

## NGUYEN DINH DUC



Dr.Sci., Full Professor

**Chairman of the University of Engineering and Technology, VNU Hanoi**

Vice-President of Vietnamese Association in Mechanics

President of The Network Club about Ensures The Quality of Higher Education of Vietnam

The Head of Laboratory of Advanced Materials and Structures,

The Dean of Faculty of Civil Engineering - VNU Hanoi,

University of Engineering and Technology (UET)

Director of the Infrastructure Engineering Program of Vietnam-Japan University (VJU)

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Google Scholar citation: <https://scholar.google.com.vn/citations?user=bD9RE7AAAAAJ&hl=en&oi=ao>

### 1. EDUCATION

**B.Sc.:** 1984, Hanoi State University, Faculty of Math. & Mech., Hanoi, Vietnam

**Ph. D:** 1991, Moscow State University, Faculty of Math. & Mech. , Moscow - Russia

**Dr.Sc: (Habilitation)** 1997, Laboratory of Mechanics of composite materials –

Mechanical Engineering Research Institute of Russian Academy of Sciences, Moscow  
- Russia.

**Post-doctoral** at Moscow State University (1991-1993)

**Guest research professor** at Mechanical Engineering Research Institute of Russian Academy of sciences (1999-2001)

**Visiting professor** at Japan Advanced Institute of Sciences and Technology (2006-2009)

**Guest research professor** at University of Birmingham, UK (2016-2017)

**Visiting professor** at Sejong University, Korea (2017- 2021)

## 2. CAREER

- 1980-1984: Student of Dept.of. Maths. & Mech., Hanoi State University, (B.Sc – 1984).

- 1985-10/1986: Lecturer of Dept.of. Maths. & Mech., Hanoi State University.

- 10/1986- 9/1991: Post-graduate for Ph.D. Dissertation at Dept. of Maths. & Mech. , Moscow State University. (Ph.D-1991).

- 10/1991-6/1993: Post-doctoral at Dept. of Mathe. & Mecha., Moscow State University.

- 6/1993-12/1997: Post-graduate for Dr.Sci. (Dr. Habilitation) Dissertation at Laboratory of Mechanics of composite, Mechanical Engineering Research Institute of Russ. Acad. of Sci. (Dr.Sc -1997).

- 12/1997-8/1999: Researcher of Laboratory of Mechanics of composite, Mechanical Engineering Research Institute of Russian Academy of sciences.

- The member of the Central Committee of the Vietnam Fatherland Front in period 1999-2004.

- 9/1999 -12/2001: Guest Research Professor - Main researcher of Laboratory of Mechanics of composite, Mechanical Engineering research Institute of Russian Academy of sciences.

- The Vice-President and Secretary general of Vietnam Science-Technical Association in Russia (1999-12/2001). The foreign member of Russian Academy of Natural Sciences and the member of International Academy of Scientific Inventions and Patents (since 1999).

- 2/2002-6/2003: Lecture - Faculty of Mathematics, Mechanics and Information, University of Sciences, Vietnam National University - Hanoi

- 7/2002-9/2003: Expert of External Affairs and Economic Department of the Central Committee of the Vietnam Fatherland Front. Guest Lecturer of University of Sciences,

Vietnam National University – Hanoi; The Head of Editorial Board of Mathematics and Physics Journal (in English) of Vietnam National University, Hanoi (since 2002).

- 9/2003-3/2004: Expert of School of Graduate Studies, Vietnam National University, Hanoi (VNU). Guest Lecturer of University of Sciences, Vietnam National University – Hanoi.

- 3/2004-9/2004: Vice-Director of Academic Affairs Department, Vietnam National University, Hanoi (VNU). Vice-President of Vietnamese Young Scientist Association in Vietnam (2004-2010).

- 10/2004-2/2005: Vice Director of Science and Technology Department, Vietnam National University, Hanoi (VNU).

- 2/2005 – 11/2008: Director of Science and Technology Department, Vietnam National University, Hanoi (VNU). The secretary of the Council for Science and Education of Vietnam National University, Hanoi.

- Associate Professor (2007). Full professor (2013). The Third Prize of “Talented Vietnamese National Award” (in Vietnam, 2008). Visiting professor at Japan Advanced Institute of Sciences and Technology (2006-2009)

- 11/2008- 9/2012: Vice President of University of Engineering and Technology - Vietnam National University, Hanoi.

- 10/2012- 5/2023: Director of Undergraduate and Postgraduate Academic Affairs Department, Vietnam National University, Hanoi.

**- Present:**

- **Chairman of the University Council of University of Engineering and Technology, Vietnam National University-Hanoi (5/2023 –present)**
- President of the network club about ensures the quality of higher education of Vietnam (2023 – present)
- Vice-President of Vietnamese Association in Mechanics, 2017-present.
- The member of the Vietnam Professor Council in Mechanics, 2014-present.
- The Head of Laboratory of Advanced Materials and Structures, University of Engineering and Technology (UET) – VNU Hanoi, 2015-present.
- The Dean of the Faculty of Civil Engineering of University of Engineering and Technology (UET) – VNU Hanoi, 2018- present.
- Director of Infrastructure Engineering Program of Vietnam-Japan University (VJU), 2016- present.

