

## CURRICULUM VITAE

Name: **NGUYEN-XUAN HUNG**

Associate Professor of Computational Mechanics

Home page: <http://www.math.hcmuns.edu.vn/~nxhung/>

<http://www.researcherid.com/rid/A-3817-2009>

<http://scholar.google.co.uk/citations?user=3iK9h-gAAAAJ&hl=en>

Department of Computational Engineering, Vietnamese–German University, New City, Binh Duong, Vietnam

E-mail: [hung.nx@vgu.edu.vn](mailto:hung.nx@vgu.edu.vn) , [h.nguyenxuan@gmail.com](mailto:h.nguyenxuan@gmail.com)

Phone: (+84) (0650) 2220990, Ext. 107

Mobile: (+84) 0906682393



### *Citation Impact*

Dr. Nguyen-Xuan was cited as a *Highly Cited Researcher 2014* of 1% in the category ‘Computer Science’ (<http://highlycited.com>). Citation data can be found in ISI Web of Science, and Google Scholar under "H. Nguyen-Xuan".

### **PERSONAL DATA**

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Date of Birth: January 01, 1976

Citizenship: Vietnamese

Sex: Male

### **EDUCATION**

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Feb 2006 – May 2008

Doctor of Philosophy  
Department of Applied Sciences  
University of Liège, Belgium

Sep 2001 – Dec 2003

Master in Modelisation of Continuum  
Department of Applied Sciences  
University of Liège, Belgium

Sep 1996 – Sep 2000

Bachelor in Mathematics and Computer Science  
Faculty of Mathematics and Computer Science  
University of Science, Vietnam National University HCMC

### **PROFESSIONAL EXPERIENCE**

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Apr 2014- date

Associate Professor, Department of Computational Engineering, Vietnamese-German University.

Sep 2014-date

Visiting Professor, Sejong University, Seoul, Korea.

Jul 2013- Oct 2013

Visiting Professor, School of Engineering, Cardiff University, UK.

Jan 2013- May 2014

Associate Professor, School of Mathematics and Computer Science, University of Science, Vietnam National University HCMC.

Oct 2004 – Dec 2012	Lecturer, Department of Mechanics, School of Mathematics and Computer Science, University of Science, Vietnam National University HCMC.
Apr 2011 – Sep 2011	Research Scholar, School of Aerospace Systems, Ohio, USA
Sep 2009 – Dec 2009	Visiting Researcher, Institute of Structural Mechanics (ISM), Bauhaus-University Weimar, Germany
Jul 2008 – Jun 2009	Post Doctoral Fellow Singapore-MIT Alliance, National University of Singapore
Aug 2004 – Feb 2006	Research Assistant, European Master in Engineering Sciences of Mechanics Construction program (EMMC) (in cooperation with University of Liège (Belgium), Ho Chi Minh University of Technology (Vietnam)).
Jul 2001 – Oct 2004	Lecturer, Department of Technical Structure and Engineering, Ho Chi Minh City University of Transport, Vietnam.

## **RESEARCH BACKGROUND AND INTERESTS**

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- Robust and efficient computational technology
- Composite structures, Smart materials and structures
- Limit and shakedown analysis
- Error estimation and adaptivity
- Isogeometric analysis
- Optimization algorithms: Sequence quadratic and second-order cone programming
- Computational Fracture and Damage Mechanics
- Multi-scale homogenization computation
- Real-time computations

## **AWARDS**

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June 2014	ISI Highly Cited Researcher 2014 - ranking among the top 1% most cited in the category 'Computer Science' ( <a href="http://highlycited.com">http://highlycited.com</a> )
December 2013	Scientific Award for excellent researchers, Vietnam National University HCMC
January 2012	Scientific Award for excellent researchers, Vietnam National University HCMC
December 2011	Nguyen Van Dao's Award for excellent researchers under age 40, Association of Mechanics of Vietnam
December 2010	Scientific Award for excellent researchers, Vietnam National University HCMC
December 2009	Scientific Award for excellent young researchers, Vietnam National University HCMC
November 2008	Scientific Award for excellent young researchers, Vietnam National University HCMC
Feb 2006 – May 2008	Awarded research scholarship for PhD at University of Liège, Belgium
October 2006	Scientific Award of excellent researchers at University of Science HCMC

## **TEACHING EXPERIENCE**

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### **Under-graduate students**

- Fundamental of numerical methods in Engineering
- Introduction to finite element methods
- Mechanics of deformable solids
- Continuum Mechanics

### **Master students**

- Advanced finite element methods
- Computational fracture damage mechanics
- Modeling and numerical simulation in Engineering
- Variational principles in Engineering Mechanics
- Methods of Scientific Research 1
- Composite & Smart Structures
- Isogeometric analysis

