

Curriculum Vitae, Lars Damkilde

Employments

2023 - present : Professor in Structural Mechanics at Aarhus University

2010 - 2019: Head of Division for Structural Mechanics, Materials and Geotechnics, Department of Civil Engineering, Aalborg University.

2008 - 2010: Head of Division for Structural Mechanics, Department of Civil Engineering, Aalborg University.

2011 - 2015: Head of Danish Centre for Risk and Safety Management, Aalborg University.

2007 - may, june: Visiting Professor at Laboratoire de Génie Civil et Génie Mécanique (LGCGM, Geomechanics and Structures Group), Institut National des Sciences Appliquées de Rennes (INSA), France.

2002 - 2007: Head of Section for Structural and Mechanical Engineering, Esbjerg Institute of Technology.

2001 - 2023 : Professor in Structural Mechanics at Aalborg University.

1999 - august, september: Visiting Professor at Department of Building Technology and Structural Engineering, Aalborg University.

1988 - 2001 : Associate Professor at Department of Structural Engineering, Technical University of Denmark.

1987 : Parttime at Technological Institute.

1985 - 1987 : Assistant Professor at Department of Structural Engineering, Technical University of Denmark.

1982 - 1984 : Associate Professor at the Department of Mechanical Engineering, Danish Engineering Academy. (1. year as assistant professor).

1980 - 1981 : Research assistant at "ADB-Udvalget".

1980 : Employed at a private company "i-68".

1977 - 1979 : Ph.D. Student at Department of Structural Engineering, Technical University of Denmark.

1983 : Ph.D. (Lic. Techn.).

1977 : M.Sc. (in Structures).

1953 : Born.

Awards

Received the Royal decoration in danish called Ridder af Dannebrogordenen, 2012.

Received the Professor Ostenfeld Medal, 2000.

Received price from Martha og Paul Kern-Jespersens Fond, 1994.

Patents and similar

[1] WO2011006506 Foldable Frame Supporting Electromagnetic Radiation Collectors

[2] WO2012092933 Self-Deployable Deorbiting Space Structure

[3] DK 2007 00186 U3 Brugsmodekskrift, Mellemlæg til effektiv indfrysning af produkter/varer (in danish).

Papers in International Journals with review - registered in Web of Science

[88] Sina Farahani, Amir.H Akhaveissy and L. Damkilde, "Towards a modified displacement-based seismic design of braced reinforced concrete frame structures considering soil structure interaction", submitted for possible publication in Structures, 2024.

[87] Sven Krabbenhoft and Lars Damkilde, "Design of rectangular footings in cohesionless soil subject to torsion", accepted for publication in International Journal of Geomechanics, 2024.

[86] J. Nielsen, K.S. Jepsen and L. Damkilde, "A Numerical Implementation of a General Plasticity Model Unifying Several Classical Models", submitted for possible publication in International Journal for Numerical and Analytical methods in Geomechanics, 2022.

[85] Sina Farahani, Amir.H Akhaveissy and L. Damkilde, "Equivalent viscous damping for buckling-

restrained braced RC Frame structures", *STRUCTURES* Vol. 34 , pp.1229-1252, 2021.

[84] E. Peri, S.D. Nielsen, B.N. Nielsen and L. Damkilde, "Experimental evaluation of time effect on swelling pressure in high plasticity clay", *IOP Conference Series: Earth and Environmental Science*, Volume 710, 18th Nordic Geotechnical Meeting, Helsinki, Finland, 2021. Peri

[83] B.A. Qadri, M.D. Ulriksen, L. Damkilde and D. Tcherniak, "Cointegration for Detecting Structural Blade Damage in an Operating Wind Turbine: An Experimental Study", *Dynamics of Civil Structures*, Vol. 2, pp 173-180, 2020.

[82] M. Taghva and L. Damkilde, "Estimation of bending stresses in piping systems subjected to transient pressure", *ASME 2020 Pressure Vessels and Piping Conference*, PVP 2020, 2020.

[81] S. Gres, P. Andersen and L. Damkilde, "Operational Modal Analysis of Rotating Machinery", *Rotating Machinery, Vibro-Acoustics & Laser Vibrometry*, Vol. 7, pp 67-75, 2019.

[80] S. Gres, P. Andersen, C. Hoen and L. Damkilde, "Orthogonal Projection-Based Harmonic Signal Removal for Operational Modal Analysis", *Structural Health Monitoring, Photogrammetry & DIC*, Volume 6 pp 9-21, 2019.

[79] S. Gres, M. Dohler, P. Andersen, L. Damkilde and L. Mevel, "HANKEL MATRIX NORMALIZATION FOR ROBUST DAMAGE DETECTION", *8th International Operational Modal Analysis Conference (IO-MAC)*, pp. 147-154, 2019.