- Director of the Automation and Informatics Program of VNU Hanoi - International School, 2020-present.

### 3. TEACHING EXPERIENCE

- Continuum Mechanics
- Mechanics of Deformed Solid
- Mechanics of Composite Materials
- Strength of Material and Mechanics of Structures
- Functional Materials
- The Theory of Elastic and Plastic
- The Theory of Plates and Shells
- The sustainable development in Civil Engineering
- Feng Shui in Civil Engineering

### 4. RESEARCH INTEREST AND SPECIALIZATION

- Mechanics of composite materials
- Dynamic and Vibration of Advanced Structures
- Nonlinear stability of FGM plates and shells
- Composite structures with dynamic crack propagation
- Constructions and composite structures subjected to special loads
- Piezoelectric composite and auxetic materials
- Nano composite materials in renewable Energy
- Composite with space structure (Carbon-carbon composite 3D, 4D)
- Three phases polymer composite and nanocomposite
- Advanced materials and Structures
- Applied Mathematics and Mechanics
- Application of AI and Machine Learning in Engineering

### 5. BOOKS (monographs and text books)

1. **Nguyen Dinh Duc**, *The spherofibre composite with space structure*, URSS Publishing House, Moscow, Russia, 2000, 242 pages (Monograph in Russian).
2. **Nguyen Dinh Duc, Nguyen Hoa Thinh**, *Composite materials - Mechanics and Technology of manufacture*, Science and Technics Publishing House, Hanoi, Vietnam, 2002, 364 pages (Monograph in Vietnamese).

3. **Nguyen Dinh Duc, Dao Nhu Mai**, *Strength of the Materials and Structures*. Vietnam National University Press, Hanoi, 2012, 292 pages (Text book in Vietnamese).
4. **Nguyen Dinh Duc**, *Nonlinear Static and Dynamic Stability of Functionally Graded Plates and Shells*. Vietnam National University Press, Hanoi, 2014, 724 pages (Monograph in English).
5. **Nguyen Dinh Duc, Tran Quoc Quan, Pham Hong Cong**, *Nonlinear Vibration of Auxetic Plates and Shells*. Vietnam National University Press, Hanoi, 2021, 376 pages (Monograph in English).
6. **Nguyen Dinh Duc, Vu Thi Thuy Anh**, *Mechanics of Deformed Solid*. Vietnam National University Press, Hanoi, 2022, 374 pages (Text book in Vietnamese).

## **6. REFEREEING ACTIVITY:**

### **6.1. Reviewer for the following ISI international journals**

1. J. Computational Materials Sciences (SCI, Elsevier)
2. International Journal of Mechanical Sciences (SCI, Elsevier)
3. International Journal of Non-Linear Mechanics (SCI, Elsevier)
4. J. Composite Structures (SCIE, Elsevier)
5. J. Mechanic of Composite Materials (SCIE, Springer)
6. Journal of Engineering Mathematics (SCIE, Springer)
7. Journal of Mechanics of Science and Technology (SCIE, Springer)
8. Journal of Vibration and Control (SCIE, SAGE)
9. Journal of Composite Materials (SCIE, SAGE)
10. Journal of Vibration and Acoustic, ASME
11. Journal of Engineering Mechanics (SCI, ASCE)
12. International Journal of Structural Stability and Dynamics (SCIE, World Scientific)
13. Journal of Zhejiang University-SCIENCE A (SCIE, Springer)
14. Engineering Failure Analysis (SCIE, Elsevier)
15. Acta Astronautica (SCIE, Elsevier)
16. Meccanica (SCI, Springer)
17. Mechanics Based Design of Structures and Machines (SCI, Taylor & Francis)
18. Science and Engineering of Composite Materials (SCIE, De Gruyter)
19. ZAMM - Zeitschrift fuer Angewandte Mathematik und Mechanik (Journal of Applied Mathematics and Mechanics, Germany)

