

## Curriculum Vitae

1. First name: Helle
2. Last name: Hein
3. Current employment: University of Tartu, Institute of Computer Science, Associate Professor of Software Systems
4. Birthdate: 07.02.1951
5. Education: 1974 University of Tartu - 1974  
1993 University of Tartu PhD
6. Language command: English, Russian, German
7. Research and development:  
Natural Sciences and Engineering: Computer Sciences (Dynamical systems; Application of wavelets and neural networks in computational mechanics; Vibrations of elastic delaminated beams and plates; Optimization of plastic plates and shells in the case of static and dynamic loading)
8. Publications -since 2000

1. Hein H and Lellep J. Optimal plastic design of shallow curved beams with step-wise varying cross section. Mech. Struct. and Mach., 2000, 28(4), 355 – 365.
2. Lellep J., Hein H. Optimization of stepped shells subjected to impulsive loading. 4-th Euromech. Solid Mechanics Conference, Metz, 2000 p.549.
3. Hein H., Lellep J. Optimization of plastic shells subjected to impulsive loading. In WCSMO4 - Dalian, China, ISSMO, 2001.
4. J. Lellep, H. Hein Optimization of clamped plastic shallow shells subjected to initial impulsive loading, Engineering Optimization, 2002, 34, N5, 545 – 556.
5. H. Hein Optimal Design of Elastic-Plastic Laminated Beams, WCCM V World Congress on Computational Mechanics, 2002, Vienna, Austria.
6. H. Hein Optimization of strain-hardening plates of piece-wise constant thickness. Short papers of structural and multidisciplinary optimization, 2003, 109-110.
7. H.Hein, Ü.Lepik Stochastic response of some nonlinear oscillators, In Proceedings International Conference – Dynamical Systems and Applications, July 05-10, 2004, Antalya, Turkey, 55.
8. H. Hein, Ü. Lepik Stochastic response of nonlinear oscillators, 5-10 July 2004, Antalya, Turkey – Dynamical Systems and Applications, Proceedings, pp. 395-407.
9. H.Hein Optimization of strain-hardening plates of piece-wise constant thickness (6 pages). Papers of The Fifth World Congress of STRUCTURAL AND MULTIDISCIPLINARY OPTIMIZATION, paper no.104 CD -2005
10. H.Hein. Vibrations of delaminated beams on elastic foundation. NSCM: Proceedings of 17th Nordic Seminar on Computational Mechanics, Stockholm, 2004, 209 – 212.
11. H. Hein, Ü. Lepik The effect of random frequency on chaotic motion of some nonlinear oscillators. Proceedings of Dynamics Days 2005, Berlin 25-28 July, 2005, pp97
12. Ü. Lepik and H. Hein. On response of nonlinear oscillators with random frequency of excitation. Journal of Sound and Vibration, 288, 1-2, 22, 2005, 275-292.
13. H. Hein. The Effect of Delamination on the Natural Frequencies of the Composite Beams on Two-Parameter Foundation. Journal of Structural Mechanics, 38, Nr. 3, 2005, 97 - 100. Special issue for the 8th Nordic Seminar on Computational Mechanics.

14. H. Hein. The Influence of Delamination on the Free Vibrations of Composite Beams on Pasternak Soil. Proc. Estonian Acad. Sci. Phys. Math., 2006, 55, 4, 220–234..
15. H. Hein. Vibrations of composite beams with multiple delaminations. III European Conference on Computational Mechanics Solids, Structures and Coupled problems in Engineering, Lisbon, Portugal, 5–8 June 2006. Full paper in CD, 11p, ECCOMAS, APMTAC, Springer.
16. H. Hein Vibrations of composite beams with multiple delaminations . III European Conference on Computational Mechanics Solids, Structures and Coupled problems in Engineering C.A. Mota Soares et.al. (eds.), Lisbon, Portugal, 5–8 June 2006, Springer, 269.
17. H. Hein The influence of delamination and concentrated masses on the free vibrations of Euler beams on Pasternak soil. Dynamics Days Europe, 2006, 63-64.
18. H. Hein and Ü. Lepik. Response of nonlinear oscillators with random frequency of excitation, revisited. Journal of Sound and Vibration, 301, 3-5, 3, 2007, 1040-1049
19. H. Hein Determination of foundation characteristics of vibrating beams using wavelet transform and neural network, in Wavelet Applications in Industrial Processing V, edited by Frederic Truchelet, Olivier Laligant, Proceedings of SPIE Vol. 6763 (SPIE Bellingham, WA, 2007) 676309, 1-9.
20. H. Hein and Ü. Lepik Regularization of the Trajectories of Dynamical Systems by Adjusting Parameters, in Proceedings Of World Academy Of Science, Engineering And Technology, Volume 33, September 2008, ISSN: 1307-6884, 328-332.