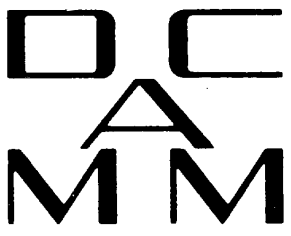
DANISH CENTER FOR APPLIED MATHEMATICS AND MECHANICS

ANNUAL REPORT 2009



TECHNICAL UNIVERSITY OF DENMARK
and AALBORG UNIVERSITY

D A N I S H C E N T E R F O R
A P P L I E D M A T H E M A T I C S A N D M E C H A N I C S

Scientific Council

Morten Brøns	Dept. of Mathematics, DTU
Ole Christensen	Dept. of Mathematics, DTU
Allan P. Engsig-Karup	Informatics and Mathematical Modelling, DTU
Jesper Henri Hattel	Dept. of Mechanical Eng., Manufacturing Engineering, DTU
Steen Krenk	Dept. of Mech. Eng., Coastal, Maritime and Struct. Eng., DTU
Erik Lund	Department of Mechanical Engineering, AAU
Lars Pilgaard Mikkelsen	Risø Nat. Lab. for Sustainable Energy, DTU
Søren R.K. Nielsen	Department of Civil Engineering, AAU
Niels Olhoff	Department of Mechanical Engineering, AAU
Pauli Pedersen	Dept. of Mechanical Eng., Solid Mechanics, DTU
Ole Sigmund	Dept. of Mechanical Eng., Solid Mechanics, DTU
Jens Nørkær Sørensen	Dept. of Mechanical Eng., Fluid Mechanics, DTU

Chairman

Ole Sigmund, Professor, dr. techn.

Department of Mechanical Engineering, Solid Mechanics.

Nils Koppels Allé, Building 404

Technical University of Denmark

2800 Kgs. Lyngby, Denmark

sigmund@mek.dtu.dk

FOREWORD

This annual report about the year 2009 contains information on publications, seminars and guests. The report serves mainly as reference and documentation for accomplished activities. Detailed information is available on our homepage: www.dcamm.dk and on the homepages of the cooperating departments.

This year only 3 DCAMM reports were published on our web-page. Due to the limited interest we have decided to discontinue the publication of DCAMM reports. No doubt the reports have had a great influence on the impact of research from DCAMM in the past but the internet and rapid publication possibilities elsewhere have declined its importance.

The DCAMM Research School receives funding from Forskeruddannelsesudvalget (FUU) under the Ministry of Science, Technology and Innovation, for course activities and scholarship programmes for visiting students and postdocs. The school organized seven special, intensive courses in 2009, in addition to the standard courses at DTU and AAU. The courses attracted 163 participants, and of these 59 were from abroad. Thus the School continues to maintain its strong international profile. The School also ensured special fellowships for full Ph.D. projects from FUU, including international fellowships in close collaboration with industry. Details on the activities of the School and on courses for 2010 can be found on the DCAMM website.

DCAMM's 12th Symposium was held at Sørup Herregård near Ringsted with the participation of 106 members.

DCAMM's 40th anniversary was celebrated on November 27th. The event held at DTU included presentations by Pauli Pedersen "40 years of DCAMM history", Ole Christensen – "Wavelets – a mathematical microscope", Poul Scheel Larsen – "Thermodynamics – Historic developments, some applications and pitfalls" and last but not least the "DCAMM Annual Speaker" Norman Fleck from Cambridge who spoke on "Strain gradient plasticity theories – theory vs. experiment". The lectures were followed by a festive banquet dinner.

As of Jan. 1, 2010, the departments cooperating within DCAMM are:
from **Technical University of Denmark**:

IMM:	Dept. of Informatics and Mathematical Modelling
MAT:	Dept. of Mathematics
MEK:	Dept. of Mechanical Engineering (Solid Mechanics, Fluid Mechanics, Manufacturing Engineering, Materials and Surface Engineering, Maritime Engineering, Thermal Energy Systems)
Risø:	National Laboratory of sustainable Energy

from **Aalborg University**:
IBA: Department of Civil Engineering
ME: Department of Mechanical Engineering

I thank our international contacts for their support and inspirations.

Ole Sigmund

CONTENTS

		page
1.	Obituary for Frithiof Niordson	3
2.	Members 2009	4
3.	Foreign members	4
4.	Guests for extended periods in 2009	6
5.	Publications	7
5a.	International journals with peer review 2009	7
5b.	Books	25
6.	List of electronically available DCAMM reports indicating final reference	26
7.	List of DCAMM S-reports (from no. S85) and other PhD. Theses	29
8.	DCAMM seminars given in 2009	32
	Appendix: List of members	33

1. OBITUARY FOR FRITHIOF NIORDSON

The founder of DCAMM, Frithiof Niordson sadly passed away in the fall of 2009. He was born in 1922 of a Russian mother and a Swedish father. He studied at KTH in Stockholm and then did a PhD with William Prager at Brown University in the United States; however, from 1958 onwards Frithiof Niordson was a full professor at the Technical University of Denmark (DTU). His scholarly research covered a wide range of topics in applied and computational mechanics, including vibrations, stability, inverse eigenvalue problems, the theory of plates and shells and structural optimisation. He also played major roles both in Denmark and internationally, being the driving force behind the development of the Danish Center for Applied Mathematics and Mechanics (of which he was secretary from its inception in 1969 until 1992) and serving with great distinction as Secretary-General (1968-1976), President (1976-1980) and Vice-President (1980-1984) of IUTAM. He had many international collaborators and was instrumental in enabling younger Danish mechanics scholars to develop their international careers. He will be sorely missed.

(by Niels Olhoff and Tim Pedley)

2. MEMBERS 2009

41 professors
107 scientific members at the six coorperating departments at the Center
111 Ph.D.-students

28 elected members
9 foreign members

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

3. FOREIGN MEMBERS

Professor Hassan Aref
Department of Engineering Science & Mechanics
Virginia Polytechnic Institute and State University
Norris Hall 320
Blacksburg, VA 24061
USA

Professor G.I. Barenblatt
Department of Mathematics
University of California, Berkeley
970 Evens Hall # 3840
Berkeley, CA 94720-3840
USA

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

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

Professor Michael S. Longuet-Higgins
Department of Applied Mathematics and Theoretical Physics
University of Cambridge
UK

Professor Ole Secher Madsen
Ralph M. Parsons Laboratory
Massachusetts Institute of Technology
Cambridge, MA 02139
USA

Professor Alan Needleman
Department of Materials Science & Engng.
University of North Texas
1155 Union Circle
305310 Denton, TX 76203-5017
USA

Professor S. Nemat-Nasser
The UCSD Jacobs School of Engineering
Center of Excellence for Advanced Materials
4209 Engineering Building I
9500 Gilman Drive
La Jolla, CA 92093
USA

Professor Bertil Storåkers
Kungliga Tekniska Högskolan
S-100 44 Stockholm 9500
Sweden

4. GUESTS FOR EXTENDED PERIODS IN 2009
(more than a fortnight)

Guest professors & post docs:

Carlsson, Leif, Florida Atlantic University, USA, 11.5.09 – 29.5.09

Efendiev, Messoud, Dept. of Dynamical System, München, Germany, several visits

Gaididei, Yuri B., Professor, Inst. of Theoret. Physics, Kiev, Ukraine, several visits

Janwa, H., University of Puerto Rico, Puerto Rico, 1.10.09 – 21.10.09

Kircave, Ozgur, Istanbul Technical University, Turkey, 1.4.09 – 1.4.10

Naumov, Igor, Inst. of Thermophysis, Siberian branch of RAS, Novosibirsk, Russia, 5.1.09 – 14.2.09

Sonderegger, Bernhard, Austria, 2.7.09 – 30.6.10

Symons, Digby, Cambridge University, United Kingdom, 29.6.09 – 1.4.10

Ph.D. students

Alishaha, Meysam, Ph.D. student, Shahid Behest University, Iran, 8.11.09 – 31.12.09

Cheng, Jiangtao, ChongQing University, China, 1.9.09 – 31.8.10

Guo, Jian, Ph.D. student, Nanyang Techn. University, Singapore, 1.4.09 – 31.5.09

Lemaire, Etienne, Ph.D. student, University of Liege, Belgium, 24.8.09 – 25.9.09

Naserizadeh, Roohollah, Tehran University, Iran, 1.4.09 – 1.10.09

Niu, Bin, Ph.D. Student, Dalian Univ. of Technology (DUT), 1.10.2008 – 31.10.2009.

Schläffer, Martin, Ph.D. student, Techn.Universität, Graz, Austria, 20.7.09 – 18.9.09

Taherkhani, Ali, Ph.D. student, Shahid Behest University, Iran, 8.11.09 – 31.12.09

Thumthai, Chalathorn, Suranaree University of Technology, Thailand, 1.2.09 – 30.4.09

Wang, Ming Qing, Beijing University, China, 10.09.09 – 10.03.10

Xiao, Xiangchung, Ph.D. student, Xiamen University, China, 26.10.09 – 31.12.09

5 . PUBLICATIONS IN 2009

5A. INTERNATIONAL JOURNALS WITH PEER REVIEW

Amir, Oded; Bendsøe, Martin P.; Sigmund, Ole.
Approximate Reanalysis in Topology Optimization. International Journal for Numerical Methods in Engineering (2009), 78(12), 1474-1491

Andersen, Michael Skipper ; Damsgaard, Michael ; Rasmussen, John.
Kinematic analysis of over-determinate biomechanical systems. Computer Methods in Biomechanics and Biomedical Engineering. 2009 ; vol. 12, No. 4, August. pp. 371-384

Andreasen, Casper S.; Gersborg, Allan R.; Sigmund, Ole.
Topology optimization of laminar fluid mixes. International Journal for numerical methods in fluids, 61(5), 498-513

Jakobsen, Johnny; Andreasen, Jens H; Thomsen, Ole Thybo.
Crack Deflection by Core Junctions in Sandwich Structures. Engineering Fracture Mechanics. 2009 ; vol. 76, No. 14, SEP. pp. 2135-2147

Bai, Shaoping ; Hansen, Michael Rygaard ; Angeles, Jorge.
A robust forward-displacement analysis of spherical parallel robots. Mechanism and Machine Theory. 2009 ; vol. 44, No. 12, DEC. pp. 2204-2216

Bai, Shaoping ; Hansen, Michael Rygaard ; Andersen, Torben Ole.
Modelling of a Special Class of Spherical Parallel Manipulators with Euler Parameters. Robotica. 2009 ; vol. 27, No. 2, MAR. pp. 161-170

Arentoft, Mogens; Bay, Niels; Tang, Peter Torben; Jensen, J. D.
A new lubricant carrier for metal forming. C I R P Annals, (2009), 58(1), 243-246

Kijima, Hideo; Bay, Niels.
Influence of tool roughness and lubrication on contact conditions in skin-pass rolling. Journal of Materials Processing Technology, (2009), 209(10), 4835-4841

Beelen, Peter
"A generalization of Baker's theorem." Finite Fields and Their Applications, vol. 15(5), pp. 558-568, Academic Press (2009).

Larsen, Anders Astrup; Bendsøe, Martin P.; Hattel, Jesper Henri; Schmidt, Henrik Nikolaj Blicher.
Optimization of friction stir welding using space mapping and manifold mapping-an initial study of thermal aspects. Structural and Multidisciplinary Optimization, (2009), 38(3), 289-299

Bingham, Harry B.; Madsen, Per A.; Fuhrman, David R.
Velocity potential formulations of highly accurate Boussinesq-type models. Coastal Engineering, (2009), 56(4), 467-478

Blasques, José Pedro Albergaria Amaral; Berggreen, Christian; Andersen, Poul.
Hydro-Elastic Analysis and Optimization of a Composite. Marine Propeller Marine Structures (2009).

Bogomolny, Michael
"A Shape Optimization Study for Tool Design in Resistance Welding." Structural and Multidisciplinary Optimization, vol. 38(2), pp. 185-194, Springer, (2009).

Brix, Wiebke; Kærn, Martin Ryhl; Elmegaard, Brian.
Modelling refrigerant distribution in microchannel evaporators. International Journal of Refrigeration, (2009), 32(7), 1736-1743

Brohus, Henrik
Application of Sensitivity Analysis in Design of Sustainable Buildings. / Heiselberg, Per ; Brohus, Henrik ; Brohus, Henrik ; Rasmussen, Henrik ; Seinre, Erkki ; Thomas, Sara. I: Renewable Energy. 2009 ; vol. 34, nr. 9, 31.03.2009. s. 2030-2036

Laursen, J.L.; Sivebæk, I.M.; Christoffersen, L.W.; Papsøe, M.; Vigild, Martin Etchells; Brøndsted, Povl; Horsewell, Andy.
Influence of tribological additives on friction and impact performance of injection moulded polyacetal. Wear, (2009), 267(12), 2294-2302

Brøns, Morten; Thompson, M. C.; Hourigan, K.
"Dye visualization near a three-dimensional stagna-tion point: application to the vortex breakdown bub-ble." Journal of Fluid Mechanics, vol. 622, pp. 177-194 Cambridge University Press, (2009).

Lo Jacono, D.; Nazarinia, M.; Brøns, Morten
"Experimental vortex breakdown topology in a cy-linder with a free surface." Physics of Fluids, vol. 11, Article no. 111704, American Institute of Physics (2009).

Chidambaram, Vivek; Hald, John; Hattel, Jesper Henri.
Development of gold based solder candidates for flip chip assembly. Microelectronics Reliability, (2009), 49(3), 323

Chidambaram, Vivek; Hald, John; Ambat, Rajan; Hattel, Jesper Henri
A Corrosion Investigation of Solder Candidates for High-Temperature Applications. JOM: The Member Journal of TMS, (2009), 61(6), 59-65

Chidambaram, Vivek; Hald, John; Hattel, Jesper Henri.
A Feasibility Study of Lead Free Solders for Level 1 Packaging Applications. Journal of Microelectronics and Electronic Packaging, (2009), 6(1), 75-82

Gaididei, Yuri Borisovich; Gorria, C.; Christiansen, Peter Leth
"Langevin dynamics of conformational transforma-tions induced by the charge-curvature interaction." Journal of Biological Physics, vol. 35(1), pp. 103-113 Springer Netherlands (2009).

Gaididei, Yuri Borisovich; Gorria, C.; Christiansen, Peter Leth; Sørensen, Mads Peter; Büttner, H.
"Effects of charge-charge interactions and external fields in shape transformations of closed filaments." Boletin de la Sociedad Española de Matematica Aplicada, vol. 49, pp. 41-60 (2009).

Gaididei, Yuri Borisovich; Berkemer, Rainer; Caputo, Jean Guy; Christiansen, Peter Leth; Kawamoto, Atsushi; Shiga, T.; Sørensen, Mads Peter;
"Analytical solutions of jam pattern formation on a ring for a class of optimal velocity traffic models." New Journal of Physics, vol. 11, Institute of Phys-ics Publishing (2009).

Christiansen, Thomas; Somers, Marcel A. J..
Stress and Composition of Carbon Stabilized Expanded Austenite on Stainless Steel. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, (2009), 40A(8), 1791-1798

Christiansen, Thomas; Somers, Marcel A. J.
Low-temperature gaseous surface hardening of stainless steel: the current status. International Journal of Materials Research, (2009), 100(10), 1361-1377

Oddershede, Jette; Christiansen, Thomas; Ståhl, Kenny; Somers, Marcel A. J..
Extended X-ray absorption fine structure investigation of nitrogen stabilized expanded austenite. Scripta Materialia, (2009), 62(5), 290-293

Clausen, Johan
Comments on ‘‘Flow rule effects in the Tresca model" by H.A. Taiebat andJ.P. Carter [Computers and Geotechnics 35 (2008) 500-503]. / Andersen, Lars ; Clausen, Johan. I: Computers and Geotechnics. 2009 ; vol. 36, nr. 5, s. 911-913

Damkilde, Lars
An Experimentally Validated Fatigue Model for Wood Subjected to Tension Perpendicular to the Grain. / Clorius, Christian Odin ; Pedersen, M. U. ; Hoffmeyer, Preben ; Damkilde, Lars. I: Wood Science and Technology. 2009 ; vol. 3-4, nr. 43, 22.02.2009. s. 343-357

Danielsen, Hilmar Kjartansson; Hald, John.
Tantalum-containing Z-phase in 12%Cr martensitic steels. Scripta Materialia, (2009), 60(9), 811-813

Danielsen, Hilmar Kjartansson; Hald, John.
On the nucleation and dissolution process of Z-phase Cr(V,Nb)N in martensitic 12%Cr steels. Materials Science & Engineering: (2009), A, 505(1-2), 169-177

De Chiffre, Leonardo; Tosello, Guido; Píška, Miroslav; Müller, Pavel.
Investigation on Capability of the Reaming Process using Minimal Quantity Lubrication. C I R P - Journal of Manufacturing Science and Technology, (2009), 2(1), 47-54

Museau, Matthieu; De Grave, Arnaud; Masclet, Cedric; Paris, Henri.
A product-model supporting coupling's management during microproduct design. International Journal of Design Engineering, (2009), 2(4), 398-413

Ditlevsen, Ove Dalager; Friis-Hansen, Peter.
Cost and benefit including value of life, health and environmental damage measured in time units. Structural Safety, (2009), 31(2), 136-142

Der Kiureghian, Armen; Ditlevsen, Ove Dalager.
Aleatoric or epistemic? Does it matter? Structural Safety, (2009), 31(2), 105-112

Ditlevsen, Peter Dalager; Ditlevsen, Ove Dalager.
On the stochastic nature of the rapid climate shifts during the last ice age. Journal of Climate, (2009), 22(2), 446-557

Dühring, Maria Bayard; Laude, Vincent; Khelif, Abdelkrim.
Improving surface acousto-optical interaction by high aspect ratio electrodes. Journal of Applied Physics, (2009), 106, 113518

Dühring, Maria Bayard; Laude, Vincent; Khelif, Abdelkrim.
Energy storage and dispersion of surface acoustic waves trapped in a periodic array of mechanical resonators. Journal of Applied Physics, (2009), 105(9), 093504

Dühring, Maria Bayard; Sigmund, Ole.
Improving the acousto-optical interaction in a Mach-Zehnder interferometer. Journal of Applied Physics, (2009), 105(8), 083529

Engsig-Karup, Allan Peter ; Bingham, Harry B.; Lindberg, Ole.
An efficient flexible-order model for 3D nonlinear water waves in journal: Journal of Computational Physics , vol: 228, issue: 6, pages: 2100-2118, 2009, Academic Press 2009

Estupinan, Edgar Alberto; Santos, Ilmar.
Linking rigid multibody systems via controllable thin fluid films. Tribology International, (2009), 42(10), 1478-1486

Estupinan, Edgar Alberto; Santos, I. F.
Modelling Hermetic Compressors Using Different Constraint Equations to Accommodate Multibody Dynamics and Hydrodynamic Lubrication. Brazilian Society of Mechanical Sciences and Engineering. Journal, (2009), 31(1), 35-46

Evgrafov, Anton; Maute, Kurt; Yang, Ronggui; Dunn, Martin L.
“Topology optimization for nano-scale heat transfer.” International Journal for Numerical Methods in Engineering, col.: 77(2), pp. 285-300, John/Wiley & Sons Ltd. (2009).

Pingen, Georg; Waidmann, Matthias; Evgrafov, Anton; Maute, Kurt
“A parametric level-set approach for topology opti-mization of flow domains.” Structural and Multidisciplinary Optimization, Online First, Springer (2009).

Pingen, Georg; Evgrafov, Anton; Maute, Kurt
"Adjoint Parameter Sensitivity Analysis for the Hy-drodynamic Lattice Boltzmann Method with Applica-tions to Design Optimization." Computers & Fluids, vol. 38(4), pp. 910-923, Pergamon (2009).

Rupp, Cory; Evgrafov, Anton; Maute, Kurt; Dunn, Martin L.
"Design of Piezoelectric Energy Harvesting Systems: A Topology Optimization Approach Based on Multi-layer Plates and Shells." Journal of Intelligent Material Systems and Structures, vol. 20(16), pp. 1923-1939, Sage Science Press (UK) (2009).

Gislason, Kjartan; Fredsøe, Jørgen; Deigaard, Rolf; Sumer, B. Mutlu.
Flow under standing waves Part 1. Shear stress distribution, energy flux and steady streaming. Coastal Engineering, (2009), 56(3), 341-362

Gislason, Kjartan; Fredsøe, Jørgen; Sumer, B. Mutlu.
Flow under standing waves Part 2. Scour and deposition in front of breakwaters. Coastal Engineering, (2009), 56(3), 363-370

Fuhrman, David R.; Fredsøe, Jørgen; Sumer, B. Mutlu.
Bed slope effects on turbulent wave boundary layers: 1. Model validation and quantification of rough-turbulent results. Journal of Geophysical Research - Oceans, (2009), 114(3)

Fuhrman, David R.; Madsen, Per A..
Tsunami generation, propagation, and run-up with a high-order Boussinesq model. Coastal Engineering, (2009), 56(7), 747-758

Haglind, Fredrik; Elmegaard, Brian.
Methodologies for predicting the part-load performance of aero-derivative gas turbines. Energy, (2009), 34(10), 1484-1492

Vollertsen, F.; Biermann, D.; Hansen, Hans Nørgaard; Jawahir I.S.; Kuzman, K.,
Size effects in manufacturing of metallic components. Annals CIRP, (2009), 58(2), 566-587.

Frandsen, Sten Tronæs; Ejsing Jørgensen, Hans; Barthelmie, Rebecca Jane; Rathmann, Ole; Badger, Jake; Hansen, Kurt Schaldemose; Ott, Søren; Rethore, Pierre-Elouan Mikael; Larsen, Søren Ejling; Jensen, Leo E.
The Making of a Second-generation Wind Farm Efficiency Model Complex. Wind Energy, (2009), 12(5), 445-458

Rivas, Rajai Aghabi; Clausen, Jens; Hansen, Kurt Schaldemose; Jensen, Leo E..
Solving the Turbine Positioning Problem for Large Offshore Wind Farms by Simulated Annealing. Wind Engineering, (2009), 33(3), 287-297

Hansen, Vagn Lundsgaard
Review: "Lewis Carroll in Numberland" by Robin Wilson Math Horizons, vol. 17(2), pp. 28-29, Mathemati-cal Association of America (2009).

Domkin, Konstantin; Hattel, Jesper Henri; Thorborg, Jesper.
Modeling of high temperature- and diffusion-controlled die soldering in aluminum high pressure die casting. Journal of Materials Processing Technology, (2009), 209(8), 4051-4061

Hansson, Anette Nørgaard; Hattel, Jesper Henri; Dahl, Kristian Vinter; Somers, Marcel A. J..
Modelling Cr depletion under a growing Cr2O3 layer on austenitic stainless steel: the influence of grain boundary diffusion. Modelling & Simulation in Materials Science and Engineering, (2009), 17(3), 035009

Andersen Nordström, Karin; Petersen, Dirch Hjorth; Carlson, Kenneth; Mølhave, Kristian; Sardan Sukas, Özlem; Horsewell, Andy; Eichhorn, Volkmar; Fatikow, S.; Bøggild, Peter.
Multimodal Electrothermal Silicon Microgrippers for Nanotube Manipulation. IEEE Transactions on Nanotechnology, (2009), 8(1), 76-85

Deriabyn, M. V.; Hjorth, Poul G.
"Tip of the iceberg." European Journal of Applied Mathematics, vol. 20, pp. 289-301 Cambridge University Press (2009).

Kerridge, David H; Horsewell, Andy; Berg, Rolf W..
The structure of solid salt eutectics - Why lamellar or conglomerate? Solid State Ionics, (2009), 180, 1453-1456

Islam, Mohammad Aminul; Hansen, Hans Nørgaard; Tang, Peter Torben; Sun, Jie.
Process chains for the manufacturing of moulded interconnect devices. International Journal of Advanced Manufacturing Technology, (2009), 42(9-10), 831-841

Jellesen, Morten Stendahl; Hilbert, Lisbeth Rischel; Møller, Per.
Corrosion and wear properties of materials used for minced meat production. Journal of Food Process Engineering, (2009), 32(4), 463-477

Jellesen, Morten Stendahl; Christiansen Thomas; Hilbert, Lisbeth Rischel; Møller Per
Erosion-corrosion and corrosion properties of DLC coated low temperature erosion-corrosion and corrosion properties of DLC coated low temperature. Wear, (2009), 06(038)

Jensen, Jakob Søndergaard.
Space-time topology optimization for one-dimensional wave propagation. Computer Methods in Applied Mechanics and Engineering, (2009), 198(5-8), 705-715

Larsen, Anders Astrup; Laksafoss, B.; Jensen, Jakob Søndergaard; Sigmund, Ole.
Topological material layout in plates for vibration suppression and wave propagation control. Structural and Multidisciplinary Optimization, (2009), 37(6), 585-594

Jensen, Jørgen Juncher.
Stochastic Procedures for Extreme Wave Load Predictions- Wave Bending Moment in Ships. Marine Structures, (2009), 22(2), 194-208

Kepler, Jørgen Asbøl ; Bull, Peter H..
Sensitivity of structurally loaded sandwich panels to localized ballistic penetration**.**
Composites Science and Technology. 2009 ; vol. 69, No. 6, MAY. pp. 696-703

Sheikh, Abdul Hamid ; Bull, Peter H. ; Kepler, Jørgen Asbøl.
Behaviour of multiple composite plates subjected to ballistic impact. Composites Science and Technology. 2009 ; vol. 69, No. 6, MAY. pp. 704-710

Knudsen, Kim; Lassas, Matti; Mueller, Jennifer; Siltanen, Samuli
"Regularized D-bar Method for the inverse conduc-tivity problem."
Inverse Problems and Imaging, vol. 3(4), pp. 599-624, American Institute of Mathematical Sciences (2009).

Knudsen, Lars Ramkilde; Mathiassen, John Erik; Muller, Frédéric; Thomsen, Søren Steffen "Cryptanalysis of MD2." Journal of Cryptology: Online, First Springer New York LLC (2009).

Krenk, Steen; Høgsberg, Jan Becker.
Optimal resonant control of flexible structures. Journal of Sound and Vibration, (2009), 323(3-5), 530-554

Preumont, André; de Marneffe, Bruno; Krenk, Steen.
Transmission zeros in structural control with collocated multi-input/ multi-output pairs. Journal of Guidance, Control, and Dynamics, (2009), 31(2), 428-431

Larsen, Mikael
Modification of single-walled carbon nanotubes and its influence on the interfacial strength in polymeric composites. Journal of Materials Science. 2009 ; vol. 44, No.. 3, FEB. pp. 799-807

Larsen, Poul Scheel.
Viscosity and not biological mechanisms often controls the effects of temperature on ciliary activity and swimming velocity of small aquatic organisms. Journal of Experimental Marine Biology and Ecology, (2009), 381, 67-73

Riisgård, Hans Ulrik; Larsen, Poul Scheel.
Ciliary-propelling mechanism, effect of temperature and viscosity on swimming speed, and adaptive significance of 'jumping' in the ciliate Mesodinium rubrum. Marine Biology Research, (2009), 5, 585-595

Lazarov, Boyan Stefanov; Thomsen, Jon Juel.
Using high-frequency vibrations and non-linear inclusions to create metamaterials with adjustable effective properties. International Journal of Non-Linear Mechanics, (2009), 44(1), 90-97

Leander, Gregor; McGuire, G.
"Construction of bent functions from near-bent func-tions." Journal of Combinatorial Theory, Series A, vol. 116(4), pp. 960-970, Academic Press (2009).

Legarth, Brian Nyvang.
Debonding analyses of closely spaced Z-pins bridging an unbonded interface. Materials & Design , (2009), 30(9), 3743-3751

Lund, Erik
Buckling Topology Optimization of Laminated Multi-Material Composite Shell Structures. Composite Structures. 2009 ; vol. 91, No. 2, NOV. pp. 158-167

Johansen, Leon Stenholt ; Lund, Erik ; Kleist, Josva.
Failure Optimization of Geometrically Linear/Nonlinear Laminated Composite Structures using A Two-Step Hierarchical Model Adaptivity**.** Computer Methods in Applied Mechanics and Engineering. 2009 ; vol. 198, No. 30-32, pp. 2421-2438

Johansen, Leon Stenholt ; Lund, Erik.
Optimization of Laminated Composite Structures Using Delamination Criteria and Hierarchical Models. Structural and Multidisciplinary Optimization. 2009 ; vol. 38, No. 4, MAY. pp. 357-375

Markvorsen, Steen; Palmer, Vicente "Extrinsic Isoperimetric Analysis on Submanifolds with Curvatures bounded from below." Journal of Geometric Analysis, Springer. (2009).

Holopainen, Ilkka*;* Markvorsen, Steen**;** Palmer, Vicente
"p-Transience and p-Hyperbolicity of Submanifolds." Revista Matematica Iberoamericana, vol. 25(2), pp. 709-738, Universidad Autonoma de Madrid Departamento de Matematicas (2009).

Hurtado, Ana*;* Markvorsen, Steen; Palmer, Vicente
"Torsional rigidity of submanifolds with controlled geometry." Mathematische Annalen, vol. 344(3), pp. 511-542 Springer (2009).

Andersen, J.; Jensen, Peter Arendt; Meyer, Knud Erik; Hvid, S.L.; Glarborg, Peter.
Experimental and numerical investigation of gas phase freeboard combustion: Part I: Main combustion process. Energy & Fuels, (2009), 23(12), 5773-5782

Mikkelsen, L.P. and Goutianos, S.
Suppression of plastic deformation at blunted crack-tips due to strain gradient effects, International Journal of Solids and Structures, vol: 46, p. 4430-4436 (2009). Elsevier Science.

Fredriksson, P.; Gudmundson, P. and Mikkelsen, L.P.
Finite element implementation and numerical issues of strain gradient plasticity with application to metal matrix composites. International Journal of Solids and Structures , vol: 46, p. 3977-3987,(2009). Elsevier Science.

Aagaard Madsen, Helge; Bak, Christian; Døssing, Mads; Mikkelsen, Robert Flemming; Øye, Stig. (Article in Press). Validation and modification of the Blade Element Momentum theory based on comparisons with actuator disc simulations. Wind Energy.

Minzari, Daniel; Jellesen, Morten Stendahl; Møller, Per; Wahlberg, Pia; Ambat, Rajan. (2009). Electrochemical Migration on Electronic Chip Resistors in Chloride Environments. I E E E Transactions on Device and Materials Reliability, 9(3), 392-402

L. Mishnaevsky Jr and P. Brøndsted,
Statistical modelling of compression and fatigue damage of unidirectional fiber reinforced composites, *Composites Sci & Technol*, Vol. 69, 3-4, 2009, pp. 477-484

H. Qing and L. Mishnaevsky Jr,
Unidirectional high fiber content composites: Automatic 3D FE model generation and damage simulation, *Computational Materials Science*, *Vol. 47, 2*, *2009*, *pp. 548-555*

H. Qing and L. Mishnaevsky Jr,
3D hierarchical computational model of wood as a cellular material with fibril reinforced, heterogeneous multiple layers, *Mechanics of Materials,* Vol. 41, 9, 2009, pp. 1034-1049

L. Mishnaevsky Jr and P. Brøndsted,
Micromechanisms of damage in unidirectional fiber reinforced composites: 3D computational analysis, *Composites Sci & Technol*, *Vol. 69, No.7-8*, *2009*, *pp. 1036-1044*

L. Mishnaevsky Jr.; P.Freere; R. Sharma; P.Brøndsted; H. Qing; J. I. Bech; R. Sinha; P. Acharya; R. Evans.
Strength and Reliability of Wood for the Components of Low-Cost Wind Turbines: Computational and Experimental Analysis and Applications, Journal of Wind Engineering, Vol. 33, No. 2, 2009 PP 183–196

H. W. Wang; H.W. Zhou; L. Mishnaevsky Jr.; P. Brøndsted; L.N. Wang.
Single fibre and multifibre unit cell analysis of strength and cracking of unidirectional composites, Computational Materials Science, Vol. 46, No. 4, 2009, Pages 810-820

V.I. Kushch; S.V. Shmegera and L. Mishnaevsky Jr.
Statistics of microstructure, peak stress and interface damage in fiber reinforced composites Journal of the Mechanics of Materials and Structures Vol. 4 (2009), No. 6, 1089–1107

H. Qing, and L. Mishnaevsky Jr.
Moisture-related mechanical properties of softwood: 3D micromechanical modeling, Computational Materials Science, Vol. 46, No. 2, 2009, pp.310-320

L. Mishnaevsky Jr and P. Brøndsted.
Micromechanical modeling of damage and fracture of unidirectional fiber reinforced composites: A review, Comput Materials Science, Vol. 44, No. 4, 2009, pp. 1351-1359

V.I. Kushch; I. Sevostianov; L. Mishnaevsky Jr.
Effect of crack orientation statistics on effective stiffness of mircocracked solid, Int J Solids and Structures, Vol. 46, No. 6, 2009, pp. 1574-1588

Montgomery, Melanie; Jensen, S. A.; Rasmussen, F.; Vilhelmsen, T..
Fireside corrosion and steamside oxidation of 9-12% Cr martensitic steels exposed for long term testing. Corrosion Engineering, Science and Technology, (2009), 44(3), 196-210

Hansson, Anette N.; Montgomery, Melanie; Somers, Marcel A. J..
Development of the inner oxide zone upon steam oxidation of an austenitic stainless steel. Materials at High Temperatures, (2009), 26(1), 39-44

Hansson, Anette Nørgaard; Montgomery, Melanie; Somers, Marcel A. J..
Oxidation of X20 in Water Vapour: The Effect of Temperature and Oxygen Partial Pressure. Oxidation of Metals, (2009), 71(3-4), 201-218

van Lith, Simone Cornelia; Frandsen, Flemming; Montgomery, Melanie; Vilhelmsen, Tommy; Jensen, Søren A..
Lab-scale Investigation of Deposit-induced chlorine Corrosion of Superheater Materials under Simulated Biomass-firing Conditions. Part 1: Exposure at 560o C. Energy & Fuels, (2009), 23(7), 3457-3468

Moslemian, Ramin; Berggreen, Christian; Carlsson, Leif A.; Avilés, Francis.
Failure Investigation of Debonded Sandwich Columns: An Experimental and Numerical Study. Journal of Mechanics of Materials and Structures, (2009), 4(7-8), 1469-1487

Chiang, Wen-Chi; Schroll, Casper; Hilbert, Lisbeth Rischel; Møller, Per; Tolker-Nielsen, Tim.
Silver-Palladium Surfaces Inhibit Biofilm Formation. Applied and Environmental Microbiology, (2009), 75(6), 1674-1678

Chiang, Wen-Chi; Tseng, I-Sheng; Møller, Per; Hilbert, Lisbeth Rischel; Tolker-Nielsen, Tim; Wu, Jiann-Kuo.
Influence of silver additions to type 316 stainless steels on bacterial inhibition, mechanical properties, and corrosion resistance. Materials Chemistry and Physics, (2009), 119(1-2), 123-130

Nielsen, Kaspar Kirstein; Bahl, Christian Robert Haffenden; Smith, Anders; Bjørk, Rasmus; Pryds, Nini; Hattel, Jesper Henri.
Detailed numerical modeling of a linear parallel-plate Active Magnetic Regenerator. International Journal of Refrigeration, (2009), 32(6), 1478-1486

Bahl, Christian Robert Haffenden; Nielsen, Kaspar Kirstein.
The effect of demagnetization on the magnetocaloric properties of gadolinium. Journal of Applied Physics, (2009), 105(1), 013916

Nielsen, Kim Lau; Tvergaard, Viggo.
Effect of a shear modified Gurson model on damage development in a FSW tensile specimen. International Journal of Solids and Structures, (2009), 46(3-4), 587-601

Nielsen, Søren R.K.
A Component Mode Synthesis Algorithm for Multibody Dynamics of Wind Turbines. / Holm-Jørgensen, Kristian ; Nielsen, Søren R.K.. I: Journal of Sound and Vibration. 2009 ; vol. 326, nr. 3-5, OCT 9. s. 753-767

Nielsen, Søren R.K.
System Reduction in Multibody Dynamics of Wind Turbines. / Holm-Jørgensen, Kristian ; Nielsen, Søren R.K.. I: Multibody System Dynamics. 2009 ; vol. 21, nr. 2, 30.10.2008. s. 147–165

Nielsen, Søren R.K.
Stochastic Subspace Modelling of Turbulence. / Sichani, Mahdi Teimouri ; Pedersen, B. J. ; Nielsen, Søren R.K.. I: World Academy of Science, Engineering and Technology. Proceedings. 2010 ; vol. 58, October. s. 1140-1148

Nielsen, Ulrik Dam; Friis-Hansen, Peter; Jensen, Jørgen Juncher.
A step towards risk-based decision support for ships - Evaluation of limit states using parallel system analysis. Marine Structures, (2009), 22(2), 209-224

Okulov, Valery**.**
Chaotic advection and separatrix branching in the Lagrangian diagnostics of flows. Doklady Physics, (2009), 54(3), 134-139

Okulov, Valery; van Kuik, G.A.M..
The Betz-Joukowsky limit for the maximum power coefficient of wind turbines. International Scientific Journal for Alternative Energy and Ecology (2009), (9), 106-111

Olsen, Flemming Ove; Hansen, Klaus Schütt; Nielsen, