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### 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.

### 2. AREAS OF SPECIALISATION

Mechanics of deformation solid; Mechanics of composite materials; Technology of manufacture of composite materials.

### 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

## 4. RESEARCH INTEREST

- Composite with space structure (Carbon-carbon composite 3D, 4D)
- Three phase polymer composite and nanocomposite
- Mechanics of FGM plates and shells
- Applied mechanics

## 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).
- **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).
- **3.** Nguyen Dinh Duc, Dao Nhu Mai, Strength of the Materials and Structures. Vietnam National University Press, Hanoi, 2012, 292 pages (Text book).
- **4. Nguyen Dinh Duc,** *Nonlinear Static and Dynamic Stability of Functionally Graded Plates and Shells.* Vietnam National University Press, Hanoi, 2014, 724 pages (Monograph).

## **6. REFEREEING ACTIVITY:**

# 6.1. Reviewer for the following ISI journals

- 1. J. Computational Materials Sciences (SCI, Elsevier)
- 2. International Journal of Mechanics 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)
- **6.2.** 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: http://cogentoa.tandfonline.com/page/aboutJournal?journalCode=oaen20 (UK, Taylor & Francis, Scopus Journal).
  - The member of Editor Board (The Head of Engineering and Technology Session) of Vietnam Technology and Sciences Journal – Vietnam Ministry of Technology and Science.
  - The member of the Vietnam Council of Professor in Mechanics
- **7. PUBLICATIONS:** 122 publications (79 in International journals and International Conferences, including 46 papers in ISI (SCI, SCIE) listed journals)
  - 1. **Nguyen Dinh Duc, Tran Quoc Quan, Vu Dinh Luat** (2015), *Nonlinear dynamic analysis and vibration of shear deformable piezoelectric FGM double curved shallow shells under damping-thermo-electro-mechanical loads.* J. Composite Structures, Vol. 125, pp 29-40 (Elsevier, SCIE).
  - 2. Tran Quoc Quan, Phuong Tran, Ngo Duc Tuan, Nguyen Dinh Duc (2015). Nonlinear dynamic analysis and vibration of shear deformable eccentrically stiffened S-FGM cylindrical panels with metal-ceramic-metal layers resting on elastic foundations. Accepted for publication. J. Composite Structures, (Elsevier, SCIE).
  - 3. **Nguyen Dinh Duc, Pham Hong Cong** (2015). *Nonlinear dynamic response of imperfect symmetric thin S-FGM plate with metal- ceramic-metal layers on elastic foundation.* Journal of Vibration and Control, Vol. 21(4), pp.637-646 (SAGE, SCIE).
  - 4. **Nguyen Dinh Duc, Pham Toan Thang** (2015). *Nonlinear dynamic response and vibration of shear deformable imperfect eccentrically stiffened*

- S-FGM circular cylindrical shells surrounded on elastic foundations". J. Aerospace Science and Technology, Vol.40, pp.115-127 (Elsevier, SCI).
- 5. Nguyen Dinh Duc, Pham Toan Thang, Nguyen Trong Dao, Hoang Van Tac (2015). "Nonlinear buckling of higher deformable S-FGM thick circular cylindrical shells with metal-ceramic-metal layers surrounded on elastic foundations in thermal environment". J. Composite Structures, Vol.121, pp.134-141 (Elsevier, SCIE).
- 6. **Nguyen Dinh Duc, Pham Hong Cong** (2015). *Nonlinear thermal stability of eccentrically stiffened functionally graded truncated conical shells surrounded on elastic foundations*. European Journal of Mechanics A/Solids, Vol.50, pp.120-131 (Elsevier, SCI).
- 7. Vu Thi Thuy Anh, Dao Huy Bich, Nguyen Dinh Duc (2015). Nonlinear buckling analysis of thin FGM annular spherical shells on elastic foundations under external pressure and thermal loads. European Journal of Mechanics A/Solids, Vol. 50, pp 28-38 (Elsevier, SCI).
- 8. **Nguyen Dinh Duc, Phạm Toan Thang** (2014). *Nonlinear response of imperfect eccentrically stiffened ceramic-metal-ceramic S-FGM thin circular cylindrical shells surrounded on elastic foundations under uniform radial load.* J. Mechanics of Advanced Materials and Structures (Taylor & Francis, SCIE): 10.1080/15376494.2014.910320.
- 9. T. Vu Quoc, H. Nguyen Dac, T. Pham Quoc, D. Nguyen Dinh, T. Chu Duc (2014). A printed circuit board capacitive sensor for air bubble inside fluidic flow detection. J. Microsystem Technologies. DOI:10.1007/s00542-014-2141-8 (Springer, SCI).
- 10. **Nguyen Dinh Duc, Tran Quoc Quan** (2014). Transient responses of functionally graded double curved shallow shells with temperature-dependent material properties in thermal environment. European Journal of Mechanics A/Solids, Vol.47, pp.101-123 (Elsevier, SCI).
- 11. **Nguyen Dinh Duc, Pham Toan Thang** (2014). *Nonlinear buckling of imperfect eccentrically stiffened metal-ceramic-metal S-FGM thin circular cylindrical shells with temperature-dependent properties in thermal environments*. International Journal of Mechanics of Sciences, Vol.81, pp.17-25 (Elsevier, SCI).
- 12. **Nguyen Dinh Duc, Tran Quoc Quan** (2014). *Nonlinear response of imperfect eccentrically stiffened FGM cylindrical panels on elastic foundation subjected to mechanical loads.* European Journal of Mechanics A/Solids. Vol.46, pp.60-71 (Elsevier, SCI).
- 13. **Nguyen Dinh Duc, Pham Toan Thang** (2014). *Nonlinear response of imperfect eccentrically stiffened ceramic-metal-ceramic FGM circular cylindrical shells surrounded on elastic foundations and subjected to axial*

- compression. J. Composite Structures, Vol. 110, pp.200-206 (Elsevier, SCIE).
- 14. **Hoang Van Tung, Nguyen Dinh Duc** (2014). *Nonlinear response of shear deformable FGM curved panels resting on elastic foundations and subjected to mechanical and thermal loading conditions.* J. Applied Mathematical Modelling, Vol. 38, Issues 11-12, pp.2848-2866 (Elsevier, SCIE).
- 15. Dao Huy Bich, Nguyen Dinh Duc, Tran Quoc Quan (2014). Nonlinear vibration of imperfect eccentrically stiffened functionally graded double curved shallow shells resting on elastic foundation using the first order shear deformation theory. International Journal of Mechanics of Sciences, Vol.80, pp.20-28 (Elsevier, SCI).
- 16. Nguyen Dinh Duc, Vu Thi Thuy Anh, Pham Hong Cong (2014). Nonlinear axisymmetric response of FGM shallow spherical shells on elastic foundations under uniform external pressure and temperature. J. European Journal of Mechanics A/Solids, Vol.45, pp.80-89 (Elsevier, SCI).
- 17. **Nguyen Dinh Duc, Pham Van Thu** (2014). *Nonlinear stability analysis of imperfect three-phase polymer composite plates in thermal environments.* J. Composite Structures, Vol.109, pp.130-138. (Elsevier, SCIE).
- 18. **Nguyen Dinh Duc, Pham Hong Cong** (2014). *Nonlinear postbuckling of an eccentrically stiffened thin FGM plate resting on elastic foundation in thermal environments*. J. Thin Walled Structures, Vol.75, pp.103-112 (Elsevier, SCIE).
- 19. **Nguyen Dinh Duc** (2013). *Nonlinear dynamic response of imperfect eccentrically stiffened FGM double curved shallow shells on elastic foundation*. J. Composite Structures, Vol 102, pp.306-314 (Elsevier, SCIE).
- 20. **Nguyen Dinh Duc, Tran Quoc Quan** (2013). *Nonlinear postbuckling of imperfect eccentrically stiffened P-FGM double curved thin shallow shells on elastic foundations in thermal environments.* J. Composite Structures, Vol.106, Dec. 2013, pp. 590-600, (Elsevier, SCIE).
- 21. **Nguyen Dinh Duc, Tran Quoc Quan** (2013). *Nonlinear dynamic analysis of imperfect FGM double curved thin shallow shells with temperature-dependent properties on elastic foundation.* Journal of Vibration and Control, First published on July 31, 2013 as doi:10.1177/1077546313494114 (SAGE, SCIE).
- 22. **Nguyen Dinh Duc, Tran Quoc Quan** (2013). *Nonlinear postbuckling of imperfect double curved thin FGM shallow shells on elastic foundations subjected to mechanical loads.* J.Mechanics of Composite Materials, Vol.49. N5, p.493-506 (Springer, SCIE).
- 23. **Nguyen Dinh Duc, Tran Quoc Quan, Do Nam** (2013). *Nonlinear stability analysis of imperfect three phase polymer composite plates.* J. Mechanics of Composite Materials Vol.49, N4, p. 345-358 (Springer, SCIE).

- 24. **Nguyen Dinh Duc, Pham Hong Cong** (2013). *Nonlinear postbuckling of symmetric S-FGM plates resting on elastic foundations using higher order shear deformation plate theory in thermal environments.* J. Composite Structures, Vol 100, pp 566-574 (Elsevier, SCIE).
- 25. Do Ngoc Chung, Nguyen Nang Dinh, David Hui, Nguyen Dinh Duc, Tran Quang Trung and Mircea Chipara (2013). Investigation of Polymeric Composite Films Using Modified TiO2 Nanoparticles for Organic Light Emitting Diodes. J. Current Nanoscience, Vol 9, Issue 1, pp.14-20 (Bentham Science Publishers, SCIE).
- 26. **Nguyen Dinh Duc, Tran Quoc Quan** (2012). *Nonlinear stability analysis of double curved shallow FGM panel on elastic foundation in thermal environments*. J. Mechanics of Composite Materials (Springer, SCIE), Vol.48, N4, pp.435-448.
- 27. Nguyen Dinh Duc, Nghiem Thi Thu Ha (2012). Determining the deflection of thin composite plates under unsteady temperature filed. J. Mechanics of Composite Materials (Springer, SCIE), Vol 48, N3, pp.297-304.
- 28. **Nguyen Dinh Duc, Vu Nhu Lan, Tran Duc Trung, Bui Hai Le** (2011), *A study on the application of hedge algebras to active fuzzy control of a seism-excited structure*. Journal of Vibration and Control (SAGE, SCIE), Vol 18 (14), pp.2186-2200.
- 29. **Nguyen Dinh Duc, Hoang Van Tung** (2011), *Mechanical and thermal postbuckling of higher order shear deformable functionally graded plates on elastic foundations*. J. Composite Structures (Elsevier, SCIE), Vol. 93, N3, pp.2874-2881.
- 30. **Nguyen Dinh Duc, Hoang Van Tung** (2010), *Nonlinear response of pressure-loaded functionally graded cylindrical panels with temperature effects*. J. Composite Structures (Elsevier, SCIE), Vol. 92, Issue 7, pp.1664-1672.
- 31. **Hoang Van Tung, Nguyen Dinh Duc** (2010). *Nonlinear analysis of stability for functionally graded plates under mechanical and thermal loads*. J. Composite Structures (Elsevier, SCIE), Vol.92, Issue 5, pp. 1184-1191.
- 32. **Nguyen Dinh Duc, Hoang Van Tung** (2010). *Nonlinear analysis of stability for functionally graded cylindrical shells under axial compression.*J. Computational Materials Sciences (Elsevier, SCI), Vol. 49, No.4, Supplement, pp. S313-S316
- 33. **Nguyen Dinh Duc, Dinh Khac Minh** (2010). *Bending analysis of three-phase polymer composite plates reinforced by glass fibers and Titanium oxide particles.* J. Computational Materials Sciences (Elsevier, SCI), vol. 49, N4, Supplement, pp.S194-S198.
- 34. **Nguyen Dinh Duc, Hoang Van Tung** (2010). *Mechanical and thermal postbuckling of shear deformable FGM plates with temperature-dependent*

- *properties*. J. Mechanics of Composite Materials (Springer, SCIE), Vol.46, Issue 5, Page 461- 476.
- 35. Phan Viet Dung, Pham Tien Lam, Nguyen Dinh Duc, Ayumu Sugiyama, Tatsuya Shimoda, Dam Hieu Chi (2010). First-principles study of the thermally induced polymerization of cyclopentasilane. J. Computational Materials Sciences (Elsevier, SCI), Vol. 49, N1, Supplement, pp.S21-S24.
- 36. Tien Lam Pham, Phan Viet Dung, Ayumu Sugiyama, Nguyen Dinh Duc, Tatsuya Shimoda, Akihiko Fujiwara, Dam Hieu Chi (2010). First principles study of the physisorption of hydrogen molecule on graphenne and carbon nanotube surfaces adhered by Pt atom. J. Computational Materials Sciences (Elsevier, SCI), Vol.49, N1, Supplement, pp.S15-S20.
- 37. Vanin G.A., Nguyen Dinh Duc (1997). The determination of rational structure of spherofibre composite.1: Models 3Dm. J. Mechanics of composite materials (Springer, SCIE), vol.33, N2, pp.155-160.
- 38. **Nguyen Dinh Duc** (1997). *The shear of the orthogonal reinforced spherofibre composite*. J. Mechanics of composite materials (Springer, SCIE), vol.33, No.1, pp.104-111.
- 39. **Nguyen Dinh Duc** (1997). *The thermo-elastic expansion of spherofibre composite*. J. Mechanics of composite materials (Springer, SCIE), vol.33, No.2, pp.251-257.
- 40. **Nguyen Dinh Duc** (1997). *The determination of rational structure of spherofibre composite*. 2: models 4 Dm. J. Mechanics of composite materials (Springer, SCIE), 1997, vol. 33, No.3, pp.370-376.
- 41. **Nguyen Dinh Duc** (1997). *Theory of fibre-matrix separation in sphero-fibrous plastics*. J. Mechanics of composite materials (Springer, SCIE), vol.33, No.5, pp.644-65
- 42. Vanin G.A., Nguyen Dinh Duc (1996). The theory of spherofibrous composite.1: The input relations, hypothesis and models. J. Mechanics of composite materials (Springer, SCIE), vol.32, No.3, pp.291-305.
- 43. Vanin G.A., Nguyen Dinh Duc (1996). The theory of spherofibrous composite.2: The fundamental equations. J. Mechanics of composite materials (Springer, SCIE), vol.32, No.3, pp.306-316.
- 44. Vanin G.A., Nguyen Dinh Duc (1996). *The creep of spheroplastics*. J. Mechanics of composite materials (Springer, SCIE), vol.32, No.5, pp.668-675.
- 45. **Nguyen Dinh Duc** (1996). *The creep by the shear of the orthogonal reinforced spherofibre composite.* J. Mechanics of composite materials (Springer, SCIE), 1996, vol.32, No.6, pp.770-779.

- 46. Vanin G.A., Nguyen Dinh Duc (1996). The creep of orthogonal reinforced spherofibre composite. J. Mechanics of composite materials (Springer, SCIE), vol.32, No.6, pp.780-786.
- 47. **Nguyen Dinh Duc** (1990). *The analysis of failure criterions of composite materials*. "VINITI" of Acad. of Scien. USSR, No.4619B-90, 27 pages.
- 48. **Nguyen Dinh Duc** (1991). The analysis of failure criterion for unidirectional fibre composite with periodic structure. "VINITI" of Acad. of Scien. USSR, No.321B-91, 62 pages.
- 49. **Nguyen Dinh Duc** (1991). The dependence of effective strength tensor on plastics properties of composite. "VINITI" of Acad. of Scien. USSR, No.2489B-91, 14 pages.
- 50. **Nguyen Dinh Duc** (1991). *The experimental control of some failure criterions for anisotropic materials*. In the book "Numerical simulation in the problems of mechanics". Edited by Bakhvalov N.C. and Pobedria B.E., Moscow State University, pp.75-79.
- 51. **Nguyen Dinh Duc** (1992). The comparative analysis of some falure criterions on the sample of orthotropous graphite. J. "VECTNIK" of Moscow State University, No.1, pp.88-92.
- 52. **Vanin G.A. and Nguyen Dinh Duc** (1994). *The theory of woven composite with profile fibre*. The report of International conference "Mechanics of nonclassical materials" (Composite-94), Feb.1-5, 1994, Moscow, Russia, pp.206.
- 53. Vanin G.A., Nguyen Dinh Duc (1995). The theory of woven composite with spatial interface. The thesis of ninth International conference on mechanics of composite materials. Oct. 17-20,1995, Riga, Latvia, pp.206.
- 54. **Nguyen Dinh Duc** (1998). *The three-phase composite 3Dm with hollow fibres*. In the book: "The Science and collaboration", "Creation" Publisher, Moscow, pp.341-347.
- 55. **Nguyen Dinh Duc** (1999). *The elasticity of spheroplastics*. J "The news" of Russian Academy of natural sciences, Vol. 3, N3, pp.94-99
- 56. **Nguyen Dinh Duc, Yu.V.Suvorova** (2000). *The influence of temperature and humidity on behaviour viscoelastic composite*, in the book "The Science and Collaboration", "Creation" Publisher, Moscow, pp.289-310
- 57. **Nguyen Dinh Duc, Yu.V.Suvorova, X.I.Alecxeeva** (2000). *Joint account of temperature and humidity in the constitutive equations of hereditary type.* J. "Factory laboratory Diagnostics of materials", No.11, pp.45-47 (in Russian).
- 58. **Nguyen Dinh Duc, Yu.V.Suvorova, X.I. Alecxeeva, T.G.Xorina** (2000). *The influence of moisture content on strength for basalt plastics.* J. "Factory laboratory Diagnostics of materials", No.12, pp.44-48 ((in Russian).

