

FOREWORD

This annual report about the year 2002 contains information on publications, seminars and guests. A list of DCAMM reports number 1-612 including the final references and also a list of the DCAMM S-reports number S1-S84 is available on request.

The report serves mainly as reference and documentation for accomplished activities. Information on the actual activities are available on our homepage: www.mek.dtu.dk and on the homepages of the cooperating departments of the center.

In the year 2002 the DCAMM Graduate Research School gave 3 advanced courses:

- 1) Stability of Ships, 10-18 June
- 2) Optimal designs- Size, Shape and Topology, 20-28 June
- 3) Machine Acoustics, 20-24 August

The school was visited by 3 guestprofessors, 8 guestlecturers, 3 gueststudents and 63 course participants. With very limited financial support, the school continues its activities in year 2003.

The departments cooperating within DCAMM are:

from Technical University of Denmark:

IMM: Dept. of Informatics and Mathematical Modelling

MAT: Dept. of Mathematics

MEK-ET: Dept. of Mechanical Engineering, Fluid Mechanics and Energy Egnn.

MEK-FAM: Dept. of Mechanical Engineering, Solid Mechanics

MEK-K&P: Dept. of Mechanical Engineering, Engineering Design

MEK-MT: Dept. of Mechanical Engineering, Maritime Engineering

MEK-VB: Dept. of Mechanical Engineering, Coastal and River Eng.

from Aalborg University:

IFB-AAU: Building Technology and Structural Engineering

IME-AAU: Institute of Mechanical Engineering

In 2002 the center organized an international Symposium on "Challenges in Applied Mechanics", held here in Kgs. Lyngby at Hotel Frederiksdal. A short report from the Symposium is given on page 36.

I thank our international contacts for their support and inspirations.

Pauli Pedersen

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1. MEMBERS 2002

23 professors
73 scientific members at the seven cooperating institutes at the Center
40 Ph.D.-students

35 elected members
14 foreign members

(A complete list of names is given in the Appendix).

2. FOREIGN MEMBERS

Professor Hassan Aref
Virginia Polytechnic Institute & State University
333 Norris Hall
Blacksburg, VA 24061-0217
USA

Professor G.I. Barenblatt
Department of Mathematics
UC Berkeley

USA

Professor John P. Breslin, Dr. Sc.
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03193 San Miguel de Salinas, (Alicante)
Spain

Professor Germund Dahlquist
Kungliga Tekniska Högskolan
Stockholm
Sweden

Professor John W. Hutchinson
Division of Applied Sciences
Harvard University, 315 Pierce Hall
29 Oxford St.
Cambridge, MA 02138, USA

Professor Joseph B. Keller
Departments of Mathematics and Mechanical Engineering
Stanford University
Stanford, California
USA

Professor Michael S. Longuet-Higgins
UCSD

USA

Professor Ole Secher Madsen
Ralph M. Parsons Lab., Dept. of civil Eng.
Massachusetts Institute of Technology
Cambridge, MA 02139
USA

Professor Alan Needleman
Division of Engineering, Box D
Brown University
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Professor S. Nemat-Nasser

University of California in San Diego
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Professor D.H. Peregrine
School of Mathematics
University Walk
Bristol BS8 1TW
UK

Professor Bertil Storåkers
Kungliga Tekniska Högskolan
S-100 44 Stockholm
Sweden

Professor Ib A. Svendsen
Department of Civil Engineering
University of Delaware, Newark, DE 19716
USA

Professor John E. Taylor
Department of Aerospace Engineering
Aerospace Engineering Building
University of Michigan
Ann Arbor, MI 48109
USA

3. GUESTS FOR EXTENDED PERIODS IN 2002

Tyler Bruns, Dept. of Mechanical Engineering, University of Illinois, Urbane, USA
(January 1 - February 28)

Gil Ho, Ph.D. student, Korea (February 27 - April 1)

Oleg Kirillov, Institute of Mechanics, Moscow State Lomonosov University,
Moscow, Russia (February 1 - April 1 and October 1 - November 30)

Alan Needleman, Professor, Division of Engineering, Brown University, USA
(January 16 - 20)

Parviz Nikraves, Dr., University of Arizona, Tucson, USA (July 7 - August 1)

Ivindra Pane, Department of Civil Engineering, University of Michigan, Ann Arbor,
USA (March 1 - August 31)

Alija Picuga, Professor, Faculty of Mechanical Engineering, University "Dzemal
Bijedic", Mostar, Bosnia and Herzegovina (January 1 – 14, July 19 – 28)

Alexander Seyranian, Professor, Moscow State Lomonosov University, Russia (July 5
- August 10)

4A. SCIENTIFIC PUBLICATIONS IN PROCEEDINGS AND MONOGRAPHS IN 2002

Krishnaswamy, P., Andersen, P. & Kinnas, S.A.: Re-Entrant Jet Modelling for Partially Cavitation Two-Dimensional Hydrofoils, In Proc. Proc CAV2001, Fourth International Symposium on Cavitation, Pasadena, California, June 2001.

Kappel, J. & Andersen, P.: KAPPEL Propeller. Development of a Marine Propeller with Non-planar Lifting Surfaces. In: Proceedings of The 24th Motor Ship Marine Propulsion Conference. Copenhagen, April 2002. Surrey, United Kingdom, Highbury Business Communications.

Friesch, J., Kim, K.-H., Andersen, P., Bark, G., Chang, B. J., Di Felice, F. & Sasaki, N. The Specialist Committee on Cavitation Induced Pressures, Final Report and Recommendations to the 23rd ITTC. In: Enrico De Bernardis(ed.), Proceedings of the 23rd International Towing Tank Conference, Venezia, Italy, September 2002, Roma, INSEAN The Italian Ship Model Basin, Vol. 2, 2002, pp. 409-450.

Corney, J. F. & Bang, Ole: Modulational-instability gain bands in quasi-phase-matched materials, Proceedings of the Australian Institute of Physics 15th Biennial Congress 2002, 8-11 July 2002, pp. 280-282.

Nikolov, N.I.; Bang, Ole & Bjarklev, A.: Improving efficiency of supercontinuum generation in photonic crystal fibers by direct degenerate four-wave mixing. Nonlinear Guided Waves and Their Applications, pp. 1-3/NLTuD11, Optical Society of America, 2002.

Nikolov, N. I.; Bang, Ole; Christiansen, P.L.; Rasmussen, J.J. & Krolikowski, W.: Soliton interaction in weakly nonlocal nonlinear media. Nonlinear Guided Waves and Their Applications, pp. 1-3/NLTuD43, Optical Society of America, 2002.

Bendsøe, M. P. & Sigmund, O.: Material models in topology optimisation. Lecture notes, Advanced School and Workshop on Bone Mechanics - Mathematical and Mechanical Models for Analysis and Synthesis, 30 pp., Instituto Superior Tecnico, Lisbon, Portugal, June 24-28 2002.

Kawamoto, A., Bendsøe, M. P. & Sigmund, O.: Articulated Mechanism Design by an Enumeration Approach. Proc. 15th Nordic Seminar on Computational Mechanics (E. Lund, N. Olhoff, J. Stegmann, eds.) 17-19 October, 2002, Aalborg, Denmark. AAU, Denmark, pp. 59-62.

Bendsøe, M.P.: See Sigmund O.; Jensen, J.S.

Berggreen, C. & Simonsen, B.C.: The effect of Curvature on the Strength of Laterally Loaded Sandwich Panels, Proceeding of The Eighth International Symposium on Practical Design of Ships and Other Floating Structures (PRADS), 16-21 September 2001, Shanghai, China, pp. 1323-1329.

Berggreen, C. & Simonsen, B.C.: Weight Reduction in Sandwich Structures by use of Curved Panels, Proceedings of The Eighth International Symposium on Practical Design of Ships and Other Floating Structures, 16-21 September 2001, Shanghai, China, p.1323-1329.

Bingham, H.B.: A Fourier-Boussinesq method for short-wave coastal problems. Abstract in Fall Meeting, American Geophysical Union, San Francisco, CA, USA, Dec. 2002.

Bingham, H. B.: See Madsen, P.A.

Bjørnø, L., Bradley, D.L., Culver, R.L. & Di, X.: Acoustics of surface ship wakes. Proceedings 25th Scandinavian Symposium on Physical Acoustics, Scientific/Technical Report No. 420130, Department of Telecommunications, Norwegian University of Science and Technology, Trondheim, June 2002, 1 - 7.

Bredmose, H., Agnon, Y., Schäffer, H. & Madsen, P. A.: Fully dispersive evolution equations: Wave breaking and efficiency. Proc. Int. Conf. in Coastal Eng., Cardiff, Wales, July 2002.

Anh, N. D. & Bræstrup, M. W. (eds): International Conference on Concrete in Marine Environments, Vietnam National Center for Natural Science and Technology, Hanoi, 10 October 2002, 304 pp.

Clausen, H.B., Lützen, M., Friis-Hansen, A. & Bjørneboe, N.: Bayesian and Neural Networks for Preliminary Ship Design, The Eighth International Symposium On Practical Design of Ships and Other Floating Structures, Shanghai, China, September 2001.

Christiansen, P.L.: See Bang, O.

Damkilde, L. & Grønne, M.: An improved triangular element with drilling rotations. In Proceedings of 15th Nordic Seminar on Computational mechanics. pp. 4, 2002.

Krabbenhof, K., Damkilde, L. & Krabbenhof, S.: Ultimate limit state design of sheet pile walls by finite elements and nonlinear programming. In Proceedings of 3rd International Conference on Engineering Computational Technology, Prague, September 2002, "Finite Elements: Techniques and Developments", p.18.

Hansen, H.-J., Thygesen, U., Kristensen, A. & Damkilde, L.: Structural analysis of offshore structures exposed to blast loads. In Proceedings of 15th Nordic Seminar on Computational mechanics. pp. 4, 2002.

Hvejsel, B., Langmack, L.N., Kristensen, A. & Damkilde, L.: Prediction of limit rotational speeds in a high-speed tool based on FE computed J-integral intensities. In Proceedings of 15th Nordic Seminar on Computational mechanics, pp. 4, 2002.

Krabbenhof, K., Hoffmeyer, P., Bechgaard, C. & Damkilde, L.: Finite element analysis of boron diffusion in wood. In Proceedings of 15th Nordic Seminar on Computational mechanics, pp. 4, 2002.

Ditlevsen, O. D. & Madsen, H. O.: Structural Reliability Methods. Edition 2.1: Internet edition downloadable from <http://www.mek.dtu.dk/staff/od/books.htm> (First edition: Wiley & Sons, Chichester, UK, 1996), 2002.

Franchin, P., Ditlevsen, O. D. & Der Kiurehian, A.: Integrals of random fields treated by the model correction factor method. ICOSSAR'01, Newport Beach, CA, USA, June 2001. In Corotis, R.B., Schuëller, G.I. and Shinozuka, M. (editors), Structural Safety and Reliability, CDROM, Swets & Zeitlinger, Lisse, 2002.

Friss-Hansen, P., Simonsen, B.C.: Integrated Software for Risk Analysis of Shipping, Proceedings of the 2nd International Conference on Collision and Grounding of Ships, ICCGS, Copenhagen, July 2001, pp. 1-12.

Carlsen, R.A. & Friss-Hansen, P.: Risk Evaluation Of Deferred Production, ESREL 2001, Torino, Italy, September 16-20, 2001, Paper no. 52.

