, R. Belgacemi, A. Zegaoui, K. Khimeche, N. Fantuzzi, A. Mouloud, "Development of highly performant hybrid materials based on phthalonitrile resin for a simultaneous ballistic and nuclear shielding protection". *High Performance Polymers*. (2020) <https://doi.org/10.1177/0954008320954526>. In Press.
21. U. De Maio, N. Fantuzzi, F. Greco, L. Leonetti, A. Pranno, "Failure analysis of ultra high-performance fiber-reinforced concrete structures enhanced with nanomaterials by using a diffuse cohesive interface approach", *Nanomaterials*, 10(9), 1-23, 1792 (2020).
22. H. Wang, Y. Li, S. Cao, N. Fantuzzi, R. Pan, M. Tian, Y. Liu, H. Yang, "Fracture toughness analysis of HCCD specimens of longmaxi shale subjected to mixed mode I-II loading", *Engineering Fracture Mechanics*, 239, 107299 (2020).
23. N. Fantuzzi, M. Baccocchi, J. Agnelli, D. Benedetti, "Three-phase homogenization procedure for woven fabric composites reinforced by carbon nanotubes in thermal environment", *Composite Structures*, 254,112840 (2020).
24. M. Baccocchi, N. Fantuzzi, A.J.M. Ferreira, "Conforming and nonconforming laminated finite element Kirchhoff nanoplates in bending using strain gradient theory", *Computers & Structures*, 239, 106322 (2020).
25. D. Gnoli, S. Babamohammadi, N. Fantuzzi, "Homogenization and equivalent beam model for fiber reinforced tubular profiles", *Materials*, 13, 2069 (2020).
26. X.W. Gao, Y.T. Zheng, N. Fantuzzi, "Local least-squares element differential method for solving heat conduction problems in composite structures", *Numerical Heat Transfer, Part B: Fundamentals*, 1-20 (2020).
27. N. Fantuzzi, "Smart tuned liquid column damper for reducing structural vibrations in offshore structures", *Proceedings of the Institution of Civil Engineers - Maritime Engineering* (2020). <https://doi.org/10.1680/jmaen.2019.18>
28. N. Fantuzzi, P. Trovalusci, R. Luciano, "Multiscale analysis of anisotropic materials with hexagonal microstructure as micro-polar continua", *International Journal for Multiscale Computational Engineering*, 18(2), 265-284 (2020).
29. P. Trovalusci, N. Fantuzzi, M.L. De Bellis, "Preface: Multiscale and multiphysics modeling of "complex" materials and engineering applications", *International Journal for Multiscale Computational Engineering*, 18 (1) (2020).
30. P. Kazemi Esfeh, B. Nadi, N. Fantuzzi, "Influence of random heterogeneity of shear wave velocity on sliding mass response and seismic deformations of earth slopes", *Earthquake Engineering and Engineering Vibration*. 19, 1-19 (2020).
31. N. Fantuzzi, P. Trovalusci, R. Luciano, "Material symmetries in homogenized hexagonal-

- shaped composites as Cosserat continua”, *Symmetry*. 12, 441 (2020).
32. L. Gao, T. Liu, Q.Q. Shao, N. Fantuzzi, W. Chen, “Burst pressure of steel reinforced flexible pipe”, *Marine Structures*. 71 (2020) 102704.
 33. F. Cornacchia, F. Fabbrocino, N. Fantuzzi, R. Luciano, R. Penna, “Analytical solution of cross- and angle-ply nano plates with strain gradient theory for linear vibrations and buckling”, *Mechanics of Advanced Materials and Structures*. 1-15 (2019). DOI: 10.1080/15376494.2019.1655613
 34. S. Babamohammadi, N. Fantuzzi, G. Lonardi, “Mechanical assessment of hollow-circular FRP beams”, *Composite Structures*. 227, 111313 (2019).
 35. B. Zhang, Y. Li, N. Fantuzzi, Y. Zhao, Y.-B. Liu, B. Peng, J. Chen, “Investigation on the Flow Properties of CBM Based on Stochastic Fracture Network Modeling”, *Materials*. 12, 2387 (2019).
 36. F. Cornacchia, N. Fantuzzi, R. Luciano, R. Penna, “Solution for cross- and angle-ply laminated Kirchhoff nano plates in bending using strain gradient theory”, *Composites Part B: Engineering*. 173, 107006 (2019).
 37. J.A.F.O. Correia, T. Ferradosa, J.M. Castro, N. Fantuzzi, Editorial: Renewable energy and oceanic structures: Part I. In *Proceedings of the Institution of Civil Engineers. Maritime Engineering*. 172 (1), 1-2, 2019. doi:10.1680/jmaen.2019.172.1.1.
 38. N. Fantuzzi, F. Borgia, M. Formenti, R. Righini, “Mechanical optimization of an innovative overboarding chute for floating umbilical systems”, *Ocean Engineering*, 180, 144-161 (2019).
 39. N. Fantuzzi, P. Trovalusci, S. Dharasura, “Mechanical Behavior of Anisotropic Composite Materials as Micropolar Continua”. *Frontiers in Materials*, 6:59 (2019).
 40. F. Cornacchia, T. Liu, Y. Bai, N. Fantuzzi, “Tensile strength of the unbonded flexible pipes”, *Composite Structures*, 218, 142-151 (2019).
 41. L. Leonetti, N. Fantuzzi, P. Trovalusci, F. Tornabene, “Scale Effects in Orthotropic Composite Assemblies as Micropolar Continua: A Comparison between Weak- and Strong-Form Finite Element Solutions”, *Materials*, 12(5), 758 (2019).
 42. S. Ouakka, N. Fantuzzi, “Trustworthiness in modeling unreinforced and reinforced T-joints with finite elements”, *Mathematical and Computational Applications*, 24, 27 (2019).
 43. L. Alessi, J.A.F.O. Correia, N. Fantuzzi, “Initial design phase and tender designs of a jacket structure converted into a retrofitted offshore wind turbine”, *Energies*, 12, 659 (2019).
 44. F. Tornabene, N. Fantuzzi, M. Baccocchi, “Refined shear deformation theories for laminated composite arches and beams with variable thickness: natural frequency analysis”, *Engineering Analysis with Boundary Elements*, 100, 24-47 (2019).
 45. N. Fantuzzi, F. Borgia, “Theoretical and applied insights on pistons buckling according to DNV regulation”, *Journal of Offshore Mechanics and Arctic Engineering*, 141, 041604, 1-10 (2019).
 46. F. Tornabene, M. Baccocchi, N. Fantuzzi, J.N. Reddy, “Multiscale approach for three-phase CNT/polymer/fiber laminated nanocomposite structures”, *Polymer Composites*, 40, pp. E102-E126 (2019).
 47. F. Tornabene, N. Fantuzzi, M. Baccocchi, “Foam core composite sandwich plates and shells with variable stiffness: effect of curvilinear fiber path on the modal response”, *Journal of Sandwich Structures and Materials*, 21(1), pp. 320-365 (2019).
 48. F. Tornabene, N. Fantuzzi, M. Baccocchi, “Strong and weak formulations based on differential and integral quadrature methods for the free vibration analysis of composite plates and shells: convergence and accuracy”, *Engineering Analysis with Boundary Elements*, 92, 3-37 (2018).
 49. N. Fantuzzi, F. Tornabene, M. Baccocchi, A.J.M. Ferreira, “On the convergence of laminated composite plates of arbitrary shape through finite element models”, *Journal of Composite Science*, 2(1), 16, 1-50 (2018).
 50. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola, “Mechanical behavior of damaged

- laminated composites plates and shells: higher-order shear deformation theories”, *Composite Structures*, 189, 304-329 (2018).
51. N. Fantuzzi, L. Leonetti, P. Trovalusci, F. Tornabene, “Some novel numerical applications of Cosserat continua”, *International Journal of Computational Methods*, 15(3), 1850054-1-38. (2018).
 52. N. Fantuzzi, F. Tornabene, M. Bacciocchi, “Mechanical behaviour of composite Cosserat solids in elastic problems with holes and discontinuities”, *Composite Structures* 179(1), 468-481 (2017).
 53. F. Tornabene, N. Fantuzzi, M. Bacciocchi, “Linear static behavior of damaged laminated composite plates and shells”, *Materials*, 10(7), 811, 1-52 (2017).
 54. N. Fantuzzi, F. Tornabene, M. Bacciocchi, A.M.A. Neves, A.J.M. Ferreira, “Stability and accuracy of three Fourier expansion-based strong form finite elements for the free vibration analysis of laminated composite plates”, *International Journal for Numerical Methods in Engineering*, 111(4) 354-382 (2017).
 55. F. Tornabene, N. Fantuzzi, M. Bacciocchi, J.N. Reddy, “A Posteriori Stress and Strain Recovery Procedure for the Static Analysis of Laminated Shells Resting on Nonlinear Elastic Foundation”, *Composites Part B Engineering* 126(1), 162-191 (2017).
 56. E. Viola, F. Tornabene, N. Fantuzzi, M. Bacciocchi, “Numerical investigation of composite materials with inclusions and discontinuities”, *Key Engineering Materials* 747(1), 69-76 (2017).
 57. N. Fantuzzi, F. Tornabene, M. Bacciocchi, R. Dimitri, “Free vibration analysis of arbitrarily shaped functionally graded carbon nanotube-reinforced plates”, *Composites Part B: Engineering*, 115(1), 384-408 (2017).
 58. F. Tornabene, N. Fantuzzi, M. Bacciocchi, “Linear static response of nanocomposite plates and shells reinforced by agglomerated carbon nanotubes”, *Composites Part B Engineering*, 115(1), 449-476 (2017).
 59. F. Tornabene, N. Fantuzzi, M. Bacciocchi, “Finite Elements based on strong and weak formulations for structural mechanics: stability, accuracy and reliability”, *International Journal of Engineering & Applied Sciences*, 9(2), 1-21 (2017).
 60. F. Tornabene, N. Fantuzzi, M. Bacciocchi, “A new doubly-curved shell element for the free vibrations of arbitrarily shaped laminated structures based on weak formulation isogeometric analysis, *Composite Structures*, 171(1), 429-461 (2017).
 61. R. Dimitri, Y. Li, N. Fantuzzi, F. Tornabene, “Innovative modeling of the crack path and stress intensity factor for arbitrary shaft configurations”, *Advanced Materials & Technologies*, 1, 20-35 (2017).
 62. F. Tornabene, N. Fantuzzi, M. Bacciocchi, E. Viola, J.N. Reddy, “A numerical investigation on the natural frequencies of FGM sandwich shells with variable thickness by the local generalized differential quadrature method”, *Applied Sciences*, 7, 131, 1-39 (2017).
 63. Y. Li, S. Cao, R. Dimitri, N. Fantuzzi, F. Tornabene, “Analytical and numerical investigation of the stiffness matrix for edge-cracked circular shafts”, *Fatigue and Fracture of Engineering Materials and Structures*, 40, 391-411 (2017).
 64. S. Brischetto, F. Tornabene, N. Fantuzzi, M. Bacciocchi, “Interpretation of boundary conditions in the analytical and numerical shell solutions for mode analysis of multilayered structures”, *International Journal of Mechanical Sciences*, 122, 18-28 (2017).
 65. N. Fantuzzi, G. Della Puppa, F. Tornabene, M. Trautz, “Strong Formulation IsoGeometric Analysis for the vibration of thin membranes of general shape”, *International Journal of Mechanical Sciences*, 120, 322-340 (2017).
 66. F. Tornabene, N. Fantuzzi, M. Bacciocchi, J.N. Reddy, “An equivalent layer-wise approach for the free vibration analysis of thick and thin laminated sandwich shells”, *Applied Sciences*, 7, 17, 1-34 (2017).
 67. R. Dimitri, Y. Li, N. Fantuzzi, F. Tornabene, “Numerical computation of the crack development and SIF in composite materials with XFEM and SFEM”, *Composite Structures*,