- 59. Nguyen Dinh Duc, Dinh Khac Minh, Pham Van Thu (2010). The bending analysis of three phase polymer composite plate reinforced glass fibres and titanium oxide particles including creep effect. International Journal of Aeronautical and Space Sciences. Vol 11, N4, pp.361–366.
- 60. **Nguyen Dinh Duc** (1998). *The three-phase composite with space structure* 3Dm. Proceeding of the conference of Hanoi State University, Department of Mathe. & Mecha., April 24<sup>th</sup> 1998, Hanoi, Vietnam, pp 84-91.
- 61. **Nguyen Dinh Duc, Nguyen Hoa Thinh** (2000). *Mechanics of composite materials in beginning XXI century.* J. "The engineering and equipment", Hanoi, Vietnam, No.1, pp.18-21.
- 62. **Nguyen Dinh Duc** (2001). *Technology of manufacture of oil-pipe from composite materials in terms tropic of Vietnam*. Proceedings of XIII Conference of young scientist: "Pressing problems of machine manufacture", December, Moscow Russian, pp.28.
- 63. **Nguyen Dinh Duc** (2002). *The design, technology of manufacture and experiment for oil-pipe from composite materials.* Proceedings of the seventh national congress on mechanics, Hanoi, December 2002, pp.177-185.
- 64. **Nguyen Dinh Duc** (2002). *Determination of elastic moduli for the hybrid composite*. Proceedings of the seventh national congress on mechanics, Hanoi, December -2002, pp.186-189.
- 65. **Nguyen Dinh Duc** (2003). *The problem of the new composite in the extreme high temperature*, Journal of Scientific and Military technology, No.2, pp.54-62.
- 66. **Nguyen Dinh Duc** (2003). *The matrix of the new composite in the extreme high temperature*, Journal of Science Vietnam National University, Hanoi: "Mathematics-Physics", No.2, Vol.19, pp.9-13.
- 67. **Nguyen Dinh Duc** (2003). *Mechanic of nanocomposite material*, Journal of Science Vietnam National University, Hanoi: "Mathematics-Physics", No.4, Vol. 19, pp. 13-18.
- 68. **Nguyen Dinh Duc** (2004). *Mechanics of polymer nanocomposite material*, Proceedings of 7<sup>th</sup> National Conference on Mechanics of Deformed Solid, Do Son, 7-2004, pp.232-240
- 69. **Nguyen Dinh Duc** (2005). *Three phase polymer nanocomposite Material*, Journal of Science of Vietnam National University "Mathematics Physics" N3, Vol. 21, pp.16-23.
- 70. **Nguyen Dinh Duc** (2005). *Composite material used in design and manufacture of flying vehicle*. Proceedings of the First national congress on Mechanic of flying vehicle. Hanoi, 5-2005, pp.207-223.
- 71. **Nguyen Dinh Duc, Nguyen Le Hai** (2006). The influence of spherical particles to structures of chemical pool and oil-pipe made of three-phase