Friis-Hansen, P. & Sørensen, J. D.: Reliability-based code calibration of partial safety factors. In: M.H. Faber(ed.), Joint Committee of Structural Safety. JCCS-Workshop on Code calibration, Zurich, Switzerland, April 2002.

Fynbo, J., Rasmussen, J. & Olhoff, N.: A Cubist Topology Optimisation Method. In: Proc. 15th Nordic Seminar on Computational Mechanics, eds. E. Lund, N. Olhoff and J. Stegmann, October 18-19, 2002, Aalborg, Denmark. Institute of Mechanical Engineering, Aalborg University, Denmark, ISBN 87-89206-67-3, pp. 223-226, 2002.

Gaunaa, M. & Sørensen, J. N.: Experimental Investigation of Airfoil Subject to Harmonic Translatory Motions. AIAA-2002-0035.

Goltermann, P.: SMART STRUCTURES: Monitoring of Concrete Structures. pp.143-145, Proc. XVII Nordic Concrete Research Symposium, 12-14 June 2002, Helsingør, Denmark.

Goltermann, P., Jensen, F. & Andersen, M.E.: Smart Structures: Possibilities, experiences and benefits from permanent monitoring. IABMAS 02, July 2002, Barcelona, Spain.

Klinghoffer, O., Goltermann, P. & Bässler, R.: Smart Structures: Embeddable sensors for use in the integrated monitoring systems of concrete structures. IABMAS 02, July 2002, Barcelona, Spain.

Pardi, L., Mercalli, A. & Goltermann, P.: SMART STRUCTURES: per una migliore gestione dei ponti. Proc. Giornata di Studi La valutazione del Degrado dei Ponti ed I Sistemi di Gestione in Europe, 30 September 2002, Messina, Italy.

Mietz, J., Raupach, M. & Goltermann, P.: Integrated monitoring system for reinforced concrete structures. Proc. 1st FIUP Congress "Concrete structures in the 21st century", 13-19 October, 2002, Osaka, Japan.

Hansen, J.M.: See Pedersen, S. L.

Hansen, L.V.: Constant Frequency Condition of Fiber Lasers in Strain. In: Lund, E., Olhoff, N., Stegmann, J. (eds), Proceedings of 15th Nordic Seminar on Computational Mechanics, Aalborg, Denmark, October, pp. 185-188, 2002

Jacobsen, T. K., Andersen, L. F., Sørensen, B. F., Jensen, H. M. & Hansen, P. F.: Brudmekanisk karakterisering og design af limsamlinger. Dansk Metallurgisk Selskabs Vintermøde, 61-73, (Eds. P. Brøndsted & M. Somers), ISBN 87-97535-31-9, 2002.

Jensen, J. S., Sigmund, O., Thomsen, J. J. & Bendsøe, M. P.: Design of multi-phase structures with optimized vibrational and wave-transmitting properties. In Proceedings of the 15th Nordic seminar on Computational Mechanics, 63-66, Aalborg, Denmark, E. Lund, N. Olhoff and J. Stegmann (eds.), Institute of Mechanical Engineering, Aalborg University, 2002.

Jensen, J.S.: See Sigmund, O.

Jensen, J.J.: Beregningsmetoder for svejste aluminiumssamlinger, Proceedings ASAK Seminar, Copenhagen, June 2001, 9 pages.

Jensen, J.J.: Load and Global Response of Ships, Elsevier Ocean Engineering Book Series, Vol. 4, 337 Pages, August 2001.

Lauridsen P.H., Jensen, J. J. & Baatrup J.: Ship Design Using Probabilistic Damage Stability Rules – A Sensitivity Study, Proceedings PRADS'2001, Vol. I, pp. 261-268, Shanghai, Sept. 2001.

Wang, Z., Jensen, J. J. & Xia, J.: Prediction of Wave-induced Anti-symmetric Ship Responses by Time-domain Strip Theory. Proceedings PRADS'2001, Vol. II, pp 839-846, Shanghai, Sept. 2001.

Jensen, J. J.: Conditional short-crested waves in shallow water and with superimposed current. In: Naess, A., Chakrabarti, S. (Eds.) Proceeding of the 21st International Conference on Offshore Mechanics and Arctic Engineering, OMAE2002, Oslo, Norway, 23-28 June 2002, Paper no. 28399.

Jensen, J. J. & Folsø, R.: Hydroelastic Vibrations of Ships. In: Pensa, C. (Ed.) Proceedings of the HSMV 2002 Conference, Naples, September 2002, pp II.17-II.24, ATENA.

Jensen, J. J., Törnquist, R. & Nielsen, W. P. E.: Fatigue Damage Predictions in Aluminium Constructions. In: A.F. Blom (Ed.) Proceedings of the 8th Int. Fatigue Congress, Stockholm, June 2002, Emas, UK, pp 3253-3260.

Krenk, S.: Damping mechanisms and models in structural dynamics. Structural Dynamics, EUROODYN2002, Eds. Grundmann and Schueller, Balkema, Lisse, 2002, pp. 87-98.

Rüdinger, F. & Krenk, S.: Non-linear stochastic oscillator models of vortex-induced vibrations. In Corotis, R.B., Schuëller, G.I. and Shinozuka, M. (editors), Structural Safety and Reliability, paper no. 452, 2002, Balkema, Rotterdam.

Rüsgård, Hans Ulrik & Larsen, Poul S.: Water pumping and analysis of flow in burrowing zoobenthos - a short overview. BioFlow, First workshop, 10-14 Sept. 2002 at NIOO-CEMO, Yerseke, The Netherlands. pp.1-15.

Larsen, P.S.: See Ullum, T.; Meyer, K. E.

Legarth, B.N., Tvergaard, V. & Kuroda, M.: Crack-tip blunting in an anisotropic material with plastic spin. WCCM V, Fifth World Congr. Comput. Mech. (eds. H.A. Mang et al.), ISBN 3-9501554-0-6, on Web, 9 p., 2002.

Lützen, M. & Rusås, S.: Derivation of Probability Distributions for Collision Energy for use within a Harmonized Probabilistic Damage Stability Framework, 2nd International Conference on Collision and Grounding of Ships, Copenhagen, Denmark, July 2001.

Tagg, R., Bartzis, P., Papanikolaou, A., Spyrou, K. & Lützen, M.: Updated Vertical Extent of Collision Damage, 2nd International Conference on Collision and Grounding of Ships, Copenhagen, Denmark, July 2001.

Lützen, M. & Pedersen, P.T.: Design Against Minor Impacts, The Eighth International Symposium On Practical Design of Ships and Other Floating Structures, Shanghai, China, September 2001.

Lützen, M.: Investigations and Proposed Formulations for the factor “p”, “r” and “v”. IMO, SUB-COMMITTEE ON STABILITY AND LOAD LINES ON FISHING VESSELS SAFETY, 45th Session, July 2002, Item 3, No. 5, SLF45/3/5.

Lützen, M.: See Clausen, H. B.

Madsen, P. A., Bingham, H. & Wang, B.: Velocity formulations and mild-slope approximations in the framework of Boussinesq theory. Proc. Int. Conf. in Coastal Eng., Cardiff, Wales, July 2002.

Madsen, P. A.: See Bredmose, H.

Mayer, S.: See Nielsen, K.B.

Meyer, K. E., Özcan, O., Larsen, P. S., Gjelstrup, P. & Westergaard, C.: Point and planar LIF for velocity-concentration correlations in a jet in cross flow. Laser Techniques for Fluid Mechanics: selected papers from the 10th International Symposium on Applications of Laser Techniques to Fluid Mechanics. Lisbon, Portugal, 10-13 July 2000. Editors R. J. Adrian et al., Springer, 2002.

Meyer, Knud Erik, Larsen, Poul S., Westergaard, Carsten H. & Guillard, Fabrice: Temperature and velocity fields in natural convection by PIV and LIF, 11th Intl. Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal 8-11 July 2002 (abstract published. Paper published on CD-rom, pp.1-8).

Mikkelsen, R. F. & Sørensen, J. N.: Modelling of Wind Tunnel Blocage. Proc. CD-ROM Global Windpower Conference & Exhibition, www.ewea.org, Paris, April 2002, 5 pages.

Mikkelsen, R. F. & Sørensen, J. N.: Modelling of Wind Tunnel Blocage. S.-T. Thor (ed.), 15th IEA Symposium on the Aerodynamics of wind Turbines, Athens. Swedish Defence Research Agency, FOI-S-0224-SE, pp. 41-52, 2002.

Mikkelsen, R. F.: See Shen, W. Z.

Nielsen, K.B. & Mayer, S.: VOF simulation of green water load problems, Proceedings of 4th Numerical Towing Tank Conference, 23-25 September, Hamburg, Germany.

Niordson, C. F.: Nonlocal plasticity effects on fracture toughness. In: Khan, K. S. and Lopez-Pamies, O. (eds.). Proceedings of Plasticity '02: Plasticity, Damage and Fracture at Micro and Nano Scales, Aruba, January 3-9 2002, Fulton, Maryland, USA, Neat Press, pp. 591-593.

Nygaard, J. & Pyrz, R.: Carbon nanotube reinforced microcellular polycarbonate, Proceedings ACUN-4 Conference on Composite Systems: Macrocomposites, Microcomposites, Nanocomposites, S. Bandyopadhyay et.al (eds.), University of New South Wales, 2002, pp. 345-350.

Nygaard, J. & Pyrz, R.: Analysis of volumetric data from X-ray microtomography with application to foams, Proceedings. "Mesomechanics 2002 on New Challenges in Mesomechanics", R. Pyrz et. al (eds.), Aalborg University, 2002, pp. 549-556.

Olhoff, N. & Seyranian, A.P.: Initial Post-buckling Behaviour of Bimodal Optimal Columns. In: CD-Proc. 1st Int. Congress on Mechatronics, eds. A. Guran and H. Bremer, July 3-6, 2002, Linz, Austria. Johannes Kepler University, Linz, Austria, 4 pp., 2002.

Olhoff, N. & Seyranian, A.P.: On the Bifurcation and Initial Post-buckling Behaviour of Bimodal Optimal Columns. In: Proc. 15th Nordic Seminar on Computational Mechanics, eds. E. Lund, N. Olhoff and J. Stegmann, October 18-19, 2002, Aalborg, Denmark. Institute of Mechanical Engineering, Aalborg University, Denmark, ISBN 87-89206-67-3, pp. 249-252, 2002.

Kharmanda, G. & Olhoff, N.: Reliability-based Topology Optimization as a New Strategy to Generate Different Structural Topologies. In: Proc. 15th Nordic Seminar on Computational Mechanics, eds. E. Lund, N. Olhoff and J. Stegmann, October 18-19, 2002, Aalborg, Denmark. Institute of Mechanical Engineering, Aalborg University, Denmark, ISBN 87-89206-67-3, pp. 211-214, 2002.

Olhoff, O.: See Fynbo, J.

Pedersen, C. B. W.: Revisiting Topology Optimization of Continuum Structures with Elastoplastic Response. Proceedings of the 15th Nordic Seminar on Computational Mechanics, October 18-19, 2002, Aalborg, Denmark, Editors: Lund, E., Stegmann J., and Olhoff N. Publisher: Institute of Mechanical Engineering, Aalborg University, Denmark, 2002.

Pedersen, C. B. W.: Topology Optimization of Energy Absorbing Frames. Proceedings of the Fifth World Congress on Computational Mechanics (WCCM V), July 7-12, 2002, Vienna, Austria, Editors: Mang, H.A., Rammerstorfer, F.G. and Eberhardsteiner, J., Publisher: Vienna University of Technology, Austria, 2002.