### **PhD students**

- Advances of modelling and numerical simulation in Engineering Mechanics
- Isogeometric analysis
- Methods of Scientific Research 2 (Research and project writing skills)

## **SUPPERVIORS**

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Current PhD students: 05

Current master students: 03

Former master students: 18

## **PROFESSIONAL SERVICES**

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### **Deputy Editor-in-chief**

Asia-Pacific Journal of Computational Engineering (owned by Springer)

### **Subject Editor**

Mathematical Problems in Engineering (IF = 1.082)

The Scientific World Journal

### **Reviewer for the papers in ISI journals**

- Smart Material and Structures
- KSCE - Journal of Civil Engineering
- International Journal of Computational Methods
- Applied Mathematical Modelling
- Journal of Applied Mathematics
- Engineering Fracture Mechanics
- Finite element analysis and Design
- International Journal for Numerical Methods in Engineering
- Computer Methods in Applied Mechanics and Engineering
- Computational Mechanics
- International Journal of Mechanics Sciences
- Composite Structures
- Journal of Aerospace Engineering
- International Journal of Heat and Mass Transfer
- Mathematical Problems in Engineering

- Computational Materials Science
- Theoretical and Applied Fracture Mechanics

**Member of National Scientific Committee on Mechanics (NAFOSTED)** <http://www.nafosted.gov.vn/en/>

**Member of the State Council for Professor Title on Mechanics**

### **Organizer**

International Conference on Advanced Computational Mechanics (ACOME 2012), August 2012.

Co-Editor, Proceedings of the International Conference on Advances in Computational Mechanics, ISBN: 978-604-908-577-2, 2012 (organized in August, Ho Chi Minh City).

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## **INTERNATIONAL COLLABORATION**

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- Professors:
1. Nguyen–Dang Hung, University of Liège, Belgium  
Editor-in-Chief, Asia Pacific Journal on Computational Engineering  
<http://www.springer.com/materials/mechanics/journal/40540>
  2. Liu Gui-Rong, University of Cincinnati, Ohio, USA  
Editor-in-Chief, International Journal of Computational methods  
<http://www.worldscientific.com/worldscinet/ijcm>
  3. Antonio J. M. Ferreira, University of Porto, Portugal  
Editor-in-Chief, Composite Structures  
<http://www.journals.elsevier.com/composite-structures/>
  4. Stephane P.A. Bordas, University of Luxembourg  
Editor, Advances in Applied Mechanics  
<http://www.sciencedirect.com/science/bookseries/00652156>
  5. Jean–Francois Debongnie, University of Liège, Belgium
  6. Timon Rabczuk, Bauhaus-University Weimar, Germany  
<http://www.uni-weimar.de/Bauing/rabczuk/>
  7. Erasmo Carrera, Politecnico di Torino, Italy  
Contributing Editor, Mechanics of Advanced Materials and Structures  
<http://www.tandfonline.com/loi/umcm20#.Ue-zDKw8m4Y>
  8. Magd Abdel Wahab, University of Ghent, Belgium  
Department of Mechanical Construction and Production  
[http://users.ugent.be/~mabdelwa/Web\\_MAW\\_ugent.htm](http://users.ugent.be/~mabdelwa/Web_MAW_ugent.htm)

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## **RESEARCH GRANTS**

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|-------------|--|
| 2014-2016   | Integration of modeling and simulation of laminated structures with size effects. Grant No.: 107.02-2014.24, The National Foundation for Science and Technology Development (NAFOSTED) (PI).     |
| 2012 – 2014 | Isogeometric analysis: Integration of modeling and simulation for mechanics problems. Grant No.: 107.02-2012.17, The National Foundation for Science and Technology Development (NAFOSTED) (PI). |
| 2012 – 2014 | Integration of modeling and simulation of coupled multi-physics problems by isogeometric analysis. Grant No.: B2013-18-04, Key research, Vietnam National University HCM (PI).                   |
| 2010 – 2012 | Development of two alternative finite element methods for solid mechanics problems, The National Foundation for Science and Technology Development   |

	(NAFOSTED) (PI).
2010 – 2011	Development of smoothed finite element methods for plate structures, National University Research Program (PI).
2006 – 2007	Approximated Methods and Numerical Simulation for Mechanics of Deformed Solids, National Basic Research Program in Natural Sciences, Ministry of Science, Technology and Environment (Key research member).
2004 – 2005	Numerical simulation and structural optimization of composite materials, National Basic Research Program in Natural Sciences, Ministry of Science, Technology and Environment (Research member).

## **PUBLICATIONS**

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### **A. International Journals (International Peer-Reviewed Journals with ISI )**

1. **H. Nguyen-Xuan**, S. Bordas and H. Nguyen-Dang, Addressing volumetric locking and instabilities by selective integration in smoothed finite elements, *Communications in Numerical Methods in Engineering*, DOI: 10.1002/cnm.1098, 2008 (SCI).
2. **H. Nguyen-Xuan** and T.T. Nguyen, A stabilized smoothed finite element method for free vibration analysis of Mindlin--Reissner plates, *Communications in Numerical Methods in Engineering*, 25 (8), 882-906, 2009 (SCI).
3. **H. Nguyen-Xuan**, T. Rabczuk, S. Bordas and J. F. Debongnie, A smoothed finite element method for plate analysis, *Computer Methods in Applied Mechanics and Engineering*, 197, 1184–1203, 2008 (SCI).
4. N. Nguyen-Thanh, T. Rabczuk, **H. Nguyen-Xuan** and S. Bordas, A smoothed finite element method for shell analysis, *Computer Methods in Applied Mechanics and Engineering*, 198, 165-366, 2008 (SCI).
5. T. Rabczuk, Goangseup Zi, S. Bordas and **H. Nguyen-Xuan**, A geometrically nonlinear three dimensional cohesive crack method for reinforced concrete structures, *Engineering Fracture Mechanics*, 75 (16), 4740-4758, 2008 (SCI).
6. **H. Nguyen-Xuan**, S. Bordas and H. Nguyen-Dang, Smooth finite element methods: Convergence, accuracy and properties, *International Journal for Numerical Methods in Engineering*, 74, 175 - 208, 2008 (SCI).
7. GR Liu, T.T. Nguyen, **H. Nguyen-Xuan**, KY Lam, A node-based smoothed finite element method for upper bound solution to solid mechanics problems, *Computers and Structures*, 87 (1-2), 14-26, 2009 (SCI).
8. GR Liu, T.T. Nguyen, **H. Nguyen-Xuan**, K. Y. Dai, K. Y. Lam, *On the essence and the evaluation of the shape functions for the smoothed finite element method (SFEM)*, *International Journal for Numerical Methods in Engineering*, 77, 1863–1869, 2009 (SCI).
9. GR Liu, **H. Nguyen-Xuan**, T.T. Nguyen, X. Xu, A novel weak form and a superconvergent alpha finite element method (S $\alpha$ FEM) for mechanics problems using triangular meshes, *Journal of Computational Physics*, 228 (11), 3911-4302, 2009 (SCI).
10. **H. Nguyen-Xuan**, GR Liu, T.Nguyen-Thoi, C. Nguyen Tran, An edge –based smoothed finite element method (ES-FEM) for analysis of two–dimensional piezoelectric structures, *Journal of Smart Material and Structures*, 18 (6) 065015 (12pp), 2009 (SCI).
11. GR Liu, T.T. Nguyen, **H. Nguyen-Xuan**, K. Y. Dai, K. Y. Lam, On the essence and the evaluation of the shape functions for the smoothed finite element method (SFEM), *International Journal for Numerical Methods in Engineering*, 77, 1863–1869, 2009 (SCI).
12. T. Nguyen-Thoi, GR. Liu, HC. Vu Do, **H. Nguyen-Xuan**, A face –based smoothed finite element method (FS-FEM) for visco-elastoplastic analyses of 3D solids using tetrahedral mesh, *Computer Methods in Applied Mechanics and Engineering*, 198 (41-44), 3479-3498, 2009 (SCI).
13. T. Nguyen-Thoi, GR. Liu, HC. Vu Do, **H. Nguyen-Xuan**, An edge –based smoothed finite element method (ES-FEM) for visco-elastoplastic analyses of 2D solids using triangular mesh, *Computational Mechanics*, 45, 23-44, 2009 (SCI).
14. Nguyen-Thoi T, Liu GR, **Nguyen-Xuan H**, Additional properties of the node-based smoothed finite element