- *composite materials.* Proceedings of the eighth national congress on Mechanics, Thai Nguyen, pp.301-309.
- 72. **Nguyen Dinh Duc, Hoang Van Tung** (2006). The stability of the thin round cylindrical composite shells subjected to torsional moment at two extremities. Proceedings of the eighth national congress on Mechanics, Thai Nguyen, pp.310-317.
- 73. **Nguyen Dinh Duc, Hoang Van Tung, Do Thanh Hang** (2006). *A method for determining the bulk modulus of composite material with sphere pad seeds*, Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol. 22, No2, pp.17-20.
- 74. **Nguyen Dinh Duc, Hoang Van Tung** (2006). *Determining the effective uniaxial modulus of three-phase composite material of aligned fibres and spherical particles*, Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol. 22, No3, pp.12-18..
- 75. **Nguyen Dinh Duc, Nguyen Tien Dac** (2006). *Determining the plane strain bulk moduls of the composite material reinforced by aligned fibre.* Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol.22, No4, pp.1-5.
- 76. Luu Manh Ha, Tran Duc Tan, Nguyen Thang Long, Nguyen Dinh Duc, Nguyen Phu Thuy (2006). Errors determination of the MEMS IMU. Journal of Science, Mathematics- Physics, Vietnam National University, Vol.22, No4, pp.6-14.
- 77. **Nguyen Dinh Duc, Nguyen Le Hai** (2007). *Determining the mechanical modulus of three-phase composite material with spherical particles*, Journal of Science and Technique, Military Technical Academy, No118, pp.34-40.
- 78. Nguyen Dinh Duc, Hoang Van Tung, Do Thanh Hang (2007). An alternative method for determining the coefficient of thermal expansion of composite material of spherical particles. Vietnam Journal of Mechanics, Vol.29. N1, pp.58-64.
- 79. **T.D. Tan, L.M.Ha, N.T.Long, N.D.Duc, N.P.Thuy** (2007). *Land-vehicle MEMS INS/GPS positioning during GPS signal Blockage periods* Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol. 23, No4, pp.243-251.
- 80. Tran Duc Tan, Luu Manh Ha, Nguyen Thang Long, Nguyen Dinh Duc, Nguyen Phu Thuy (2007). Integration of Inertial Navigation System and Global positioning sistem: Performance analysis and measurements. Proceedings of International Conference on Intelligent & Advanced Systems (ICIAS2007), November 2007, MALAYSIA, E-ISBN: 978-1-4244-1356-0. pp.1047-1050.
- 81. **Nguyen Dinh Duc**, **Hoang Van Tung** (2007). An alternative method for determining thermal expansion coefficients for transversely isotropic

- *aligned fibre composites.* Proceedings of the eight National Conference on Mechanics, Hanoi, December 2007, pp.156-166.
- 82. **Nguyen Dinh Duc** (2007). *Determination of module K for hollow-sphero composite*. Proceedings of the eight National Conference on Mechanics, Hanoi, December, pp.148-155.
- 83. **Nguyen Dinh Duc, Luu Van Boi, Nguyen Tien Dac** (2008). *Determining thermal expansion coefficients of three-phase fiber composite material reinforced by spherical particles*. Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol. 24, No2, pp.57-65.
- 84. **Hoang Van Tung, Nguyen Dinh Duc** (2008). Thermal buckling of imperfect functionally graded cylindrical shells according to Wan-Donnell model. Vietnam Journal of Mechanics, Vol. 30, N3, pp.185-194.
- 85. **Nguyen Dinh Duc, Hoang Van Tung** (2008). *Thermal buckling of functionally graded cylindrical panels*. The International Conference on Computational Solid Mechanics (CSM2008), Hochiminh City, Vietnam, pp.77-87.
- 86. **Nguyen Dinh Duc, Hoang Van Tung** (2008). *Thermal buckling of imperfect functionally graded cylindrical shells according to Koiter model.* The International Conference on Computational Solid Mechanics (CSM2008), Hochiminh City, Vietnam, pp.88-99.
- 87. **Nguyen Dinh Duc, Hoang Van Tung** (2009). *Thermal buckling of laminated plates comprising functionally graded materials*. Proceedings of the National Conference on Mechanics, Hanoi, 3-2009, pp.30-39.
- 88. Nguyen Nang Dinh, Nguyen Dinh Duc, Tran Thi Chung Thuy, Le Ha Chi, Do Ngoc Chung, Tran Quang Trung (2009). Characterization of mechanical, elictrical and spectral properties of nanocomposite films used for organic light emitting diodes. Proceedings of Second International Workshop on Nanotechnology and Application 2009 (IWNA 2009), November 12-14, Vung Tau, Vietnam, pp.63-68.
- 89. **Hoang Van Tung, Nguyen Dinh Duc** (2010). *Thermoelastic stability of thick imperfect functionally graded plates*. Vietnam Journal of Mechanics, Vol.32, N1, pp.47-58.
- 90. **Nguyen Dinh Duc, Hoang Van Tung** (2010). *Buckling and postbuckling of functionally graded cylindrical shells subjected to mechanical and thermal loads*. Proceeding of The International Conference on Engineering Mechanics and Automation (ICEMA), Hanoi, July -2010, pp.167-175.
- 91. **Dinh Khac Minh, Pham Van Thu, Nguyen Dinh Duc** (2010). *Bending of three phase composite plate with creep effect.* Proceeding of The International Conference on Engineering Mechanics and Automation (ICEMA), Hanoi, July 2010, pp.53-58.

