

ARMAĞAN FATİH KARAMANLI

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SCOPUS: Citations – 412, h-index:11

WOS: Citations – 397, h-index:11



EDUCATION:

- 2006 - 2013 Ph.D. in Mechanical Engineering, Istanbul Technical University
GPA: 3,63 / 4,00
Thesis Topic: Development of Meshless Methods Based on Differential Transform Method.
- 2000 – 2003 M.Sc. in Managerial Engineering, Istanbul Technical University
GPA: 3,69 / 4,00
Thesis Topic: Equipment Improvement Activities of Total Productive Maintenance Continuous Improvement Action Teams.
- 1995 – 2000 B.S. in Mechanical Engineering, Istanbul Technical University
GPA: 3,44 / 4,00
Project Topic: A Controller Design for an Active Suspension System.

PROFESSIONAL EXPERIENCE:

- 2022-** **Department Chair, Associate Professor**, Department of Mechanical Engineering, Istinye University, Turkey.
- 2019-2022** **Associate Professor**, Department of Mechatronics Engineering, Bahcesehir University, Turkey.
- 2018 - 2019** **Assistant Professor**, Department of Mechatronics Engineering, Bahcesehir University, Turkey.
- 2016 - 2018** **Assistant Professor**, Department of Mechatronics Engineering, Istanbul Gelisim University, Turkey.
- 2014 - 2016** **R&D Project Manager**, Tırsan Treyler Sanayi ve Ticaret A.Ş., Turkey.

- 2012 - 2014** **Joint Quality Manager, Project Manager**, Small Household Appliances, Ernameş Makina ve Ticaret Sanayi A.Ş., Turkey.
- 2008 - 2012** **Senior Design Engineer**, Powerpack and Suspension Systems (Engine, Transmission, Suspension System, Cooling System, Air Filtration System, Exhaust System, Auxiliary Power Unit), Turkish National Main Battle Tank Project, OTOKAR, Turkey.
- 2004 – 2008** **Design Engineer**, Powerpack Systems (Engine, Cooling System, Air Filtration System, Exhaust System), Uzel Makina Sanayi ve Ticaret A.Ş., Turkey.
- 2003 – 2004** **Production Engineer**, Machining Workshop, KALEKILIT, Turkey.

RESEARCH INTERESTS:

Theoretical and Applied Mechanics, Computational Mechanics, Numerical Methods

PATENTS:

1. “Modular Locking System”, European Patent Office, EP3283355B1; WO2016200354A2; WO2016200354A3, **Issued**.
2. “Modular Locking System”, Türk Patent Enstitüsü, Patent No:2015 07201, **Issued**.
3. “Modular Adaptor Featured Lashing Point”, Türk Patent Enstitüsü, Patent No: 2015/16108, **Issued**.
4. “Levelling Adaptor”, Türk Patent Enstitüsü, Patent No: 2015/07203, **Issued**.

PROJECTS:

- Structural analysis of multi-directional functionally graded size-dependent microbeams and microplates, BAP, Bahcesehir University, 2020 – 2021, (**Research Funding: 6441 USD**)
- Forced vibration analysis of multi-directional functionally graded porous microplates subjected to moving loads, 2021 – on going, 220M079, TUBITAK 1002 (**Research funding: 5200 USD**)

PUBLICATIONS

a) Peer Reviewed Publications (SCI and SCI-Expanded)