20. Cogent Engineering (UK, Taylor & Francis, Scopus journal)
21. J. of the Brazilian Society of Mechanical Sciences and Engineering (SCIE)
22. Mechanics of Advanced Materials and Structures (Taylor & Francis, SCIE)
23. Applied Mathematical Modelling (Elsevier, SCIE)
24. Journal of Theoretical and Computational Science (OMICS Publishing)
25. Scientia Iranica (SCIE, Sharif University of Technology)
26. J. Aerospace Science and Technology (Elsevier, SCI).
27. Computer Methods in Applied Mechanics and Engineering (Elsevier, SCI)
28. KSCE Journal of Civil Engineering (Springer, SCIE)
29. Mechanic Research Communications ((Elsevier, SCI)
30. Ocean Engineering (Elsevier, SCI).
31. Earthquake Engineering and Engineering Vibration (Springer, SCIE)
32. Journal of Sandwich Structures and Materials (SAGE, SCIE)
33. Journal of Computational and Nonlinear Dynamics (The American Society of Mechanics Engineers)
34. Acta Mechanica (Springer, SCI)
35. Composite Part B: Engineering (Elsevier, SCI)
36. Iranian Journal of Science and Technology, Transactions of Mechanical Engineering (Publisher of Shiraz University, SCIE)
37. Engineering Optimization (Taylor & Francis, SCIE)
38. Smart Structures and Systems – International journal (Techno-Press, SCIE)
39. Part C: Journal of Mechanical Engineering Science (SAGE, SCI)
40. Advanced in Mechanical Engineering (SAGE, SCIE)
41. Advanced in Composite Material (Taylor & Francis, SCIE)
42. Journal of Mechanical Engineering Science (Proc. IMechE Part C)
43. International Journal of Mechanics and Materials Design (Springer, SCIE)
44. Applied Mathematics and Mechanics – English Edition (Springer, SCIE)
45. Engineering Structures (Elsevier, SCI)
46. Computers & Structures (Elsevier, SCI)
47. Science China Technological Sciences (Springer, SCI)
48. Intelligent Material Systems and Structures (SAGE, SCIE)
49. Advanced in Engineering Software (Elsevier, SCIE)

50. Proceeding A: Mathematical, Physical and Engineering Sciences  
(The Royal Society Publishing).
51. The European Physical Journal Plus (Springer, SCI)
52. Steel and Composite Structures (Techno-Press, SCI)
53. Smart Structures and Systems (Techno-press, SCIE)
54. Earthquakes and Structures (Techno-Press, SCIE)
55. Computers & Mathematics with Applications (Elsevier, SCI)
56. International Journal of Computational Methods (World Scientific, SCIE)
57. European Journal of Environment and Civil Engineering (Taylor & Francis, SCIE)
58. Journal of Advanced Research (Elsevier, SCIE)
59. Engineering with Computers (Springer, SCIE)
60. Results in Physics (Elsevier, SCIE)
61. Journal of Thermoplastic Composite Materials (SAGE, SCIE)
62. Journal of Materials Science (Springer, SCI)
63. Engineering Computations (Emerald Publishing Limited, SCIE)
64. Ships and Offshore Structures (Taylor & Francis, SCIE)
65. Computer Modeling in Engineering & Science (Tech Science Prees, SCIE).
66. Defence Technology (Elsevier, SCIE)
67. Science Progress (SAGE, SCIE)
68. Low Frequency Noise Vibration and Active Control (SAGE, SCIE)
69. International Journal of Mechanical and Materials Engineering (Springer, SCIE)
70. Ships and Offshore Structures (Taylor & Francis, SCIE)
71. Engineering Computations (Emerald - UK, SCIE)
72. Ceramic International (Elsevier, SCIE)
73. Theoretical and Applied Fracture Mechanics (Elsevier, SCIE)
74. International Journal of Applied Mechanics (World Scientific, SCIE)
75. J of Material Research and Technology (Elsevier, SCIE)

**6.2. Member of Editorial Board** of Journals:

- The Head of Editorial Board of Journal of Mathematics and Physics, Vietnam National University, Hanoi (since 2002).

- The member of Editorial Advisory Board of Journal Cogent Engineering (UK, Taylor & Francis, SCIE Journal)
- The member of Editorial Board (The Head of Engineering and Technology Session) of Vietnam Technology and Sciences Journal – Vietnam Ministry of Technology and Science
- The member of Editorial Board of Vietnam Journal of Mechanics
- The member of Editorial Board - Journal of Science: Advanced Materials and Devices (SCIE journal, Elsevier)
- The member of Editorial Board – Journal of Aerospace Science and Technology (SCI journal, Elsevier)
- The member of Editorial Board – Journal of Aerospace Science and Technology, SCI journal, Elsevier)
- The member of Editorial Board - Journal of Science and Engineering of Composite Materials (De Gruyter, SCIE journal)
- The member of Editorial Board of Journal of Mechanical Engineering Science (Proc. IMechE Part C, SCI journal, SAGE)
- The member of Editorial Board of Journal Science Progress (SCIE journal, SAGE)
- The member of Editorial Board of Journal of Mechanical Science and Technology (SCIE journal, Springer)
- The member of Editorial Board of Journal of Mechanics of Composite Materials (SCIE journal, Springer).
- The member of Editorial Board of Journal of Applied Mathematics and Mechanics -Zeitschrift für Angewandte Mathematik und Mechanik, ZAMM (SCI, WILEY).
- The member of Editorail Board of the Journal “Aerospace” (SCIE, MDPI).
- The member of Editorial Board of the Journal "Machine Science" (which is published at the Azerbaijan Technical University).
- The member of Editorial Board of the Journal “Materials Genome Engineering” (EnPress Publisher LLC).
- Guest Editor of Special Issue on “Advances in hybrid composite materials and structures” of ISI Journal: Advances in Mechanical Engineering (2016).
- Guest Editor of Special Issue on “Smart Nanostructures – 2017”, Journal of Applied and Computational Mechanics: <http://jacm.scu.ac.ir/news?newsCode = 71>
- The member of the Vietnam Professor Council in Mechanics