- method (NS-FEM) for solid mechanics problems, *International Journal of Computational Methods*, 6, 633-666, 2009 (SCIE).
15. L. Chen, **H. Nguyen-Xuan**, T. Nguyen-Thoi, S. C. Wu, Assessment of smoothed point interpolation methods for elastic mechanics, *Communications in Numerical Methods in Engineering*, 26 (12), 1635 - 1655, 2010 (SCI).
  16. S. Bordas and T. Rabczuk, **H. Nguyen-Xuan**, P. Nguyen-Vinh, N. Sundararajan, B. Tino and Q. Do-Minh and H. Nguyen-Vinh, Strain smoothing in FEM and XFEM, *Computers & Structures*, 88(23-24), 1419-1443, 2010 (SCI).
  17. **H. Nguyen-Xuan**, GR Liu, C. Thai-Hoang, T. Nguyen-Thoi, An edge-based smoothed finite element method with stabilized discrete shear gap technique for analysis of Reissner-Mindlin plates, *Computer Methods in Applied Mechanics and Engineering*, 199 (9-12), 471-489, 2010 (SCI).
  18. N. Nguyen-Thanh, T. Rabczuk, **H. Nguyen-Xuan** and S. Bordas, An alternative alpha finite element method (A $\alpha$ FEM) for free and forced vibration analysis of solids using triangular meshes, *Journal of Computational and Applied Mathematics*, 233, 2112-2135, 2010 (SCI).
  19. T.N. Tran, GR Liu, **H. Nguyen-Xuan**, T. Nguyen-Thoi, An edge-based smoothed finite element method for primal-dual shakedown analysis of structures, *International Journal for Numerical Methods in Engineering*, 82 (7), 917 - 938, 2010 (SCI).
  20. V.C. Le, **H. Nguyen-Xuan**, H. Nguyen-Dang, Upper and lower bounds limit analysis of plates using FEM and second-order cone programming, *Computers & Structures*, 88, 65-73, 2010 (SCI).
  21. Canh V Le, **Nguyen-Xuan H**, H. Askes, S. Bordas, T. Rabczuk, H. Nguyen-Vinh. A cell-based smoothed finite element method for kinematic limit analysis. *International Journal for Numerical Methods in Engineering*, 83, 1651-1674, 2010 (SCI).
  22. G.R Liu, **H. Nguyen-Xuan**, T. Nguyen-Thoi, A theoretical study on NS/ES-FEM: properties, accuracy and convergence rates, *International Journal for Numerical Methods in Engineering*, 84, 1222-1256, 2010 (SCI).
  23. T. Rabczuk, Goangseup Zi, S. Bordas and **H. Nguyen-Xuan**, A simple and robust three dimensional cracking particle method without enrichment, *Computer Methods in Applied Mechanics and Engineering*, 199 (37-40), 2437-2455, 2010 (SCI).
  24. **H. Nguyen-Xuan**, T. Rabczuk, N. Nguyen-Thanh, T. Nguyen-Thoi, S. Bordas, A node-based smoothed finite element method (NS-FEM) with stabilized discrete shear technique for analysis of Reissner-Mindlin plates, *Computational Mechanics*, 46 (5), 679-701, 2010 (SCI).
  25. T. Nguyen-Thoi, H.C. Vu-Do, T. Rabczuk, **H. Nguyen-Xuan**, A node-based smoothed finite element method (NS-FEM) for upper bound solution to visco-elastoplastic analyses of solids using triangular and tetrahedral meshes, *Computer Methods in Applied Mechanics and Engineering*, 199 (45-48), 3005-3027, 2010 (SCI).
  26. Nguyen-Thoi T, Liu GR, **Nguyen-Xuan H**, An  $n$ -sided polygonal edge-based smoothed finite element method ( $n$ ES-FEM) for solid mechanics. *Communications in Numerical Methods in Engineering*, 27(9), 1446-1472, 2011 (SCI).
  27. G.R Liu, **H. Nguyen-Xuan**, T.T. Nguyen, A variationally consistent  $\alpha$ FEM (VC $\alpha$ FEM) for solution bounds and nearly exact solution to mechanics problems using quadrilateral elements, *International Journal for Numerical Methods in Engineering*, 85 (4), 403–536, 2011 (SCI).
  28. C. Thai Hoang, N. Nguyen-Thanh, **H. Nguyen-Xuan**, T. Rabczuk and S. Bordas, A smoothed finite element method for free vibration and buckling analysis of shells, *KSCE Journal of Civil Engineering*, 12 (2), 347-361, 2011 (SCIE).
  29. N. Nguyen-Thanh, **H. Nguyen-Xuan**, S. Bordas, T. Rabczuk, Isogeometric finite element analysis using polynomial splines over hierarchical T-meshes for two-dimensional elastic solids, *Computer Methods in Applied Mechanics and Engineering*, 200, 1892–1908, 2011 (SCI).
  30. N. Nguyen-Thanh, T. Rabczuk, **H. Nguyen-Xuan**, S. Bordas, An alternative alpha finite element method (A $\alpha$ FEM) for analysis of RM plates, *Finite Element Analysis and Design*, 47(5), 519-535, 2011 (SCI).

