

Curriculum Vitae

1. Full name and date

- Name: S. Mahmoud Mousavi
- Date of writing the CV: October, 2021
- Birth date: March 24, 1983
- Contact details: **Email:** mahmoud.mousavi@angstrom.uu.se
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2. Employments

- 2019-present: Associate Professor in Applied Mechanics, Department of Materials Science and Engineering Uppsala University, Sweden.
- 2016-2019: Senior Lecturer in Mechanical Engineering, Department of Engineering and Physics, Karlstad University, Sweden.
- Jan-Jun 2016: Visiting Postdoctoral Researcher, Department of Engineering Science, University of Oxford, UK
- 2014-2015: Visiting Postdoctoral Researcher, School of Engineering, Aristotle University of Thessaloniki, Greece
- Jun 2014: Visiting Postdoctoral Researcher, Department of Engineering Science, University of Oxford, UK
- 2012-2016: Postdoctoral Researcher and Lecturer, Department of Civil Engineering, Aalto University, Finland

3. PhD degree

- **Date:** 21 Dec 2011, Ph.D. in Mechanical Engineering, Applied Mechanics.
- **University:** Tehran Polytechnic, Tehran, Iran
- **Title:** Antiplane elastodynamic analysis of cracked FGM layers with viscous damping

4. List of acquired external funding

- **2019-2022** Starting grant from Swedish Research Council
Project: Defect engineering in metamaterials based on generalized continuum modeling
Total amount: 3 600 000 SEK
Level of responsibility: Main applicant
- **2018-2019** Knowledge Foundation: KKS, NU17
Project: Web-based courses for international positioning of strategic research groups.
Level of responsibility: co-applicant
Total amount: 6 379 272 SEK
Sub amount for Mahmoud Mousavi: 1 186 000 SEK
- **2012-2016** Aalto University research grant as postdoctoral fellowship (2+3 years)
Project: Size effects in structures
Level of responsibility: main applicant
Total amount: 3 000 000 SEK
- **2016** Foundation for Aalto University Science and Technology; Jubilee Fund, Finland
Project: Dislocation-based Fracture mechanics in Generalized Continuum Mechanics: Experiment and Theory.
Total amount: 60 000 SEK
Level of responsibility: Main applicant
- **2014** General Secretariat of Research and Technology of Greece
Project acronym: Hellenic ERC-13 and ARISTEIA II

Project: Internal Length Gradient Mechanics across Scales and Materials: Theory, Experiments and Applications.

Level of responsibility: co-applicant

5. Distinctions and awards

- **2019** Nomination by Karlstad University for the Wallenberg Academy Fellows program.
- **2018** Nomination by the student union at Karlstad University for the best teacher award.
- **2007-2011** PhD full scholarship by Ministry of Science Research and Technology, Tehran Polytechnic, Iran.
- **2005** Outstanding Undergraduate Student in Mechanical Engineering with the Rank #1 in class, Received a full scholarship for master's programs in mechanical engineering outside of normal application and examination.
- **2005-2007** MSc full scholarship by Ministry of Science Research and Technology, Tehran Polytechnic, Iran.
- **2001** Total rank of 220 among 368404 participants of the nationwide university entrance exam, Received a full scholarship for undergraduate programs.
- **2001-2005** BSc full scholarship by Ministry of Science Research and Technology, Tehran Polytechnic, Iran.

6. Formal university pedagogical and management training

- **2017-2018** A course on "Supervising doctoral and licentiate students", Karlstad University, Sweden.
- **2016** A course on "How to Deliver a Lecture", Mathematical, Physical and Life Sciences Division, University of Oxford.
- **2014** Project management basics, Aalto University Professional Development, Finland.
- **2014** Project management best practices, Aalto University Professional Development, Finland.
- **2013** IPMA (International Project Management Association) Certification Preparation, Aalto University Professional Development, Finland.
- **2012-2014** Formal pedagogical trainings (29 credits), Strategic Support for Research and Education, Aalto University, Finland.

7. Supervision

- **2019-present** Supervisor of PhD students: Danial Molavitabrizi & Rhodel Bengtsson, Uppsala University, Sweden.
- **2019-present** Main supervisor of Bachelor theses (in total 3), Uppsala University, Sweden.
- **2012-2016** Instructor of PhD student: Saba Tahaei Yaghoubi, Aalto University, Finland.
- **2016-2019** Supervisor of Master theses (in total 8), Karlstad University, Sweden.
- **2018-2019** Training program on researcher development, offered by EU-funded Transpeer project organized by universities in Sweden, UK, Norway, and Portugal.