**7. PUBLICATIONS: More than 350 publications, including more than 200 articles in ISI international journals (SCI, SCIE):**

1. **Nguyen Van Huong, Pham Hong Cong, Nguyen Dinh Duc** (2024). *Nonlinear vibration analysis of double curved shallow sandwich shell in which the core made of three-phase nanocomposite and the two-outer layer of electromagnetic*



- materials*. Thin Walled Structures, 196 (2024) 111501 (Elsivier, SCIE, IF = 6.4).
2. **Tran Quoc Quan, Ngo Dinh Dat, Nguyen Dinh Duc** (2023). *Vibration analysis of magneto-electro-elastic sandwich plate with auxetic graphene reinforced metal matrix composite core*. J Vibration and Control, DOI: 10.1177/10775463231222581, (SAGE, SCIE, IF = 2.633).
  3. **Tran Quoc Quan, Vu Minh Anh, Nguyen Dinh Duc** (2024). *Natural frequency analysis of sandwich plate with auxetic honeycomb core and CNTRC face sheets using analytical approach and artificial neural network*. J Aerospace Science and Technology, 144 (2024) 108806 (Elsevier, SCI, IF = 5.457).
  4. **Pham Dinh Nguyen, Nguyen Dinh Duc** (2023). *A semi-analytical sinusoidal shear deformation theory for nonlinear dynamic response and vibration of CNT-FGM doubly curved shallow shells*. Acta Mechanica, DOI: 10.1007/s00707-023-03824-8 (Springer, SCI, Nature Index, IF = 2.166).
  5. **Le-Hung Tran, Tien Hoang, Gilles Foret, Denis Duhamel, Dinh-Duc Nguyen** (2023). *Calculation of dynamic responses of railway sleepers on a nonlinear foundation*. Nonlinear Dynamic, DOI: 10.1007/s11071-023-09070-w (Springer, SCI, IF = 5.6).
  6. **Tran Hiep Dinh, Vu Thi Thuy Anh, TruongGiang Nguyen, Cong Hieu Le, Nguyen Linh Trung, Nguyen Dinh Duc, Chin-Teng Lin** (2023). *Towards Vision-based Concrete Crack Detection: Automatic Simulation of Real-world Cracks*. IEEE Transactions on Instrumentation & Measurement, Vol. 72 (2023), 1-15, DOI: 10.1109/TIM.2023.3328076 (IEEE, SCIE, IF = 5.6).
  7. **Duc Tho Le, Lawrence H. Le, Hoai Nguyen, Emmanuel L. C. VI M. Plan, Hoai-Nam Tran, Dinh Duc Nguyen, Hai Dang Phan** (2023). *Reciprocity-based closed-form solutions to guided waves in multilayered structures subjected to time-harmonic excitations*. J. European Journal of Mechanics - A/Solids, 102 (2023) 105083 (Elsevier, SCI, IF = 4.873).
  8. **Pham Minh Vuong, Nguyen Dinh Duc** (2023). *"Vibration analysis of variable thickness functionally graded toroidal shell segments"*. Archives of Civil and Mechanical Engineering, <https://doi.org/10.1007/s43452-023-00743-2> (Springer, SCIE, IF = 4.04).
  9. **Phuc Minh Pham, Duc Nguyen Dinh** (2023). *Free Vibration of Cracked MEE FG Plates Resting on Elastic Foundations Using Phase Field Simulation*. Journal of Engineering Mechanics, <https://doi.org/10.1061/JENMDT.EMENG-7088> (ASCE, SCIE, IF = 3.125).
  10. **Nguyen Dinh Duc, Kamran Foroutan, Seyyed Mojtaba Varedi-Koulaei, Habib Ahmadi** (2023). *Nonlinear vibration analysis of laminated composite cylindrical shell under external loading utilizing meta-heuristic optimization algorithms*. Iranian

Journal of Science and Technology, Transactions of Mechanical Engineering, <https://doi.org/10.1007/s40997-023-00685-3> (Springer, SCIE, IF = 1.53).