31. C. Thai-Hoang, N. Nguyen-Thanh, **H. Nguyen-Xuan**, Analysis of laminated plated using an alternative alpha finite element method with discrete shear gap technique, *Applied Mathematics and Computation*, 217, 7324–7348, 2011 (SCIE).
32. N. Vu-Bac, **H. Nguyen-Xuan**, L. Chen, S. Bordas, P. Kerfriden, R.N. Simpson, G.R. Liu, and T. Rabczuk, A Node-Based Smoothed eXtended Finite Element Method (NS-XFEM) for Fracture Analysis, *CMES*, 1898 (1), 1-25, 2011 (SCIE).
33. N. Nguyen-Thanh, J. Kiendl, **H. Nguyen-Xuan**, R. Wuchner, K.U. Bletzinger, Y. Bazilevs, T. Rabczuk, Rotation free isogeometric shell analysis using PHT-splines for thin shell, *Computer Methods in Applied Mechanics and Engineering*, 200 (47-48), 3410-3424, 2011 (SCI).
34. C. Thai-Hoang, **H. Nguyen-Xuan**, N. Nguyen-Thanh, T. Nguyen-Thoi, T. Rabczuk, Static, free vibration and buckling analyses of laminated composite Reissner-Mindlin plates using NURBS-based isogeometric approach, *International Journal for Numerical Methods in Engineering*, 91, 571-603, 2012 (SCI).
35. **H. Nguyen-Xuan**, T. Rabczuk, T. Nguyen-Thoi, N.T. Tran, N. Nguyen-Thanh, A node-based finite element method for limit and shakedown analysis of structures, *International Journal for Numerical Methods in Engineering*, 90, 287-310, 2012 (SCI).
36. **H. Nguyen-Xuan**, G.R. Liu, N. Nourbakhshnia, L.Chen, A novel singular ES-FEM for crack growth simulation, *Engineering Fracture Mechanics*, 84, 41-66, 2012 (SCI).
37. Chien H. Thai, Loc V Tran, Dung T. Tran, T. Nguyen-Thoi, **H. Nguyen-Xuan**, Analysis of laminated composite plates using higher-order shear deformation theory and node-based smoothed discrete shear gap method, *Applied Mathematics and Modelling*, 36, 5657-5677, 2012 (SCIE).
38. **H. Nguyen-Xuan**, Loc V Tran, Chien H. Thai, T. Nguyen-Thoi, Analysis of functionally graded plates by an efficient finite element method with node-based strain smoothing, *Thin-Walled Structures*, 54, 1-18, 2012 (SCIE).
39. **H. Nguyen-Xuan**, H. Nguyen-Vinh, S. Bordas, T. Rabczuk and M. Duflo, A cell-based smoothed finite element method for three dimensional solid structures, *KSCE Journal of Civil Engineering*, 16 (7), 1230-1242, 2012 (SCIE).
40. T. Nguyen-Thoi, P. Phung-Van, **H. Nguyen-Xuan**, Chien H. Thai, A cell-based smoothed discrete shear gap method (CS-DSG3) using triangular elements for static and free vibration analyses of Reissner-Mindlin plates. *International Journal for Numerical Methods in Engineering*, 91 (7), 705-741, 2012 (SCI).
41. L. Chen, Y.W. Zhang, G.R. Liu, **H. Nguyen-Xuan**, Y.Q. Zhang, A stabilized finite element method for certified solution with bounds in static and frequency analyses of piezoelectric structures, *Computer Methods in Applied Mechanics and Engineering*, 241-244, 65-81, 2012 (SCI).
42. H.H. Phan Dao, **H. Nguyen-Xuan**, Chien. H. Thai, T.Nguyen-Thoi, T. Rabczuk, An edge-based smoothed finite element method for analysis of laminated composite plates, *International Journal of Computational Methods*, 10(1), 1340005, 2013 (SCIE).
43. **H. Nguyen-Xuan**, GR. Liu, S. Bordas, S. Natarajan, T. Bordas, An adaptive singular ES-FEM for mechanics problems with singular field of arbitrary order, *Computer Methods in Applied Mechanics and Engineering*, 253, 252-273, 2013 (SCI).
44. Loc V. Tran, T. Nguyen-Thoi, Chien H. Thai, **H. Nguyen-Xuan**, An edge-based smoothed discrete shear gap method (ES-DSG) using the C0-type higher-order shear deformation theory for analysis of laminated composite plates, *Mechanics of Advanced Materials and Structures*, in press, 2013 (SCIE).
45. Chien H. Thai, **H. Nguyen-Xuan**, S. Bordas, N. Nguyen-Thanh, T. Rabczuk. Isogeometric analysis of laminated composite plates using the higher-order shear deformation theory, *Mechanics of Advanced Materials and Structures*, in press, 2013 (SCIE).
46. G.R. Liu, W. Zeng, **H. Nguyen-Xuan**. Generalized stochastic cell-based smoothed finite element method (GS\_CS-FEM) for solid mechanics, *Finite Elements in Analysis and Design*, 63, 51–61, 2013 (SCI).
47. Canh V. Le, **H. Nguyen-Xuan**, H. Askes, T. Rabczuk, T. Nguyen-Thoi, Computation of limit load using edge-based smoothed finite element method and second-order cone programming, *International Journal of Computational Methods*, 10 (1), 1340004, 2013 (SCIE).