[78] S. Krabbenhoft, L. Damkilde and K. Krabbenhoft, "A contribution to a new bearing capacity equation in cohesionless soil", *ADVANCES IN ENGINEERING MATERIALS, STRUCTURES AND SYSTEMS: INNOVATIONS, MECHANICS AND APPLICATIONS*, pp. 2247-2252, 2019.

[77] M.E. Nielsen, B. Fornberg and L. Damkilde, "A HIGH-ORDER AND MESH-FREE COMPUTATIONAL MODEL FOR NON-LINEAR WATER WAVES", *MARINE 2019: COMPUTATIONAL METHODS IN MARINE ENGINEERING VIII: VIII INTERNATIONAL CONFERENCE ON COMPUTATIONAL METHODS IN MARINE ENGINEERING*, 2019

[76] D. Parigi and L. Damkilde, "Multi-objective optimization of reciprocal timber layouts from reclaimed stock elements", *60th Anniversary Symposium of the International-Association-for-Shell-and-Spatial-Structures (IASS SYMPOSIUM) / 9th International Conference on Textile Composites and Inflatable Structures (STRUCTURAL MEMBRANES)*, Barcelona, SPAIN,2019.

[75] D. Parigi and L. Damkilde, "Multi-dimensional form finding: structure, construction and sustainability", *Proceedings of the 4th International Conference on Structures and Architecture*, 2019.

[74] M. Samusev, M.D. Ulriksen and L. Damkilde, "A numerical study of vibration-based scour detection in offshore monopile foundations", *ADVANCES IN ENGINEERING MATERIALS, STRUCTURES AND SYSTEMS: INNOVATIONS, MECHANICS AND APPLICATIONS*, pp. 1976-1981, 2019.

[73] M.D. Ulriksen, D. Bernal and L. Damkilde, "Shaped input distributions for structural damage localization", *Mechanical Systems and Signal Processing*, Vol. 110. pp. 499-508, 2018.

[72] M.S. Jepsen and L. Damkilde, "A direct and fully general implementation of influence lines/surfaces in Finite Element software", *Advances in Engineering Software*, Vol. 120, pp. 55-61, 2018.

[71] M.S. Jepsen, L. Damkilde, I. Lovgren and C.G. Berrocal, "Adaptive inverse analysis (AIA) applied and verified on various fiber reinforced concrete composites", accepted for publication in *Materials and Structures*, 2018.

[70] S. Gres, P. Andersen, R.J. Johansen, M.D. Ulriksen and L. Damkilde, "A comparison of damage detection methods applied to civil engineering structures", *Experimental Vibration Analysis for Civil Engineering Structures : Testing, Sensing, Monitoring, and Control*, Springer, pp. 306-316, 2018.

[69] M. Taghva and L. Damkilde, "Analysis of Transient Two-Phase Flow in Pressure Safety Valve Outlet Headers", *Proceedings of the 5th Joint US-European Fluids Engineering Summer Conference, FEDSM2018 ASME*, Montreal, 2018.

[68] M.D. Ulriksen, D. Tcherniak, L.M. Hansen, R.J. Johansen, L. Damkilde and L. Frøyd, "In-situ damage localization for a wind turbine blade through outlier analysis of SDDL-induced stress resultants", *Online, Structural Health Monitoring*, 2017.

[67] E.S. Sørensen, J. Clausen and L. Damkilde, "Comparison of numerical formulations for the modelling of tensile loaded suction buckets", Vol. 83, pp. 198-208, *Computers and Geotechnics*, 2017.

- [66] S. Gres, M.D. Ulriksen, Michael Dohler, R.J.Johansen, P. Andersen, L. Damkilde and S.A. Nielsen, "Statistical methods for damage detection applied to civil structures", *Procedia Engineering*, The X International Conference on Structural Dynamics, EUROODYN 2017 - Sapienza University of Rome, 2017.
- [65] A.S. Kristensen, M.D. Ulriksen and L. Damkilde "Self-deployable Deorbiting Space Structure for Active Debris Removal", *Journal of Spacecraft and Rockets*, Vol. 54, pp. 322-325, 2017.
- [64] M.E. Nielsen, M.D. Ulriksen and L. Damkilde, "SOFIA - A simulation tool for bottom founded and floating offshore structures", *Procedia Engineering*, The X International Conference on Structural Dynamics, EUROODYN 2017 - Sapienza University of Rome, 2017.
- [63] M.D. Ulriksen, D. Bernal, M.E. Nielsen and L. Damkilde, "Damage localization in offshore structures using shaped inputs", *Procedia Engineering*, The X International Conference on Structural Dynamics, EUROODYN 2017 - Sapienza University of Rome, 2017.
- [62] M.S. Jepsen and L. Damkilde and I. Lovgren, "A fully general and adaptive inverse analysis method for cementitious materials", Accepted for publication in *Materials and Structures*, Vol. 49, pp. 4335-4348, 2016.
- [61] M.D.Ulriksen, D. Tcherniak, P.H. Kirkegaard and L. Damkilde, "Operational Modal Analysis and Wavelet Transformation for Damage Identification in Wind Turbine Blades", *Proceedings of 7th European Workshop on Structural Health Monitoring: July 8-11, 2014. Universite de Nantes*, 8 p., 2014. *Structural Health Monitoring*, Vol. 15, pp. 381-388, 2016. (also in *Proceedings of the Workshop*).
- [60] M.D. Ulriksen and L. Damkilde, "Structural damage localization by outlier analysis of signal-processed mode shapes - Analytical and experimental validation", *Mechanical Systems and Signal Processing*, Vol. 68-69, pp. 1-14, 2016.
- [59] S.H. Lambertsen, L. Damkilde and M.S. Jepsen, "Fatigue of thin walled tubes in copper alloy CuNi10", *Ships and Offshore Structures*, Vol. 11, pp. 75-80, 2016.
- [58] S. Gres, M. Fejerskov, L.B. Ibsen and L. Damkilde, "Experimental damping assessment of a full scale offshore mono bucket foundation", *Proceedings of ISMA2016: International conference proceedings on noise and vibration engineering*, Leuven, 2016.
- [57] S. Krabbenhøft, L. Damkilde and K. Krabbenhøft, "Effect of slope height and horizontal forces on the bearing capacity of strip footings near slopes in cohesionless soil", *Research and Applications in Structural Engineering, Mechanics and Computation: proceedings of the sixth international conference on structural engineering, mechanics and computation*, 2016.
- [56] A.S. Zurkinden, S.H. Lambertsen, L. Damkilde, Z. Gao and T. Moan, "Fatigue Analysis of a Point Absorber WEC subjected to Passive and Reactive Control", *ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2014)*, American Society of Mechanical Engineers, 2014.
- [55] E.S. Sørensen, J. Clausen and L. Damkilde, "Finite element implementation of the Hoek-Brown material model with general strain softening behavior", *International Journal of Rock Mechanics and Mining Sciences*, Vol. 78, pp. 163-174, 2015.
- [54] J. Clausen, L. Damkilde and L. Andersen, "Robust and efficient handling of yield surface discontinuities in elasto-plastic finite element calculations", *Engineering Computations*, Vol. 32, pp. 1722 - 1752, 2015.
- [53] L.M. Hansen, R.J. Johansen, M.D. Ulriksen, D. Tcherniak, Dmitri and L. Damkilde, "Statistical evaluation of characteristic SDDLV-induced stress resultants to discriminate between undamaged and damaged elements.", *11th International Conference on Damage Assessment of Structures (DAMAS 2015)*.
- [52] R.J. Johansen, L.M. Hansen, M.D. Ulriksen, D. Tcherniak and L. Damkilde, "Damage localization in a residential-sized wind turbine blade by use of the SDDLV method.", *11th International Conference on Damage Assessment of Structures (DAMAS 2015)*.
- [51] M.D. Ulriksen and L. Damkilde, "Damage localization by statistical evaluation of signal-processed mode shapes.", *11th International Conference on Damage Assessment of Structures (DAMAS 2015)*.
- [50] M.D. Ulriksen, D. Tcherniak, L. Damkilde, "Damage detection in an operating Vestas V27 wind turbine blade by use of outlier analysis", *2015 IEEE WORKSHOP ON ENVIRONMENTAL, ENERGY AND STRUCTURAL MONITORING SYSTEMS (EESMS)*, pp. 50-55, 2015.
- [49] S. Krabbenhoft, L. Damkilde and K. Krabbenhoft, "Bearing capacity of Strip Footings in Cohesionless Soil Subjected to Eccentric and Inclined Loads", *International Journal of Geomechanics*, Vol 14., No 3,

pp. 18, 2014.

[48] A.S. Zurkinden, M.S. Jepsen, M.T. Sichani and L. Damkilde, "Nonlinear motion analysis of the wavestar wave energy converter with a focus on the structural responses", ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering, OMAE, 2014.

[47] J.F. Skov, M.D. Ulriksen, K.A. Dickow, P.H. Kirkegaard and L. Damkilde, "On Structural Health Monitoring of Wind Turbine Blades", Damage Assessment of Structure X: 10th International Conference on Damage Assessment of Structures (DAMAS 2013), Vol. 1, pp. 628-635, 2013.

[46] M.D. Ulriksen, J.F. Skov, K.A. Dickow, P.H. Kirkegaard and L. Damkilde, "Modal Analysis for Crack Detection in Small Wind Turbine Blades", Damage Assessment of Structure X: 10th International Conference on Damage Assessment of Structures (DAMAS 2013), Vol. 1, pp. 603-610, 2013.

[45] A.S. Zurkinden, S.H. Lambertsen, L. Damkilde, Z. Gao and T. Moan, "Fatigue Analysis of a Wave Energy Converter Taking into Account Different Control Strategies", Proceedings of the ASME 2013, 32nd International Conference on Ocean, Offshore and Arctic Engineering, Nantes, France, 2013.

[44] A.S. Zurkinden, L. Damkilde, Z. Gao and T. Moan, "Structural Modeling and Analysis of a Wave Energy Converter Applying Dynamical Substructuring Method", ASME 2013 32nd International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2013), American Society of Mechanical Engineers, 2013.

[43] "Self deployable deorbiting space structure (SDDS) for use in e.g. spacecraft, satellites, has flexible frame which is twistable into at least loops and two loops being foldable into overlapping configuration", Patent Number: WO2012092933-A1, Patent Assignee: UNIV AALBORG.

[42] S. Krabbenhoft, L. Damkilde and K. Krabbenhoft, "Lower Bound calculations of the bearing capacity of Eccentrically loaded Footings in Cohesionless Soil", Canadian Geotechnical Journal, Vol. 49, pp. 298-310, 2012.

[41] A.S. Kristensen and L. Damkilde, "Stowing method of flexible frame supporting collector of electromagnetic radiations by deforming by twisting and folding flexible frame into stressed configuration to reduce its size, and maintaining flexible frame in stressed configuration", Patent Number: WO2011006506-A1, Patent Assignee: UNIV AALBORG.

[40] Damkilde L. and Pedersen R.R., "A new accurate yet simple shear flexible triangular plate element with linear bending strains", Proceedings of the Thirteenth International Conference on Civil, Structural and Environmental Engineering Computing, Civil-Comp Press, 2010. pp. 14.

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[38] S. Krabbenhoft, L. Damkilde and A. Andersen, "Field tests with drilled shafts in tension in frictional soil", Deep foundations on bored and auger piles, pp. 257-262, 2009.

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[33] Damkilde, L., "Numerical Limit Analysis: An Engineering Tool for Both Ultimate Limit Load Analysis and Optimal Material Layout", Invited lecture. Civil Engineering: Tools and Techniques, 2007, pp. 199-216, 2007.

[32] Frandsen, H.L., Svensson S. and Damkilde, L.: "A Hysteresis Model Suitable for Numerical Simulation of Moisture Content in Wood", Holzforschung, Vol. 61, pp. 175-181, 2007.

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- [30] Krabbenhøft, K., Damkilde, L. and Nazem, M. "An implicit mixed enthalpy-temperature method for phase-change problems", *Heat and Mass Transfer*, Vol. 43, Issue 3, pp. 233-241, 2007.
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- [28] Clausen, J. and Damkilde, L. "Slope safety factor calculations with non-linear yield criteria using finite elements", *Numerical Methods in Geotechnical Engineering*, 2006, pp. 491-496.
- [27] Krabbenhøft, K., Damkilde, L. and Krabbenhøft, S. "Ultimate limit state design of sheet pile walls by finite elements and nonlinear programming", *Computers & Structures*, Vol. 83, No 4-5, pp. 383-393, 2005.
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- [62] M.E. Nielsen, B. Fornberg and L. Damkilde, "A high-order and mesh-free computational model for non-linear water waves", *Proceedings of MARINE 2019: VIII International Conference on Computational Methods in Marine Engineering*, 2019.
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- [58] D. Parigi and L. Damkilde, "Geometric vs. structural form finding in reciprocal structures", Proceedings of the IASS Annual Symposium 2018 Creativity in Structural Design, MIT, Boston, USA, 2018
- [57] R. Skov, D. Parigi and L. Damkilde, "Form vs. Performance: An intuitive GUI for negotiating multi-objective design choices", Proceedings of the IASS Annual Symposium 2018 Creativity in Structural Design, MIT, Boston, USA, 2018.
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- [3] Damkilde, L og Kirk, J. : "RUPTUS - et program til brudstadieregninger", ADB-Udvalget, Rapport No. 8115, pp. 114, 1981.
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- [1] Byskov, E og Damkilde, L. : "Stabilitet af søjler", ABK, DTH, Serie F. No. 85, pp. 69, 1980.

Teaching Notes

In the following the author is Lars Damkilde, if nothing else is stated.

- [21] Damkilde, L. and Poulsen, P.N., Deformationsmetoden for rammekonstruktioner, BYG·DTU, pp. 74, 2002.
- [20] Stress and stiffness analysis of beam-sections, BKM, DTU, pp. 32, 2000.
- [19] Bjælker på elastisk underlag, BKM, DTU, pp. 12, 1998.
- [18] Forskydningsfleksible bjælker, BKM, DTU, pp. 5, 1998.
- [17] Introduktion til dynamik, BKM, DTU, pp. 31, 1998.
- [16] An introduction to computational analysis for structures of perfect material, ABK, DTU, pp. 38, 1995.
- [15] Influenzlinier, ABK, DTU, pp. 23, 1995.
- [14] Cosmos - rammeberegninger, ABK, DTU, pp. 61, 1994.
- [13] En introduktion til beregning af rammekonstruktioner med lineært-elastisk/ideal-plastisk materiale-opførelse, ABK, DTU, pp. 26, 1993.
- [12] Elementmetodeformulering af tyndvæggede bjælker, ABK, DTU, pp. 30, 1993.
- [11] En introduktion til tyndvæggede bjælker, ABK, DTU, pp. 12, 1992.
- [10] PAFEC - Rammeberegninger, ABK, DTH, pp. 46, 1989.
- [9] PAFEC - Afvikling af job, ABK, DTH, pp. 16, 1989.
- [8] Applikationsprogrammering, ABK, DTH, pp. 7, 1989.
- [7] Parametrisk Konstruktion, ABK, DTH, pp. 15, 1989.
- [6] Introduktion til databaser, ABK, DTH, pp. 47, 1988.
- [5] Damkilde, L og Riberholt, H. : Trækonstruktioner - opgavesamling, ABK, DTH, pp. 35, 1987.
- [4] Kort introduktion til DOS, ABK, DTH, pp. 16, 1987.
- [3] Introduktion til elementmetoden, Noter til kursus 5947, Offshorekonstruktioner, ABK, DTH, pp. 36, 1985.
- [2] Introduktion til CAD/CAM systemet EUCLID, pp. 55, DIA-M, 1984.
- [1] Noter til Mekanik-undervisningen (Statik og dynamik), DIA-M, pp. 24, 1983.

Computer Systems

- [1] Timber-design. Bjlím, Skarpram, Krumram. See User Guide.
- [2] LimitS-Frame, Plate, Stringer and LP-Solv. Programs for analysis of perfect plastic structures and a general Linear Programming solver.
- [3] Frame2D, Stabil2D. Frame analysis. Used in education at DTU.
- [4] Thinwall. Stability of thinwalled frames. Used in education at DTU.
- [5] Fest3D. Finite Element Simulation of Timber Structures in 3D. Used in research at AUE and DTU.

Lectures at Conferences

The list only includes items which are not mentioned in the previous lists of papers.

2006 : Non-Linear Limit Analysis and Optimal Material Layout based on Lower-Bound Solutions, Ninth Pan American Congress of Applied Mechanics, In Abstracts of Papers, Merida, Mexico, pp. 104, 2nd-6th of January.

1998 : Accurate determination of postbuckling stresses by the Finite Element Method, The 1998 International Mechanical Engineering Congress, Anaheim, California, 15-20 November.

1998 : Grans tværtrykstyrke, TIMWORC, Trämekanikdagar., Växjö, Sweden, 11-12 march.

1996 : An Energy Based Numerical Approach to Phase Change Problems, Hauggaard, A. Boe, Damkilde, L. and Krenk, S., XIXth International Congress of Theoretical and Applied Mechanics, Kyoto, Japan, 25-21 august, See Proceedings pp. 512.

1986 : Multimode Interaction in Axially Cylindrical Shells by Byskov, E. , Damkilde, L. and Jensen, K. J., Tenth U.S. National Congress of Applied Mechanics, In Abstracts of Papers, Austin, Texas, pp. 1, June.