- 160, 468-490 (2017).
68. F. Tornabene, S. Brischetto, N. Fantuzzi, M. Baccocchi, "Boundary conditions in 2D numerical and 3D exact models for cylindrical bending analysis of functionally graded structures", *Shock and Vibration*, Vol. 2016, Article ID 2373862, 1-17 (2016).
 69. E. Viola, L. Rossetti, N. Fantuzzi, F. Tornabene, "Generalized stress-strain recovery formulation applied to functionally graded spherical shells and panels under static loading", *Composite Structures*, 156, 145-164 (2016).
 70. M. Baccocchi, M. Eisenberger, N. Fantuzzi, F. Tornabene, E. Viola, "Vibration analysis of variable thickness plates and shells by the generalized differential quadrature method", *Composite Structures*, 156, 218-237 (2016).
 71. F. Tornabene, N. Fantuzzi, M. Baccocchi, "On the mechanics of laminated doubly-curved shells subjected to point and line loads", *International Journal of Engineering Science*, 109, 115-164 (2016).
 72. F. Tornabene, N. Fantuzzi, M. Baccocchi, A.M.A. Neves, A.J.M. Ferreira, "MLSDQ based on RBFs for the free vibrations of laminated composite doubly-curved shells", *Composites Part B: Engineering*, 99, 30-47 (2016).
 73. R. Dimitri, N. Fantuzzi, F. Tornabene, G. Zavarise, "Innovative numerical methods based on SFEM and IGA for computing stress concentrations in isotropic plates with discontinuities", *International Journal of Mechanical Sciences*, 118, 166-187 (2016).
 74. N. Fantuzzi, S. Brischetto, F. Tornabene, E. Viola, "2D and 3D shell models for the free vibration investigation of functionally graded cylindrical and spherical panels", *Composites Structures*, 154, 573-590 (2016).
 75. F. Tornabene, N. Fantuzzi, M. Baccocchi, "The GDQ method for the free vibration analysis of arbitrarily shaped laminated composite shells using a NURBS-based isogeometric approach", *Composites Structures*, 154, 190-218 (2016).
 76. S. Brischetto, F. Tornabene, N. Fantuzzi, E. Viola, "3D exact and 2D generalized differential quadrature models for free vibration analysis of functionally graded plates and cylinders", *Meccanica*, 51(9), 2059-2098 (2016).
 77. N. Fantuzzi, F. Tornabene, "Strong Formulation Isogeometric Analysis (SFIGA) for laminated composite arbitrarily shaped plates", *Composites Part B Engineering* 96(1), 173-203 (2016).
 78. N. Fantuzzi, R. Dimitri, F. Tornabene, "A SFEM-based evaluation of Mode-I stress intensity factor in composite structures", *Composite Structures*, 145(1), 162-185 (2016).
 79. F. Tornabene, N. Fantuzzi, E. Viola, "Inter-laminar stress recovery procedure for doubly-curved, singly-curved, revolution shells with variable radii of curvature and plates using generalized higher-order theories and the local GDQ method", *Mechanics of Advanced Materials and Structures*, 23(9), 1019-1045 (2016).
 80. F. Tornabene, N. Fantuzzi, M. Baccocchi, "The Local GDQ method for the natural frequencies of doubly-curved shells with variable thickness: a general formulation", *Composites Part B Engineering*, 92(1), 265-289 (2016).
 81. F. Tornabene, N. Fantuzzi, M. Baccocchi, "Higher-order structural theories for the static analysis of doubly-curved laminated composite panels reinforced by curvilinear fibers", *Thin-Walled Structures*, 102, 222-245 (2016).
 82. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola, "Effect of agglomeration on the natural frequencies of functionally graded carbon nanotube-reinforced laminated composite doubly-curved shells", *Composites Part B Engineering*, 89(1), 187-218 (2016).
 83. N. Fantuzzi, F. Tornabene, E. Viola, "Four-parameter functionally graded cracked plates of arbitrary shape: a GDQFEM solution for free vibrations", *Mechanics of Advanced Materials and Structures*, 23(1), 89-107 (2016).
 84. S. Brischetto, F. Tornabene, N. Fantuzzi, M. Baccocchi, "Refined 2D and exact 3D shell models for the free vibration analysis of single- and double-walled carbon nanotubes", *Technologies* 3(1), 259-284 (2015).

85. E. Viola, A. Marzani, N. Fantuzzi, "Interaction effect of cracks on flutter and divergence instabilities of cracked beams under subtangential forces", *Engineering Fracture Mechanics*, 151, 109-129 (2016).
86. Y. Li, S. Cao, N. Fantuzzi, Y. Liu, "Elasto-plastic analysis of a circular borehole in elastic-strain softening coal seams", *International Journal of Rock Mechanics and Mining Sciences*, 80, 316-324 (2015).
87. F. Tornabene, N. Fantuzzi, M. Baccocchi, R. Dimitri, "Free vibrations of composite oval and elliptic cylinders by the generalized differential quadrature method", *Thin-Walled Structures*, Vol. 97(1), 114-129 (2015).
88. F. Tornabene, S. Brischetto, N. Fantuzzi, E. Viola, "Numerical and exact models for free vibration analysis of cylindrical and spherical shell panels", *Composites Part B Engineering*, Vol. 81(1), 231-250 (2015).
89. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola, "Higher-order theories for the free vibration of doubly-curved laminated panels with curvilinear reinforcing fibers by means of a local version of the GDQ method", *Composites Part B Engineering*, Vol. 81(1), 196-230 (2015).
90. F. Tornabene, N. Fantuzzi, M. Baccocchi, R. Dimitri, "Dynamic analysis of thick and thin elliptic shell structures made of laminated composite materials", *Composite Structures*, Vol. 133(1), 278-299 (2015).
91. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola, "A new approach for treating concentrated loads in doubly-curved composite deep shells with variable radii of curvature", *Composite Structures*, Vol. 131(1), 433-452 (2015).
92. N. Fantuzzi, M. Baccocchi, F. Tornabene, E. Viola, A.J.M. Ferreira, "Radial basis functions based on differential quadrature method for the free vibration of laminated composite arbitrary shaped plates", *Composites Part B Engineering*, Vol. 78(1), 65-78 (2015).
93. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola, "Accurate inter-laminar recovery for plates and doubly-curved shells with variable radii of curvature using layer-wise theories", *Composite Structures*, Vol. 124(1), pp. 368-393 (2015).
94. E. Viola, M. Miniaci, N. Fantuzzi, A. Marzani, "Vibration analysis of multi-stepped and multi-damaged parabolic arches using GDQ", *Curved and Layered Structures*, Vol. 2, pp. 28-49 (2015).
95. F. Tornabene, N. Fantuzzi, F. Ubertini, E. Viola, "Strong formulation finite element method based on differential quadrature: a survey", *Applied Mechanics Reviews*, Vol. 67(2), pp. 1-55 (2015).
96. F. Tornabene, N. Fantuzzi, E. Viola, R.C. Batra, "Stress and strain recovery for functionally graded free-form and doubly-curved sandwich shells using higher-order equivalent single layer theory", *Composite Structures*, Vol. 119(1), pp. 67-89 (2015).
97. E. Viola, F. Tornabene, N. Fantuzzi, "Stress and strain recovery of laminated composite doubly-curved shells and panels using higher-order formulations," *Key Engineering Materials*, Vol. 624, pp. 205-213 (2015).
98. N. Fantuzzi, "New insights into the strong formulation finite element method for solving elastostatic and elastodynamic problems", *Curved and Layered Structures*, Vol. 1, pp. 93-126 (2014)
99. F. Tornabene, N. Fantuzzi, M. Baccocchi, "Free vibrations of free-form doubly-curved shells made of functionally graded materials using higher-order equivalent single layer theories", *Composite Part B Engineering*, Vol. 67(1), pp. 490-509 (2014).
100. N. Fantuzzi, F. Tornabene, E. Viola, A.J.M. Ferreira, "A Strong Formulation Finite Element Method (SFEM) Based on RBF and GDQ techniques for the static and dynamic analyses of laminated plates of arbitrary shape", *Meccanica*, Vol. 49(1), pp. 2503-2542 (2014).
101. F. Tornabene, N. Fantuzzi, M. Baccocchi, "The strong formulation finite element method: stability and accuracy", *Fracture and Structural Integrity*, Vol.29(1), pp. 251-265 (2014).
102. F. Tornabene, N. Fantuzzi, M. Baccocchi, "The local GDQ method applied to general