11. **Ngo Dinh Dat, Vu Thi Thuy Anh, Nguyen Dinh Duc** (2023). *Vibration characteristics and shape optimization of FG-GPLRC cylindrical shell with Magneto-Electro-Elastic face-sheets*. Acta Mechanica, <https://doi.org/10.1007/s00707-023-03620-4> (Springer, Nature Index, SCI, IF = 2.166).
12. **Tran Quoc Quan, Ngo Dinh Dat, Nguyen Dinh Duc** (2023). *Static buckling, vibration analysis and optimization of nanocomposite multilayer perovskite solar cell*. Acta Mechanica, 234, 3893–3915 (2023), <https://doi.org/10.1007/s00707-023-03588-1> (Springer, Nature Index, SCI, IF = 2.166).
13. **Vu Thi Thuy Anh, Nguyen Dinh Khoa, Tuan Ngo, Nguyen Dinh Duc** (2023). *Vibration of hybrid eccentrically stiffened sandwich auxetic double curved shallow shells in thermal environment*. J Aerospace Science and Technology, 137 (2023) 108277 (Elsevier, SCI, IF = 5.457).
14. **Minh Banh Duc, Hung Tran The, Nguyen Dinh Duc, Trinh Chu Duc & Anh Dinh Le** (2023). *Performance enhancement of savonius wind turbine by multicurve blade shape*. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (Taylor & Francis, SCIE, IF = 3.477).
15. **Farzad Ebrahimi, Reza Nopour, Ali Dabbagh and Nguyen Dinh Duc** (2023). *Vibration of three-phase hybrid viscoelastic nanocomposites beams*. Journal of Mechanical Science and Technology 37 (5) 2023 (Springer, SCIE, IF = 1.734).
16. **Vu Minh Anh, Tran Quoc Quan, Ngo Dinh Dat, Nguyen Dinh Duc** (2023) *Nonlinear static stability and optimal design of nanocomposite multilayer organic solar cells in thermal environment*. Int J of Mechanics and Materials in Design, <https://doi.org/10.1007/s10999-022-09636-3> (Springer, SCIE, IF = 3.561).
17. **Pham Hong Cong, Nguyen Dinh Duc** (2023). *Effect of nonlocal parameters and Kerr foundation on nonlinear static and dynamic stability of micro/nano plate with graphene platelet reinforcement*. Thin-Walled Structures, 182 (2023) 110146 (Elsevier, SCIE, IF = 6.4).
18. **Ngoc-Vinh Nguyen, Nguyen Dinh Duc, Nguyen Vu-Luat, Thai-Hoan Pham** (2022). *Experimental study on microstructural evolution and dynamic properties of a Low-carbon steel*. International Journal of GEOMATE, 2022, Vol.23 (98), pp.66-74 (TSU – Japan, ESCI-ISI).
19. **Nguyen Dinh Duc, Ngo Dinh Dat, Vu Thi Thuy Anh, Vu Dinh Giang, Pham Ngoc Thinh** (2022). *Effects of the Magneto-Electro-Elastic layer on the CNTRC cylindrical shell*. Archive of Applied Mechanics (Springer, SCIE, IF = 2,467), <https://link.springer.com/article/10.1007/s00419-022-02310-2>.
20. **Tien Thanh Pham, Minh Tuan Nguyen, Hoang Giang Nguyen, Thi An Hang Nguyen, Danh Bich Do, Duc Cuong Nguyen, Daisuke Tanaka, Dinh Duc Nguyen**

- (2022). *Fe(III)-Natural Polyphenols Bilayer Coatings on Fingered Citron as a Novel Photothermal Material for Sustainable Seawater Desalination*. *Desalination*, 537 (2022) 115873 (Elsevier, SCI, IF = 11.3).
21. **Nguyen Van Quyen, Nguyen Dinh Duc** (2022). *Vibration and nonlinear dynamic response of nanocomposite multi-layer solar panel resting on elastic foundations*. *Thin Walled Structures* 177 (2022) 109412 (Elsevier, SCIE, IF = 6.4).
  22. **Do Quang Chan, Tran Quoc Quan, Bui Gia Phi, Dang Van Hieu, Nguyen Dinh Duc** (2022). *Buckling analysis and dynamic response of FGM sandwich cylindrical panels in thermal environments using nonlocal strain gradient theory*. *Acta Mechanica*, <https://doi.org/10.1007/s00707-022-03212-8> (Springer, Nature Index, SCI, IF = 2.166).
  23. **Ehsan Arshid, Zeinab Soleimani-Javid, Saeed Amir, Nguyen Dinh Duc** (2022). *Higher-Order Hygro-Magneto-Electro-Thermomechanical Analysis of FG-GNPs-Reinforced Composite Cylindrical Shells Embedded in PEM Layers*. *J Aerospace Science and Technology*, 126 (2022) 107573 (Elsevier, SCI, IF = 5.457).
  24. **Pham Dinh Nguyen, George Papazafeiropoulos, Quang-Viet Vu, Nguyen Dinh Duc** (2022). *Buckling response of laminated FG-CNT reinforced composite plates: analytical and finite element approach*. *Aerospace Science and Technology*, 121 (2022) 107368 (Elsevier, SCI, IF = 5.457).
  25. **Nguyen Dinh Duc, Duong Tuan Manh, Nguyen Dinh Khoa, Pham Dinh Nguyen** (2022). *Mechanical stability of sandwich eccentrically stiffened auxetic truncated conical shells surrounded on elastic foundations*. Vol. 58 (3), 2022, pp. 365-382, *Mechanics of Composite Materials* (Springer, SCIE, IF = 1.52).
  26. **Quang Vu Dinh, Quang-Van Doan, Thanh Ngo-Duc, Van Nguyen Dinh, Nguyen Dinh Duc** (2022). *Offshore wind resource in the context of global climate change over a tropical area*. *Applied Energy*, 308 (2022) 118369 (Elsevier, SCI, IF = 9.8).
  27. **Du Dinh Nguyen, Minh Ngoc Nguyen, Nguyen Dinh Duc, Tinh Quoc Bui** (2022). *Modeling the transient dynamic fracture and quasi-static crack growth in cracked functionally graded composites by the extended four-node gradient finite elements*. *Composite Structures*, 284 (2022) 115056 (Elsevier, SCIE, IF = 6.603).
  28. **Nguyen Dinh Duc, Pham Minh Vuong** (2022). *Nonlinear vibration response of shear deformable FGM sandwich toroidal shell segments*. *Meccanica*, <https://doi.org/10.1007/s11012-021-01470-9> (Springer, SCIE, IF = 2.258).
  29. **Thom Van Do, Duc Hong Doan, Nguyen Chi Tho, Nguyen Dinh Duc** (2022). *Thermal buckling analysis of cracked functionally graded plates*. *International Journal of Structural Stability and Dynamics*, 22 (8) (2022) 2250089 (World Scientific, SCIE, IF = 2.58).
  30. **Pham Hong Cong, Vu Dinh Trung, Nguyen Dinh Khoa, Nguyen Dinh Duc** (2022). *Vibration and nonlinear dynamic response of temperature-dependent FG-*