Lectures given outside University

- 2018: Giving an invited lecture at the seminar "Advances in Rotor Blades for Wind Turbines" with the title "A simplified yet accurate non-linear analysis of blades with large deformations", 25-4-2018, Bremen.
- 2018: Giving a presentation at a seminar arranged by Aalborg Portland with the title "Cooperation between Industry and University - In an traditional field as Concrete", 06-3-2018.
- 2013 : Presentation of the new RISC education at Aalborg University at a meeting in the Fire Protection Engineers, which is a group under the Danish Engineering Society.
- 2012 : Presentation of the new RISC education at Aalborg University at a meeting in the Risk Association, which is a group under the Danish Engineering Society.
- 2009 : Simulering af komposit materialer og strukturer, Temadag om hærdeplast og hærdeplastiske kompositmaterialer - et område med stadig stigende betydning for dansk industri (sammen med Anders Kristensen). Polymerteknisk Selskab. 29. oktober.
- 2001 : Fra Ostenfelds deformationsmetode til Finite Elements", BYG·DTU, 11. december.
- 2000 : Trækonstruktioner og de nye normer, Niras, 24. oktober.
- 1996 : Finite Element simulation of a T-stub connection, COST C1, Working Group Meeting on "Steel and Composite", Clermont-Ferrand, 7.-8. november.
- 1996 : Beton og betonkonstruktioner på BKM - Status og visioner, Universiteternes Beton Forskning, AUC, 8. maj.
- 1992 : Automatiserede plastiske brudstadieregninger, Dansk Selskab for Bygningsstatik, 6. oktober.
- 1990 : CAD-undervisningen på DTH-B, Institut for Bygningsteknik, AUC, 16. oktober.
- 1989 : Udvikling af grundlag for beregning af tyndpladekonstruktioner, FTU-seminar, DTH, august.
- 1989 : CAD i undervisningen - et eksempel på anvendelse af systemet EUCLID-IS, DECUS-seminar 2. juni.
- 1989 : Analyse-systemers integration med CAD-programmer, ATV-selskabet for datateknik i byggesektoren's seminar d. 30. og 31. maj (2 foredrag).
- 1989 : Integration af CAD og EDB orienterede beregningsmetoder", Seminar "CAD i Byggesektoren", DTH, 11. april.
- 1988 : DTH-B's anvendelse af CAE, Temadag, UNI.C, 14. december.
- 1988 : CAE-programmer og deres anvendelse, Teknologisk Institut, 12. april.
- 1986 : Indlæg om "Høring om oprettelse af Byggeriets edb-center", ATV-selskabet for datateknik i byggesektoren, 13. maj.
- 1986 : Anvendelse af CAE i ingeniøruddannelserne, Teknologisk Institut, 20. juni.
- 1986 : CAD/CAM i ingeniøruddannelserne, Temadag: Stålintustrien i det teknologiske samfund, Kolding, 9. december.
- 1986 : DTH-B's anvendelse af CAD, ATV-selskabet for datateknik i byggesektorens prisopgave 1987, Århus og København, 3. og 4. december.
- 1984 : Erfaringer efter et års CAD/CAM undervisning, GrafikDage 1984, Recku, København, 1984.

Courses given outside University

- Course in "Fracture Mechanics and Fatigue" for Siemens Windpower, 2012-13.
- Course in "Introduction to Finite Element Analysis and Numerical Methods" at University of Southern Denmark, spring 2006 - 2013.
- Course in "Advanced Finite Element Analysis of Structures of Nonlinear Material" at BYG·DTU, June 2002.
- Courses in Continuummechanics and Finite Elements - linear/non-linear (together with J. Dalsgaard Sørensen) at the Engineering Colleges in Denmark, 1995-97.
- Course on "Information technology", City University, London, UK, 1989 and 1990. (Under Erasmus-program).
- Kursus i "Nye Normer for sikkerhed, last og trækonstruktioner"(DIEU), Færøerne, (med H. J. Larsen),

1985.

Kursus i "Svingningsberegninger", Danmarks Ingeniørakademis Maskinafdelingen, DIEU-kursus (3D), (med S. Laier), afholdt 2 gange i 1984 og 1985.

Kursus i "CAD/CAM", Danmarks Ingeniørakademis Maskinafdelingen, DIEU-kursus (3D), (med K. Casper og senere også P. Klit), afholdt 3 gange i 1984 og 1985.

Kursus i "Edb-beregning af betonkonstruktioner", Dansk Beton Institut, 1981.

Teaching

Supervised following Ph.D. students:

Elena Peri, "Compression and time-dependent behaviour in Danish clays and chalk - an experimental study", April 2021.

Morten Eggert Nielsen, "Computational methods for wave-structure interaction - Numerical analysis of a RBF-based method", November 2020.

Szymon Gres, "Vibration-based condition monitoring of structures: algorithms for fault detection and uncertainty quantification of modal indicators", November 2019.

Michael Sandholm Jepsen, "Ultra-High Performance Fiber Reinforced Concrete - Applications and Test Methods", July 2020.

Martin Dalgaard Ulriksen, "Damage Location for Structural Health Monitoring", April 2018.

Emil Smed Sørensen, "Numerical Simulation of non-linear phenomena in geotechnical engineering", September 2016.

Søren Heide Lambertsen, "Fatigue and fracture problems in materials and welds", December 2015.

Andrew Zurkinden, "Analysis of a Wave Energy Converter with Particular Focus on the Effects of Power Take-Off Forces on the Structural Responses", October 2014.

Caspar Thrane Leth, "Improved design basis for laterally loaded large diameter piles", December 2013.

Thomas Astrup, "Modeling of cracks in wood taken into account visco-elasticity and moisture variations", March 2009.

Johan Clausen, "Modeling of dynamic soil-structure interaction", March 2008.

Kristian Krabbenhøft, "Modeling of mechanical properties of wood due to moisture and load history", November 2004.

Bo Madsen, "Properties of Plant Fibre Yarn Polymer Composites - An Experimental Study", June 2004.

Lennart Østergaard, "Early-Age Fracture Mechanics and Cracking of Concrete - Experiments and Modeling", February 2003.