- higher-order theories of doubly-curved laminated composite shells and panels: the free vibration analysis”, *Composite Structures*, Vol.116(1), pp. 637-660 (2014).
103. N. Fantuzzi, F. Tornabene, “Strong formulation finite element method for arbitrarily shaped laminated plates – I. Theoretical analysis”, *Advances in Aircraft and Spacecraft Science*, Vol.1(2), pp. 124-142 (2014).
 104. N. Fantuzzi, F. Tornabene, “Strong formulation finite element method for arbitrarily shaped laminated plates – II. Numerical analysis”, *Advances in Aircraft and Spacecraft Science*, Vol. 1(2), pp. 143-173 (2014).
 105. N. Fantuzzi, F. Tornabene, E. Viola, “Generalized differential quadrature finite element method for vibration analysis of arbitrarily shaped membranes”, *International Journal of Mechanical Sciences*, Vol. 79, pp. 216-251 (2014).
 106. E. Viola, L. Rossetti, N. Fantuzzi, F. Tornabene, “Static analysis of functionally graded conical shells and panels using the generalized unconstrained third order theory coupled with the stress recovery”, *Composite Structures*, Vol. 112(1), pp.44-65 (2014).
 107. A.J.M. Ferreira, E. Carrera, M. Cinefra, E. Viola, F. Tornabene, N. Fantuzzi, A.M. Zenkour, “Analysis of thick isotropic and cross-ply laminated plates by generalized differential quadrature method and a unified formulation”, *Composite Part B Engineering* Vol. 58(1), p. 544-552 (2014).
 108. F. Tornabene, N. Fantuzzi, E. Viola, J.N. Reddy, “Winkler-Pasternak foundation effect on the static and dynamic analyses of laminated doubly-curved and degenerate shells and panels”, *Composites Part B Engineering* Vol. 57(1), p. 269-296 (2014).
 109. F. Tornabene, N. Fantuzzi, E. Viola, E. Carrera, “Static analysis of doubly-curved anisotropic shells and panels using CUF approach, differential geometry and differential quadrature method”, *Composite Structures* Vol. 107(1), p. 675-697 (2014).
 110. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi, “On static analysis of composite plane state structures via GDQFEM and cell method”, *CMES* Vol. 94(5), p. 421-458 (2013).
 111. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi, “GDQFEM numerical simulations of continuous media with cracks and discontinuities”, *CMES* Vol. 94(4), p. 331-369 (2013).
 112. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi, “Soft core plane state structures under static loads using GDQFEM and cell method”, *CMES* Vol. 94(4), p. 301-329 (2013).
 113. A.J.M. Ferreira, E. Viola, F. Tornabene, N. Fantuzzi, A.M. Zenkour, “Analysis of sandwich plates by generalized differential quadrature method”, *Mathematical Problems in Engineering* Vol. 2013, Article ID 964367, 12 pages (2013).
 114. F. Tornabene, N. Fantuzzi, E. Viola, A.J.M. Ferreira, “Radial basis function method applied to doubly-curved laminated composite shells and panels with a general higher-order equivalent single layer formulation”, *Composites Part B Engineering* Vol. 55(1), p. 642-659 (2013).
 115. E. Viola, F. Tornabene, N. Fantuzzi, “Generalized differential quadrature finite element method for cracked composite structures of arbitrary shape”, *Composite Structures* Vol. 106(1), p. 815-834 (2013).
 116. F. Tornabene, E. Viola, N. Fantuzzi, “General higher-order equivalent single layer theory for free vibrations of doubly-curved laminated composite shells and panels”, *Composite Structures* Vol 104(1), p. 94-117 (2013).
 117. Y. Li, N. Fantuzzi, F. Tornabene, “On mixed mode crack initiation and direction in shafts: Strain energy density factor and maximum tangential stress criteria”, *Engineering Fracture Mechanics* Vol. 109, p. 273-289 (2013).
 118. E. Viola, F. Tornabene, N. Fantuzzi, “Static analysis of completely doubly-curved laminated shells and panels using general higher-order shear deformation theories”, *Composite Structures* Vol. 101(1), p. 59-93 (2013).
 119. E. Viola, F. Tornabene, N. Fantuzzi, “General higher-order shear deformation theories for the free vibration analysis of completely doubly-curved laminated shells and panels”, *Composite Structures* Vol. 95(1), p. 639-666 (2013).

120. E. Viola, L. Rossetti, N. Fantuzzi, “Numerical investigation of functionally graded cylindrical shells and panels using the generalized unconstrained third order theory coupled with the stress recovery”, *Composite Structures*, Vol. 94(12), p. 3736-3758 (2012).
121. E. Viola, Y. Li, N. Fantuzzi, “On the stress intensity factors of cracked beams for structural analysis”, *Key Engineering Materials*, Vol. 488-489, p. 379-382 (2012).
122. E. Viola, N. Fantuzzi, A. Marzani, “Cracks interaction effect on the dynamic stability of beams under conservative and nonconservative forces”, *Key Engineering Materials*, Vol. 488-489, p. 383-386 (2012).

Books

1. N. Fantuzzi, *Mesh-Free and Finite Element-Based Methods for Structural Mechanics Applications*, MDPI Books, ISBN 978-3-0365-0136-9 (2021).
2. A.J.M. Ferreira, N. Fantuzzi, *MATLAB Codes for Finite Element Analysis. 2nd Edition*, Springer, ISBN 978-3-030-47951-0 (2020).
3. F. Tornabene, N. Fantuzzi, M. Bacciocchi, *DiQuMASPAB. Differential quadrature for mechanics of anisotropic shells, plates, arches and beams*, Esculapio, Bologna. ISBN 978-8893850636 (2018).
4. F. Tornabene, N. Fantuzzi, *Theory of Laminated Composite Doubly-Curved Shell Structures*, Esculapio, Bologna. ISBN 978-88-9385-001-8. Doi: 10.15651/978-88-938-5001-8 (2017).
5. F. Tornabene, N. Fantuzzi, M. Bacciocchi, E. Viola, *Laminated Composite Doubly-Curved Shell Structures II. Differential and Integral Quadrature. Strong Formulation Finite Element Method*, Esculapio, Bologna. ISBN: 978-88-7488-958-7. ISSN: 2421-2822 (2016).
6. F. Tornabene, N. Fantuzzi, M. Bacciocchi, E. Viola, *Laminated Composite Doubly-Curved Shell Structures I. Differential Geometry. Higher-Order Structural Theories*, Esculapio, Bologna. ISBN: 978-88-7488-957-0. ISSN: 2421-2822 (2016).
7. F. Tornabene, N. Fantuzzi, M. Bacciocchi, E. Viola, *Strutture a Guscio in Materiale Composito II. Quadratura Differenziale e Integrale. Elementi Finiti in Forma Forte*, Esculapio, Bologna. ISBN: 978-88-7488-856-6. ISSN: 2421-2822 (2015).
8. F. Tornabene, N. Fantuzzi, M. Bacciocchi, E. Viola, *Strutture a Guscio in Materiale Composito I. Geometria Differenziale. Teorie di Ordine Superiore*, Esculapio, Bologna. ISBN: 978-88-7488-855-9. ISSN: 2421-2822 (2015).
9. F. Tornabene, N. Fantuzzi, *Mechanics of Laminated Composite Doubly-Curved Shell Structures*, Esculapio, Bologna (2014).

Book Chapters

1. A. Rustico, N. Fantuzzi, M. Formenti, A.J.M. Ferreira, “Dynamic actuation model for vibration reduction in offshore cranes”, in book: *Advances in Nonlinear Dynamics (Eds.) W. Lacarbonara* (2021). In press.
2. N. Fantuzzi, P. Trovalusci, “Multiscale Analysis of Materials with Anisotropic Microstructure as Micropolar Continua”, in book: *Proceedings of XXIV AIMETA Conference 2019 (Eds.) A. Carcaterra, A. Paolone, G. Graziani* (2020).
3. F. Tornabene, N. Fantuzzi, “Strong Formulation: A Powerful Way for Solving Doubly Curved Shell Structures”, in book: *Recent Developments in the Theory of Shells (Eds.) Altenbach, H., Chróścielewski, J., Eremeyev, V.A., Wiśniewski, K.* (2020).
4. A. Mourao, J.A.F.O. Correia, J.M. Castro, M. Correia, G. Leziuk, N. Fantuzzi, A.M.P. De Jesus, R.A.B. Calçada, “Fatigue Damage Analysis of Offshore Structures using Hot-Spot stress and Notch Strain Approaches”, *Materials Research Forum*, In book: *Experimental Mechanics of Solids* (2019).

International and National Conferences

1. N. Fantuzzi, P. Trovalusci (2021) Dynamic analysis of Cosserat media for anisotropic homogenized materials. Sustainable Industrial Processing Summit & Exhibition (SIPS2020)

- Phuket, Thailand, 28th November - 2nd December 2021.
2. M. Colatosti, B. Carboni, N. Fantuzzi, P. Trovalusci (2021) Cosserat material identification for hexagonal particle composites with elastic interfaces. Mechanics Of Masonry Structures Strengthened With Composite Materials (MuRiCo7), Online, 24-26 November 2021.
 3. A. Aidibi, N. Fantuzzi, J.A.F.O. Correia (2021) Stress Concentration Factor Evaluation for Tubular KT-Joints. OMC - Med Energy Conference and Exhibition – Ravenna, Italy, 28-30 September 2021.
 4. S. Ouakka, C. Smith, M. Gilbert, N. Fantuzzi (2021) Hybrid Truss-Discontinuity Layout Optimization – Application in Offshore Wind Turbines Support Structures and Foundations. OMC - Med Energy Conference and Exhibition – Ravenna, Italy, 28-30 September 2021.
 5. J. Agnelli, S. Saponara, D. Benedetti, N. Fantuzzi, Exploiting sustainable composite materials for the manufacturing of high-efficient electric cars. Applications in Electronics Pervading Industry, Environment and Society conference (ApplePies 2021) – Pisa, Italy, 21-22 September 2021.
 6. M. Avey, A.H. Sofiyev, N. Fantuzzi, N. Kuruoglu, Vibration Analysis of Multilayer Double-Curved Structural Systems Containing CNT Patterned Layers in the Framework of Different Shell Theories. 7th International Conference on Mechanics of Composites (MECHCOMP7) – Porto, Portugal, 1-3 September 2021.
 7. M. Colatosti, B. Carboni, N. Fantuzzi, P. Trovalusci (2021) Cosserat material identification for hexagonal particle composites with elastic interfaces. 7th International Conference on Mechanics of Composites (MECHCOMP7) – Porto, Portugal, 1-3 September 2021.
 8. S. Saitta, F. Fabbrocino, R. Vescovini, N. Fantuzzi (2021) Vibrations and buckling of composite plates based on strain gradient theory and meshless methods. 7th International Conference on Mechanics of Composites (MECHCOMP7) – Porto, Portugal, 1-3 September 2021.
 9. F. Shi, N. Fantuzzi, Y. Li, P. Trovalusci (2021) The effects of dilatancy in composite assemblies as micropolar continua. 7th International Conference on Mechanics of Composites (MECHCOMP7) – Porto, Portugal, 1-3 September 2021.
 10. T. Liu, J. Bai, N. Fantuzzi, G. Bu, D. Li (2021) Multi-objective optimisation designs for thin-walled deployable composite hinges using surrogate models and Genetic Algorithms. 7th International Conference on Mechanics of Composites (MECHCOMP7) – Porto, Portugal, 1-3 September 2021.
 11. N. Fantuzzi, P. Trovalusci (2021) Composite materials with hexagonal microstructure analyzed with a micropolar model. 25th International Congress of Theoretical and Applied Mechanics (ICTAM2020+1) – Milano, Italy, 22-27 August 2021.
 12. M. Baccocchi, N. Fantuzzi, A.J.M. Ferreira (2021) Conforming and nonconforming finite elements for vibrations and buckling of laminated thin nanoplates including strain gradient effect, 1st Ibero-American Conference on Composite Materials (IAMaC2021), 29-30 July 2021, Porto, Portugal.
 13. N. Fantuzzi, M. Baccocchi, A.J.M. Ferreira (2021) Natural frequency analysis of thin laminated nanoplates with non-uniform orthotropic mechanical properties by means of nonconforming finite elements, 1st Ibero-American Conference on Composite Materials (IAMaC2021), 29-30 July 2021, Porto, Portugal.
 14. Farui S., N. Fantuzzi, Y. Li, P. Trovalusci, Z. Wei (2021) Mechanics of layered shale as Cosserat continua with dilatancy effects. 1st International Conference on Computations for Science and Engineering (ICCSE1) – Online, 19-22 July 2021.
 15. S. Saitta, F. Fabbrocino, R. Vescovini, N. Fantuzzi (2021) Laminated composite strain gradient nanoplates analyzed with meshless methods. 1st International Conference on Computations for Science and Engineering (ICCSE1) – Online, 19-22 July 2021.
 16. P. Mendes, J. Correia, J.M. Castro, N. Fantuzzi, D. Haselibozechaloe, L. Manuel (2021) Horizontal and Vertical Axis Wind Turbines on Existing Jacket Platforms: A Comparative Study, Congress of Structural Integrity and Maintenance (SIM2021), 8-9 April 2021, Belo

- Horizonte, Brazil.
17. P. Mendes, R. Dantas, J. Correia, N. Fantuzzi, G. Lesiuk, A. Jesus, L. Manuel, F. Berto (2021) Probabilistic Fatigue Strength Modelling based on various statistical approaches for a Double-Side Welded Connection, Congress of Structural Integrity and Maintenance (SIM2021), 8-9 April 2021, Belo Horizonte, Brazil.
 18. B. Ávila, H. Carvalho, J. Correia, A. Mourão, A. Aidibi, P. Mendes, N. Fantuzzi (2021) Simplified fatigue damage assessment based on the hot-spot stress approach using numerical and analytical solutions of an offshore tubular KT joint. Congress of Structural Integrity and Maintenance (SIM2021), 8-9 April 2021, Belo Horizonte, Brazil.
 19. M. Baccocchi, N. Fantuzzi, A.J.M. Ferreira (2021) Hermite finite elements for the vibrations and buckling of strain gradient nano plates in hygro-thermal environment. 5th International Conference on Numerical and Symbolic Computation Developments and Applications (SYMCOMP2021) – Evora, Portugal, 25-26 March 2021.
 20. M. Baccocchi, N. Fantuzzi, A.J.M. Ferreira (2021) Vibrations and Buckling of nonlocal laminated nanoplates solved by Finite Element Method. 2nd International Conference on Theoretical, Analytical and Computational Methods for Composite Materials and Composite Structures (ICOMP2021) – on line, 5-7 March 2021.
 21. A. Rustico, M. Formenti, N. Fantuzzi, A.J.M. Ferreira (2021) Dynamic actuation model for vibration reduction in offshore cranes. Second International Nonlinear Dynamics Conference (NODYCON2021) – Rome, Italy, 16-19 February, 2021.
 22. M. Baccocchi, N. Fantuzzi, A.J.M. Ferreira (2021) Vibrations of Orthotropic Functionally Graded Strain Gradient Nano Plates via Hermitian Finite Element Formulation, 5th Brazilian Conference on Composite Materials (BCCM5) – Sao Paulo, Brazil, 18-22 January 2021.
 23. N. Fantuzzi, E. Lofrano, P. Trovalusci, M. Colatosti (2021) Computational dynamics for anisotropic homogenized materials. 14th World Congress in Computational Mechanics (WCCM) ECCOMAS Congress 2020 – Paris, France, 11-15 January 2021.
 24. B. Ávila, H. Carvalho, P. Mendes, A. Aidibi, N. Fantuzzi, J. Correia (2020) Evaluation of the stress concentration factor for a welded KT-joint. 1st Virtual Conference on Mechanical Fatigue (VCMF2020) – Porto, Portugal, 9-11 September 2020.
 25. A. Aidibi, J.A.F.O. Correia, N. Fantuzzi (2020) Stress Concentration Factor Evaluation for Tubular KT-Joints. 1st Virtual Conference on Mechanical Fatigue (VCMF2020) – Porto, Portugal, 9-11 September 2020.
 26. P. Mendes, A. Mourão, A. Aidibi, N. Fantuzzi, J.A.F.O. Correia (2020) A comparative study on fatigue lifetime assessment based on stress and strain local criteria applied to an offshore structure. 1st Virtual Conference on Mechanical Fatigue (VCMF2020) – Porto, Portugal, 9-11 September 2020.
 27. J. Agnelli, D. Benedetti, N. Fantuzzi (2020) Carbon fiber-reinforced textiles enhanced with carbon nanotubes. Joint Event: 23rd International Conference on Composite Structures & 6th International Conference on Mechanics of Composites (ICCS23&MECHCOMP6) – Porto, Portugal, 1-4 September 2020
 28. J. Agnelli, D. Benedetti, N. Fantuzzi (2020) Use of bio-composites for the manufacturing of a full electric microcar. Joint Event: 23rd International Conference on Composite Structures & 6th International Conference on Mechanics of Composites (ICCS23&MECHCOMP6) – Porto, Portugal, 1-4 September 2020.
 29. N. Fantuzzi, F. Fabbrocino, R. Luciano, G. Tocci Monaco (2020) Bending, vibrations and buckling of cross- and angle-ply nano plates using strain gradient theory. Joint Event: 23rd International Conference on Composite Structures & 6th International Conference on Mechanics of Composites (ICCS23&MECHCOMP6) – Porto, Portugal, 1-4 September 2020.
 30. N. Fantuzzi, P. Trovalusci, M. Colatosti (2020) Chiral/Auxetic/Orthotetragonal behaviors of homogenized micro-structured composites using Cosserat theory, Joint Event: 23rd International Conference on Composite Structures & 6th International Conference on Mechanics of Composites (ICCS23&MECHCOMP6) – Porto, Portugal, 1-4 September 2020.

31. N. Fantuzzi, P. Trovalusci (2019) Homogenized micro-structured composites as anisotropic micropolar continua, 22nd International Conference on Composite Structures (ICCS22) – Wuhan, China, 31 October-3 November 2019.
32. N. Fantuzzi, P. Trovalusci (2019) Multiscale analysis of materials with anisotropic microstructure as micropolar continua, XXIV Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2019) - Roma, Italy, 15-19 September 2019.
33. D. Tornatore, E. Panettieri, S. Guerard, M. Montemurro, N. Fantuzzi (2019) Damping capability of lattice structures: a numerical study, 5th International Conference on Mechanics of Composites (MECHCOMP5) – Lisbon, Portugal, 1-4 July 2019.
34. S. Babamohammadi, N. Fantuzzi, G. Lonardi (2019) Mechanical characterization and analysis of FRP pultruded beams, 5th International Conference on Mechanics of Composites (MECHCOMP5) – Lisbon, Portugal, 1-4 July 2019.
35. F. Cornacchia, Y. Bai, N. Fantuzzi (2019) Mechanical behavior of reinforced flexible pipe subjected to tensile force, 5th International Conference on Mechanics of Composites (MECHCOMP5) – Lisbon, Portugal, 1-4 July 2019.
36. N. Fantuzzi (2019) Buckling in analysis and design of structures in off-shore environment, 7th International Symposium on Solid Mechanics (MECSOL2019) – Sao Carlos, Brazil.
37. L. Alessi, J.A.F.O. Correia, N. Fantuzzi (2019) Empowering existing jacket platforms to bear wind turbines in the Adriatic area, Offshore Mediterranean Conference & Exhibition (OMC2019) – Ravenna, Italy, 27-29 March 2019.
38. F. Borgia, N. Fantuzzi, M. Formenti, R. Righini (2019) Optimization procedure of an overboarding chute with standards, mechanical and numerical considerations, Offshore Mediterranean Conference & Exhibition (OMC2019) – Ravenna, Italy, 27-29 March 2019.
39. N. Fantuzzi, L. Leonetti, P. Trovalusci (2019) Mechanical behaviors of anisotropic Cosserat solids under concentrated loads, Multiscale Innovative Materials and Structures (MIMS19) – Cetara, Italy, 28 February – 2 March 2019.
40. L. Leonetti, N. Fantuzzi, P. Trovalusci, F. Tornabene (2018) The effect of micro-polar rotation in 2D Cosserat solids, XXII Convegno Italiano di Meccanica Computazionale - IX Riunione del Gruppo Materiali AIMETA (GIMC-GMA2018) - Ferrara, Italy, 13-14 September 2018.
41. F. Tornabene, M. Bacciocchi, N. Fantuzzi (2018) Strong and Weak Formulations for the Analysis of Arbitrarily Shaped Laminated Composite Structures, XXII Convegno Italiano di Meccanica Computazionale - IX Riunione del Gruppo Materiali AIMETA (GIMC-GMA2018) - Ferrara, Italy, 13-14 September 2018.
42. A. Mourão, J.A.F.O. Correia, J.M. Castro, C. Rebelo, A.M.P. de Jesus, N. Fantuzzi, R. Calçada (2018) Fatigue analysis for an offshore jacket-type platform using simplified and local approaches, XIX International Colloquium on Mechanical Fatigue of Metals (ICMFM XIX) – Porto, Portugal, 5-7 September 2018.
43. A. Mourão, J.A.F.O. Correia, J. Barbosa, J.M. Castro, C. Rebelo, M. Correia, N. Fantuzzi, R. Calçada (2018) Fatigue wave loads estimation using Morison formula for an offshore jacket-type platform, XIX International Colloquium on Mechanical Fatigue of Metals (ICMFM XIX) – Porto, Portugal, 5-7 September 2018.
44. N. Fantuzzi, M. Bacciocchi, F. Tornabene (2018) Free vibration problem of composite plates of arbitrary shape: where do we stand?, 21st International Conference on Composite Structures (ICCS21) - Bologna, Italy, 4-7 September 2018.
45. L. Leonetti, N. Fantuzzi, P. Trovalusci, F. Tornabene (2018) Mechanical behavior of orthotropic micropolar continua subjected to localized loads, 9th International Conference on Computational Methods (ICCM2018) - Rome, Italy, 6-10 August 2018.
46. F. Tornabene, N. Fantuzzi, M. Bacciocchi (2018) An innovative numerical approach for the mechanical analysis of damaged laminated composite structures, 9th International Conference on Computational Methods (ICCM2018) - Rome, Italy, 6-10 August 2018.
47. N. Fantuzzi, M. Bacciocchi, F. Tornabene (2018) Peculiar Convergence And Accuracy For Laminated Moderately Thick Plates Of Arbitrary Shape In Free Vibrations, 4th International