Pedersen, C. B. W.: Topology Optimization for Crashworthiness of Frame Structures. ICrash 2002, 3rd International Crashworthiness Conference, Society of Automotive Engineering, Melbourne, Victoria, Australia, 2002.

Pedersen, N.L.: On design of probes for biological sensing. Proceedings of the 15th Nordic Seminar on Computational Mechanics, (NSCM-15), Aalborg, 67-70, 2002.

Pedersen, P.: Sensitivity Analysis for Dynamics Stability Problems. A. P. Seyranian and I. Elishakoff (eds.). Modern Problems of Structural Stability CISM, Italy Springer, Courses and Lectures, Number 436, pages 285-340, 2002.

Pedersen, P.: On Design for Uniform Energy Density of Non-isotropic Continua. E. Lund, N. Olhoff and J. Stegmann, 15th Nordic Seminar on Computational Mechanics, 2002, pp. 71-74.

Otto, S., Pedersen, P.T., Samuelidis, M. & Sames, P.: Elements of Risk Analysis for Collision and Grounding of a RoRo Passenger Ferry, Proceedings 2nd Int. Conference on Collision and Grounding of Ships, pp 303 - 310, 2001, Copenhagen, Denmark.

Pedersen, P. T.: See Lützen, M.

Pedersen S. L., Hansen J. M. & Ambrosio, J. A. C.: A Novel Roller-Chain Drive Model Using Multibody Dynamics Analysis Tools . Virtual Nonlinear Multibody Dynamic Systems, NATO Advanced Study Institute, Prague, Czech Republic, June 23 - July 3 2002.

Pyrz, R.: Wavelets a new method for analysis of microstructure of composite materials, Proceedings 5th DURACOSYS Int. Conference, ed. H. Fukuda, Balkema 2002, pp. 117-120.

Pyrz, R.: Identification of clustered distributions of inclusions in composite materials, Proceedings ACUN-4 Conference on Composite Systems: Macrocomposites, Microcomposites, Nanocomposites, S. Bandyopadhyay et.al (eds.), University of New South Wales, 2002, pp.132-137.

Pyrz, R.: Bridging the length-scale gap: short fibre composite material as an example, Proceedings International Symposium of Multiscalling in Mechanics, G.C. Sih, C.P. Spyropoulos (eds.), 2002, National Technical University of Athens, pp. 247-254.

Bochenek, B. & Pyrz, R.: Reconstruction methodology for planar and spatial random microstructures, Proceedings. "Mesomechanics 2002 on New Challenges in Mesomechanics", R. Pyrz et. al (eds.), Aalborg University, 2002, pp. 565-572.

Pyrz, R.: See Schjødt-Thomsen, J.; Nygaard, J.; Thomsen, T.; Rauhe, J.C.

Rasmussen, J.: See Fynbo, J.

Rauhe, J.C., Pyrz, R.: generation of 3D finite element mesh of foam using X-ray microtomographic data, Proc. 15th Nordic Seminar on Computational Mechanics, N. Olhoff & E. Lund (eds.), Aalborg University, 18-19 October, 2002, pp. 159-162.

Ravn, E.S., Urban, J. & Simonsen, B.C.: Damage and Loss of Stability for HSC in Grounding or Collision Accidents, proceedings of HIPER 2001, Hamburg, May 2001, 15 pages.

Redanz, Pia: Deformation induced anisotropy in powder compaction at high relative densities. In: Khan, A.S. and Lopez-Pamies, O. (eds.) Proceedings of Plasticity '02: Plasticity, Damage and Fracture at Macro, Micro and Nano Scales, Aruba, January 3-9, Fulton, Maryland, USA, Neat Press, pp. 522-524, 2002.

Richelsen, Ann Bettina & van der Giessen, Erik: The influence of grain shape on surface roughening in sheet drawing. In: Khan, A.S. and Lopez-Pamies, O. (eds.) Plasticity, Damage and Fracture at Macro, Micro and Nano Scales, Proceedings of Plasticity'02: The Ninth International Symposium on Plasticity and Its Current Applications, Aruba, January 3-9, Neat Press, Fulton, Maryland, USA 2002, pp. 257-259.

Kjeldsen, T. R. & Rosbjerg, D.: Assessment of water resources system sustainability. Proceedings of ICWRRER 2002, Dresden, Germany. In: Smidtz, G.H. (ed.) Water Resources and Environment Research Volume I - Modeling water resources phenomena & Water resources management, 514-517.

Eskilsson, C. G., Arnason, J. I. & Rosbjerg, D.: Simulation of the jökulhlaup on Skeidarársandur. Iceland, in November 1996 using MIKE 21 HD. In: Snorrason, A., Finnsdóttir, H.P. & Moss, M.E. (eds.), The Extremes of the Extremes: Extraordinary Floods. Proceedings of an International Symposium, Reykjavik, Iceland, July 2000. International Association of Hydrological Sciences, Oxfordshire, UK. IAHS Publication 271, 37-43.

Souza, A. & Santos, I.: Modeling and Experimental Tests of a Mechatronic Device to Measure Road Profiles Considering Impact Dynamics. São Paulo, Brazil, 24-26 November 2002, Society of Automotive Engineers, pp. 1-8, PAPER 2002-01-3474 (in Portuguese).

Schjødt-Thomsen, J. & Pyrz, R.: Interaction among spatially dispersed inclusions, Proceedings ACUN-4 Conference on Composite Systems: Macrocomposites, Microcomposites, Nanocomposites, S. Bandyopadhyay et.al (eds.), University of New South Wales, 2002, pp.138-144.

Schjødt-Thomsen, J. & Pyrz, R.: Stress fields in heterogeneous solids with spatially dispersed inclusions, Proceedings. "Mesomechanics 2002 on New Challenges in Mesomechanics", R. Pyrz et. al (eds.), Aalborg University, 2002, pp. 75-82.

Shen, W. Z., Mikkelsen, R. F., Sørensen, J. N. & Bak, C.: Evaluation of TIP Correction Theories. In: S. E. Thor (ed.), 15th IEA Symposium on the Aerodynamics of Wind Turbines, Athens, 2002. Swedish Defence Research Agency, FOI-S-0224-SE, pp. 107-112.

Shen, W. Z., Michelsen, J. & Sørensen, J. N.: Aero-acoustic Computations of Wind Turbines. AIAA-2002-0043.

Shen, W. Z., Mikkelsen, R. F., Sørensen, J. N. & Bak, C.: Evaluation of the Prandtl Tip Correction for Wind Turbine Computations. Proc. CD-ROM Global Windpower Conference & Exhibition, www.ewea.org, Paris, April 2002, 5 pages.

Shen, W. Z.: See Sørensen, J. N.

Sigmund, O.: Material design by topology optimisation. In "Plasticity, Damage and Fracture at Macro, Micro and Nano Scales, Proceedings of Plasticity '02", Aruba, 45-47, Kahn, A. S. and Lopez-Pamies, O. (eds.), Neat Press, Maryland, 2002 USA.

Sigmund, O. & Jensen, J. S.: Topology optimization of elastic band gap structures and waveguides. In H. A. Mang, F. G. Rammerstorfer, and J. Eberhardsteiner, (eds.), Proceedings of the Fifth World Congress on Computational Mechanics, <http://wccm.tuwien.ac.at>, Vienna University of Technology, Austria 2002.

Neves, M. M., Sigmund, O. & Bendsøe, M. P.: Topology optimization of periodic microstructures with a buckling criteria. In H. A. Mang, F. G. Rammerstorfer, and J. Eberhardsteiner, (eds.), Proceedings of the Fifth World Congress on Computational Mechanics, <http://wccm.tuwien.ac.at>, Vienna University of Technology, Austria 2002.

Sigmund, O.: See Bendsøe, M.P.; Jensen, J.S.

Abildgaard, P.M., Hansen, P.W. & Simonsen, B.C.: Strength of Welded Aluminium Structures, proceedings of HIPER 2001, Hamburg, May 2001, 15 pages.

Naar, H., Kujala, P., Simonsen, B.C. & Ludolphy H.: Development of Crashworthy Bottom and Side Structures, Proceedings of the International Conference on Collision and Grounding of Ships (ICCGS), Copenhagen, July, 2001, pp. 179-188.

Simonsen, B. C.: See Berggren, C.; Ravn, E. S.

Sterndorff, M.J.: Large-Scale Model Tests with Wave Loading on Offshore Platform Deck Elements, Proceedings of OMAE'02, Oslo, Norway, Paper No. OMAE2002-28624, 2002.

Skourup J. & Sterndorff, M.J.: Deterministic Reproduction of Nonlinear Waves, Proceedings of OMAE'02, Oslo, Norway, Paper No. OMAE2002-28575, 2002.

Sumer, B. M. & Fredsøe, J.: The Mechanics of Scour in the Marine Environment. World Scientific, pp. 552, 2002.

Sumer, B. M.: Wave-induced liquefaction. In: Sumer, B. M. (ed.), Book of Abstracts, Workshop on Wave- and Seismic-Induced Liquefaction and its Implications for Marine Structures, 16-18 Sept. 2002, Istanbul, Turkey, pp. 14-15.

Sumer, B. M., Truelsen, C. & Fredsøe, J.: Liquefaction around a buried pipeline in a progressive wave. In: Sumer, B. M. (ed.), Book of Abstracts, Workshop on Wave- and Seismic-Induced Liquefaction and its Implications for Marine Structures, 16-18 Sept. 2002, Istanbul, Turkey, pp. 14-15.

Sumer, B.M. & Fredsøe, J.: Time scale of scour around a large vertical cylinder in waves. Proceedings of the 12th International Offshore and Polar Engineering Conference, KitaKyushu, Japan, May 26-31, 2002, vol. II, pp. 55-60.

Sumer, B.M., Kaya, A. & Hansen, N.-E. O.: Impact of liquefaction on coastal structures in the 1999 Kocaeli, Turkey Earthquake". Proceedings of the 12th International Offshore and Polar Engineering Conference, KitaKyushu, Japan, May 26-31, 2002, vol. II, pp. 504-511.

Roulund, A., Sumer, B.M., Fredsøe, J. & Michelsen, J.: 3-D Numerical modelling of flow and scour around a pile. Proceedings of the First International Conference on Scour of Foundations, 17-20 November, 2002, Texas A&M University, College Station, Texas, USA, vol. 2, pp. 795-809.

Sørensen, D. N.: Radiation between segments of the seated human body. In: Melikov, A. K. and Nielsen, P. V. (Eds.) ROOMVENT 2002, 8-11 September, Copenhagen, Denmark, pp. 317-320.

Sørensen, D. N. & Weschler, C.: Modeling chemical reactions in the indoor environment by CFD. In: Melikov, A. K. and Nielsen, P. V. (Eds.) ROOMVENT 2002, 8-11 September, Copenhagen, Denmark, pp. 149-152.

Sørensen, J. N. & Shen, W. Z.: Aeroacoustic Modelling of Turbulent Flows. In: Lund, E., Olhoff, N. and Stegmann, J. (Eds.), NSCM 15th Nordic Seminar on Computational Mechanics, pp. 17-24, www.ime.auc.dk/nscm15.

Sørensen, J. N.: See Gaunaa, M.; Mikkelsen, R. F.; Shen, W. Z.

Thomsen, J.J.: See Jensen, J.S.

Thomsen, T., Pyrz, R.: Raman investigation of the mechanical degradation of single PP-fibres subjected to low-cycle loading, Proceedings. "Mesomechanics 2002 on New Challenges in Mesomechanics", R. Pyrz et. al (eds.), Aalborg University, 2002, pp. 667-675.

True, H. & Asmund, R.: On the dynamics of a railway wheelset with dry friction damping. Proceedings of the 7 the mini conference on vehicle system dynamics, identification and anomalies, Budapest, 6-8 November, 2000, Budapest University of Technology and Economics, 2002, pp. 83-88.

Nielsen, J.B. and True, H.: A Polynomial approach to contact mechanics. Proceedings of the 7 the mini conference on vehicle system dynamics, identification and anomalies, Budapest, 6-8 November, 2000, Budapest University of Technology and Economics, 2002, pp.145-147.

Tvergaard, V. & Needleman, A.: 3D Charpy specimen analyses for welds. From Charpy to Present Impact Testing (eds. D. Francois, et al.), ESIS Publication 40, Elsevier, pp. 437-444, 2002.

Tvergaard, V. & Hutchinson, J.W.: Crack growth per cycle by blunting and void growth. Fatigue 2002 (ed. A.F. Blom), Vol. 1/5, EMAS Publishing, U.K., pp. 107-116, 2002.

Tvergaard, V.: Numerical modelling in nonlinear fracture mechanics. Fracture Mechanics Beyond 2000 (eds. A. Neimitz et al.), Vol. III/III, EMAS Publishing, U.K., pp. 477-484, 2002.

Tvergaard, V.: See Legarth, B.N.

Törnqvist, R.: See Jensen, J.J.

Ullum, Thorvald, Larsen, Poul S. & Ozcan, Oktay: Three-dimensional Flow and Turbulence Structure in Electrostatic Precipitator. 11th Intl. Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal 8-11 July 2002 (abstract published. Paper published on CD-rom, pp.1-8).

Urban, J.: Energy Dissipation in Sandwich Structures during Axial Crushing. In Proceedings of HIPER02, 2002, Bergen, Norway.

Urban, J.: Ravn, E. S.

4B. PUBLICATIONS IN SCIENTIFIC JOURNALS IN 2002

Bang, Ole, Krolikowski, Wieslaw, Wyller, John & Rasmussen, Jens Juul: Collapse arrest and soliton stabilization in nonlocal nonlinear media. *Physical Review E*, 66, 2002, 1-5/046619.

Wyller, John; Krolikowski, Wieslaw; Bang, Ole & Rasmussen, Jens Juul: Generic features of modulational instability in nonlocal Kerr media. *Physical Review E*, 66, 2002, 1-13/066615.

Bang, O.: See Johansen, S. K.

Rodrigues, H., Guedes, J. M. & Bendsøe, M. P.: Hierarchical Optimization of Material and Structure. *Structural and Multidisciplinary Optimization*, Vol. 24, 2002, pp. 1-10.

Bendsøe, M. P.: See Sigmund, O.

Bingham, H.: See Madsen, P. A.

Bjørnø, L.: Forty years of nonlinear ultrasound. *Ultrasonics*, Vol. 40, (1), 11 - 17, 2002.

Bjørnø, L.: 40 Years of Nonlinear Underwater Acoustics. *ACTA ACUSTICA united with ACUSTICA*, Vol. 88, 771 - 775, 2002.

Bradley, D.L., Culver, R.L., Di, X. & Bjørnø, L.: Acoustic Qualities of Ship Wakes. *ACTA ACUSTICA united with ACUSTICA*, Vol. 88, 687 - 690, 2002.

Bræstrup, M. W.: Punching Shear Revisited: Impact of the Plasticity Approach. *Bygningsstatistiske Meddelelser*, Vol 72, No 1, 2002, pp 1-26.

Bræstrup, M. W.: Discussion of L Gale & T J Ibell: Effect of Compression Reinforcement on the Shear Strength of Reinforced Concrete Bridge Beams. *Magazine of Concrete Research*, Vol 54, No 2, April 2002, p 154.

Buhl, T.: Simultaneous topology optimization of structures and supports. *Structural and Multidisciplinary Optimization*. Vol. 23, 5, 2002, pp. 336-346.

Byskov, E.: *Elementary Continuum Mechanics for Everyone - and Some More*. Vol. 1: Continuum Mechanics. Specialized Continua. Fourth Extended Edition. ISSN 1395-8232 U0207, 2002, 217 pages.

Byskov, E.: *Elementary Continuum Mechanics for Everyone - and Some More*. Vol. 2: Buckling, Introduction to the Finite Element Method. Mathematical Preliminaries. Fourth Extended Edition. ISSN 1395-8232 U0208, 2002, 231 pages.

Byskov, E., Kloster, J. & Østergaard, M.: In-Plane and Lateral Buckling, Postbuckling and Imperfection Sensitivity of Arches. Structural and Solid Mechanics, Paper no. 6. ISSN 1395-7953 R0217, 9 pages.

Byskov, E., Christoffersen, J., Christensen, C. D. & Poulsen, J. S.: Kinkband Formation in Wood and Fiber Composites - Morphology and Analysis. International Journal of Solids and Structures 39, 2002, pp. 3649-3673.

Warren, W. E. & Byskov, E.: Three-fold symmetry restrictions on two-dimensional micropolar materials. European Journal of Mechanics A/Solids, pp. 779-792. Elsevier, 2002.

Christiansen, E. & Garby, L.: Prediction of body weight changes caused by changes in energy balance. European Journal of Clinical Investigation, vol.32, pp.826-830, 2002.

Nordén, B., Zolotaryuk, Y., Christiansen, P. L. & Zolotaryuk, A. V.: Ratchet due to broken friction symmetry. Physical Review E, 65, 2002, 1-9/011110.

Savin, A. V., Khalack, J. M., Christiansen, P. L. & Zolotaryuk, A. V.: Twisted topological solitons and dislocations in a polymer crystal. Physical Review B, 65, 2002, 1-10/054106.

Archilla, J. F. R., Christiansen, P. L. & Gaididei, Y. B.: Interplay of nonlinearity and geometry in a DNA-related, Klein-Gordon model with long-range dipole-dipole interaction. Physical Review E, 65, 2002, 1-6/016609.

Gaididei, Y. B., Christiansen, P. L. & Ramanujam, P. S.: Theory of photoinduced deformation of molecular films. Appl. Phys., B, 74, 2002, pp. 139-146.

Nordén, B., Zolotaryuk, Y., Christiansen, P. L. & Zolotaryuk, A. V.: Ratchet device with broken friction symmetry. Applied Physics Letters, 80, 14, 2002, pp. 2601-2603.

Archilla, J. F. R., Gaididei, Y. B., Christiansen, P. L. & Cuevas, J.: Stationary and moving breathers in a simplified model of curved alpha-helix proteins. J. Phys. A: Math. Gen., 35, 2002, pp. 8885-8902.

Karpan, V. M., Zolotaryuk, Y., Christiansen, P. L. & Zolotaryuk, A. V.: Discrete kink dynamics in hydrogen-bonded chains: The one-component model. Physical Review E, 66, 2002, 1-13/066603.

Gorria, G., Christiansen, P. L., Gaididei, Y. B., Muto, V., Pedersen, N. F. & Sørensen, M. P.: Fluxon dynamics in three stacked Josephson junctions. Physical Review B, 66, 2002, 1-4/172503.

Mingaleev, S. F., Gaididei, Y. B., Christiansen, P. L. & Kivshar, Y. S.: Nonlinearity-induced conformational instability and dynamics of biopolymers. Europhysics Letters, 59, 3, 2002, pp. 403-409.

Christiansen, P. L.: See Sørensen, M. P.

- Christensen, Ole, Casazza, Peter, Li, Shidong & Lindner, Alexander: On Riesz-Fischer sequences and lower frame bounds. *Zeitschrift für Analysis und ihre Anwendungen* 21, no. 2 2002, pp. 305-314.
- Christensen, Ole & Lindner, Alexander: Decomposition of Riesz frames and wavelets into a finite union of linearly independent sets. *Linear Algebra and Its Appl.* 335, 2002, pp.147-159.
- Christensen, Ole, Casazza, Peter & Lammers, Mark: Perturbations of Weyl-Heisenberg frames. *Hokkaido Math. Journal* 31 no. 3, 2002, pp. 539-553.
- Christoffersen, J.: See Byskov, E.
- Clausen, H.B., Lützen, M., Friis-Hansen, A. & Bjørneboe, N.: Bayesian and Neural Networks for Preliminary Ship Design, *Marine Technology*, Vol. 38, No. 4, October 2001.
- Krabbenhoft, K. & Damkilde, L.: Lower Bound Limit Analysis of Slabs with nonlinear yield criteria. *Computers & Structures*, Vol. 80, No. 27-30, pp. 2043-2057, 2002.
- Deigaard, R.: See Sumer, B.M.
- Ditlevsen, O., Randrup-Thomsen, S.R. & Tarp-Johansen, N.J.: Slepian approach to a Gaussian excited elasto-plastic frame including geometric nonlinearity. *Nonlinear Dynamics*, Vol. 24, 2001, 53-69.
- Tarp-Johansen, N.J., & Ditlevsen, O.: Time between plastic displacements of elasto-plastic oscillators subject to Gaussian white noise, *Probabilistic Engineering Mechanics*, Vol. 16, No.4, 373-380, 2001.
- Ditlevsen, O. D.: Stochastic model for joint wave and wind loads on offshore structures. *Structural Safety*, Vol. 24, 2002, 139-163.
- Franchin, P., Ditlevsen, O. D. & Der Kiurehian, A.: Model correction factor method for reliability problems involving integrals of non-Gaussian random fields. *Probabilistic Engineering Mechanics*, Vol. 17, 2002, pp.109-122.
- Ditlevsen, O.: See Friis- Hansen, P.
- Friis-Hansen, P. & Simonsen, B. C.: GRACAT: Software for grounding and collision analysis. *Journal of Marine Structures*, Special issue on Ship Collision and Grounding. Vol. 15, No. 4-5 July-October 2002. pp. 383-402.
- Friis-Hansen, P. & Ditlevsen, O.D.: Nature preservation acceptance model applied to tanker oil spill simulations. *Structural Safety*, Vol. 25, No. 1, 2002, pp. 1-34.

Friis-Hansen, P. & Ditlevsen, O. D.: Stochastic Still Water Response Model. *Journal of Ship Research*, Vol. 46, No. 1, March 2002, pp. 16-30.

Babovic, V., Drecourt, J., Keijzer, M. & Friis-Hansen, P.: A Data Mining Approach to Modelling of Water Supply Assets. *Urban Water*, Vol. 4., 2002, pp. 410-414.

Hansen, J. M.: Synthesis of Mechanisms using Time-Varying Dimensions. *Multibody Systems Dynamics*, vol. 7, no. 1, pp. 127-144, 2002.

Jensen, Henrik Myhre: Three Dimensional Numerical Investigation of Brittle Bond Fracture. *International Journal of Fracture* 114, 153-165, 2002.

Jensen, Henrik Myhre & Sheinman, Izhak: Numerical Analysis of Buckling-Driven Delamination. *International Journal of Solids and Structures* 39, 3373-3386, 2002.

Jensen, Henrik Myhre: Residual Stress Effects on the Compressive Strength of Uni-directional Fibre Composites. *Acta Materialia* 50, 2895-2904, 2002.

Moon, M.-W., Jensen, H. M., Hutchinson, J. W., Oh, K. H. & Evans, A. G.: The Characterization of Telephone Cord Buckling of Compressed Thin Films on Substrates. *Journal of the Mechanics and Physics of Solids* 50, 2355-2377, 2002.

Jensen, J. J.: See Ravn, E. S.

Johansen, Steffen Kjær, Bang, Ole & Sørensen, Mads Peter: Escape angles in bulk $x(2)$ soliton interactions. *Physical Review E*, 65, 2002, 1-4/026601.

Johansen, Steffen Kjær, Carrasco, Silvia, Torner, Lluís & Bang, Ole: Engineering of spatial solitons in two-period QPM structures. *Optics Communications*, 203, 2002, pp. 393-402.

Krenk, S.: Unified formulation of radiation conditions for the wave equation. *International Journal for Numerical Methods in Engineering*, Vol. 53, 2002, pp. 275-295.

Krenk, S. & Nielsen, S. R.: Vibrations of a shallow cable with a viscous damper. *Proceedings of the Royal Society London, Series A*, Vol. 458, 2002, pp. 339-357.

Krenk, S., Lin, Y. K. & Rüdinger, F.: Effective system properties and spectral density in random vibration with parametric excitation. *Journal of Applied Mechanics*, Vol. 69, 2002, pp. 161-170.

Rüdinger, F. & Krenk, S.: Stochastic analysis of self-induced vibrations, *Meccanica*, Vol. 37, 2002, pp. 3-14.

Larsen, Poul S. & Riisgård, Hans Ulrik: On ciliary pumping and sieving in bryozoans. *J. Sea Research*, 48, 181-195, 2002.

Riisgård, Hans Ulrik, Larsen, Poul Scheel & Nielsen, Claus: Filtrerende bryozoer (mosdyr) - partikler og strømmende vand. *Naturens Verden*, 5, 12-23, 2002.

Larsen, Poul S.: See Reck, M.

Tagg, R., Bartzis, P., Papanikolaou, P., Spyrou, K. & Lützen, M.: Updated Vertical Extent of Collision Damage. *Journal of Marine Structures*, Special issue on Ship Collision and Grounding, Vol. 15, Nos. 4-5, July-October 2002, pp. 475-498.

Lützen, M.: See Clausen, H. B.

Madsen, P. A., Bingham, H. & Liu, H.: A new Boussinesq method for fully nonlinear waves from shallow water to deep water. *Journal of Fluid Mechanics*, Vol 462, 2002, pp 1-30.

Madsen, P.A., Bingham, H.B. & Schäffer, H.A.: Boussinesq-type formulations for fully nonlinear and extremely dispersive water waves: Derivation and analysis. To appear in *Proc. Roy. Soc. Lond. A*, 2002.

Meyer, K. E., Özcan, O. & Westergaard, C.: Flow Mapping of a Jet in Crossflow with Stereoscopic PIV. *Journal of Visualization*, Vol. 5, No. 3, 2002, pp. 225-231.

Meyer, K. E.: See Pedersen, J. M.

Niordson, C.F. & Tvergaard, V.: Nonlocal plasticity effects on fibre debonding in a whisker-reinforced metal. *Eur. J. Mech. A/Solids*, Vol 21, pp. 239-248, 2002.

Langthjem, M. & Olhoff, N.: Modal Expansion of the Perturbation Velocity Potential for a Cantilevered Fluid-Conveying Cylindrical Shell. *J. Fluids and Structures* (accepted).

Sorokin, S.V., Nielsen, J.B. & Olhoff, N.: Green's Matrix and the Boundary Integral Equations Method for Analysis of Vibrations and Energy Flows in Cylindrical Shells with and without Internal Fluid Loading. *J. Sound and Vibration* (accepted).

Kharmanda, G., Olhoff, N., Mohamed, A. & Lemaire, M.: Reliability-based Topology Optimization. *Struct. Multidisc. Optim.* (accepted).

Pedersen, J.M. & Meyer, K.E.: POD analysis of flow structures in a scale model of a ventilated room. *Experiments in Fluids* 33, 2002, pp. 940-949.

Pedersen, N.L.: Topology optimization of laminated plates with prestress. *Computers & Structures*. Vol 80, pp. 559-570, 2002.

Pedersen, P.: On Bone Mechanics, Modelling and Optimization. *Meccanica*, Vol. 37, pp. 335-342, 2002.

Araujo, A., Soares, C., Herskovits, J. & Pedersen, P.: Development of a finite element model for the identification of mechanical and piezoelectric properties through gradient optimisation and experimental vibration data. *Composite Structures*, Vol. 58, pp. 307-318, 2002.

Paik, J. K., Thayamballi, A. K., Pedersen, P. T. & Park, Y.: Ultimate Strength of Ship Hulls under Torsion, *Ocean Engineering*, Vol. 28 pp 1097-1133, 2001.

Cui, W., Wang, Y. & Pedersen, P. T.: Strength of Ship Plates under Combined Loading, *Marine Structures*, vol 15, 2002, pp 75-97.

Pedersen, P. T.: Collision Risk for Fixed Offshore Structures Close to High-density Shipping Lanes. *Journal of Engineering for the Maritime Environment*, Proceedings of the Institution of Mechanical Engineers 2002, Vol. 216 Part M1, 2002, pp. 29 - 44.

Otto, S., Pedersen, P. T., Samuelidis, M. & Sames, P.: Elements of Risk Analysis for Collision and Grounding of a RoRo Passenger Ferry. *Marine Structures* Vol. 15, Nos. 4 – 5, pp. 461 – 475. July-October 2002.

Cui, W., Wang, Y. & Pedersen, P. T.: Strength of Ship Plates under Combined Loading. *Marine Structures*. Vol 15, 2002, pp 75-97.

Poulsen, T. A.: A simple scheme to prevent checkerboard patterns and one-node connected hinges in topology optimization. *Structural and Multidisciplinary Optimization*. Vol. 24, no. 5, pp. 396-399, Springer, 2002.

Poulsen, T. A.: Topology optimization in wavelet space. *International Journal for Numerical Methods in Engineering*. Vol. 53, pp. 567-582, John Wiley & Sons. 2002.

Vejen, N. & Pyrz, R.: Transverse crack growth in glass/epoxy composites with exactly positioned long fibres, part II: numerical. *Composites Part B*, vol.33, pp. 279-290, 2002.

Gamstedt, E.K., Skrifvars, M., Jacobsen, T.K. & Pyrz, R.: Synthesis of unsaturated polyesters for improved interfacial strength in carbon fibre composites. *Composites Part A: Applied Science and Manufacturing*, vol.33, pp. 1239-1252, 2002.

Nielsen, A.S. & Pyrz, R.: A novel approach to measure local strains in polymer matrix composites using polarised Raman microscopy, *Composites Science and Technology*, vol. 62, pp. 2219-2227, 2002.

Ravn, E. S., Jensen, J. J., Baatrup, J., Papanikolaou, A., Vassalos, D. & GuedesSoares, C.: Robustness of the Probabilistic damage Stability Concept to the Degree of Details in the Subdivision. *J. Ship Technology Research*, Vol. 49, 2002, pp. 151-159.

Reck, Mads, Larsen, Poul S. & Ullum, Ulrik: Particle deposition in low-speed, high-turbulence flows. *Atmospheric Environment*, vol 36/30, 4801-4809, 2002.

Brun, A., Engesgaard, P., Christensen, T. H. & Rosbjerg, D.: Modelling of transport and biogeochemical processes in pollution plumes: Vejen landfill, Denmark. *Journal of Hydrology*, 256, 2002, pp. 228-248.

Kjeldsen, T. R. & Rosbjerg, D.: Comparison of regional index flood estimation procedures based on the extreme value type I distribution. *Stochastic Environmental Research and Risk Assessment*, 16, 2002, pp. 358-373.

Madsen, H., Mikkelsen, P. S., Rosbjerg, D. & Harremoës, P.: Regional estimation of rainfall intensity-duration-frequency curves using generalized least squares regression of partial duration series statistics. *Water Resources Research*, 38, 11, 2002, 21-1-21-11.

Shen, W. Z.: See Sørensen, J. N.

Sigmund, O., Bruns, T. E. & Tortorelli, D. A.: Numerical methods for the topology optimization of structures that exhibit snap-through. *International Journal for Numerical Methods in Engineering*, 2002, 55, pp. 1215-1237.

Neves, M. M., Sigmund, O. & Bendsøe, M. P.: Topology optimization of periodic microstructures with a penalization of highly localized buckling modes. *International Journal of Numerical Methods on Engineering*, 2002, 54(6), pp. 809-834.

Naar, H., Kujala, P., Simonsen, B. C. & Ludolph, H.: Development of Crashworthy Bottom and Side Structures. *Marine Structures*, Vol. 15, 2002, pp. 443-461.

Simonsen, B. C.: See Friis-Hansen, P.

Drønen, N., Karunaratna, H., Fredsøe, J., Sumer, B.M. & Deigaard, R.: An experimental study of rip channel flow. *Coastal Engineering*, vol. 45, pp. 223-238, 2002.

Sørensen, D. N., Weschler, C.: Modeling-gas phase reactions in indoor environments using computational fluid dynamics. *Atmospheric Environment*. Vol. 36, no. 1, pp. 9-18, 2002.

Topp, C., Nielsen, P. V. & Sørensen, D. N.: Application of computer simulated persons in indoor environmental modeling. *ASHRAE Transactions*. Vol. 108, no. 2, pp. 1084-1089, 2002.

Okulov, V. L., Sørensen, J. N., Voigt, L. P. K.: Alternation of the Right- and Left Handed Helical Vortices Caused by Increased Flow Swirling in a Cylindrical Cavity with Rotating Lids. *Technical Physics Letter*. Vol. 28, no. 1, pp. 55-58, 2002.

Sørensen, J. N., Larsen, E. H. & Sørensen, J. B.: Analysis of the Sodium Recirculation Theory of Solute Coupled Water Transport in Small Intestine. *Journal of Physiology*. Vol. 542, no. 1, pp. 33-50, 2002.

Sørensen, J. N., Michelsen, J. & Schreck, S.: Navier-Stokes predictions of the NREL phase VI rotor in the NASA Ames 80 ft x 120 ft wind tunnel. *Wind Energy*. Vol. 5, pp. 151-169, 2002.

Sørensen, J. N. & Shen, W. Z.: Numerical Modelling of Wind Turbine Wakes. *J. of Fluids Engineering*. Vol. 124, no. 2, pp. 393-399, 2002.

Sørensen, M. P., Brio, Moysey, Webb, Gary M. & Moloney, Jerome V.: Solitary waves steepening and initial collapse in the Maxwell-Lorentz system. *Physica D*, 170, 2002, pp. 287-303.

Aslanidi, O. V., Mornev, O. A., Vesterager, M., Sørensen, M. P. & Christiansen, P. L.: A Model for Glucose-induced Wave Propagation in Pancreatic Islets of Langerhans. *J. Theor. Biol.*, 215, 2002, pp. 273-286.

Sørensen, M. P.: See Christiansen, P. L.; Johansen, S. K.

Tcherniak, D. M.: Topology optimisation of resonating structures using SIMP method. *International Journal for Numerical Methods in Engineering*. Vol. 54, pp. 1605-1622. ISSN 00295981, 2002.

Thomsen, J. J.: Some general effects of strong high-frequency excitation: stiffening, biasing, and smoothening. *Journal of Sound and Vibration*, Vol. 253, No. 4, pp. 807-831, 2002.

Andersen, S. B. & Thomsen, J. J.: Post-critical behavior of Beck's column with a tip mass. *International Journal of Non-linear Mechanics*, Vol. 37, No. 1, pp. 135-151, 2002.

True, Hans & Asmund, Rolf: The Dynamics of a Railway Freight Wagon Wheelset with dry friction Damping. *Vehicle System Dynamics*, 38, 2, 2002, pp.149-163.

Benzerga, A.A., Tvergaard, V. & Needleman, A.: Size effects in the Charpy V-notch test. *Int. J. Fracture*, Vol. 116, pp. 275-296, 2002.

Tvergaard, V. & Hutchinson, J.W.: Two mechanisms of ductile fracture: Void by void growth versus multiple void interaction. *Int. J. Solids Structures*, Vol. 39, pp. 3581-3597, 2002.

Tvergaard, V.: Theoretical investigation of the effect of plasticity on crack growth along functionally graded region between dissimilar elastic-plastic solids. *Engng. Fracture Mech.*, Vol. 69, pp. 1635-1645, 2002.

Tvergaard, V.: See Niordson, Christian F.

Ullum, U.: See Reck, M.

5. LIST OF DCAMM REPORTS INDICATING FINAL REFERENCE

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620. PEDERSEN, NIELS L.: Maximization of Eigenvalues Using Topology Optimization (June 1999). Structural and Multidisciplinary Optimization, vol. 20, no. 1, pp. 2-12, 2000.
621. PEDERSEN, PAULI: On Influence of Boundary Conditions, Poisson's Ratio and Material Non-Linearity on the Optimal Shape (August 1999). Int. J. Solids Structures, vol. 38, pp. 465-477, 2001.
622. KRENK, STEEN: Vibrations of a Taut Cable with an External Damper (September 1999)
623. SEYRANIAN, ALEXANDER P. & KLIEM, WOLFHARD: Bifurcations of Eigenvalues of Gyroscopic Systems with Parameters near Stability Boundaries (September 1999). J. of Applied Mechanics, vol. 68, pp. 199-205, March, 2001.
624. GRAVESEN, JENS & HENRIKSEN, CHRISTIAN: The Intrinsic Equation of Planar Curves and the Geometry of the Scroll Compressor (September 1999)
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628. HARTNACK, JOHAN NICOLAI, BRØNS, MORTEN & SPOHN, ANDREAS: The Role of Asymmetric Perturbations in Steady Vortex Breakdown Bubbles (January 2000)
629. PEDERSEN, NIELS L.: On Topology Optimization of Plates with Prestress (January 2000). *Int. J. Numer. Met. Engng.*, vol. 5, no. 2, pp. 229-239, 2000.
630. SIMONSEN, BO CERUP & LAURIDSEN, LARS PEDER: Energy Absorption and Ductile Failure in Metal Sheets under Lateral Indentation by a Sphere (January 2000)
631. PEDERSEN, CLAUS B.W., BUHL, THOMAS & SIGMUND, OLE: Topology Synthesis of Large-displacement Compliant Mechanisms (January 2000)
632. SIGMUND, OLE & BUHL, THOMAS: Design of Multiphysics Actuators using Topology Optimization - Part I: One Material Structures (Part II: Two Material Structures (Ole Sigmund), Part III: Large Displacements (Ole Sigmund and Thomas Buhl) (February 2000)
633. BRUNS, TYLER E. & TORTORELLI, DANIEL: Topology Optimization of Nonlinear Elastic Structures and Compliant Mechanism (March 2000)
634. KRENK, STEEN: Unified Formulation of Radiation Conditions for the Wave Equation (April 2000)
635. ANDERSEN, STEEN BRAHE & THOMSEN, JON JUEL: Post-critical Behavior of Beck's Column with a Tip Mass (April 2000)
636. BRØNS, MORTEN, VOIGT, LARS KØLLGAARD & SØRENSEN, JENS NØRKÆR: Topology of Vortex Breakdown Bubbles in a Cylinder with Rotating Bottom and Free Surface (May 2000)
637. RÜDINGER, FINN & KRENK, STEEN: Non-parametric System Identification from Non-linear Stochastic Response (June 2000)
638. NIORDSON, FRITHIOF I.: An Asymptotic Theory for Spherical Shells (June 2000)
639. POULSEN, THOMAS A.: Topology Optimization in Wavelet Space (June 2000)
640. TVERGAARD, VIGGO: Crack Growth Predictions by Cohesive Zone Model for Ductile Fracture (July 2000). *J. Mech. Phys. Solids*, to appear.

641. JENSEN, HENRIK MYHRE & SHEINMAN, IZHAK: Straight-sided, Buckling-driven Delamination at High Stress Level (August 2000)
642. NIORDSON, CHRISTIAN F. & TVERGAARD, VIGGO: Nonlocal Plasticity Effects on the Tensile Properties of a Metal Matrix Composite (August 2000)
643. FIDLIN, ALEXANDER & THOMSEN, JON JUEL: Predicting Vibration-induced Displacement for a Resonant Friction Slider (August 2000)
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645. TCHERNIAK, DMITRI: Topology Optimization of Resonating Memes (August 2000)
646. FIDLIN, ALEXANDER: On the Asymptotic Analysis of Discontinuous Systems (September 2000)
647. BAASER, HERBERT & TVERGAARD, VIGGO: A New Algorithmic Approach Treating Nonlocal Effects at Finite Rate-independent Deformation using the Rousselier Damage Model (September 2000)
648. JENSEN, HENRIK MYHRE: Three Dimensional Numerical Investigation of Brittle Bond Fracture (November 2000)
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651. PEDERSEN, CLAUS B.W.: Topology Optimization of 2D-Frame Structures with Path Dependent Response (January 2001)
652. THOMSEN, JON JUEL & FIDLIN, ALEXANDER: Analytical Approximations for Stick-Slip Vibration Amplitudes (February 2001). *Int. J. of Non-linear Mechanics*, to appear.
653. PEDERSEN, NIELS L.: Optimization of Laminated Plates with Prestress Using Topology Optimization (February 2001). *Computers & Structures*, to appear.
654. BRUNS, T.E., SIGMUND, O. & TORTORELLI, D.A.: A Strategy for the Topology Optimization of Nonlinear Elastic Structures that Exhibit Snap-Through (February 2001)
655. KRENK, S., LIN, Y.K. & RÜDINGER, F.: Effective System Properties and Spectral Density in Random Vibration with Parametric Excitation (March 2001)

656. NEVES, M.M., SIGMUND, O. & BENDSØE, M.P.: Topology Optimization of Periodic Microstructures with a Penalization of Highly Localized Buckling Modes (March 2001)
657. DERIABINE, MIKHAIL: On Stability of Uniformly-Accelerated Motions of an Axially-Symmetric Heavy Rigid Body in an Ideal Fluid (April 2001)
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660. THOMSEN, J.J.: Some General Effects of Strong High-Frequency Excitation: Stiffening, Biasing, and Smoothing (June 2001). *J. of Sound and Vibration*, to appear.
661. NIORDSON, CHRISTIAN F. & TVERGAARD, VIGGO: Nonlocal Plasticity Effects on Fibre Debonding in a Whisker-Reinforced Metal (June 2001)
662. JENSEN, H.M. & SHEINMAN, I.: Numerical Analysis of Buckling-Driven Delamination (August 2001)
663. POULSEN, THOMAS A.: A New Scheme for Imposing a Minimum Length Scale in Topology Optimization (September 2001)
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665. THOMSEN, JON JUEL: Theories and Experiments on the Stiffening Effect of High-Frequency Excitation for Continuous Elastic Systems (October 2001)
666. PEDERSEN, CLAUD B.W.: Topology Optimization Design of Crushed 2D-Frames for Desired Energy Absorption History (November 2001)
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668. LEGARTH, BRIAN NYVANG, TVERGAARD, VIGGO & KURODA, MITSUTOSHI: Effects of Plastic Anisotropy on Crack-Tip Behavior (January 2002)
669. PEDERSEN, PAULI: Design Study of Hole Positions and Hole Shapes for Crack Tip Stress Releasing (January 2002)
670. HANSEN, JORN S. & LUND, ERIK: Shape Sensitivity Analysis of Natural Frequency Using a Fixed Basis Function Finite Element Approach (January 2002)

668. LEGARTH, BRIAN NYVANG, TVERGAARD, VIGGO & KURODA, MITSUTOSHI: Effects of Plastic Anisotropy on Crack-Tip Behavior (January 2002)
669. PEDERSEN, PAULI: Design Study of Hole Positions and Hole Shapes for Crack Tip Stress Releasing (January 2002)
670. HANSEN, JORN S. & LUND, ERIK: Shape Sensitivity Analysis of Natural Frequency Using a Fixed Basis Function Finite Element Approach (January 2002)
671. KIRILLOV, O.N. & SEYRANIAN, A.P.: Collapse of the Keldysh Chains and Stability of Continuous Non-Conservative Systems (April 2002)
672. PEDERSEN, NIELS L.: On Optimization of Bioprobes (June 2002)
673. NIORDSON, CHRISTIAN F.: Strain Gradient Plasticity Effects in Whisker-Reinforced Metals (July 2002)
674. RASHID, M.M. & TVERGAARD, V.: On the Path of a Crack near a Graded Interface under Large Scale Yielding (September 2002)
675. PEDERSEN, PAULI: On Combined Design of Density, Orientation and Shape for Stiffness and/or Strength with Orthotropic Materials (November 2002)
676. PEDERSEN, PAULI: A Note on Design of Fiber-Nets for Maximum Stiffness (December 2002)
677. GUEDES, J. M., RODRIGUES, H. & BENDSØE, M. P.: A Material Optimization Model to Approximate Energy Bounds for Cellular Materials under Multiload Conditions. (December 2002)
678. REDANZ, P. & MCMEEKING, R. M.: Sintering of spherical particles of equi and different size arranged in a body centered cubic structure. Submitted. (December 2002).

6. LIST OF DCAMM S-REPORTS (THESES ETC.)

S1 - S84: Ask for separate book.

- S85. HANSEN, MORTEN H.: Aeroelasticity and Dynamics of Spinning Disks (September 1999)
- S86. POULSEN, THOMAS A.: Controlling Geometry in Topology Optimization (April 2002)
- S87. PEDERSEN, CLAUS B.W.: On Topology Design of Frame Structures for Crashworthiness (July 2002)
- S88. NIORDSON, CHRISTIAN F.: Non-local Modeling of Materials (September 2002)
- S89. BUHL, THOMAS: Design of Non-linear Mechanisms - Topology and Shape Optimization - (November 2002)

7. OTHER REPORTS

Bendsøe, M. P.: Book review: Shape Optimization by the Homogenization Method by G. Allaire. Structural and Multidisciplinary Optimization, Vol. 24, 2002, p. 405.

Bendsøe, M. P. & Sigmund, O.: Material models in topology optimization. Lecture notes, Advanced School and Workshop on Bone Mechanics - Mathematical and Mechanical Models for Analysis and Synthesis, Instituto Superior Técnico, Lisbon, Portugal, June 24-28, 2002. 30 pp.

Bendsøe, M.P., Olhoff, N. & Rasmussen, J. (eds): Proceedings of 2nd Max Planck Workshop on Engineering Design Optimization, October 12-14, 2001, Aalborg, Denmark. Department of Mathematics, Technical University of Denmark and Institute of Mechanical Engineering, Aalborg University, Denmark, xviii+127 pp., 2002.

Bjørnø, L.: A constructive, critical evaluation of contributions to acoustics of wakes. Applied Research Laboratory, The Pennsylvania State University, State College, USA, Technical Report, TR 02-001, 2002.

Christensen, O.: Frames og Riesz baser i Hilbertrum. Doctoral dissertation, 2002.

Christensen, O.: An introduction to frames and Riesz bases. Monography, to be published by Birkhaeuser 2003.