48. Vinh Phu Nguyen, **H. Nguyen-Xuan**, High-order B-splines based finite elements for the delamination analysis of laminated composites, *Composite Structures*, 102, 261-275, 2013 (SCIE).
49. Loc V. Tran, A. J. Ferreira, **H. Nguyen-Xuan**, Isogeometric approach for analysis of functionally graded plates using higher-order shear deformation theory, *Composite Part B*, 51, 368-383, 2013 (SCI).
50. Chien H. Thai, A. J. Ferreira, E. Carrera, **H. Nguyen-Xuan**, Isogeometric analysis of laminated composite and sandwich plates using a layerwise deformation theory, *Composite Structures*, 104, 196-214, 2013 (SCIE).
51. Loc V. Tran, Chien H. Thai, **H. Nguyen-Xuan**, An isogeometric finite element formulation for thermal buckling analysis of functionally graded plates, *Finite Element in Analysis and Design*, 73, 65-76, 2013 (SCI).
52. N. Vu-Bac, **H. Nguyen-Xuan**, Lei Chen, Goangseup Zi, Gui Rong Liu, and Timon Rabczuk, A phantom-node with edge-Based Strain Smoothing for Linear Elastic Fracture Mechanics, *Journal of Applied Mathematics*, Article ID 978026, 12 pp, 2013 (SCIE).
53. O. A. González-Estrada, S. Natarajan, J. J. Ródenas, **H. Nguyen-Xuan**, S. P. A. Bordas, Efficient recovery-based error estimation for the smoothed finite element method for smooth and singular linear elasticity, *Computational Mechanics*, 52, 37-52, 2013 (SCI).
54. T. Nguyen-Thoi, P. Phung-Van, T. Rabczuk, **H. Nguyen-Xuan**, Canh V. Le, An application of the ES-FEM in solid domain for dynamic analysis of 2D fluid-solid interaction problems, *International Journal of Computational Methods*, 10(1), 13400033, 2013 (SCIE).
55. T. Nguyen-Thoi, P. Phung-Van, T. Rabczuk, **H. Nguyen-Xuan**, Canh V. Le, Free and forced vibration analysis using the  $n$ -sided polygonal cell-based smoothed finite element method ( $n$ CS-FEM), *International Journal of Computational Methods*, 10(1), 13400082, 2013 (SCIE).
56. **H. Nguyen-Xuan**, Chien H. Thai, T. Nguyen-Thoi, Isogeometric finite element analysis of composite sandwich plates using a new higher order shear deformation theory, *Composite Part B*, 55, 558-574, 2013 (SCI).
57. **H. Nguyen-Xuan**, G.R. Liu, An edge-based smoothed finite element method softened with a bubble function (bES-FEM) for solid mechanics problems, *Computers and Structures*, 128, 14-30, 2013 (SCI).
58. T. Nguyen-Thoi, P. Phung-Van, Chien H. Thai, **H. Nguyen-Xuan**, Cell-based smoothed discrete shear gap method (CS-DSG3) using triangular elements for static and free vibration analyses of shell structures, *International Journal of Mechanical Sciences*, 74, 32-45, 2013 (SCI).
59. T. Nguyen-Thoi, T. Bui-Xuan, P. Phung-Van, **H. Nguyen-Xuan**, P. Ngo-Thanh, Static, free vibration and buckling analyses of stiffened plates by CS-FEM-DSG3 using triangular elements. *Computers & Structures*, 125, 100-113, 2013 (SCI).
60. P. Phung-Van, T. Nguyen-Thoi, Loc V. Tran, **H. Nguyen-Xuan**, A cell-based smoothed discrete shear gap method (CS-DSG3) based on the C0-type higher-order shear deformation theory for static and free vibration analyses of functionally graded plates, *Computational Materials Science*, 79, 857-872, 2013 (SCI).
61. W. Zeng, G.R. Liu, Y. Kitamura, **H. Nguyen-Xuan**, A three-dimensional ES-FEM for fracture mechanics problems in elastic solids, *Engineering Fracture Mechanics*, 114, 127-150, 2013 (SCI).
62. P. Phung-Van, T. Nguyen-Thoi, T. Le-Dinh, **H. Nguyen-Xuan**, Static and free vibration analyses and dynamic control of composite plates integrated with piezoelectric sensors and actuators by the cell-based smoothed discrete shear gap method (CS-FEM-DSG3), *Smart Materials and Structures*, 22 (9), 095026, 2013 (SCI).
63. Chien. H. Thai, A.J.M. Ferreira, T. Rabczuk, S.P.A. Bordas, **H. Nguyen-Xuan**, Isogeometric analysis of laminated composite and sandwich plates using a new inverse trigonometric shear deformation theory, *European Journal of Mechanics - A/Solids*, 43, 89-108, 2014 (SCI).
64. **H. Nguyen-Xuan**, T. Hoang, Vinh Phu Nguyen, An isogeometric analysis for elliptic homogenization problems, *Computers & Mathematics with Applications*, 67, 1722-1741, [doi.org/10.1016/j.camwa.2014.01.001](https://doi.org/10.1016/j.camwa.2014.01.001), 2014 (SCI).
65. **H. Nguyen-Xuan**, Loc V. Tran, Chien H. Thai, S. Kulasegaram, S.P.A. Bordas, Isogeometric analysis of



