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Curriculum Vitae

Jeppe Cornelius Jönsson
Professor, Head of Section of Structural Engineering, PhD, MSc. in Structural Engineering,
DTU Civil Engineering, Brovej Building 118, DK-2800 Kgs. Lyngby
Date of Birth: 26.02.61 Nationality: Danish

Professional Positions

2009-	Head of Structural Engineering Section at DTU Civil Engineering
2005 -	Professor in Structural Engineering Design at DTU Civil Engineering
2004 - 2005	Associate Professor in Structural Engineering at DTU Civil Engineering
1995 - 2004	Senior Structural Engineer at ES-Consult A/S
1991 - 1995	Assistant Professor in Computational Mechanics and Computer Aided Analysis at Department of Building Technology and Structural Engineering, Aalborg University
1988 - 1991	Structural engineer at Haironville Danmark A/S
1986 - 1988	PhD-student at the Department of Structural Engineering, DTU
1980 - 1986	Student in structural engineering at DTU

Professional highlights

Dr. Jönsson is specialized within the field of static's, dynamics and stability of structures. He has extensive knowledge of the theory of thin-walled steel structures and its application from both research and practical applications. Dr. Jönsson has practical experience with design of large steel structures and earthquake analysis of high rise structures. Further he has experience with dynamic analysis and load determination in relation to rhythmic human loading. Design of glass structures is also part of the research and teaching curriculum. Dr. Jönsson has performed research in distortion of thin-walled steel beams and initiated research on plastic stability analysis of steel structures. Currently his focus is on light weight steel structures and distortional mechanics as well as the advanced structural steel design of bridge decks with biaxial loads. Dr. Jönsson is responsible for the steel courses at DTU. Dr. Jönsson is a member of the IDA board for approval of licensed engineers , i.e. "Statikeranerkendelsesudvalget" and also a member of the board of the Danish Steel Institute (DSI).

Experience as supervisor

1991-1995 Supervisor for numerous 7-9 term semester projects and 2 master projects, AUC.
2005- Supervisor of numerous master and bachelor exam projects, DTU
2006-2010 Supervisor of PhD project on *Facetted glass shell*, PhD Anne Bagger, DTU
2006-2011 Co-supervisor of PhD project on *Pedestrian loading*, PhD-student Einar Ingolfsson, DTU
2008-2012 Supervisor of PhD project on *Generalized dist. beam theory*, PhD-student Michael Joachim Andreassen, DTU
2009- Co-supervisor of PhD project on *Structural design of light weight composite floor and roof panels*, PhD-student Ieva Paegle, DTU

Chairman and examiner for PhD assessment

2007 Modelling of Concrete Fracture Applying the eXtended Finite Element Method, PhD Jesper L. Asferg, DTU Civil Engineering
2007 Rigid-Plastic Seismic Design of Reinforced Concrete Structures, PhD João Luis Domingues Costa, DTU Civil Engineering.
2007 Theory of Plasticity for Steel Structures - Solutions for Fillet Welds, Plate Girders and Thin Plates, PhD Thomas Hansen , DTU Civil Engineering.
2009 *Tempered Glass – Bolted Connections and Related Problems*, PhD Jens Henrik Nielsen, DTU Civil Engineering.