- Conference on Mechanics of Composites (MECHCOMP4) - Madrid, Spain, 9-12 July 2018.
48. F. Tornabene, M. Baccocchi, N. Fantuzzi (2018) - Critical Velocity Evaluation Of Rotating Laminated Composite Doubly-Curved Shells, 4th International Conference on Mechanics of Composites (MECHCOMP4) - Madrid, Spain, 9-12 July 2018.
 49. F. Tornabene, N. Fantuzzi, M. Baccocchi (2018) - Modelling of Damaged Laminated and Sandwich Shell Structures by means of Higher-order Shear Deformation Theories, 10th European Solid Mechanics Conference (ESMC2018) - Bologna, Italy, 2-6 July 2018.
 50. F. Tornabene, N. Fantuzzi, M. Baccocchi (2017) - How to Easily Model Doubly Curved Shells with Variable Radii of Curvature, The 11th Conference on Shell Structures: Theory and Applications (SSTA11) - Gdańsk, Poland, 11-13 October 2017.
 51. F. Tornabene, N. Fantuzzi, M. Baccocchi (2017) - A Numerical Approach Based on the GDQ Method for the Linear Static Analysis of Laminated Composite Shells Subjected to Point and Line Loads, IV ECCOMAS Young Investigator Conference (YIC2017) - Milano, Italy, 13-15 September 2017.
 52. F. Tornabene, N. Fantuzzi, M. Baccocchi (2017) - Isogeometric Analysis of Arbitrarily Shaped Structures: A Numerical Approach Based on the Strong Formulation, V International Conference on Isogeometric Analysis (IGA2017) - Pavia, Italy, 11-13 September 2017.
 53. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2017) - Mechanical Behavior of Laminated Composite Shells with Arbitrary Domains: Comparison Between Weak and Strong Formulations, XXIII Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2017) - Salerno, Italy, 4-7 September 2017.
 54. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2017) - Mechanical Behavior of Damaged Laminated Composites Plates and Shells: Higher-Order Shear Deformation Theories, 20th International Conference on Composite Structures (ICCS20) - Paris, France, 4-7 September 2017.
 55. N. Fantuzzi, F. Tornabene, M. Baccocchi, E. Viola (2017) - Composite Structures of Arbitrary Shape by Using Nonlinear Isogeometric Mapping, 20th International Conference on Composite Structures (ICCS20) - Paris, France, 4-7 September 2017.
 56. N. Fantuzzi, L. Leonetti, P. Trovalusci, F. Tornabene (2017) - Some Novel Numerical Applications of Cosserat Continua, 8th International Conference on Computational Methods (ICCM2017) - Guilin, China, 25-29 July 2017.
 57. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2017) - Nanocomposite Plates and Shells Reinforced by Agglomerated Carbon Nanotubes: Static and Dynamic Analysis, The 25th Annual International Conference on Composite/Nano Engineering (ICCE25) - Roma, Italy, 16-22 July 2017.
 58. N. Fantuzzi, F. Tornabene, M. Baccocchi, E. Viola (2017) - Mechanics of structural components by using a numerical approach based on blending functions mapping and a strong formulation, 3rd International Conference on Mechanics of Composites (MECHCOMP3) – Bologna, Italy, 4-7 July 2017.
 59. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2017) - Investigation on the structural response of plates and shells with variable mechanical properties: modeling of the damage, 3rd International Conference on Mechanics of Composites (MECHCOMP3) – Bologna, Italy, 4-7 July 2017.
 60. E. Viola, F. Tornabene, N. Fantuzzi, M. Baccocchi (2017) - Numerical Investigation of Composite Materials with Inclusions and Discontinuities, Mechanics of Masonry Structures Strengthened with Composite Materials - Modeling, Testing, Design, Control (MuRiCo5) - Bologna, Italy, 28-30 June 2017.
 61. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2016) - Static and dynamic behavior of functionally graded carbon nanotube-reinforced laminated composite doubly-curved shells: higher-order structural approaches, Multiscale Innovative Materials and Structures (MIMS16) - Cetara, Italy, 28-30 October 2016.
 62. N. Fantuzzi, F. Tornabene, M. Baccocchi, R. Dimitri (2016) - Free vibration analysis of

- functionally graded carbon nanotube-reinforced composite plates with arbitrary domains and discontinuities, Multiscale Innovative Materials and Structures (MIMS16) - Cetara, Italy, 28-30 October 2016.
63. N. Fantuzzi, F. Tornabene, M. Baccocchi, E. Viola (2016) - Isogeometric analysis of composite structures through mapping using blending functions, 19th International Conference on Composite Structures (ICCS19) - Porto, Portugal, 5-9 September 2016.
 64. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2016) - A general formulation based based on higher-order theories for the static and dynamic analysis of doubly-curved structures with variable mechanical and geometrical properties, 19th International Conference on Composite Structures (ICCS19) - Porto, Portugal, 5-9 September 2016.
 65. N. Fantuzzi, F. Tornabene, M. Baccocchi, E. Viola (2016) – Mechanics of arbitrarily shaped structures using isogeometric mapping, 2nd International Conference on Mechanics of Composites (MECHCOMP2) – Porto, Portugal, 11-14 July 2016.
 66. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2016) – Higher-order theories for the structural analysis of doubly-curved shells with variable mechanical properties, 2nd International Conference on Mechanics of Composites (MECHCOMP2) – Porto, Portugal, 11-14 July 2016.
 67. R. Dimitri, N. Fantuzzi, F. Tornabene, G. Zavarise (2016) - A comparative SFEM- and IGA-based numerical prediction of the stress concentration factor in plates with discontinuities, XXI Convegno Italiano di Meccanica Computazionale - VIII Riunione del Gruppo Materiali AIMETA (GIMC-GMA2016) - Lucca, Italy, 27-29 June 2016.
 68. F. Tornabene, N. Fantuzzi, M. Baccocchi (2016) - Finite element method based on a strong formulation isogeometric analysis, XXI Convegno Italiano di Meccanica Computazionale - VIII Riunione del Gruppo Materiali AIMETA (GIMC-GMA2016) - Lucca, Italy, 27-29 June 2016.
 69. N. Fantuzzi, F. Tornabene, M. Baccocchi, E. Viola (2016) - Moving least squares differential quadrature based on radial basis functions for the vibration analysis of beams, plates and shells, International Conference on Vibrations and Buckling (VibBuck2016) - Porto, Portugal, 7-9 March 2016.
 70. F. Tornabene, N. Fantuzzi, M. Baccocchi (2015) - Advanced laminated composite applications for doubly-curved shell structural components with variable curvature, XXIII Conference of the Italian Association of Aeronautics and Astronautics (AIDAA2015) - Torino, Italy, 17-19 November 2015.
 71. E. Viola, F. Tornabene, N. Fantuzzi, M. Baccocchi (2015) - Structural mechanics applications using strong formulation finite element method, XXII Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2015) - Genova, Italy, 14-17 September 2015.
 72. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2015) - Static and dynamic analyses of doubly-curved composite thick shells with variable radii of curvatures, XXII Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2015) - Genova, Italy, 14-17 September 2015.
 73. N. Fantuzzi, M. Baccocchi, F. Tornabene, E. Viola (2015) - Static and dynamic analyses of arbitrarily shaped laminated composite structures, International Conference on Shells, Plates and Beams (SPB 2015) - Bologna, Italy, 9-11 September 2015.
 74. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2015) - Higher-order theories for the structural analysis of doubly-curved shells and panels made of innovative materials, International Conference on Shells, Plates and Beams (SPB 2015) - Bologna, Italy, 9-11 September 2015.
 75. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2015) - Computational models for laminated doubly-curved shells with variable radii of curvatures using weak and strong formulations, 9th European Solid Mechanics Conference (ESMC2015) - Madrid, Spain, 6-10 July 2015.

76. N. Fantuzzi, F. Tornabene, E. Viola (2015) - Strong formulation finite element method for arbitrary shaped composite structures, 18th International Conference on Composite Structures (ICCS18) - Porto, Portugal, 15-18 June 2015.
77. F. Tornabene, N. Fantuzzi, E. Viola (2015) - Advanced applications for laminated doubly-curved shells with variable curvatures, 18th International Conference on Composite Structures (ICCS18) - Porto, Portugal, 15-18 June 2015.
78. F. Tornabene, N. Fantuzzi, M. Baccocchi, E. Viola (2015) - The strong formulation finite element method applied to structural mechanics problems, GAMM 86th Annual Scientific Conference (GAMM2015) - Lecce, Italy, 23-27 March 2015.
79. E. Viola, F. Tornabene, N. Fantuzzi (2014) - Stress and strain recovery of laminated composite doubly-curved shells and panels using higher-order formulation, Mechanics of Masonry Structures Strengthened with Composite Materials - Modeling, Testing, Design, Control (MuRiCo4) - Ravenna, Italy, 9-11 September 2014.
80. N. Fantuzzi, F. Tornabene, E. Viola (2014) - Dynamic and static behavior of arbitrarily shaped laminated plates via strong formulation finite element method, The 22st Annual International Conference on Composite/Nano Engineering (ICCE22) - Malta, 13-19 July 2014.
81. N. Fantuzzi, F. Tornabene, E. Viola (2014) - Multi-layered structures of arbitrary shape via generalized differential quadrature finite element method, 1st International Conference on Mechanics of Composites (MECHCOMP2014) - Stony Brook, USA, 8-12 June 2014.
82. F. Tornabene, N. Fantuzzi, E. Viola (2013) - General higher-order equivalent single layer and layer wise theories for laminated composite shells and panels using GDQ method, XXI Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2013) - Torino, Italy, 17-20 September 2013.
83. E. Viola, F. Tornabene, N. Fantuzzi (2013) - Static analysis of arbitrary shaped composite plates via GDQFEM, XXI Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2013) - Torino, Italy, 17-20 September 2013.
84. F. Tornabene, N. Fantuzzi, E. Viola (2013) - Dynamic and static analysis of laminated doubly-curved shells and panels using layer-wise and equivalent-single-layer theories via GDQ method, The 21st Annual International Conference on Composite/Nano Engineering (ICCE21) - Tenerife, Spain, 21-27 July 2013.
85. F. Tornabene, N. Fantuzzi, E. Viola (2013) - Vibration analysis of laminated doubly-curved shells and panels using higher-order equivalent-single-layer and layer-wise theories, 9th International Symposium on Vibrations of Continuous Systems (ISVCS13) - Courmayeur, Italy, 22-26 July 2013.
86. N. Fantuzzi, F. Tornabene, E. Viola (2013) - Free vibration of functionally graded cracked plates of arbitrary shape via GDQFEM, 6th ECCOMAS Thematic Conference on Smart Structures and Materials (SMART13) - Torino, Italy, 24-26 June 2013.
87. E. Viola, F. Tornabene, N. Fantuzzi (2013) - Generalized differential quadrature finite element method for arbitrary shaped composite structures, 17th International Conference on Composite Structures (ICCS17) - Porto, Portugal, 17-21 June 2013.
88. F. Tornabene, N. Fantuzzi, E. Viola (2013) - Layer-wise and equivalent-single-layer theories for laminated composite doubly-curved shells and panels using differential geometry and GDQ method, 17th International Conference on Composite Structures (ICCS17) - Porto, Portugal, 17-21 June 2013.
89. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi (2013) - Soft core plane state structures under static loads using GDQFEM and cell methods, International Conference on Computational & Experimental Engineering and Sciences (ICCES2013) - Seattle, USA, 24-28 May 2013.
90. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi (2013) - GDQFEM and cell method numerical simulations of continuous media with cracks and discontinuities, International Conference on Computational & Experimental Engineering and Sciences (ICCES2013) - Seattle, USA, 24-28 May 2013.
91. E. Viola, F. Tornabene, E. Ferretti, N. Fantuzzi (2013) - On static analysis of composite plane