- functionally graded plates using a refined plate theory, *Composite Part B*, 64, 222–234, [doi.org/10.1016/j.compositesb.2014.04.001](https://doi.org/10.1016/j.compositesb.2014.04.001), 2014 (SCI).
66. Chien H. Thai, S. Kulasegaram, Loc V. Tran, **H. Nguyen-Xuan**, Generalized shear deformation theory for functionally graded isotropic and sandwich plates based on isogeometric approach, *Computers & Structures*, 141, 94-112, [doi.org/10.1016/j.compstruc.2014.04.003](https://doi.org/10.1016/j.compstruc.2014.04.003), 2014 (SCI).
  67. L. Chen, N. Nguyen-Thanh, **H. Nguyen-Xuan**, T. Rabczuk, S.P.A. Bordas, G. Limbert, Explicit finite deformation analysis of isogeometric membranes, *Computer Methods in Applied Mechanics and Engineering*, 277, 104-130, [doi.org/10.1016/j.cma.2014.04.015](https://doi.org/10.1016/j.cma.2014.04.015), 2014 (SCI).
  68. T.D. Tran, C.V. Le, D.C. Pham, **H. Nguyen-Xuan**, Shakedown reduced kinematic formulation, separated collapse modes, and numerical implementation, *International Journal of Solids and Structures*, 51, 2893–2899, [doi.org/10.1016/j.ijsolstr.2014.04.016](https://doi.org/10.1016/j.ijsolstr.2014.04.016), 2014 (SCI).
  69. P. Phung-Van, L. De Lorenzis, Chien H. Thai, M. Abdel-Wahab, **H. Nguyen-Xuan**, Analysis of laminated composite plates integrated with piezoelectric sensors and actuators using higher-order shear deformation theory and isogeometric finite elements, *Computational Materials Science*, 96, 495-505, [doi:10.1016/j.commatsci.2014.04.068](https://doi.org/10.1016/j.commatsci.2014.04.068), 2015 (SCI).
  70. P Phung-Van, T Nguyen-Thoi, H Luong-Van, C Thai-Hoang, **H. Nguyen-Xuan**, A cell-based smoothed discrete shear gap method (CS-FEM-DSG3) using layerwise deformation theory for dynamic response of composite plates resting on viscoelastic foundation, *Computer Methods in Applied Mechanics and Engineering*, 272, 138-159, 2014 (SCI).
  71. P. Phung-Van, H. Luong-Van, T. Nguyen-Thoi, **H. Nguyen-Xuan**, A cell-based smoothed discrete shear gap method (CS-FEM-DSG3) based on the  $C^0$ -type higher-order shear deformation theory for dynamic responses of Mindlin plates on viscoelastic foundations subjected to a moving sprung vehicle, *International Journal for Numerical Methods in Engineering*, 98, 988-1014, 2014 (SCI).
  72. P Phung-Van, Chien H Thai, T Nguyen-Thoi, **H Nguyen-Xuan**, Static and free vibration analyses of composite and sandwich plates by an edge-based smoothed discrete shear gap method (ES-DSG3) using triangular elements based on layerwise theory, *Composite Part B*, 60, 227-238, 2014 (SCI).
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### **C. International Conference Proceedings**