Publications

1. L.H. Lárusson, G Fischer & J. Jönsson. Prefabricated floor panels composed of fiber reinforced concrete and a steel substructure. *Engineering Structures*, Vol. 46, 104-115, 2013.
2. M.J. Andreassen & J. Jönsson. A distortional semi-discretized thin-walled beam element. *Thin-Walled Structures*, 62, 142-157, 2013.
3. J. Jönsson & T.B. Højer. Analysis of Biaxially Stressed Bridge Deck Plates. In: *Proceedings of Nordic Steel Construction Conference 2012*, Norwegian Steel Association, 229-238, 2012.
4. J. Jönsson & G. Ramonas. Flange Curling in Cold Formed Profiles. In: *Proceedings of Nordic Steel Construction Conference 2012*, Norwegian Steel Association, 801-810, 2012.
5. M.J. Andreassen & J. Jönsson. Distortional buckling modes of semi-discretized thin-walled beams. *Thin-Walled Structures*, 51, 53-63, 2012.
6. M.J. Andreassen & J. Jönsson. Distortional solutions for loaded semi-discretized thin-walled beams. *Thin-Walled Structures*, 50(1), 116-127, 2012.
7. J. Jönsson & M.J. Andreassen. A Semi-Discretization Approach to Generalized Beam Theory and Analytical Solutions of the Generalized Column Equations. In: *Proceedings of the 8th European Solid Mechanics Conference*, ed. /Gerhard A. Holzapfel; Ray W. Ogden, 2012.
8. E.T. Ingólfsson, C.T. Georgakis & Jeppe Jönsson. Pedestrian-induced lateral vibrations of footbridges – A literature review. *Engineering Structures*, 45 21-52, 2012.
9. E.T. Ingólfsson, C.T. Georgakis, J. Jönsson & F. Ricciardelli. Pedestrian-induced lateral forces on footbridges. In: Noise & Vibration Bulletin, 63-69, 2012.
10. A. Jahanpour, J. Jönsson & H. Moharrami. Seismic behavior of semi-supported steel shear walls. *Journal of Constructional Steel Research*, 74, 118-133, 2012.
11. J. Jönsson & T.H. Bondum. Analysis of biaxially stressed bridge deck plates. *Proceedings of Nordic Steel Construction Conference 2012*, 229-238, 2012.
12. J. Jönsson & G. Ramonas. Flange curling in cold formed profiles. *Proceedings of Nordic Steel Construction Conference 2012*, 801-809, 2012.
13. J. Jönsson & M.J. Andreassen. A semi-discretization approach to generalized beam theory and analytical solutions of the generalized column equations. *Proceedings of the 8th European Solid Mechanics Conference, EuroMech*, 2012
14. J. Jönsson & M.J. Andreassen. Distortional eigenmodes of homogeneous solutions for semi-discretized thin-walled beams. *Thin-Walled Structures*, 49(6), 691-707, 2011.
15. M.J. Andreassen & J. Jönsson. Distortional eigenmodes and solutions for thin-walled beams. In *Thin-walled Structures: Recent Research Advances and Trends*, D. Dubina, V. Ungureanu (Eds), ICTWS 2011 Conference, Timisoara, Romania, 2011.
16. L. H.Lárusson, G.Fischer & J. Jönsson. Mechanical interaction between concrete and structural reinforcement in the tension stiffening process. In High Performance Fiber Reinforced Cement Composites 6. Springer, (RILEM Bookseries), 2011.
17. E.T. Ingólgsson, C. Georgakis, F. Riciardelli & J. Jönsson. Experimental identification of pedestrian-induced lateral forces on footbridges. *Journal of Sound and Vibration*, 330(6), 1265-1284, 2011.
18. E.T. Ingólgsson, C. Georgakis & J. Jönsson. Pedestrian-induced lateral forces on footbridges. *Noise & Vibration Worldwide*, 42(8), 11-17, 2011.
19. A. Jahanpour, J. Jönsson & H. Moharrami. An experimental investigation of the seismic behavior of semi-supported steel shear walls. *Proceedings of the Fourth International Conference on Structural Engineering Mechanics and Computation*, SEMC, SRC Press, Cape Town, South Africa, 2010
20. J. Jönsson & M.C. Andreassen. Distortional Modes of Thin-Walled Beams. *Proceedings of the 7th EUROMECH Solid Mechanics Conference, ESMC2009*, Lisbon, 2009
21. J. Jönsson. Diaphragm Action in Thin-Gauge Steel SkanDek Roof Elements: Modeling and Experimental Investigation. *Proceedings of the 7th EUROMECH Solid Mechanics Conference*, ESMC2009, Lisbon, 2009

22. G. Fischer, L.H. Lárusson & Jeppe Jönsson. Prefabricated floor and roof panels with engineered cementitious composites (ECC). In *Conference proceedings of ASCE Structures Congress*. Austin, Texas, USA, 2009

23. L.H. Lárusson, G. Fischer & J. Jönsson. Mechanical Interaction of ECC with Fiber Reinforced Polymer (FRP) rebar in tensile loading. *Conference Proceedings of Advanced Concrete Materials Conference. Stellenbosch*, Republic of South Africa, 2009

24. L.H. Lárusson, G. Fischer & J. Jönsson. Application of Engineered Cementitious Composites (ECC) in modular floor panels. *7th RILEM International Symposium on Fibre Reinforced Concrete*, BEFIB, Chennai (Madras), India, 2008

25. J. Jönsson. Rigid-Plastic Post-Buckling Analysis of Columns and Quadratic Plates. In Mahendran, M. (Ed.), *Thin-walled Structures: Recent Innovations and Developments*, p.1145-1152, 2008.

26. J. Jönsson. Rigid-plastic stability analysis of slender quadratic plates, *Proceedings of the Third International Conference on Structural Engineering Mechanics and Computation, SEMC*, Millpress, September 2007.

27. A. Bagger, J. Jönsson & T. Wester. Investigation of stresses in facetted glass shell structures. In: *Shell and Spatial Structures: Structural Architecture: Towards the future looking to the past*, IASS Symposium 2007.

28. A. Bagger, J. Jönsson, H. Almegaard & T. Wester. Facetted Shell structure of glass, in proceedings of the *Glass Performance days*, Tampere, Finland, 111-114, june 2007.

29. E.T. Ingólfsson, C. Georgakis, J. Jönsson & F. Ricciardelli. Vertical footbridge vibrations: Towards an improved and codifiable response evaluation, *Proceedings of the Third International Conference on Structural Engineering Mechanics and Computation, SEMC*, Millpress, September 2007.