Signe Kamp Jensen, "Wood Drying - With Special Reference to Sitka Spruce", 2003.

Christian Odin Clorius, "Fatigue in wood, An Investigation in Tension Perpendicular to the Grain", 2001.

Martin Uhre Pedersen, "Dowel Type Timber Connections, Strength modeling", 2001.

Peter Noe Poulsen, "Nonlinear Plate and Shell Elements for Structural Analysis", 1998.

Anders Boe Hauggaard-Nielsen, "Mathematical Modeling and Experimental Analysis of Early Age Concrete", 1997.

Mette Elbæk Andersen, "Influence of Hardening on Design of Concrete Structures", 1996.

Jan Karlshøj, "Principles and methods for productmodels applicable for design and construction of structures", 1994.

Jeppe Jönsson, "Recursive Finite Elements for Buckling of Thin-walled Beams", 1990.

Jin Tong Shan, "Analysis of Elasto-Plastic Frames to Seismic Actions", 1989.

Supervised more than 250 M.Sc. Projects within Finite Element calculation (theoretical and more practical), design of structures (bridge etc.), geotechnics, CAD/CAE and Material Modeling.

Given courses in Structures, Computer methods (e.g. Finite Elements) and Computer Aided Design. Graduate and Postgraduate level.

Supervised individual courses : Subjects primarily in coupling of CAD and CAE and advanced structural

calculations.

External Projects

Responsible for a project funded by Food & Bio Cluster and WE BUILD DENMARK. The project is dealing with effective harvesting of roofing pipes, 2024.

Responsible for a project under the project "CP-SENS Cyber-physical sensing platform for digital twins of machines and structures. The project is funded by Danmarks Innovationsfond, Grand Solutions. Period 1-1-2023 to 31-12-2025.

Responsible for a project under the project "HøstTek", which deals with development of a harvester for wetlands. The project is funded by GUDP. Period 1.1-2021 to 31-12-2024.

Responsible for a project "Urban Tranquility" funded by InterReg. Cooperation with Lund (LTH), AAU and AU. Period 1.1.2016 - 31.12.2018.

Responsible for a subproject under the project "LEX Stiffening of Wind Turbine Blades - Mitigating leading edge damages" funded by EUDP, Project no. 64013-0115. 2013 - 2016.

Responsible for parts of projects concerning wave energy: FLOAT2, Weptos funded by Forsk-El, 2012 - 2015.

Responsible for projects under Danish Centre for Risk and Safety Management, Aalborg University supported by Claus Sørensen Fund, 2011-2015.

Responsible for 3 subprojects under the project "Energy on the sea", supported by European Regional Development Fund, 2011-12.

Responsible for an EUDP project on FORIDA HYBRID TOWERS (Windturbine towers in Ultra High Performance Concrete) funded by Danish Agency for Science, Technology and Innovation, 2011 - 2013.

Responsible for a project on "Advanced computer based methods for product development" funded by the Danish Ministry for Science and Education, 2005-2007.

Responsible for a project on calculation of strength of a structural detail in a refrigerator, Vestfrost A/S and Danish Centre for Polymers and Engineering Materials, 2003.

Responsible for part of a EU-funded project on Steel Chimneys. 2002-2003.

Responsible for part of a project supported by the National and Scientific Foundation (STVF) concerning "BIOMAT - Modelling of organic fiber composites", 2000-2003.

Responsible for part of a project supported by the National and Scientific Foundation (STVF) on "Modelling the effects of moisture and load history on the mechanical properties of wood", 2000-2007.

Responsible for part of a project supported by The Ministry of Environment and Energy on "Reliability of timber structures", 1999-2003.

Responsible for a project supported by the Danish National and Scientific Foundation (STVF) concerning "Experimental investigations of Early Age Concrete", 1997-98.

Responsible for part of a project supported by Vejdirektoratet (HETEK Høj kvalitetsbeton Entreprenørens Teknologi), 1995-1996.

Responsible for part of a project supported by Elsam concerning windmills, 1995-1996.

Responsible for a project supported by the Danish National and Scientific Foundation (STVF) concerning Limit State Calculation of Structures (part of a larger project "Reliability of Constructions"), 1991-1992.

Responsible for a project supported by the Danish National and Scientific Foundation (STVF) concerning Principle and methods for product models applicable for design and construction of structures", 1990-1992.

Responsible for a project supported by the Danish National and Scientific Foundation (STVF) concerning thin-walled elements. 1989-90.

Responsible for a project under the ERASMUS-scheme in 1989.

Responsible for part of a project supported by the Danish National and Scientific Foundation (STVF) and Dr. Neergaards foundation concerning concerning Multimode Interaction in Axially Stiffened Cylindrical Shells, 1985-86.

Others

Member of board for Danish CAE group, 1986-88.