- state structures via GDQFEM and cell method, International Conference on Computational & Experimental Engineering and Sciences (ICCES2013) - Seattle, USA, 24-28 May 2013.
92. N. Fantuzzi, L. Rossetti, E. Viola (2012) - Free vibration of laminated shells via GDQ method using third-order theories, International Conference on Mechanics of Nano, Micro and Macro Composite Structures (ICMNMCS2012) - Torino, Italy, 18-20 June 2012.
 93. L. Rossetti, N. Fantuzzi, E. Viola (2012) - Stress and displacement recovery for functionally graded conical, cylindrical shells and annular plates, International Conference on Mechanics of Nano, Micro and Macro Composite Structures (ICMNMCS2012) - Torino, Italy, 18-20 June 2012.
 94. L. Rossetti, N. Fantuzzi, E. Viola (2011) - Static analysis of functionally graded conical shells based on an unconstrained third order theory, XX Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2011) - Bologna, Italy, 12-15 September 2011.
 95. E. Viola, N. Fantuzzi, A. Marzani, Y. Li (2011) - Dynamic stability and critical loads of cracked beams under subtangential forces, XX Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2011) - Bologna, Italy, 12-15 September 2011.
 96. S. de Miranda, A. De Rosis, N. Fantuzzi, L. Patruno, F. Ubertini (2011) - Controdeformazioni di materiali ceramici, XX Convegno Italiano dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA2011) - Bologna, Italy, 12-15 September 2011.
 97. E. Viola, Y. Li, N. Fantuzzi (2011) - On the stress intensity factors of cracked beams for structural analysis, 10th International Conference on Fracture and Damage Mechanics (FDM 2011), Dubrovnik, Croatia, 19-21 September 2011.
 98. E. Viola, N. Fantuzzi, A. Marzani (2011) - Cracks interaction effect on the dynamic stability of beams under conservative and nonconservative forces, 10th International Conference on Fracture and Damage Mechanics (FDM 2011), Dubrovnik, Croatia, 19-21 September 2011.
 99. E. Viola, N. Fantuzzi, L. Rossetti (2010) - Initial curvature effect on the behaviour of cylindrical shell structures, The 4th International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 6-8 September 2010.

Posters at International Conferences

1. A. Mourão, J.A.F.O. Correia, J.M. Castro, C. Rebelo, A.M.P. de Jesus, N. Fantuzzi, R. Calçada (2018) Fatigue analysis for an offshore jacket-type platform using simplified and local approaches, XIX International Colloquium on Mechanical Fatigue of Metals (ICMFM XIX) – Porto, Portugal, 5-7 September 2018.
2. A. Mourão, J.A.F.O. Correia, J. Barbosa, J.M. Castro, C. Rebelo, M. Correia, N. Fantuzzi, R. Calçada (2018) Fatigue wave loads estimation using Morison formula for an offshore jacket-type platform, XIX International Colloquium on Mechanical Fatigue of Metals (ICMFM XIX) – Porto, Portugal, 5-7 September 2018.
3. J.M. Guidotti, N. Fantuzzi, E. D'Alessandro, A. Mermoud (2018) XEN Tube: a new surgical device for micro-invasive subconjunctival drainage. Prospective evaluation of the XEN™ gel implant: initial 1 year follow-up, SOG-SSO: Schweizerische Ophthalmologische Gesellschaft-Société Suisse d'Ophtalmologie – Fribourg, Switzerland, 30-31 August 2018.

Present and Past Collaborations

Collaborations with national and international Professors about common research topics.

1. Prof. Y. Bai from Zhejiang University (China).
2. Prof. R.C. Batra from Virginia Polytechnic Institute and State University (USA).
3. Prof. E. Carrera from Politecnico di Torino (Italy).
4. Prof. M. Eisenberger from Technion University (Israel).
5. Prof. A.J.M. Ferreira from University of Porto (Portugal).
6. Prof. Y. Li from Chongqing University (China).

7. Prof. R. Luciano from Parthenope University (Italy).
8. Prof. J.N. Reddy from Texas A&M University (USA).
9. Prof. P. Trovalusci from Sapienza University of Rome (Italy).
10. Prof. A.M. Zenkour from Kafr Ashaykh University (Egypt).

Projects

1. **Scientific Representative** for Roofy Srl in Nu.Ma. project for innovative materials for civil and building applications. (approved – contract under preparation).
2. **Industrial Training** for Roofy Srl for Industry 4.0. (approved – contract under preparation).
3. **Scientific Representative** for Carbon Dream SpA in TERSA Project for an advanced flying vehicle. (approved – contract under preparation).
4. **Collaborator/Partner** for the SOS WindEnergy project, Coordinated by Prof. Jose Correia, University of Porto, Portugal and Prof. Lance Manuel, University of Texas at Austin, USA.
5. **Scientific Representative** for Carbon Dream SpA in MICAELA project for an advanced electronic micro-car.
6. **Scientific Representative** for Carbon Dream SpA in analysis and design of innovative bio-composites for water vehicles (jet ski) project.
7. **Collaborator** in Sapienza Research Grants “Progetti Grandi” 2018 (B81G19000060005), Coordinated by Prof. Patrizia Trovalusci, Sapienza University of Rome.
8. **Beneficiary** of the “Mobility project for international cooperation – first semester 2018”. Visiting scholar at City University of Hong Kong (CityU) from February 28th to March 9th.
9. **Beneficiary** of the “Financing Fund for the Basic Research Activity” (National grant called in Italian: Fondo di Finanziamento per le Attività Base di Ricerca (FFABR)).
10. **Collaborator** with the project “Manutenzione intelligente (smart maintenance) di impianti industriali e opere civili mediante tecnologie di monitoraggio 4.0 e approcci prognostici – MAC4PRO” INAIL, Coordinated by Prof. Alessandro Marzani, University of Bologna.
11. **Collaborator** in “Ateneo 2016” (B82F16005920005), Coordinated by Prof. Patrizia Trovalusci, Sapienza University of Rome.
12. **Collaborator** in the PRIN project 2015 (2015JW9NJT), Coordinated by Prof. Patrizia Trovalusci, Sapienza University of Rome.

Accomplishments

- **National Academic Qualification** (ASN) as **Associate Professor** in Mechanics of Solids and Structures (05/04/2018 - 05/04/2024).
- **21st May 2015: Oral Audition for the SIR** (Scientific Independence of Young Researchers) Research Program with the project entitled: *Magneto-Piezo-Thermo-Elastic Composite Cracked Plate and Shell Models Applied to Aerospace, Naval, Civil and Mechanical Engineering using a Higher-order Unified Formulation*. Project code: RBSI144U0W.
- **Invited chairman** at the 1st International Conference on Mechanics of Composites (MECHCOMP2014) Stony Brook, USA, 2014.
- **Invited chairman** at the 23rd Annual International Conference on Composite/Nano Engineering (ICCE22) Malta 2014.
- **Invited chairman** at the 22nd Annual International Conference on Composite/Nano Engineering (ICCE21) Tenerife, Spain 2013.
- **Speaker** at several international conferences as reported in the list of publications (conferences section).
- **Owner of the research grant** entitled: About Shell Structures Made of Anisotropic Materials. Unified Formulation and Numerical Analysis from June 2013 to January 2017 at the Alma Mater Studiorum – University of Bologna.
- **First position** obtained in the competition for admission to the **PhD in Structural**

Engineering and Hydraulics at the Alma Mater Studiorum – University of Bologna in December 2009. PhD in Structural Engineering and Hydraulics at the Alma Mater Studiorum – University of Bologna on 31/05/2013. PhD Thesis title: Generalized Differential Quadrature Finite Element Method Applied to Advanced Structural Mechanics.

- **Master degree** in Civil Engineering (major: Structural Engineering) at Alma Mater Studiorum – University of Bologna on 16/01/2009, grade 110/110 cum laude (with honours). Thesis title (in Italian): Curvature Effect on the Behavior of Shells with Anisotropic Material.

Awards

1. **Winner of the “International Computational Method Young Investigator Award”** at the 9th International Conference on Computational Methods (ICCM2018), 6th-10th August 2018, Rome, Italy.
2. **Winner of the “Best Student Paper Award – MIMS16”** with the work entitled: Free vibration analysis of arbitrarily shaped functionally graded carbon nanotube-reinforced plates by N. Fantuzzi, F. Tornabene, M. Baccocchi, R. Dimitri, published in Composites Part B Engineering 115(1), 384-408 (2017).
3. **Winner of the “ICCS17 Ian Marshall's Award for Best Student Paper”** with the work entitled: Static Analysis of Doubly-Curved Anisotropic Shells and Panels Using CUF Approach, Differential Geometry and Differential Quadrature Method by F. Tornabene, N. Fantuzzi, E. Viola and E. Carrera, published in Composite Structures 107, 675-697 (2014).

Conferences activities

Keynotes

1. 2022 23-25th Apr – Plenary Talk at the 8th International Conference on Mechanics of Composites (MECHCOMP8), University of Wuhan, China.
2. 2021 17-19th Dec – Keynote Talk at the International Symposium on Ocean Engineering Structure and Mechanical Equipment (OESME2021), Harbin Engineering University, China.
3. 2021 6th May – Invited Lecture at the Online Colloquium Materials Modelling, Summer Term 2021, Institute for Materials Testing, Materials Science and Strength of Materials (IMWF), University of Stuttgart, Germany. Thursdays, 29 Apr 2021 – 15 July 2021.
4. 2021 8-9th Apr – Keynote Lecture at Congress on Structural Integrity and Maintenance (SIM2021), Belo Horizonte, Brazil.
5. 2019 31st Oct-3rd Nov – Keynote Speaker at the 22nd International Conference on Composite Structures (ICCS22) and 1st Chinese Conference on Composite Structures (CCCS1), Wuhan, China.
6. 2019 9-13th Jul – Thematic Plenary Lecture at the 10th International Conference on Computational Methods (ICCM2019), Singapore.
7. 2019 15-17th Apr – Keynote Speaker at the International Symposium on Solid Mechanics 2019 (MECSOL 2019), Sao Carlos, Brazil.

