

## MASSIMO RUZZENE

Slade Professor of Mechanical Engineering  
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### A. PROFESSIONAL PREPARATION

Politecnico di Torino, Torino Italy - Mechanical Engineering Laurea 1995.

Politecnico di Torino, Torino Italy- Mechanical Engineering Ph.D. 1999.

### B. APPOINTMENTS

2019-Present University of Colorado Boulder, Slade Professor of Mechanical Engineering  
2016-Present Georgia Institute of Technology, Pratt and Whitney Professor of Aerospace Engineering  
2014-2016 National Science Foundation, Program Director – Dynamics, Control and System Diagnostics CMMI Division  
2011-2016 Georgia Institute of Technology, Professor of Aerospace and Mechanical Engineering  
2011 Visiting Professor of Mechanical Engineering, ETH Zurich, Zurich Switzerland  
2009-2011 Georgia Institute of Technology, Associate Professor of Mechanical Engineering  
2007-2011 Georgia Institute of Technology, Associate Professor of Aerospace Engineering  
2007 Politecnico di Milano, Milano Italy, Visiting Professor of Aerospace Engineering  
2002-2007 Georgia Institute of Technology, Assistant Professor of Aerospace Engineering  
1999-2002 Catholic University of America, Assistant Professor of Mechanical Engineering

### C. SELECTED PUBLICATIONS (journal publications>160, citations~10500, and h-index=55)

1. M Miniaci, RK Pal, B Morvan, and M Ruzzene. Experimental observation of topologically protected helical edge modes in patterned elastic plates. *Physical Review X*, 8(3):031074, 2018.
2. Raj Kumar Pal, Julian Rimoli, and Massimo Ruzzene. Effect of large deformation pre-loads on the wave properties of hexagonal lattices. *Smart Materials and Structures*, 25(5):054010, 2016.
3. Raj Kumar Pal, Massimo Ruzzene, and Julian J Rimoli. A continuum model for nonlinear lattices under large deformations. *International Journal of Solids and Structures*, 2016.
4. Erik Andreassen, Hannah R Chang, Massimo Ruzzene, and Jakob Søndergaard Jensen. Optimization of directional elastic energy propagation. *Journal of Sound and Vibration*, 379:53–70, 2016. <sup>[SEP]</sup>
5. L Boldrin, S Hummel, F Scarpa, D Di Maio, C Lira, M Ruzzene, CDL Remillat, TC Lim, R Rajasekaran, and S Patsias. Dynamic behaviour of auxetic gradient composite hexagonal honeycombs. *Composite Structures*, 149:114–124, 2016.
6. Mahmoud I Hussein, Michael J Leamy, and Massimo Ruzzene. Dynamics of phononic materials and structures: Historical origins, recent progress, and future outlook. *Applied Mechanics Reviews*, 66(4):040802, 2014.
7. F Casadei, JJ Rimoli, and M Ruzzene. A geometric multiscale finite element method for the dynamic analysis of heterogeneous solids. *Computer Methods in Applied Mechanics and Engineering*, 263:56–70, 2013.
8. G Trainiti, JJ Rimoli, and M Ruzzene. Wave propagation in periodically undulated beams and plates. *International Journal of Solids and Structures*, 75:260–276, 2015.
9. M Schaeffer and M Ruzzene. Wave propagation in multistable magneto-elastic lattices. *International Journal of Solids and Structures*, 56:78–95, 2015.
10. F Casadei, JJ Rimoli, and M Ruzzene. Multiscale finite element analysis of wave propagation in periodic solids. *Finite Elements in Analysis and Design*, 108:81–95, 2016.

### D. SYNERGISTIC ACTIVITIES

- Member and Fellow: American Society of Mechanical Engineerings (ASME)
- Associate Fellow American Institute for Aeronautics and Astronautics (AIAA)

- Chair of the Vibration and Sound Committee of ASME (2018-2020)
- “Dynamics of Topological Metastructures: Nonlinearities and Quasi-periodicity”, Keynote, Symposium on Metamaterials, SPIE Smart Materials and Structures Conference, Denver CO, March 2019.
- “The Search For Edge States (Boundary Modes) in Mechanical Metamaterials”, Plenary Speaker, Asian Pacific Conference on Structural Health Monitoring, Hong Kong, November 2018.