- CNTRC laminated double curved shallow shell with positive and negative Poisson's ratio*. *Thin Walled Structures*, 171(2022)108713 (Elsevier, SCIE, IF = 6.4).
31. **Ngo Dinh Dat, Tran Quoc Quan, Nguyen Dinh Duc** (2022). *Vibration analysis of auxetic laminated plate with magneto-electro-elastic face sheets subjected to blast loading*. *Composite Structures*, 280 (2022) 114925 (Elsevier, SCIE, IF = 6.603).
  32. **Tran Quoc Quan, Do Thi Thu Ha, Nguyen Dinh Duc** (2022). *Analytical solutions for nonlinear vibration of porous functionally graded sandwich plate subjected to blast loading*. *Thin Walled Structures* 170 (2022) 108606 (Elsevier, SCIE, IF = 6.4).
  33. **Kamran Foroutan, Seyyed Mojtaba Varedi-Koulaei, Nguyen Dinh Duc, Habib Ahmadi** (2022). *Non-linear static and dynamic buckling analysis of laminated composite cylindrical shell embedded in non-linear elastic foundation using the swarm-based metaheuristic algorithms*. *J. European Journal of Mechanics - A/Solids*, 91(2022) 104420 (Elsevier, SCI, IF = 4.873).
  34. **Pham Hong Cong, Nguyen Dinh Duc** (2022). *Nonlinear thermo-mechanical analysis of ES double curved shallow auxetic honeycomb sandwich shells with temperature-dependent properties*. *Composite Structures*, 279(2022)114739 (Elsevier, SCIE, IF = 6.603).
  35. **Ngo Dinh Dat, Nguyen Van Thanh, Vu Minh Anh, Nguyen Dinh Duc** (2022). *Vibration and nonlinear dynamic analysis of sandwich FG-CNTRC plate with porous core layer*. *J Mechanics of Advanced Materials and Structures*, 2022, 29 (10), pp 1431-1448 (Taylor & Francis, SCI, IF = 3.052).
  36. **Tran Quoc Quan, Vu Minh Anh, Vinyas Mahesh, Nguyen Dinh Duc** (2022). *Vibration and nonlinear dynamic response of imperfect sandwich piezoelectric auxetic plate*. *J Mechanics of Advanced Materials and Structures*, 2022, 29 (1), pp.127-137 (Taylor & Francis, SCI, IF = 3.052).
  37. **Vu Minh Anh, Duong Tuan Manh, Kim Seung-Eock, Nguyen Dinh Duc** (2021). *The Nonlinear Dynamic Response And Vibration Of Organic Solar Plate In Thermal Environment*. *Thin-Walled Structures*, 169(2021)108454 (Elsevier, SCIE, IF = 6.4).
  38. **Ngo Dinh Dat, Tran Quoc Quan, Nguyen Dinh Duc** (2021). *Nonlinear thermal dynamic buckling and global optimization of smart sandwich plate with porous homogeneous core and carbon nanotube reinforced nanocomposite layers*. *J. European Journal of Mechanics - A/Solids*, 90 (2021) 104351 (Elsevier, SCI, IF = 4.873).
  39. **Vu Thi Thuy Anh, Vu Thi Huong, Pham Dinh Nguyen, Nguyen Dinh Duc** (2021). *Nonlinear dynamic analysis of porous graphene platelet-reinforced composite sandwich shallow spherical shells*. *Mechanics of Composite Materials*, Vol. 57 (5), pp. 609-622 (Springer, SCIE, IF = 1.52).
  40. **Vu Dinh Quang, Nguyen Dinh Khoa, Nguyen Dinh Duc** (2021). *The effect of structural characteristics and external conditions on the dynamic behavior of shear deformable FGM*