1. **2021 Karamanli, A., Vo, T.** "Finite element model for free vibration analysis of curved zigzag nanobeams", *Composite Structures*, Vol:264, 115097.
2. **2021 Karamanli, A., Vo, T.** "Free vibration of axially loaded zigzag and armchair nanobeams using doublet mechanics", *Mechanics Based Design of Structures and Machines*, doi.org/10.1080/15397734.2021.2013878, (Accepted).
3. **2021 Karamanli, A.** "Structural behaviours of zigzag and armchair nanobeams using finite element doublet mechanics", *European Journal of Mechanics - A/Solids*, Vol:89, 104287.
4. **2021 Karamanli, A., Vo, T.** "Finite element model for carbon nanotube-reinforced and graphene nanoplatelet-reinforced composite beams", *Composite Structures*, Vol:264, 113739.
5. **2021 Karamanli, A., Aydogdu, M., Vo, T.** "A comprehensive study on the size-dependent analysis of strain gradient multi-directional functionally graded microplates via finite element model", *Aerospace Science and Technology*, Vol:111, 106550.
6. **2021 Karamanli, A., Aydogdu, M.** "Vibration behaviors of two-directional carbon nanotube reinforced functionally graded composite plates", *Composite Structures*, Vol:262, 113639.
7. **2021 Karamanli, A.** "Radial basis Taylor series method and its applications", *Engineering Computations*, Vol. 38 No. 5, pp. 2354-2393.
8. **2021 Karamanli, A.** "Size-dependent behaviors of three directional functionally graded shear and normal deformable imperfect microplates", *Composite Structures*, Vol:257, 113076.
9. **2021 Karamanli, A., Vo, T.** "A quasi-3D theory for functionally graded porous microbeams based on the modified strain gradient theory", *Composite Structures*, Vol:257, 113066.
10. **2021 Karamanli, A., Vo, T.** "Bending, vibration, buckling analysis of bi-directional FG porous microbeams with a variable material length scale parameter", *Applied Mathematical Modelling*, Vol:91, 723-748.
11. **2020 Karamanli, A., Vo, T.** "Size-dependent behaviour of functionally graded sandwich microbeams based on the modified strain gradient theory", *Composite Structures*, Vol:246, 112401.

12. **2020 Karamanli, A., Aydogdu, M.** "Bifurcation buckling conditions of FGM plates with different boundaries", *Composite Structures*, Vol:245, 112325.
13. **2020 Karamanli, A., Aydogdu, M.** "Structural dynamics and stability analysis of 2D-FG microbeams with two-directional porosity distribution and variable material length scale parameter", *Mechanics Based Design of Structures and Machines*, Vol:48(2), 164-191.
14. **2020 Karamanli, A., Aydogdu, M.** "Vibration of functionally graded shear and normal deformable porous microplates via finite element method", *Composite Structures*, Vol:237, 111934.
15. **2020 Karamanli, A., Aydogdu, M.** "Free vibration and buckling analysis of laminated composites and sandwich microbeams using a transverse shear-normal deformable beam theory", *Journal of Vibration and Control*, Vol:26(3-4), 214-228.
16. **2019 Karamanli, A., Aydogdu, M.** "Size dependent flapwise vibration analysis of rotating two-directional functionally graded sandwich porous microbeams based on a transverse shear and normal deformation theory", *International Journal of Mechanical Sciences*, Vol:159, 165-181.
17. **2019 Karamanli, A., Aydogdu, M.** "On the vibration of size dependent rotating laminated composite and sandwich microbeams via a transverse shear-normal deformation theory", *Composite Structures*, Vol:216, 290-300.
18. **2019 Karamanli, A., Aydogdu, M.** "Buckling of laminated composite and sandwich beams due to axially varying in-plane loads", *Composite Structures*, Vol:210, 391-408.
19. **2018 Karamanli, A., Thuc P. Vo,** "Size dependent bending analysis of two directional functionally graded microbeams via a quasi-3D theory and finite element method", *Composites Part B: Engineering*, Vol:144, 171-183.
20. **2018 Karamanli, A.,** "Free Vibration Analysis of Two Directional Functionally Graded Beams Using a Third Order Shear Deformation Theory", *Composite Structures*, Vol:189, 127-136.
21. **2017 Vo T.P., Thai HT., Nguyen TK., Lanc D., Karamanli A.,** "Flexural analysis of laminated composite and sandwich beams using a four-unknown shear and normal deformation theory", *Composite Structures*, Vol:176, 388-397.
22. **2017 Karamanli, A.,** "Bending Behaviour of Two-Directional Functionally Graded Sandwich Beams by using a Quasi-3D Shear Deformation Theory", *Composite Structures*, Vol:174, 70-86.
23. **2017 Karamanli, A.,** "Elastostatic Analysis of Two-Directional Functionally Graded Beams using Various Beam Theories and Symmetric Smoothed Particle Hydrodynamics", *Composite Structures*, Vol:160, 653-669.