- 92. T.Chu Duc, T. Chu Duc, T.D. Nguyen and D.D. Nguyen (2010). *Mechanical Analysis of a Sensing Microgripper Based on the Direct Displacement Method.* Proceeding of The International Conference on Engineering Mechanics and Automation (ICEMA), Hanoi, July- 2010, pp.15-22.
- 93. **Nguyen Dinh Duc, Nguyen Thi Thuy** (2010). *Composite cylinder under unsteady, axisymmetric, plane temperature field.* Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol 26, No2, pp.83-92.
- 94. **Nguyen Dinh Duc, Nguyen Cao Son, Dinh Khac Minh** (2010). *Bending analysis of some composite plates for ship-building.* Proceedings of X<sup>th</sup> National Conference on Mechanics of Deformed Solid, Thai Nguyen, Nov. 2010, pp.198-203.
- 95. **Nguyen Dinh Duc, Nguyen Thi Thuy** (2010). *The composite cylinder under pressures and temperature field.* Proceedings of X<sup>th</sup> National Conference on Mechanics of Deformed Solid, Thai Nguyen, Nov.2010, pp.204-213.
- 96. **Nguyen Dinh Duc, Do Nam, Hoang Van Tung** (2010). *Effects of elastic foundation on nonlinear stability of FGM plates under compressive and thermal loads.* Proceedings of X<sup>th</sup> National Conference on Mechanics of Deformed Solid, Thai Nguyen, Nov. 2010, pp.191-197.
- 97. **T. D. Tan, L. M. Ha, N. T. Long, C. D. Trinh, N. D. Duc** (2010). *Design, Simulation and Performance analysis of INS/GPS Integration System.* Proceedings of National Conference on "Science and Technology of Space and Application", Hanoi, Dec-2010, ISBN: 978-604-913-023-6, pp. 234-241.
- 98. **Nguyen Dinh Duc, Dinh Khac Minh** (2010). *Experimental for bending Analysis of 3-phase Composite Plate in Ship Structure*. Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol. 26, No3, pp.141-146.
- 99. Luu Manh Ha, Tran Duc Tan, Chu Duc Trinh, Nguyen Thang Long, Nguyen Dinh Duc (2011). *INS/GPS Navigation for Land Applications via GSM/GPRS Network*. Proceeding of 2nd Integrated Circuits and Devices in Vietnam (ICDV2011). ISBN: 978-4-88552-258-1, pp.30-55
- 100. **Nguyen Dinh Duc, Dinh Khac Minh** (2011). Experimental study on mechanical properties for three phase polymer composite reinforced by glass fibers and titanium oxide particles. Vietnam Journal of Mechanics, Vol.33, N2, pp.105-112.
- 101. **Nguyen Dinh Duc, Nghiem Thi Thu Ha** (2011). *The bending analysis of thin composite plate under steady temperature field.* Journal of Science, Mathematics- Physics, Vietnam National University, Hanoi, Vol.27, N2, pp.77-83.