Conferences Organized

1. **Co-Organizer** of the 1st Virtual School on Composite Structures (VSCS1). 7-12 March 2022.
2. **Co-Chair** of the 25th International Conference on Composite Structures (ICCS25), On line. 19-22 January 2022.
3. **Co-Chair** of the 1st Conference on Mechanical, Aeronautical and Structural Engineering (MASE), Porto, Portugal, 10 - 12 November 2021.
4. **Co-Chair** of the 7th International Conference on Mechanics of Composites (MECHCOMP7), Porto, Portugal. 1-3 September 2021.
5. **Co-Chair** of the 1st International Conference on Computations for Science and Engineering (ICCSE1), Porto, Portugal. 19-22 July 2021.

6. **Co-Chair** of the 24th International Conference on Composite Structures (ICCS24), Porto, Portugal. 14-18 June 2021.
7. **Co-Chair** of the Joint Event 23rd International Conference on Composite Structures (ICCS23) and 6th International Conference on Mechanics of Composites, Porto, Portugal. 1-4 September 2020.
8. **Organizer** of the Workshop on “From cessation of production “Asset Shutdown” to Offshore facilities Decommissioning Execution”, University of Bologna, Ravenna Campus. 25th May 2020.
9. **Co-Chair** of the 5th International Conference on Mechanics of Composites (MECHCOMP5), Lisbon, Portugal. 1-4 July 2019.
10. **Co-Organizer** of the Structural Integrity of Renewable Energy and Oceanic Structures Symposium at the XIX International Colloquium on Mechanical Fatigue of Metals (ICMFM XIX), Porto, Portugal. 5-7 September 2018.
11. **Co-Chair** of the 21st International Conference on Composite Structures (ICCS21), Bologna, Italy. 4-7 September 2018.
12. **Secretary General** of the 9th International Conference on Computational Methods (ICCM2018), Rome, Italy, 6-10 August 2018.
13. **Co-Chair** of the 20th International Conference on Composite Structures (ICCS20), Paris, France. 4-7 September 2017.
14. **Co-Chair** of the 3rd International Conference on Mechanics of Composites (MECHCOMP3), Bologna, Italy. 4-7 July 2017.
15. **Local Organizing Committee** of the International Conference on Composite Structures (ICCS19), Porto, Portugal. 5-9 September 2016.
16. **Co-Chair** of the 2nd International Conference on Mechanics of Composites (MECHCOMP2), Porto, Portugal. 11-14 July 2016.
17. **Local Organizing Committee** of the International Conference on Shells, Plates and Beams (SPB2015), Bologna, Italy. 9-11 September 2015.

Symposia

1. **Co-organizer** of the Thematic Session on Data science for composite materials and structures at the 25th International Conference on Composite Structures (ICCS25), Online. 19-22 January 2022.
2. **Co-chair** of the Trovalusci International Symposium (17th International Symposium on Multiscale and Multifield Modelling of 'Complex' Material (MMCM17)) at the Sustainable Industrial Processing Summit & Exhibition (SIPS2020), 28th November-2nd December 2021 Phuket, Thailand.
3. **Co-organizer** of the minisymposium on Natural Fibres Composites for Structural Strengthening of Constructions at the 7th Mechanics Of Masonry Structures Strengthened With Composite Materials (MuRiCo7), Online. 24-26 November 2021.
4. **Co-organizer** of the Thematic Session on Computer-aided structural integrity and safety (CSIS) at the 1st International Conference on Computations for Science and Engineering (ICCSE1), Porto, Portugal. 19-22 July 2021
5. **Co-coordinator** of the International Symposium on Multiscale and Multiphysics Modeling for Complex Materials (MMCM15) at the 14th World Congress on Computational Mechanics (WCCM XIV), 8th European Congress on Computational Methods in Applied Science and Engineering (ECCOMAS 2020), 11-14 January 2021, Paris, France.
6. **Co-coordinator** of the International Symposium on Multiscale and Multiphysics Modeling for Complex Materials (MMCM14) at the Joint event: 23rd International Conference on Composite Structures & 6th International Conference on Mechanics of Composites (ICCS23 & MECHCOMP6), 1-4 September 2020, Porto, Portugal.
7. **Co-coordinator** of the International Symposium on Multiscale and Multiphysics Modeling

- for Complex Materials (MMCM13) at the 16th International Conference on Civil, Structural and Environmental Engineering Computing (Civil-Comp 2019), 16-19 September 2019, Riva del Garda, Lake Garda, Italy.
8. **Co-coordinator** of the International Symposium on Multiscale and Multiphysics Modeling for Complex Materials (MMCM12) at the International Conference on Nonlinear Solid Mechanics (ICoNSoM 2019), 16-19 June 2019, Roma, Italy.
 9. **Co-coordinator** of the International Symposium on Multiscale and Multiphysics Modeling for Complex Materials (MMCM11) at the 9th International Conference on Computational Methods (ICCM2018) Rome, Italy 6-10 August 2018.
 10. **Co-coordinator** of the International Symposium on Advanced Modelling of Composite Materials and Structures at the 9th International Conference on Computational Methods (ICCM2018) Rome, Italy 6-10 August 2018.
 11. **Co-coordinator** of the International Symposium on Advanced Computational Methods for the Mechanical Modeling of Materials and Structures (ACM4S) at the 8th International Conference on Computational Methods (ICCM2017) Guilin City, China 25-29 July 2017.

Scientific Committee

- **Member of the Scientific Committee** of the 1st Iberian-American Conference on materials and structures for sustainable development (IAMS2022), 26-28 January 2022, University of Porto, Portugal.
- **Member of the Scientific Committee** of the Mechanics of Solids Conference, 3-4 November 2022, University of Porto, Portugal.
- **Member of the Scientific Committee** of the XXVII Conference of Lightweight Structures in Civil Engineering, 2-3 December 2021, Lodz University of Technology, Poland. <https://www.lsce.pl/en>
- **Academic Committee Member** of the 2021 International Conference on Materials: Advanced and Emerging Materials, 21-24 November 2021, Shenzhen, China. <https://2021icm-cn.sciforum.net>
- **Member of the Scientific Committee** of the Ibero American conference on composite materials (IAMaC), 29-30 July 2021, University of Porto, Portugal.
- **Member of the Scientific Committee** of the 14th International Conference on Damage Assessment of Structures (DAMAS 2021), 28-31 May 2021, Shanghai Jiao Tong University, Shanghai, China.
- **Member of the Scientific Committee** of the V International Conference on Numerical and Symbolic Computation: Developments and Applications (SYMCOMP2021), 25-26 March 2021, Évora, Portugal.
- **Member of the Scientific Committee** of the 2nd International Conference on Theoretical, Analytical and Computational Methods for Composite Materials and Composite Structures (ICOMP2021), 5-7 March 2021 (on line).
- **Member of the International Scientific Committee** of the First International Congress on Structural Integrity and Maintenance (SIM 2020), 23-24 November 2020, Federal University of Minas Gerais, Belo Horizonte, Brazil.
- **Member of the Organizing Committee** of the 1st Virtual Conference on Mechanical Fatigue (VCMF2020), 9-11 September 2020, Porto, Portugal.
- **Member of the Editorial Advisory Board** of the 14th International Conference on Computational Structures Technology (CST 2020), 7-10 September 2020, Palma Mallorca, Spain.
- **Member of the Scientific Committee** of the 5th Brazilian Conference on Composite Materials (BCCM 5), Sao Carlos, Brazil. 21-24 July 2020.
- **Member of the Scientific Committee** of 22nd International Conference on Composite Structures (ICCS22) and 1st Chinese Conference on Composite Structures (CCCS1). 31st Oct-3rd Nov 2019.

- **Member of the Editorial Advisory Board** of the 16th International Conference on Civil, Structural and Environmental Engineering Computing (Civil-Comp 2019), 16-19 September 2019, Riva del Garda, Lake Garda, Italy.
- **Member of the Scientific Committee** of the 10th International Conference on Computational Methods (ICCM2019), 9-13 July 2019, Singapore.
- **Member of the Scientific Committee** of the 1st International Symposium on Risk Analysis and Safety of Complex Structures and Components (IRAS 2019), 1-2 July 2019, Porto, Portugal.
- **Member of the Scientific Committee** of the 4th International Conference on Numerical and Symbolic Computation (SYMCOMP 2019), 11-12 April 2019, Porto, Portugal
- **Member of the Scientific Committee** of the International Symposium on Solid Mechanics 2019 (MECSOL 2019), Sao Carlos, Brazil. 15-17 April 2019.
- **Member of the Scientific Committee** of 21st International Conference on Composite Structures (ICCS21). 4-7 September 2018.
- **Advisory Board Member** of the 1st International Conference on Mechanics of Advanced Materials and Equipment (MAME 2018), Ahvaz, Iran. January 2018.
- **Member of Organizing Committee** of Advanced Materials Congress 2017-2018
- **Technical Program Committee Member** of the 3rd International Conference on Material Engineering and Applications (ICMEA2016), Changsha, Hunan, China. 12-13 November 2016.

Editorial activities

Editorial board member

1. Acta Mechanica et Automatica (Sciendo)
2. Archives of Oil and Gas Research (Gavin Publishers)
3. Archives of Petroleum and Environmental Biotechnology (Gavin Publishers)
4. Challenges (MDPI – Open Access Publishing)
5. Composites Part C: Open Access (JCOMC) (Elsevier) (Feb 2020 – today)
6. Composite Structures (Elsevier) (Jun 2019 – today)
7. Engineering Science (ES) (Science Publishing Group)
8. International Journal Of Engineering & Applied Sciences (DergiPark Akademik)
9. International Journal of Ocean Systems Management (InderScience Publishers) (Mar 2020 – today)
10. Journal of Applied and Computational Mechanics (Shahid Chamran University) (Jul 2016 – Dec 2017)
11. Journal of Control Science and Engineering (David Publishing Company)
12. Materials (MDPI – Open Access Publishing)
13. Mathematical and Computational Applications (MDPI – Open Access Publishing)
14. Mathematical Problems in Engineering (Hindawi)
15. Science and Engineering of Composite Materials (De Gruyter) (Dec 2018 – today)
16. SCIREA Journal of Mechanics (Science Research Association)
17. Structural Integrity (Springer) (<https://www.springer.com/series/15775?detailsPage=press>)

Editor activities

- **Guest Editor** of the Special Issue “Novel approaches for the multiscale analysis of composite materials and structures” of Composite Part C: Open Access. <https://www.journals.elsevier.com/composites-part-c-open-access/call-for-papers/special-issue-on-novel-approaches-for-the-multiscale-analysis>
- **Topic Editor** of the Research Topic “Advanced Green Thermosetting Composites: Design and Performances” of Frontiers in Materials. <https://www.frontiersin.org/research-topics/20109/advanced-green-thermosetting-composites-design-and-performances>

- **Review Editor** on the Editorial Board of Computational Methods in Structural Engineering (specialty section of Frontiers in Built Environment).
- **Guest Editor** of the Special Issue “Multiscale Mechanical Modelling of ‘Complex’ Materials and Engineering Applications. Dedicated to the 60th Birthday of Patrizia Trovalusci” of International Journal for Multiscale Computational Engineering (IJMCE).
- **Guest Editor** of the Special Issue “Mathematical and Computational Modelling in Mechanics of Materials and Structures” of Mathematical and Computational Applications (MCA). ISSN 2297-8747, MDPI. https://www.mdpi.com/journal/mca/special_issues/Mech_Mater_Struct
- **Co-Editor** of the Special Issue “Renewable Energies and Ocean Technologies: Challenges to the Green and Blue Economy” of Journal of Marine Science and Engineering (JMSE). https://www.mdpi.com/journal/jmse/special_issues/bz_renewable_energies_ocean_technologies
- **Co-Editor** of the Special Issue “Design and Structural Integrity of Offshore Structures” of Computer-Aided Civil and Infrastructure Engineering (CACAIIE).
- **Co-Editor** of the Special Issue “Selected Papers from the ABCM MecSol 2019 Conference Sao Carlos” of Latin American Journal of Solids And Structures (LAJSS).
- **Co-Editor** of the Special Issue “Multiscale Mechanical Modelling of 'Complex' Materials and Engineering Applications” of International Journal for Multiscale Computational Engineering (IJMCE).
- **Guest Editor** of the Special Issue “Mesh-free and Finite element-based methods for structural mechanics applications” of Mathematical and Computational Applications (MCA). ISSN 2297-8747, MDPI. http://www.mdpi.com/journal/mca/special_issues/str_mech_appl
- Since 2017 – **Editor-in-Chief (Section Engineering)** of Mathematical and Computational Applications (MCA) ISSN 2297-8747, MDPI. <http://www.mdpi.com/journal/mca>
- **Guest Editor** in the Special Issue “Advanced Composite Materials Applied to Structural Mechanics” of Journal of Composite Science. ISSN 2504-477X, MDPI. http://www.mdpi.com/journal/jcs/special_issues/composite_structural_mechanics

Associate editor activities

- 01/08/2021 to 31/07/2024 – **Associate Editor** of International Journal of Structural Integrity (IJSI) (Emerald).
- Since January 2020 – **Associate Editor** of International Journal of Ocean Systems Management (Inderscience Publishers).
- From 2016 to 2017 – **Associate Editor** of Journal of Applied and Computational Mechanics (JACM, Shahid Chamran University).

Assistant editor activities

- 2014 – 2019 **Assistant Editor** of Structural and Computational Mechanics Book Series (Esculapio Publishing).
- 2014 – 2019 **Assistant Editor** of Curved and Layered Structures Journal at De Gruyter Open Publisher.

Reviewer of Peer-Review Journals

1. Acta Mechanica (Springer)
2. Adsorption Science and Technology (Sage)
3. Advanced Composites Letters (Sage)
4. Advances in Engineering Software (Elsevier)
5. Advances in Mechanical Engineering (Sage)
6. Advances in Mathematical Physics (Hindawi)
7. Aerospace Science and Technology (Elsevier)
8. AIAA Journal (ARC)
9. Ain Shams Engineering Journal (Elsevier)

10. Applied Acoustics (Elsevier)
11. Applied Mathematical Modelling (Elsevier)
12. Applied Mathematics and Computation (Elsevier)
13. Applied Physics A (Springer)
14. Applied Sciences (MDPI)
15. Arabian Journal of Geosciences (Springer)
16. Archive of Applied Mechanics (Springer)
17. Archives of Mechanics (Polish Academy of Sciences)
18. Asian Research Journal of Mathematics (ScienceDomain)
19. Bulletin of Engineering Geology and the Environment ()
20. Composite Structures (Elsevier)
21. Composites Part A: Applied Science and Manufacturing (Elsevier)
22. Composites Part B: Engineering (Elsevier)
23. Composites Science and Technology (Elsevier)
24. Computers and Mathematics with Applications (Elsevier)
25. Computers and Structures (Elsevier)
26. Construction and Building Materials (Elsevier)
27. Curved and Layered Structures (De Gruyter)
28. Energies (MDPI)
29. Engineering Computations (Emerald)
30. European Journal of Mechanics - A/Solids (Elsevier)
31. Engineering Analysis with Boundary Elements (Elsevier)
32. Engineering Science and Technology: an International Journal (Elsevier)
33. Environmental Research (Elsevier)
34. Frontiers in Built Environment (Frontiers)
35. Geomechanics and Engineering, An International Journal (Techno-Press)
36. High Performance Polymers (Sage)
37. Heliyon (Elsevier)
38. IET Microwaves, Antennas & Propagation (IET Digital Library)
39. International Journal for Computational Methods in Engineering Science & Mechanics (Taylor & Francis)
40. International Journal of Aeronautical and Space Sciences (Korean Society for Aeronautical & Space Sciences (KSAS))
41. International Journal of Applied Mechanics (World Scientific)
42. International Journal of Information Technology and Decision Making (World Scientific)
43. International Journal of Fatigue (Elsevier)
44. International Journal of Mechanical Sciences (Elsevier)
45. International Journal of Numerical Methods for Heat and Fluid Flow (Emerald)
46. International Journal of Pressure Vessels and Piping (Elsevier)
47. International Journal of Rock Mechanics and Mining Sciences (Elsevier)
48. International Journal of Smart and Nano Materials (Taylor & Francis)
49. International Journal of Structural Integrity (Emerald)
50. International Journal of Structural Stability and Dynamics (World Scientific)
51. International Scholarly Research Notices (Hindawi)
52. Journal of Aerospace Engineering (ASCE)
53. Journal of the Brazilian Society of Mechanical Sciences and Engineering (Springer)
54. Journal of Composite Science (MDPI)
55. Journal of Computational Science (Elsevier)
56. Journal of Engineering and Technological Sciences (Institut Teknologi Bandung)
57. Journal of Engineering Mechanics (ASCE)
58. Journal of Industrial Textiles (Sage)
59. Journal of Low Frequency Noise, Vibration & Active Control (Sage)

60. Journal of Mathematics and Computer Science (ISRArchives of Mechanics Publications)
61. Journal of Marine Science and Technology (Springer)
62. Journal of the Mechanical Behavior of Materials (DeGruyter)
63. Journal of Numerical Analysis, Industrial and Applied Mathematics ()
64. Journal of Optimization Theory and Application (Springer)
65. Journal of Sandwich Structures and Materials (Sage)
66. Journal of Sound and Vibration (Elsevier)
67. Journal of Vibration and Control (Sage)
68. KSCE Journal of Civil Engineering (Springer)
69. Materials & Design (Elsevier)
70. Materials (MDPI)
71. Mathematical and Computational Applications (MDPI)
72. Mathematical Methods in the Applied Sciences (Wiley)
73. Mathematical Problems in Engineering (Hindawi)
74. Mathematics (MDPI)
75. Meccanica (Springer)
76. Mechanical Systems and Signal Processing (Elsevier)
77. Mechanics of Advanced Composite Structures (Semnan University)
78. Mechanics of Advanced Materials and Structures (Taylor & Francis)
79. Metals (MDPI)
80. Microsystem Technologies (Springer)
81. Multidiscipline Modeling in Materials and Structures (Emerald)
82. Nanotechnology Reviews (De Gruyter)
83. Natural Hazards (Springer)
84. Ocean Engineering (Elsevier)
85. Part C: Journal of Mechanical Engineering Science (Sage)
86. Part L: Journal of Materials: Design and Applications (Sage)
87. Physics Letters A (Elsevier)
88. Polymer Composites (Wiley)
89. Polymer Engineering & Science (Wiley)
90. Practice Periodical on Structural Design and Construction (ASCE)
91. Proceedings of The Royal Society A (The Royal Society Publishing)
92. Proceedings of ICE – Geotechnical Engineering (ICE)
93. Results in Physics (Elsevier)
94. Physica B Condensed Matter (Elsevier)
95. Royal Society Open Science (The Royal Society Publishing)
96. Science and Engineering of Composite Materials (De Gruyter)
97. Sensors (MDPI)
98. Shock and Vibration (Hindawi)
99. Steel and Composite Structures, An International Journal (Techno-Press)
100. Structural Engineering and Mechanics, An International Journal (Techno-Press)
101. Symmetry (MDPI)
102. The Arabian Journal for Science and Engineering
103. The European Physical Journal Plus (Springer)
104. Theoretical and Applied Fracture Mechanics (Elsevier)
105. Thin-Walled Structures (Elsevier)
106. Transactions of the Institute of Measurement and Control (Sage)
107. Transactions on Mechatronics (IEEE/ASME)
108. Tunnelling and Underground Space Technology (Elsevier)
109. Waves in Random and Complex Media (Taylor & Francis)
110. Zeitschrift fur Angewandte Mathematik und Mechanik – ZAMM (Wiley)

Reviewer of Research project

1. Since 2019 – Scientific Expert for the evaluation of Italian Research (REPRISE MIUR).
2. Since 2018 – Referee Reporting for Scholarship Applications for the University of Nottingham, UK.
3. Since 2018 – Referee Reporting for Scholarship Applications for the Queen’s University of Belfast, UK.
4. Since 2018 – Referee Reporting for Scholarship Applications for the University of Bath, UK.
5. Since 2017 – National Science Centre (Narodowe Centrum Nauki – NCN) Funding of National research projects in Poland, <http://www.ncn.gov.pl>
6. Since 2018 – Netherlands Organisation for Scientific Research (NWO), <http://www.ttw.nwo.nl>
7. Since 2018 – Referee Reporting for Scholarship Applications for the University of Western Australia (UWA).

Bibliometric Indices

- **Scopus**, Author ID: 53163526100
Documents: 141
Citations: 5791 total citations by 2059 documents
h-index: 47
(Excluding self-citations: Citations 4325, h-index: 41)
- **Web of Science**, ResearcherID: B-5750-2013
Articles With Citation Data: 102
Sum of the Times Cited: 5131
Average Citations per Article: 50.8
h-index: 45
- **Google Scholar**, <https://scholar.google.it/citations?user=jBvVM78AAAAJ&hl=it>
Documents: 199
Citations: 6575
h-index: 49
i10-index: 90
- **ORCID**, <http://orcid.org/0000-0002-8406-4882>
- **Publons**, <https://publons.com/researcher/1170227/nicholas-fantuzzi/>

16th September 2021

Nicholas Fantuzzi