24. **2013 Karamanli, A., Mugan, A.**, “Strong Form Meshless Implementation of Taylor Series Method”, *Applied Mathematics and Computation*, Vol:219, Issue:17, 6069-6080.

b) Peer Reviewed Publications (Non-SCI)

1. **2018 Karamanli, A.**, “Bending Analysis of Two Directional Functionally Graded Beams Using A Four-Unknown Shear and Normal Deformation Theory”, *Journal of Polytechnic*, Vol:21-4, 861-874.
2. **2018 Karamanli, A.**, “Analytical Solutions for Buckling Behavior of Two Directional Functionally Graded Beams Using a Third Order Shear Deformable Beam Theory” *Academic Platform Journal of Engineering and Science*, Vol:6-2, 164-178.
3. **2018 Karamanli, A.**, “Flexure Analysis of Laminated Composite and Sandwich Beams Using Timoshenko Beam Theory” *Journal of Polytechnic*, Vol:21-3, 633-643.
4. **2018 Karamanli, A.**, “Free Vibration and Buckling Analysis of Two Directional Functionally Graded Beams Using a Four-Unknown Shear and Normal Deformable Beam Theory” *Anadolu University Journal of Science and Technology A - Applied Sciences and Engineering*, Vol:19-2, 375-406.
5. **2018 Karamanli, A.**, “Bending analysis of composite and sandwich beams using Ritz method”, *Anadolu University Journal of Science and Technology A - Applied Sciences and Engineering*, Vol:19-1, 10-23.
6. **2017 Karamanli, A.**, “Static Analysis of Reddy-Bickford Composite and Sandwich Beams via Ritz Method”, *Celal Bayar University Journal of Science*, Vol:13-4, 933-942.
7. **2017 Karamanli, E.B., Kilicoglu, H., Karamanli, A.**, “Evaluation of the effects of the dental appliance and skeletal anchored face mask therapies on the craniofacial system by using nonlinear finite element analysis”, *APOS Trends in Orthodontics*, Vol:7 (6), 267-272.
8. **2017 Karamanli, E.B., Kilicoglu, H., Karamanli, A.**, “Evaluation of the effects of the chincup appliance on the craniofacial structures by the finite element analysis” *APOS Trends in Orthodontics*, Vol:7 (5), 219-223.
9. **2017 Karamanli, A.**, “Static Behavior of Two-Directional Functionally Graded Sandwich Beams using Various Beam Theories and the SSPH Method”, *New Trends in Mathematical Sciences*, Vol:5, No:2, 112-147.

10. **2016 Karamanli, A.**, "Deformations of Isotropic Tapered Beams by using Symmetric Smoothed Particle Hydrodynamics Method", *New Trends in Mathematical Sciences*, Vol:4, No:4, 145-162.
11. **2016 Karamanli, A.**, "Elastostatic Deformations of Thick Beams by Using Different Beam Theories and a Meshless Method", *International Journal of Engineering Technologies*, Vol:2, No:3, 83-93.
12. **2016 Karamanli, A.**, "Analysis of Bending Deflections of Functionally Graded Beams by using Different Beam Theories and Symmetric Smoothed Particle Hydrodynamics", *International Journal of Engineering Technologies*, Vol:2, No:3, 105-117.
13. **2015 Karamanli, A.**, "Bending Deflection Analysis of a Semi-Trailer Chassis by Using Symmetric Smoothed Particle Hydrodynamics", *International Journal of Engineering Technologies*, Vol:1, No:4, 134-140.
14. **2015 Karamanli, A.**, "Different Implementation Approaches of the Strong Form Meshless Implementation of Taylor Series Method", *International Journal of Engineering Technologies*, Vol:1, No:3, 95-105, 2015.
15. **2012 Karamanli, A., Mugan, A.**, "Solutions of Two-Dimensional Heat Transfer Problems by Using Symmetric Smoothed Particle Hydrodynamics Method", *Journal of Applied & Computational Mathematics*, 1:4,2012.
16. **2003 Karamanli, A.**, "Total Productive Maintenance and Equipment Improvement I", *AUTOMATION Magazine*, Turkey.
17. **2003 Karamanli, A.**, "Total Productive Maintenance and Equipment Improvement-II", *AUTOMATION Magazine*, Turkey.