Christensen, O.: On frames and multiresolution analysis. Preprint, 2002.

Christensen, O.: Frames and multiresolution analysis. Preprint, 2002.

Christiansen, S. & Madsen, P. A.: The circle of convergence for a Taylor series. IMM-Technical Report 2002-24, 2002, 14pp.

Ditlevsen, O.: Stochastic Wave Loads on Tubular Offshore Structures. Models for dynamics and reliability analysis. Lecture notes for offshore structures course. BYG.DTU, Department of Civil Engineering, Technical University of Denmark, April 2001, (115 pages).

Ditlevsen, O. D. & Madsen, H. O.: Structural Reliability Methods. Edition 2.1: Internet edition downloadable from <http://www.mek.dtu.dk/staff/od/books.htm> (First edition: Wiley & Sons, Chichester, UK, 1996), 2002.

Ditlevsen, O. D.: See Friis-Hansen, P.

Du, J. & Olhoff, N.: Topological Optimization of Continuum Structures with Design-dependent Surface Loading - - Part I: New Computational Approach for 2D Problems. Manuscript submitted to Struct. Multidisc. Optim., 2002.

Du, J. & Olhoff, N.: Topological Optimization of Continuum Structures with Design-dependent Surface Loading - - Part II: Algorithm and Examples for 3D Problems. Manuscript submitted to Struct. Multidisc. Optim., 2002.

Friis-Hansen, P. & Ditlevsen, O.: A Stochastic Still Water Response Model, Journal of Ship Research, accepted November 2001.

Friis-Hansen, P & Ditlevsen, O.: Lognormal risk profile in rational acceptance model applied to tanker oil spill simulations, submitted to publication in Structural Safety, November 2001.

Friis-Hansen, P.: See Simonsen, B. C.

Goltermann, P.: Integrated Monitoring System for Durability Assessment of Concrete Structures (SMART STRUCTURES). Project Report. RAMBØLL, September 2002 available at <http://smart.ramboll.dk>.

Larsen, P. S., Ullum, T. & Özcan, O.: EFP-2000 – Electrostatic Precipitation - Reduction of Emissions and Energy Consumption, Final Report, MEK-FM-2002-03, June 2002. pp. 66.

Lund, E., Olhoff, N. & Stegmann, J. (eds): Proceedings of 15th Nordic Seminar on Computational Mechanics, NSCM 15 , October 18-19, 2002, Aalborg, Denmark. ISBN 87-89206-67-3, Institute of Mechanical Engineering, Aalborg University, Denmark, xiii+278 pp., 2002.

Lützen, M.: Damage Distributions. EU-Project GRD1-1999-10721 'HARDER', Report 2-22-D-2001-01-1.

Madsen, P.: See Christiansen, S.

Nielsen, A. G.: See Thomsen, J. J.

Niordson, C.F.: See Tvergaard, V.

Kharmanda, G. & Olhoff, N.: Optimal Safety Factors. Report No. 115, 25 pp., Institute of Mechanical Engineering, Aalborg University, October 2002.

Kharmanda, G., Olhoff, N. & El-Hami, A.: Optimum Values of Structural Safety Factors for a Predefined Reliability Level with Extension to Multiple Limit States. Manuscript submitted to Struct. Multidisc. Optim., 2002.

Olhoff, O.: See Bendsøe, M.P.; Du, J.; Lund, E.

Pedersen, P. T. & Li, Y.: On the Global Ship Hull Bending Energy in Ship Collisions, Report TD.05.01.33.11.00., EU Projekt Crashcoaster.

Wang, J. & Pyrz, R.: Micromechanics of layered silicate-reinforced nanocomposites: Part 1 basic theory and formulas. STVF Frame Programme Report, June 2002, ISBN 87-89206-57-6, 30p.

Wang, J. & Pyrz, R.: Micromechanics of layered silicate-reinforced nanocomposites: Part 2 analysis. STVF Frame Programme Report, August 2002, ISBN 87-89206-65-7, 27p.

Redanz, P. & Tvergaard, V.: Analysis of shear band instabilities in compaction of powders. Dept. Mech. Engng., Solid Mech., Techn. Univ. Denmark, Report 2002.

Madsen, H. & Rosbjerg, D.: Analysis of hydrologic time series. Environment & Resources DTU, Technical University of Denmark, Lyngby. pp. 1-69. 2002.

Schjødt-Thomsen, J. & Pyrz, R.: Stress fields in heterogeneous solids with spatially dispersed inclusions. STVF Frame Programme Report, July 2002, ISBN 87-89206-62-0, 15p.

Schjødt-Thomsen, J. & Pyrz, R.: Interaction among spatially dispersed inclusions. STVF Frame Programme Report, July 2002, ISBN 87-89206-61-4, 11p.

Simonsen, B. C. & Friis-Hansen, P.: Risk Assessment of Shipping in Danish Waters related to Excavation of the Drogden Channel, Copenhagen, December 2001.

Simonsen, B. C.: See Thomsen, J. J.

Stegmann, J.: See Lund, E.

Sumer, B. M.: Wave-induced liquefaction. Workshop on Wave- and Seismic-Induced Liquefaction and its Implications for Marine Structures, 16-18 Sept., 2002, Istanbul, Turkey, Book of Abstracts, pp. 14-15.

Sumer, B. M., Fredsøe, J. & Truelsen, C.: Liquefaction around a buried pipeline in a progressive wave. Workshop on Wave- and Seismic-Induced Liquefaction and its Implications for Marine Structures, 16-18 Sept., 2002, Istanbul, Turkey, Book of Abstracts, pp. 14-15.

Sumer, B. M.: Lecture Notes on Turbulence. Technical University of Denmark, MEK, Coastal and River Engineering Section, 149 p., 2002.

Thomsen, J. J., Nielsen, A. G. & Simonsen, B. C.: Course Notes: Experimental Solid Mechanics. Department of Mechanical Engineering, 2001.

Tvergaard, V.: Cohesive zone representations of failure between elastic and ductile solids. Dept. Mech. Engng., Solid Mech., Techn. Univ. Denmark, Report 2002.

Tvergaard, V.: Debonding of short fibres among particulates in a metal matrix composite. Dept. Mech. Engng., Solid Mech., Techn. Univ. Denmark, Report 2002.

Tvergaard, V.: Effect of T-stress on crack growth along an interface between ductile and elastic solids. Dept. Mech. Engng., Solid Mech., Techn. Univ. Denmark, Report 2002.

Tvergaard, V. & Niordson, C.F.: Nonlocal plasticity effects on interaction of different size voids. Dept. Mech. Engng., Solid Mech., Techn. Univ. Denmark, Report 2002.

Klöcker, H. & Tvergaard, V.: Growth and coalescence of non spherical voids in metals deformed at elevated temperature. Ecole des Mines, Saint-Etienne, Report 2002.

Tvergaard, V.: See Redanz, P.

Ullum, T.: See Larsen, P. S.

8. DCAMM SEMINARS GIVEN IN 2002

Kirillov, Oleg N.: Overlapping of Characteristic Curves in Non- Conservative Stability and Optimization Problems.

4 March 2002.

(Institute of Mechanics, Moscow State Lomonosov University, Russia)

Soto, Ciro A.: The Automobile A Structural Viewpoint.

18 March 2002.

(Ford Research Labs, Dearborn, USA)

Kirillov, Oleg N.: Collapse of Keldysh Chains and Sensitivity Analysis of Continuous Nonconservative Systems.

22 March 2002.

(Institute of Mechanics, Moscow State Lomonosov University, Russia)

Kocvara, Michal: Modelling Delamination: Hemivariational Inequality, Nonsmooth or just Smooth Optimization?

22 April 2002.

(Institute of Applied Mathematics, University of Erlangen/Nuremberg, Germany)

Kim, Kyung-Suk: Scale-bridging in Dislocation-based Multi-scale Modeling.

30 April 2002.

(Professor of Engineering, Brown University, Providence, RI, USA)

Peterka, Frantisek: Vibro-impact Systems.

3 June 2002.

(Inst. of Thermomechanics, Academy of Sciences of the Czech Republic, Prague, Czech Republic)

Gautesen, A.K.: On How a Rayleigh Wave Turns a Corner.

27 June 2002.

(Department of Mathematics and Ames Laboratory, Iowa State University, USA)

Ring, W.: The Level Set Method for Shape Optimization.

28 October 2002.

(Institute of Mathematics, University of Graz, Austria)

Fleck, N.A.: Microarchitected Porous Metals.

14 November 2002.

(Professor at Cambridge University Engineering Department, UK)

Thouless, M.D.: Cohesive-zone Modeling of Adhesive Joints.

26 November 2002.

(Professor at Department of Mechanical Engineering and Department of Materials Science & Engineering, University of Michigan, Ann Arbor, USA)

9. DCAMM INTERNATIONAL SYMPOSIUM

A DCAMM International Symposium on

CHALLENGES in APPLIED MECHANICS

was held over the three days July 25th to July 27th at Hotel Frederiksdal here in Kgs. Lyngby. Combined with the symposium the participants gathered in the event of Frithiof Niordson's 80th birthday. Financial support of the Symposium received from the Mønsted Foundation and from DTU is gratefully acknowledged.

There were 60 participants; of these participants 33 were from 15 different foreign countries.

Nine sessions with the session's titles:

- Fluid – Solid Mechanics
- Fracture, Cracks and Contact
- Material Mechanics of Composites
- Laminates and Delaminations
- Length Scales in Plasticity
- Biomechanics and Waves
- Large and Small
- Structural and Material Optimization
- Non-linear Dynamics and Multibody Systems

included in all 26 lectures. In addition a poster-session was held. A Frithiof Niordson volume with proceedings from the Symposium is printed. Copies of this book of 274 pages is available from the DCAMM secretariat at the price of 40 \$ or €.



Group picture taken before the Symposium dinner
on Friday 26th July 2002

APPENDIX

Abbreviations:

from Technical University of Denmark

IMM:	Dept. of Informatics and Mathematical Modelling
MAT:	Department of Mathematics
MEK-ET:	Dept. of Mechanical Engineering, Fluid Mechanics and Energy Engng.
MEK-FAM:	Dept. of Mechanical Engineering, Solid Mechanics
MEK-K&P:	Dept. of Mechanical Engineering, Engineering Design
MEK-MT:	Dept. of Mechanical Engineering, Maritime Engineering
MEK-VB:	Dept. of Mechanical Engineering, Coastal and River Eng.

from Aalborg University

IFB-AAU:	Building Technology and Structural Engineering
IME-AAU:	Institute of Mechanical Engineering

Albertsen, Niels Chr.	(IMM)	Associate Professor, Ph.D.
Ammitzbøll, Jeppe	(MAT)	Ph.D. student
Andersen, Poul	(MEK-MT)	Associate Professor, Ph.D.
Andreasen, Jens H.	(IME-AAU)	Associate Professor, Ph.D.
Back-Pedersen, Andreas		Elected member, Ph.D.
Bang, Ole	(IMM)	Assistant Professor
Bendsøe, Martin P.	(MAT)	Professor, dr.techn.
Berggren, Carl Christian	(MEK-MT)	Ph.D. student
Bingham, Harry	(IMM)	Associate Professor
Bisgaard, Anders	(MAT)	Ph.D. student
Bjørnø, Leif		Elected member, Professor
Boudant, Pauline	(MEK-MT)	Ph.D. student
Bozhevolnaya, Elena	(IME-AAU)	Assistant Professor, Ph.D.
Bredmose, Henrik	(IMM)	Ph.D. student
Brink-Kjær, Ole	(MAT)	Professor, Ph.D.
Brohus, Henrik	(IFB-AAU)	Associate Professor, Ph.D.
Bruns, Tyler E.	(MEK-FAM)	Assistant Professor, Ph.D.
Bræstrup, M.W.		Elected member, Ph.D.
Brøns, Morten	(MAT)	Associate Professor, Ph.D.
Buhl, Thomas	(MEK-FAM)	Ph.D.
Byskov, E.	(IFB-AAU)	Professor, dr.techn.
Cederkvist, Jan		Elected member, Ph.D.
Christensen, Ole	(MAT)	Associate Professor, Ph.D.
Christensen, Søren T.	(IME-AAU)	Assistant Professor, Ph.D.
Christiansen, Edmund		Elected member, dr.scient.
Christiansen, Peter L.	(IMM)	Professor, dr.techn.
Christiansen, Søren	(IMM)	Associate Professor, Ph.D.