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  9. N. Pham Anh, **Hung Nguyen Xuan**, Hung Nguyen Dang, A smoothed finite element method for composite plate analysis, *Proceedings of The International Conference on "Computational Solid Mechanics"*, University of Technical Education, November, 2008.
  10. **H. Nguyen-Xuan**, GR. Liu, T.T. Nguyen, A Formulation of the Edge-Based Smoothed Discrete Shear Gap Method for Reissner-Mindlin Plate Analysis, *SMA 10th Anniversary Symposium 09*, National University of Singapore, 22 January 2009.
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  12. Nhon Nguyen-Thanh, **Hung Nguyen-Xuan**, Stephane P.A. Bordas, Timon Rabczuk, Isogeometric finite element analysis using polynomial splines over hierarchical T-meshes, *9th World Congress on Computational Mechanics in IOP Conference Series: Materials Science and Engineering*, Sydney, Australia, July-2010. doi: [10.1088/1757-899X/10/1/012238](https://doi.org/10.1088/1757-899X/10/1/012238).
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  14. Tran Vinh Loc, Thai Hoang Chien, Nguyen Thoi Trung, **Nguyen Xuan Hung**, A mixed Nurbs-based isogeometric approach for incompressible media problems, *Proceeding of International Conference on Advances in Computational Mechanics (ACOME)*, August 14-16, 2012, Ho Chi Minh City, Vietnam (Conference)
  15. Loc V. Tran, VP. Nguyen, LV. Hai, TM. Thi and **H. Nguyen-Xuan**, An assessment of limit loads of cracked structures using extended isogeometric analysis, *The Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13)*, 11-13/9/2013, Sapporo, Japan.

#### **D. National Conference Proceedings**

1. Trinh Anh Ngoc, **Nguyen Xuan Hung**. The approximate solution of the stationary problem of the incompressible viscous fluid flow by finite element method. *Proceedings of the 2<sup>nd</sup> Conference on Science and Technology, University of Natural Sciences – VNU-HCM*. May, 2000 (in Vietnamese).
2. Trinh Anh Ngoc, **Nguyen Xuan Hung**. The approximate solution of the stationary problem of the incompressible viscous fluid flow by Newton-Raphson algorithm. *Proceedings of the 8<sup>th</sup> Conference on science and technology, Ho Chi Minh University of Technology*. April, 2002 (in Vietnamese)
3. **Nguyen Xuan Hung**. The conforming finite element model and error estimation for plate bending. *National Congress on Computational Mechanics*, National Published Collection, Haiphong City, Vietnam, Volume 2, 2004
4. Ngo Thanh Phong, **Nguyen Xuan Hung**. The error estimation of finite element method by dual analysis. *Proceedings of National Conference on Computational Methods in Fluid Mechanics, National Published Collection*, Halong bay, Vietnam, July, 2005.
5. Ngo Thanh Phong, **Nguyen Xuan Hung**. About a numerical method for solving isotropic hardening elasto – viscoplastic problem. *National Conference of Mathematical Applications*, 12–2005.
6. **Nguyen Xuan Hung**, Ngo Thanh Phong, Using the finite element method with smoothing technique for the elasto-plastic problems, *National conference on Mechanics VIII*, Hà Nội 12/2007.
7. Nguyen Tran Chan, **Nguyen Xuan Hung**, Ngo Thanh Phong, The finite element method with smoothing technique for piezoelectric material, *8<sup>th</sup> National Conference on Mechanics VIII*, Ha Noi 12/2007

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9. Tran Vinh Loc, Nguyen Xuan Hung, Nguyen Thoi Trung, A node-based smoothed finite element method for functionally graded Reissner-Mindlin plates. *Proceedings of the tenth national conference on Solid mechanics*, Thai Nguyen, Viet Nam, 2010.
10. Tran Vinh Loc, Thai Hoang Chien, Nguyen Xuan Hung, Static analysis of composite plate using edge-based smoothed finite element method based on a C0-type higher-order shear deformation theory. *Proceedings of International Conference on Advanced Computing and Applications*, Ho Chi Minh City, Viet Nam, 2011.
11. Tran Vinh Loc, Thai Hoang Chien, Nguyen Xuan Hung, Nguyen Thoi Trung, A stable mixed formulation with edge-based strain smoothing for nearly incompressible media problems, *Proceedings of The First International Conference on Computational Science and Engineering 19-21/12/2011*.
12. Phan Dao Hoang Hiep, Tran Vinh Loc, Thai Hoang Chien, Nguyen Xuan Hung, Thermal buckling analysis of laminated plates using edge-based smoothed finite element method, *Proceedings of The First International Conference on Computational Science and Engineering 19-21/12/2011*, Ho Chi Minh City, Viet Nam.

### **COMPUTER SKILLS**

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- **Operating Systems**  
Windows /XP/Vista, 7, Linux
- **Languages and Software**  
C, C++, Matlab, Maple, Fortran, FRANC2

### **LANGUAGES**

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Vietnamese (Native language), English – fluent

I declare that all the above information is true to the best of my knowledge and belief, and I have not willfully suppressed any material fact.

December 24, 2014



**Nguyen Xuan Hung**