c) Peer-reviewed Conference Papers

1. **2021 Karamanli, A., Vo, T.** "Finite element model for carbon nanotube-reinforced and functionally graded multilayer graphene nanoplatelet-reinforced composite beams", 2nd International Conference on Theoretical, Analytical and Computational Methods for Composite Materials and Composite Structures-ICOMP21.
2. **2020 Karamanli, A., Vo, T.** "A quasi-3D theory for functionally graded porous microbeams based on the modified strain gradient theory", *International Conference on Composite Structures-ICCS23*, Portugal.
3. **2020 Karamanli, A., Aydogdu, M.** "Dynamical analysis of two-directional carbon nanotube reinforced functionally graded composite plates", *International Conference on Composite Structures-ICCS23*, Portugal.

4. **2017 Karamanli, A.**, “An analytical solution for static analysis of Two-Directional Functionally Graded Beams using a Quasi-3D Theory”, 4th International Conference on Pure and Applied Sciences: Renewable Energy, Turkey.
5. **2017 Karamanli, A.**, “Elastostatic Analysis of Two-Directional Functionally Graded Sandwich Beams Using Various Beam Theories and a Meshless Method”, International Conference on Composite Structures-ICCS20, France.
6. **2015 Karamanli, A., Topçu, İ., Kaçar, B.**, “On the Calculation of Deflection of a Semi Trailer Chassis Under Various Loading Conditions: An Experimental and Numerical Investigation”, 96-106, AVTECH '15 / III. Automotive and Vehicle Technologies Conference November, Turkey.

d) Thesis

Karamanli, A., “Development of Meshless Methods Based on Differential Transform Method”, İTÜ, Ph.D. Thesis, 2013. (Adviser: Prof.Dr. Ata MUĞAN)

Karamanli, A., “Equipment Improvement Activities of Total Productive Maintenance Continuous Improvement Action Teams”, İTÜ, M.Sc. Thesis, 2003. (Adviser: Dr. Halefşan SÜMEN)

Karamanli, A., “A Controller Design for An Active Suspension System by Using 7 Degrees of Freedom Vehicle Model”, İTÜ, B.Sc. Final Year Project, 2000.

e) Peer reviewer for the following scientific journals

International Journal of Engineering Science

Composite Structures

Applied Mathematical Modelling

Mechanical Systems and Signal Processing

Engineering Analysis with Boundary Elements

Acta Mechanica

The Journal of the Acoustical Society of America

International Journal of Mechanics and Materials in Design

Steel and Composite Structures, An International Journal

Wind and Structures, An International Journal

Mathematical Problems in Engineering

Mathematics

Engineering Computations

Archives of Acoustics

Mathematical Sciences

Advances in Mechanical Engineering
Cogent Engineering
Results in Engineering
Journal of Nanomaterials, Nanoengineering and Nanosystems
Multidiscipline Modeling in Materials and Structures
Composites Part C
Journal of Thermal Engineering
Journal of Applied and Computational Mechanics
Sigma Journal of Engineering and Natural Sciences
Gazi University Journal of Science
International Journal of Engineering Technologies

CERTIFICATIONS&TRAININGS:

- PMP, License No: 1821550, PMI, 2015
- PMP Certification Exam Preparation, Project Education Center, 2013
- TS EN ISO 13485 Medical Devices Quality Management System, NMT, 2013
- APQP, ERNA MAŞ, 2012
- FMEA, ERNA MAŞ, 2012
- NVH (Noise-Vibration-Harshness), Mi-Technology, U.K., 06/2006-10/2006
- Hydraulic, FESTO, 1999
- Pneumatic, FESTO, 1998
- Electro-pneumatic, FESTO, 1998

LANGUANGE:

Fluent in English, Turkish native speaker

COMPUTER SKILLS:

MATLAB, Catia V5, Mathematica, MS Office.