- porous plates in thermal environment*. Journal of Mechanical Science and Technology, 35(8) 2021, DOI 10.1007/s12206-021-0706-x (Springer, SCIE, IF = 1.734)
41. **Nguyen Dinh Duc, Seung-Eock Kim, Nguyen Dinh Khoa, Do Quang Chan** (2021). *Nonlinear buckling and post-buckling analysis of shear deformable stiffened truncated conical sandwich shells with FG face sheets and a FG porous core*. Journal Sandwich Structures and Materials, Vol 23(7), pp. 2700-2735, <http://dx.doi.org/10.1177/1099636220906821> (SAGE, SCIE, IF = 5.616).
  42. **Pham Hong Cong, Nguyen Dinh Duc** (2021). *Nonlinear dynamic analysis of porous eccentrically stiffened double curved shallow auxetic shells in thermal environments*. Thin-Walled Structures, 163 (2021) 107748 (SCIE, Elsevier, IF = 6.4).
  43. **Thi Thu Ha Nguyen, Hiep-Hung Pham, Quan-Hoang Vuong, Quoc-Thai Cao, Viet-Hung Dinh, Dinh Duc Nguyen** (2021). *The adoption of international publishing within Vietnamese academia from 1986 to 2020: A review*. Learned Publishing, Vol. 34 (2), pp. 175-186, (Wiley, SSCI, IF = 2.93).
  44. **Nguyen Dinh Duc, Pham Minh Phuc** (2021). *Free vibration analysis of cracked FG CNTRC plates using phase field theory*. Aerospace Science and Technology, 112 (2021) 106654 (Elsevier, SCI, Q1, IF = 5.457).
  45. **Nguyen Van Quyen, Nguyen Van Thanh, Tran Quoc Quan, Nguyen Dinh Duc** (2021). *Nonlinear forced vibration of sandwich cylindrical panel with negative Poisson's ratio auxetic honeycombs core and CNTRC face sheets*. Thin Walled Structures, 162 (2021) 107571 (SCIE, Elsevier, IF = 6.4).
  46. **Pham Hong Cong, Phi Kien Quyet, Nguyen Dinh Duc** (2021). *Effects of lattice stiffeners and blast load on nonlinear dynamic response and vibration of auxetic honeycomb plates*. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 235 (23), pp.7192-7211 (SAGE, SCI, IF = 1.762), <http://dx.doi.org/10.1177/0954406221992797>.
  47. **Phuc Pham Minh, Duong Tuan Manh, Nguyen Dinh Duc** (2021). *Free vibration of cracked FGM plates with variable thickness resting on elastic foundations*. Thin Walled Structures, 161(2021)107425, <https://doi.org/10.1016/j.tws.2020.107425> (Elsevier, SCIE, IF = 6.4).
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## **8. INVENTIONS AND PATENTS**

1. Diplome of Invention N120 “The law of changes mechanical strength three-phase composite 3D by actions of spherical inclusions”. Moscow, Russia, 1999.
2. Patent N1348 “Polymer composite materials with fiberglass” of National Office of Intellectual Property of Vietnam, Jan. 2016.

## **9. MAIN SUPERVISIONS FOR PhD STUDENTS: 20**

1. Hoang Van Tung (2007-2010), thesis title: “Elastic stability of functionally graded (FGM) plates and shells ” - Main supervisor (completed in 2010).
2. Dinh Khac Minh (2007-2010), thesis title: “Bending analysis for three phase composite plates in shipbuilding industry” - Main supervisor (completed in 2010).
3. Tran Quoc Quan, PhD thesis title: “Nonlinear static and dynamic stability of FGM double curved thin shallow shells on elastic foundation”, University of Engineering and Technology, Vietnam National University, Hanoi – Main supervisor (completed in 2018).
4. Vu Thi Thuy Anh, PhD thesis title: “Nonlinear stability analysis for FGM spherical shells”, University of Engineering and Technology, Vietnam National University, Hanoi – Main supervisor (completed in 2017).
5. Pham Van Thu, PhD thesis title: “Nonlinear stability of the plates in wing-manufacture for small composite hydrofoils in Vietnam” Institute of shipbuilding – Nha Trang University, Main supervisor (completed in 2020).
6. Pham Hong Cong, PhD thesis title: “Nonlinear static and dynamic stability of FGM plates”, University of Engineering and Technology, Vietnam National University, Hanoi, Main supervisor (completed in 2018).
7. Nguyen Van Thanh, PhD thesis title: “Stability and nonlinear response of functionally graded nanotube-reinforced composite structures” - Main supervisor (completed in 2022).
8. Pham Minh Phuc, PhD thesis title: “Studying effects of cracks in the FGM plates using Phase-Field theory” - Main supervisor (completed in 2022).
9. Nguyen Dinh Du, PhD thesis title: “CFEM for elastic and composite structures with crack” - Main supervisor (completed in 2022).
10. Pham Minh Vuong, PhD thesis title: “Nonlinear static and dynamic response of FGM toroidal shell segments using Third order shear deformation theory” - Main supervisor (completed in 2022).
11. Do Quang Chan, PhD thesis title: “Stability analysis of FGM conical shells” - Main supervisor (completed in 2019).

12. PhD student: Pham The Dung, MOST, Vietnam – Main supervisor (completed in 2019).
13. PhD student: Hoang Trong Nghia, VNU – Hanoi, Main supervisor (completed in 2020).
14. PhD student: Nguyen Thi Thu Ha, Main supervisor, MOST, Vietnam (completed in 2023).
15. PhD student: Pham Dinh Nguyen, University of Engineering and Technology, VNU, Hanoi – Main supervisor.
16. PhD student: Ngo Dinh Dat, University of Engineering and Technology, VNU Hanoi, Main supervisor.
17. PhD student: Vu Minh Anh, University of Engineering and Technology, VNU Hanoi, Main supervisor.
18. PhD student: Dinh Van Dat, University of Engineering and Technology, VNU Hanoi, Main supervisor.
19. PhD student: Nguyen Van Huong, University of Engineering and Technology, VNU Hanoi, Main supervisor.
20. PhD student: Vu Van Du, Nha Trang University, Main supervisor.

## **10. RESEARCH GRANTS**

1. Grant QG.23.65 of Vietnam National University, Hanoi (2023-2025)
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5. Grant DA.20.01 of VNU Hanoi – University of Engineering and Technology (2020-2021)
6. Government Grant number KHGD/16-20.ĐT.032 of National Science and Technology Program of Vietnam for the period of 2016-2020 "Research and development of science education to meet the requirements of fundamental and comprehensive reform education of Vietnam" (2018-2020).
7. Grant of NAFOSTED in Mechanics: “Nonlinear static and dynamic analysis of functionally graded nanocomposite plates and shells reinforced by carbon nanotubes”, Code 107.02-2018.04 (2018-2020).
8. Grant of VNU, Hanoi: “Investigation on stability and vibration of FGM structures”, “Phase-Field theory for study of buckling and free vibration of cracked FGM plate”, Code QG.17.45 (2017-2018).

9. Grant of NAFOSTED in Mechanics: “Nonlinear stability analysis of FGM structures subjected to special loads”, Code 107.02-2015.03 (2016-2018).
10. Grant of Newton Fund Code NRCP1516/1/68 (The Royal Academy of Engineering –UK) in Cooperation with University of Birmingham: “UK-Vietnam collaboration on a study of Mechanical Engineering and Advanced material science: Functionally Graded (FGM) plates and shells; three phase nanocomposite” (2016-2017).
11. Project of Vietnam National University, Hanoi: “Nonlinear analysis on stability and dynamics of functionally graded shells with special shapes” (2014-2015), code QG.14.02.
12. Project in Mechanics of NAFOSTED: "Nonlinear dynamic and static stability analysis of double curved shallow FGM shells on elastic foundation", Code 107.02–2013.06 (2013-2015).
13. Project of Vietnam National University, Hanoi “ Research and Manufacturing 3 phase polymer composite for shipbuilding industry in Vietnam”, Code QGDA 12.03 (2012-2013).
14. 12.Project in Mechanics of NAFOSTED : "Nonlinear analysis of stability for functionally graded plates and shells", Code 107.02–2010.08 (2010-2012)
15. Key project of Vietnam National University, Hanoi: "Calculating for composite materials and structures" code QGTD 09.01 (2009-2010)
16. Project of Vietnam National University, Hanoi "Determining thermal expansion coefficient of composite reinforced by aligned fibre" Code QT.08.68 (2008)
17. Project of Vietnam National University, Hanoi " Three phase polymer composite", Code: QT.06-48 (2006)
18. Special Project of Vietnam National University, Hanoi “Mechanics of composite materials oriented on application” code QG.04.27 (2004-2005)

## 11. HONOURS AND AWARDS

- Wards for ‘Best paper’ at ACCMS TM 2018
- Certificate of Merit granted by Minister of Education, 1983
- Certificate of Merit granted by Central Youth Union of Vietnam, 1983
- Kapitxui Silver Medal granted by Russian Academy of Natural sciences for science inventing, 1999
- Certificate of Merit granted by VNU President in 2006, 2007, 2009, 2011, 2013, 2014, 2015, 2016, 2018, 2020, 2021.
- Certificate of Merit granted by the Prime Minister of Vietnam, 2009



- Third class Labor Medal granted by the President of Vietnam, 2016
- Certificate of Merit granted by the Minister of Education of Vietnam, 2019
- Second class Labor Medal granted by the President of Vietnam, 2022
- In 2022, Prof. Nguyen Dinh Duc is one of the three professors of VNU who was voted by the Ministry of Education and Training as the best typical lecturer of Vietnamese education on the occasion of 40 years of Vietnam's educational career (1982-2022).
  - Professor Nguyen Dinh Duc was announced by the US magazine PLoS Biology to be in the list of the top 10,000 greatest influential scientists in the world in 2019, 2020, 2021, 2022, 2023.
  - Top 100 scientists – ranking 85 in the world with the greatest influence in Engineering in 2023.
  - In particular, in 2020, 2021, 2022, 2023 he was one of the few Vietnamese scientists working locally in the country has entered the most prestigious ranking - 100,000 scientists are ranked to greatest influence the world according to lifelong achievements.