- 102. **Nguyen Dinh Duc, Dinh Khac Minh** (2012). Experimental study on Young's modulus E of the polymer composite reinforced by nano titanium dioxide particles, Vietnam Journal of Mechanics, Vol.34, N1, pp. 19-25.
- 103. **Nguyen Dinh Duc, Pham Hong Cong** (2012). *Nonlinear dynamic response of S-FGM plate.* Proceeding of The Second International Conference on Engineering Mechanics and Automation (ICEMA2012), Hanoi, August- 2012, pp.271-278.
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- 118. Vu Thi Thuy Anh, Dao Huy Bich, Nguyen Dinh Duc (2014). Nonlinear post-buckling analysis of thin Sigmoid FGM annular spherical shells surrounded on elastic foundations under uniform external pressure including temperature effects. Proceeding of The Third International Conference on Engineering Mechanics and Automation (ICEMA 2014), Hanoi, October- 2014.

- 119. Nguyen Dinh Duc, Pobedrya B.E., Dao Huy Bich, Pham Toan Thang (2014). Nonlinear analysis on flutter of S-FGM thin circular cylindrical shells with metal-ceramic-metal layers surrounded on elastic foundations using Ilyushin supersonic aerodynamic theory. Proceeding of The Third International Conference on Engineering Mechanics and Automation (ICEMA 2014), Hanoi, October- 2014.
- 120. Vu Van Dung, Vu Thi Thuy Anh, Nguyen Dinh Duc (2014). Nonlinear response of axisymmetric shear deformable Sigmoid FGM shallow spherical shells resting on elastic foundations under external pressure. Proceeding of The Third International Conference on Engineering Mechanics and Automation (ICEMA 2014), Hanoi, October- 2014.
- 121. Tran Quoc Quan, Shen Hui Shen, Nguyen Dinh Duc (2014). Nonlinear dynamic and vibration of imperfect Sigmoid-functionally graded double curved shallow shells resting on elastic foundations using the first order shear deformation theory. Proceeding of The Third International Conference on Engineering Mechanics and Automation (ICEMA 2014), Hanoi, October- 2014.
- 122. Vu Thi Thuy Anh, Dao Huy Bich, Nguyen Dinh Duc (2014), The nonlinear post-buckling of thin FGM annular spherical shells under mechanical loads and resting on elastic foundations. Vietnam Journal of Mechanics, Vol.36, N4, pp. 291-306.

### 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. Registration on patent "Polymer composite materials with fiberglass" in National Office of Intellectual Property of Vietnam at Nov. 2012

## 9. SUPERVISIONS FOR PhD STUDENTS

- 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 Enginering and Technology, Vietnam National University, Hanoi Main supervisor.
- 4. Vu Thi Thuy Anh, PhD thesis title: "Nonlinear analysis for FGM spherical shells", University of Enginering and Technology, Vietnam National University, Hanoi Main supervisor.

- 5. Pham Van Thu, PhD thesis title: "Nonlinear stability of the plates in wing-manufaction for small composite hydrofoils in Vietnam" Institute of shipbuilding Nha Trang University, Main supervisor.
- Pham Hong Cong, PhD thesis title: "Nonlinear static and dynamic stability of FGM plates", University of Enginering and Technology, Vietnam National University, Hanoi

   Main supervisor.

#### 10. RESEARCH GRANTS

- 1. Project of Vietnam National University, Hanoi: "Nonlinear analysis on stability and dynamics of functionally graded shells with special shapes" (2014-2016).
- 2. 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).
- 3. Project of Vietnam National University, Hanoi "Resarch and Manufacturing 3 phase polymer composite for shipbuilding industry in Vietnam", Code QGDA 12.03 (2012-2013).
- 4. Project in Mechanics of NAFOSTED: "Nonlinear analysis of stability for functionally graded plates and shells", Code 107.02–2010.08 (2010-2012)
- 5. Key project of Vietnam National University, Hanoi: "Calculating for composite materials and structures" code QGTD 09.01 (2009-2010)
- 6. Project of Vietnam National University, Hanoi "Determining thermal expansion coefficient of composite reinforced by aligned fibre" Code QT.08.68 (2008)
- 7. Project of Vietnam National University, Hanoi "Three phase polymer composite", Code: QT.06-48 (2006)
- 8. Special Project of Vietnam National University, Hanoi "Mechanics of composite materials oriented on application" code QG.04.27 (2004-2005)