8. Publications

- 43 peer-reviewed journal papers & 26 conference presentations
- Google Scholar: <https://scholar.google.com/citations?user=fOnQMhgAAAAJ&hl=en>
- Researchgate: https://www.researchgate.net/profile/Mahmoud_Mousavi

9. Other scientific merits

- Reviewer of the peer reviewed international journals (21 journals)
- COST Review Panels on Engineering and Technology, nominated by Sweden
- Session chair and organizer of mini- symposiums in international conferences (4 events)
- Member of program council for the Master program of Additive Manufacturing at Uppsala University
- Examiner of Doctoral thesis

Publication lists: S. Mahmoud Mousavi (Dec 2021)

➤ **Peer-reviewed journals**

- 1- Molavitabrizi, D., Ekberg, A., **Mousavi, S.M., 2021**, Computational model for low cycle fatigue analysis of lattice materials: Incorporating theory of critical distance with elastoplastic homogenization. *European Journal of Mechanics - A/Solids*.
- 2- El Dhaba A.R., **Mousavi, S.M., 2021**, Analysis of planes within reduced micromorphic model. *Scientific Report* 11:15537.
- 3- Molavitabrizi, D., **Mousavi, S.M., 2021**, Elasticity of Anisotropic Low-Density Lattice Materials. *ASME Journal of Engineering Materials and Technology* 143:021007-1
- 4- **Mousavi S.M., 2019**, Singularity-free defect mechanics for polar media, *Continuum Mechanics and Thermodynamics* 31:1883–1909.
- 5- Ouakad H.M., El-Borgi, S., **Mousavi S.M., Friswell M.I., 2018**, Static and Dynamic Response of CNT Nanobeam using Nonlocal Strain and Velocity Gradient Theory. *Applied Mathematical Modelling* 62:207–222.
- 6- Tahaei Yaghoubi S., Balobanova V., **Mousavi S.M., Niiranen J., 2018**, Variational formulations and isogeometric analysis for the dynamics of anisotropic gradient-elastic flexible and shear-deformable beams. *European Journal of Mechanics-A/Solids* 69:113–123.
- 7- Salvati E., Brandt L., Papadaki C, Zhang H, **Mousavi S.M., Wermeille D., Korsunsky A.M., 2018**, Nanoscale Structural Damage due to Focused Ion Beam Milling of Silicon. *Materials Letters* 213:346–349
- 8- Kaiyuan L., **Mousavi S.M., Hostikka S., 2017**, Char cracking of medium density fibreboard due to thermal shock effect induced pyrolysis shrinkage. *Fire Safety Journal* 91:165–173.
- 9- Tahaei Yaghoubi S., **Mousavi S.M., Paavola J., 2017**, Buckling of centrosymmetric anisotropic beam structures within strain gradient elasticity. *International Journal of Solids and Structures* 109:84–92.
- 10- Fernandes R., El-Borgi S., **Mousavi S.M., Reddy J.N., Mechmoum A., 2017**, Nonlinear size-dependent longitudinal vibration of carbon nanotubes embedded in an elastic medium. *Physica E: Low-dimensional Systems and Nanostructures* 88:18–25.
- 11- Ayatollahi M., Bagheri R., Nourazar M., Monfared M.M., **Mousavi S.M., 2017**, Analytic solutions of multiple moving cracks in an orthotropic layer bonded to an orthotropic FGM coating. *Applied Mathematics and Computation* 293: 394–403.
- 12- Bagheri R., Ayatollahi M., **Mousavi S.M., 2017**, Stress analysis of a functionally graded magneto-electro-elastic strip with multiple moving cracks. *Mathematics and Mechanics of Solids*, 22:304-323.
- 13- Tahaei Yaghoubi S., **Mousavi S.M., Paavola J., 2017**, Size effects on centrosymmetric anisotropic shear deformable beam structures. *Zeitschrift fuer Angewandte Mathematik und Mechanik* 97:586–601.
- 14- Sourki R., Ayatollahi M., Monfared M.M., **Mousavi S.M., 2016**, Multiple cracks in an elastic half-plane subjected to thermo-mechanical loading. *Iranian Journal of Mechanical Engineering Transactions of the ISME* 17(2):19-45.
- 15- Korsunsky A.M., Guenolé J, Salvati E., Sui T., **Mousavi S.M., Prakash A., Bitzek E., 2016**, Quantifying eigenstrain distributions induced by focused ion beam damage in silicon. *Materials Letters* 185:47-49.
- 16- **Mousavi S.M., Aifantis E.C., 2016**, Dislocation-based gradient elastic fracture mechanics for in-plane analysis of cracks. *International Journal of Fracture* 202(1):93-110.
- 17- **Mousavi S.M., Reddy J.N., Romanoff J., 2016**, Analysis of anisotropic gradient elastic shear deformable plates. *Acta Mechanica*, 227:3639-3656.
- 18- Fernandes R., **Mousavi S.M., El-Borgi S., 2016**, Free and Forced Vibration Nonlinear Analysis of a Nanobeam using Finite Strain and Velocity Gradients Theory. *Acta Mechanica* 227:2657–2670.

- 19- **Mousavi S.M., 2016**, Dislocation-based fracture mechanics within nonlocal and gradient elasticity of bi-Helmholtz type-Part I: Antiplane analysis. *International Journal of Solids and Structures* 87:222–235.
- 20- **Mousavi S.M., 2016**, Dislocation-based fracture mechanics within nonlocal and gradient elasticity of bi-Helmholtz type-Part II: Inplane analysis. *International Journal of Solids and Structures*, 92:105–120.
- 21- Monfared M.M., Ayatollahi M., **Mousavi S.M., 2016**, The mixed-mode analysis of a functionally graded orthotropic half-plane weakened by multiple curved cracks. *Archive of Applied Mechanics* 86:713–728.
- 22- **Mousavi S.M., Korsunsky A.M., 2015**, Non-singular antiplane fracture theory within nonlocal anisotropic elasticity. *Materials and Design*, 25:854–861.
- 23- **Mousavi S.M., Aifantis E.C., 2015**, A Note on Dislocation-based Mode III Gradient Elastic Fracture Mechanics. *Journal of the Mechanical Behavior of Materials* 24:115–119.
- 24- **Mousavi S.M., Paavola J., Reddy J.N., 2015**, Variational approach to dynamic analysis of third-order shear deformable plates within gradient elasticity. *Meccanica* 50:1537-1550.
- 25- **Mousavi S.M., Lazar M., 2015**, Distributed dislocation technique for cracks based on non-singular dislocations in nonlocal elasticity. *Engineering Fracture Mechanics*, 136:79–95.
- 26- **Mousavi S.M., Niiranen J., Niemi A.H., 2015**, Differential cubature method for gradient-elastic Kirchhoff plates. *Journal of Structural Mechanics* 48:164–180.
- 27- Bagheri R., Ayatollahi M., **Mousavi S.M., 2015**, Analytical solution of multiple moving cracks in a functionally graded piezoelectric strip, *Applied Mathematics and Mechanics* 36:777–792.
- 28- **Mousavi S.M., 2015**, Dislocation-based fracture analysis of functionally graded magneto-electro-elastic solids. *Zeitschrift fuer Angewandte Mathematik und Mechanik* 95:1501–1513.
- 29- Tahaei Yaghoubi S., **Mousavi S.M., Paavola J., 2015**, Strain and velocity gradient theory for higher-order shear deformable beams. *Archive of Applied Mechanics*, 85:877–892.
- 30- Bagheri R., Ayatollahi M., **Mousavi S.M., 2015**, Analysis of cracked piezoelectric layer with imperfect non-homogeneous orthotropic coating, *International Journal of Mechanical Sciences*. 93:93–101.
- 31- **Mousavi S.M., Paavola J., 2015**, Analysis of a cracked concrete containing an inclusion with inhomogeneously imperfect interface, *Mechanics Research Communications* 63:1-5.
- 32- **Mousavi S.M., Paavola J., 2014**, Analysis of plate in second gradient elasticity, *Archive of Applied Mechanics* 84:1135–1143.
- 33- **Mousavi S.M., Paavola J., Baroudi D., 2014**, Distributed nonsingular dislocation technique for cracks in strain gradient elasticity, *Journal of the Mechanical Behavior of Materials* 23:47-58.
- 34- **Mousavi S.M., Paavola J., Baroudi D., 2014**, Cracks in strain gradient elasticity: distributed dislocation technique, *Procedia Materials Science*: 3:77–82.
- 35- Baghestani A.M., Fariborz S.J., **Mousavi S.M., 2014**, Low-Frequency Free Vibration of Rods with Finite Strain, *Journal of Applied Nonlinear Dynamics* 3:85–93.
- 36- **Mousavi S. M., Paavola J., 2013**, Analysis of functionally graded magneto-electro-elastic layer with multiple cracks, *Theoretical and Applied Fracture Mechanics*, 66:1–8.
- 37- **Mousavi S.M., Paavola J., 2013**, Analysis of cracked functionally graded piezoelectric strip, *International Journal of Solids and Structures* 50:2449–2456.
- 38- **Mousavi S.M., Fariborz S.J., Paavola J., 2012**, Screw dislocation in functionally graded layers with arbitrary gradation, *Journal of Structural Mechanics* 45:125–132.
- 39- **Mousavi S.M., Fariborz S.J., 2012**, Anti-plane elastodynamic analysis of cracked graded orthotropic layers with viscous damping, *Applied Mathematical Modelling* 36:1626–1638.
- 40- **Mousavi S.M., Fariborz S.J., 2012**, Free vibration of a rod undergoing finite strain, *Journal of Physics: Conference Series* 382:012011.
- 41- **Mousavi S.M., Fariborz S.J., 2011**, Propagation of Anti-plane Shear Waves in a Cracked Graded Strip with Viscous Damping, *Procedia Engineering* 10:792–797.
- 42- **Mousavi S.M., 2011**, Differential cubature method for static solution of laminated shells of revolution with mixed boundary conditions, *Key Engineering Materials* 471:1005–1009.
- 43- **Mousavi S.M., Aghdam M.M., 2009**, Static bending analysis of Laminated cylindrical panels with various boundary conditions using the differential cubature method, *Journal of Mechanics of Materials and Structures* 4:509–521.