The degree of Ph.D.: After the five year engineering education, this degree can be obtained by a three year study, including courses and a thesis.

Christoffersen, Jes	(MEK-FAM)	Emeritus Assoc. Prof., Ph.D.
Cifuentes, Gustavo C.	(IFB-AAU)	Ph.D. student
Cour, Dorthe D. de la	(MEK-FAM)	Ph.D. student
Damkilde, Lars		Elected Member, Prof., Ph.D.
Damsgaard, Michael	(IME-AAU)	Assistant Professor, Ph.D.
Deigaard, Rolf	(MEK-VB)	Professor, Ph.D.
Deriabine, Mikhael	(MAT)	Assistant Professor, Ph.D.
Dietz, Jesper	(MEK-MT)	Ph.D. student
Ditlevsen, Ove	(MEK-MT)	Professor, dr.techn.
Du, Jianbin	(IME-AAU)	Assistant Professor, Ph.D.
Fenger, N.P.		Elected member, Ph.D.
Frier, Christian	(IFB-AAU)	Assistant Professor, Ph.D.
Fuhrman, David	(MEK-MT)	Ph.D. student
Fynbo, Jens	(IME-AAU)	Ph.D. student
Gaunaa, Mac	(MEK-ET)	Ph.D. student
Goltermann, Per		Elected member, Ph.D.
Gravesen, Jens	(MAT)	Associate Professor, Dr.phil.
Groos, Jesper	(IMM)	Ph.D student
Gunneskov, Ole		Elected member, Ph.D.
Hammer, Velaja B.		Elected member, Ph.D.
Hansen, John M.	(MEK-FAM)	Associate Professor, Ph.D.
Hansen, Martin O.L.	(MEK-ET)	Associate Professor, Ph.D.
Hansen, Michael R.	(IME-AAU)	Associate Professor, Ph.D.
Hansen, Morten Hartvig		Elected member, Ph.D.
Hansen, Lars Pilegaard	(IFB-AAU)	Professor, Ph.D.
Hansen, Per Chr.	(IMM)	Professor, dr.techn.
Hansen, Per Skafte	(IMM)	Associate Professor
Hansen, Peter Friis	(MEK-MT)	Associate Professor, Ph.D.
Hansen, Vagn Lundsgaard	(MAT)	Professor, Ph.D.
Hjorth, Poul	(MAT)	Associate Professor, Ph.D.
Hjort, Søren	(MEK-ET)	Ph.D. student
Hougaard, Peter		Elected member, Ph.D.
Høgsberg, Jan	(MEK-MT)	Ph.D. student
Jacobsen, Michael	(IMM)	Ph.D. student
Jensen, Henrik Myhre	(MEK-FAM)	Associate Professor, dr. techn.
Jensen, Jakob S.	(MEK-FAM)	Assistant Professor, Ph.D.
Jensen, Jarl	(MEK-FAM)	Associate Professor
Jensen, Jørgen Juncher	(MEK-MT)	Professor, dr.techn.
Jensen, Lars R.	(IME-AAU)	Ph.D. student
Jensen, Torben Klint	(MAT)	Ph.D. student
Johansen, Steffen Kjær	(IMM)	Ph.D. student
Kepler, Jørgen A.	(IME-AAU)	Assistant Professor, Ph.D.
Kildegaard, Arne	(IME-AAU)	Professor, lic.techn.
Kliem, Wolfhard	(MAT)	Associate Professor
Knudsen, Thomas S.		Elected member, Ph.D.
Kokkendorff, Simon Lyngby	(MAT)	Ph.D. student
Krenk, Steen	(MEK-MT)	Professor, dr. techn.
Lade, Poul V.		Elected member, Professor
Larsen, Jesper		Elected member, Ph.D.
Larsen, Mikael	(IME-AAU)	Associate Professor, Ph.D.

Larsen, Peter V.	(IMM)	Ph.D. student
Larsen, P. Scheel	(MEK-ET)	Professor, Ph.D.
Legarth, Brian N.	(MEK-FAM)	Ph.D. student
Lind-Nielsen, Birger		Elected member, Ph.D.
Lund, Erik	(IME-AAU)	Associate Professor, Ph.D.
Lyckegaard, Anders	(IME-AAU)	Ph.D. student
Lützen, Marie	(MEK-MT)	Assistant Professor, Ph.D.
Madsen, Kaj	(IMM)	Professor, dr.techn.
Madsen, Per	(MEK-MT)	Professor, dr.techn.
Markvorsen, Steen	(MAT)	Professor, Ph.D.
Mayer, Stefan	(IMM)	Assistant Professor, Ph.D.
Melnik, Roderick V.N.		Elected member, Professor
Meyer, Knud Erik	(MEK-ET)	Associate Professor, Ph.D.
Michelsen, Jess	(MEK-ET)	Associate Professor
Mikkelsen, Lars P.		Elected member, Ph.D.
Mikkelsen, Robert	(MEK-ET)	Ph.D. student
Mohr, Gunnar	(MAT)	Professor
Mouritsen, Ole Ø.	(IME-AAU)	Associate Professor, cand. polyt.
Møller, Henrik	(IME-AAU)	Assistant Professor, Ph.D.
Mørch, K.A.		Elected member, Ph.D.
Nielsen, Arne Gudmann	(MEK-FAM)	Associate Professor
Nielsen, H. Bruun	(IMM)	Associate Professor, Ph.D.
Nielsen, Jacob	(IFB-AAU)	Associate Professor, Ph.D.
Nielsen, Kristian Bendix	(MEK-MT)	Ph.D. student
Nielsen, Leif Otto		Elected, Asso. Prof. Ph.D.
Nielsen, N.-J. Rishøj		Elected member, Ph.D.
Nielsen, Peter V.	(IFB-AAU)	Professor, Ph.D.
Nielsen, Søren R.K.		Elected member, Prof., dr.techn.
Nielsen, Ulrik D.	(MEK-MT)	Ph.D. student
Niordson, Christian	(MEK-FAM)	Assistant Professor, Ph.D.
Niordson, Frithiof I.	(MEK-FAM)	Emeritus Professor, Ph.D.
Nygaard, Jens V.	(IME-AAU)	Ph.D. student
Olhoff, Niels	(IME-AAU)	Professor, dr.techn.
Olsen, Anders Smærup	(MEK-MT)	Assistant Professor, Ph.D.
Ottosen, Niels Saabye		Elected member, Professor
Pedersen, Claus B.W.	(MEK-FAM)	Ph.D.
Pedersen, Jacob M.	(MEK-ET)	Ph.D. student
Pedersen, Michael	(MAT)	Associate Professor, Ph.D.
Pedersen, Niels L.	(IME-AAU)	Associate Professor, Ph.D.
Pedersen, Ole Bøcker		Elected member, dr.techn.
Pedersen, Pauli	(MEK-FAM)	Professor, dr.techn., HD
Pedersen, P. Terndrup	(MEK-MT)	Professor, Ph.D.
Pedersen, Sine L.	(MEK-FAM)	Ph.D. student
Pedersen, Thomas Ørts		Elected member, Ph.D.
Perram, John W.		Elected member, Professor
Perunovic, Jelena	(MEK-MT)	Ph.D. student
Petersen, Thomas		Elected member, Ph.D.
Pommer, Christian	(MAT)	Professor
Poulsen, Thomas Agersten	(MEK-FAM)	Ph.D.
Pyrz, Ryszard W.	(IME-AAU)	Professor, dr.techn.

Rasmussen, Jeppe F.	(MEK-MT)	Ph.D. student
Rasmussen, John	(IME-AAU)	Associate Professor, Ph.D.
Rathkjen, Arne	(IFB-AAU)	Associate Professor, Ph.D.
Rauhe, Jens Chr.	(IME-AAU)	Ph.D. student
Ravn, Erik S.	(MEK-MT)	Ph.D. student
Ravn-Jensen, Kim		Elected member, Ph.D.
Reck, Mads	(MEK-ET)	Assistant Professor
Redanz, Pia	(MEK-FAM)	Associate Professor, Ph.D.
Richelsen, Ann Bettina	(MEK-FAM)	Associate Professor, Ph.D.
Rosbjerg, Dan		Elected, Reader, dr.techn.
Røgen, Peter	(MAT)	Assistant Professor, Ph.D.
Santos, Ilmar Ferreira	(MEK-K&P)	Associate Professor
Schjødt-Thomsen, Jan	(IME-AAU)	Assistant Professor, Ph.D.
Shen, Wen Zhong	(MEK-ET)	Associate Professor
Sigmund, Ole	(MEK-FAM)	Professor, dr.techn.
Simonsen, Bo Cerup	(MEK-MT)	Associate Professor, Ph.D.
Skovgaard, Ove	(MAT)	Professor, Ph.D.
Sorokin, Sergey	(IME-AAU)	Professor, Ph.D.
Stang, Henrik		Elected, Asso. Prof. Ph.D.
Stegmann, Jan	(IME-AAU)	Ph.D. student
Sterndorff, Martin J.		Elected member, Ph.D.
Stoustrup, Jakob		Elected member, Professor
Sumer, B. Mutlu	(MEK-VB)	Professor
Svensson, E.		Elected member, Ph.D.
Søndergaard, Jacob	(IMM)	Ph.D. student
Søndergaard, Peter	(MAT)	Ph.D. student
Sørensen, Dan N.	(MEK-ET)	Associate Professor, Ph.D.
Sørensen, Jens Nørkær	(MEK-ET)	Professor, Ph.D.
Sørensen, John D.	(IFB-AAU)	Associate Professor, Ph.D.
Sørensen, Mads P.	(IMM)	Associate Professor
Sørensen, Niels Jakob		Elected member, Ph.D.
Thoft-Christensen, Palle	(IFB-AAU)	Professor, dr.techn.
Thomsen, Jon Juel	(MEK-FAM)	Associate Professor, Ph.D.
Thomsen, Ole Thybo	(IME-AAU)	Professor, Ph.D.
Thomsen, P. Grove	(IMM)	Professor
Thomsen, Thomas	(IME-AAU)	Ph.D. student
True, Hans	(IMM)	Associate Professor, Ph.D.
Tvergaard, Viggo	(MEK-FAM)	Professor, dr.techn.
Törnqvist, Rikard	(MEK-MT)	Ph.D. student
Ullum, Thorvald	(MEK-ET)	Ph.D. student
Valsgaard, Poul	(IME-AAU)	Ph.D. student
Widell, K.E.		Elected member, Professor
Wolff, Stefan	(MAT)	Ph.D. student
Zee, Mark de	(IME-AAU)	Assistant Professor, Ph.D.