30. J. Jönsson. Distortional Theory of Thin-walled Beams. *Thin-walled Structures*, Vol. 33, No. 4, 245-268, 1999.

31. J. Jönsson. Distortional Warping Functions and Shear Distributions in Thin-walled Beams. *Thin-walled Structures*, Vol. 33, No. 4, 245-268, 1999.

32. J. Jönsson. Determination of Shear Stresses, Warping Functions and Section Properties of Thin-walled Beams using Finite Elements. *Computers & Structures*, Vol. 68, 393-410, 1998.

33. J. Jönsson & L. Pilegaard Hansen. *The Structural Influence on Repetitive Vertical Human Loading*, R9804 & R9805, Department of Building Technology and Structural Engineering, Aalborg University, February 1998.

34. J. Jönsson. *Repetitive Vertical Human Loading, Part I - Theoretical Investigation*, R9753, Department of Building Technology and Structural Engineering, Aalborg University, September 1997.

35. J. Jönsson & L. Pilegaard Hansen. *Repetitive Vertical Human Loading, Part II - Experimental Investigation*, R9754, Department of Building Technology and Structural Engineering, Aalborg University, September 1997.

36. J. Jönsson. Computational Investigation of Repetitive Vertical Human Loading, in the proceedings of *Ninth Nordic seminar on computational mechanics*, Technical University of Denmark, 1996.

37. J. Jönsson, E. Svensson & J. T. Christensen. Strain Gauge Measurement of Wheel-Rail Interaction Forces, *Journal of Strain Analysis*, Vol. 32, No. 3, 183-191, 1997.

38. S. Krenk, J. Jönsson & L. P. Hansen. Fatigue Analysis and Testing of Adhesive Joints. *Engineering Fracture Mechanics*, Vol. 53, No. 6, 859-872, 1996.

39. Hededal, J. Jönsson, E. A. Jensen, & H. V. Vedstesen. Elasto-Plastic Model for Concrete, *Eighth Nordic Seminar on Computational Mechanics*, Department of Structural Mechanics, Chalmers University of Technology, Sweden, November 1995.

40. J. Jönsson. *Continuum Mechanics of Beam and Plate Flexure*, Department of Building Technology and Structural Engineering, Aalborg University, (222 pages), July 1995.

41. L. P. Hansen & J. Jönsson. *Statiske og Dynamiske Forsøg med Tribuneelement fra Aalborg Stadion.* (ISSN 0902-7513 R9501), Department of Building Technology and Structural Engineering, Aalborg University, January 1995.

42. S. Krenk, L. P. Hansen & J. Jönsson. Crack Growth and Fatigue Life of Adhesive Aluminum Joints. Proceedings from the *Sixth International Conference on Aluminum Weldments*, INALCO, April 1995.

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45. P. Leylde, J. Jönsson & S. Krenk. FEM Stress Determination by Virtual Work. *Seventh Nordic Seminar on Computational Mechanics,* ed. by Kollbein Bell. ISBN 82-7482-017-7, Department of Structural Engineering, Then Norwegian Institute of Technology, Trondheim, Norway, 1994, pp. 22-25

46. J. Jönsson & L. Pilegaard Hansen. Man-Induced Vibrations. *Dynamics of structures a workshop on dynamic loads and response of structures and soil dynamics.* Aalborg University, Denmark, September 1994.

47. L. P. Hansen, S. Krenk, J. Jönsson, L. Thesbjerg & J. Lyngbye. *Fatigue Tests on Aluminum Adhesive Joints,* EUREKA 269, Department of Building Technology and Structural Engineering, Aalborg University, 1993.

48. J. Jönsson, S. Krenk and L. Damkilde. A Hybrid Displacement Plate Element for Bending and Stability Analysis. *Computers & Structures.* Vol. 48, no. 6, pp. 1125-1139, 1993.

49. J. Jönsson, S. Krenk and L. Damkilde. A Hybrid Displacement Plate Element. *Fifth Nordic Seminar on Computational Mechanics,*ed. by Kirsten Aakjær. ISSN 0902-7513 R9231, Department of Building Technology and Structural Engineering, University of Aalborg, Denmark, 1992, pp. 162-166.

50. J. Jönsson, Distortional Lateral Buckling of Z and C Purlins. *Nordic Steel Colloquium on Research and Development within the Field of Steel Construction.* The Danish Steel Institute, Odense, Denmark, 1991, pp. 217-228.

51. J. Jönsson, S. Krenk and L. Damkilde. The Semi-Loof Element for Plate Instability. *Fourth Nordic Seminar on Computational Mechanics*, Lund University, Sweden, 1991.

52. J. Jönsson. *Recursive Finite Elements for Buckling of Thin- Walled Beams*, Ph.D. thesis (204 pages). Report series R263, Department of Structural Engineering, Technical University of Denmark, 1990.

53. J. Jönsson. *Rammer opbygget af tyndpladeprofiler del* 1 *og* 2, master's thesis from the Department of Structural Engineering, Technical University of Denmark, 1986.