Member of CEN TC124/WG3 (CEN : New European Standards in the "inner"market) 1987 - 1991.

Member of board for Sofus-Byg, 1988 - 1992.

Member of board for T-virke, 1988 - 2006.

Member of Management Committee for COST C1, 1993 - 1999.

Member of COST C1, WG6, 1994 - 1999.

Member of COST FP1101, 2011 - .

Member of board of Nordic Association for Computational Mechanics (NoACM), 1995 - 2004.

Member of board of Dansk Beton Råd, 2003 - 2005.

Member of Study council at the Civil Engineering Department. 1990 - 97.

Coordinator for "Bygge- og Anlægskonstruktioner", 1 of 20 Engineering Specializations at DTU, 1993-1996.

Member of Study Council for the Technical University, 1995 - 97.

Member of Board for Department of Civil Engineering, Technical University of Denmark, 2001 - 2002.

Coordinator for "Civil Engineering", 1 of 15 Engineering Specializations at DTU, 2001 - 2002.

Chairman/Member of committees for appointment of professors/ associate professors/ assistant professors at the Technical University of Denmark, University of Aalborg, Aarhus School of Engineering, Copenhagen University College of Engineering, University of Southern Denmark, Lund University, Sweden, Växjö University, Sweden and Cyprus University of Technology.

Chairman/Member of committees for appointment of senior researchers at Danish Building Research Institute (SBI) and Risø (DTU).

Chairman/Member of Ph.D. assessment committees for Ph.D. thesis at Department of Civil Engineering, Technical University of Denmark, Department of Mechanical Engineering, Technical University of Denmark, Lund University, Sweden, Chalmers University, Sweden and Delft University of Technology, Netherlands, Indian Institute of Technology Roorkee.

Member of steering committee for a national network cooperation for Structures and Materials in engineering education, 1994 - 1998.

Chairman for WG 6 and 7 in a national network cooperation for Structures and Materials in engineering education, 1994 - 1998.

Vicechairman for Group 46, Construction, Mechanical- and Production Technology. Part of a national network for bibliometric research indicators, 2008 - .

Technical responsible for Load-bearing Structures, The danish encyklopedia, Lex.dk, 2024 -

Censor at University of Aalborg, 1994 - 2001.

Censor at The Engineering Colleges in Copenhagen and Aarhus, 2000 - .

Censor at Technical University of Denmark, 2002 - .

Censor at University of Southern Denmark, 2011 - .

Censor at Lunds University, 1997 - .

Organized the 9th Nordic Seminar on Computational Mechanics, 25-26 October, 1996.

Organized the 22th Nordic Seminar on Computational Mechanics, 21-23 October, 2009.

Organized NAFEMS seminar on Simulating Composite Materials and Structures, 2.-3. of February, Esbjerg, Denmark, 2010.

Reviewer for The Danish National Advanced Technology Foundation.

Reviewer for Statens råd för byggnadsforskning, Sverige.

Reviewer for Austrian Science Fund (FWF), 2016.

Reviewer for Netherlands Foundation for Fundamental Research on Matter (FOM), 2014.

Reviewer for "Advances in Engineering Software", "Cement and Concrete Research", "Communications in Numerical Methods in Engineering", "Computers & Geosciences", "Computers & Geotechnics", "Computers & Structures", "Energy & Fuels", "Engineering Structures", "European Journal of Mechanics - A/Solids", "European Journal of Operational Research", "Frontiers of Architectural Research", "IEEE

Transactions on Industrial Electronics", "International Journal for Numerical Methods in Engineering", "International Journal of Non-Linear Mechanics", "International Journal of Solids and Structures", "Journal of Engineering Mechanics", "Measurement", "Physica Scripta", "Sensors", "Strain", "Structural Control and Health Monitoring", "Structural Engineering and Mechanics".

Member of Scientific Committees/ Editorial Boards/ Program Committees: Nordic Association of Computational Mechanics, Second International Conference on Engineering, Computational Technology, Control of the Semi-Rigid Behaviour of Civil Engineering Structural Connections.

Chairman for Panel 5, Building and Construction Technology in the evaluation project "Research Quality Assurance for the Future 2020", Lund University, Sweden.

Vicechairman for Panel 17 in the evaluation project "Research Quality Assurance for the Future 2008", Lund University, Sweden.

Member of external assessment board for evaluation of the Technical Faculty of Linneaus University, Sweden, 2014 and 2015.

Formas, Chairman for the panel The Built Environment in 2019, 2020 and 2021. In 2018 reviewer in the same panel. In 2022 external reviewer for the panel "From research to implementation for a sustainable society 2022"

Member of board for The Danish Society of Engineers, Civil Engineering Section, South Jutland, 2004 - 2013.

Discipline coordinator and Juror-member for EASA - European Academic Software Award 2004.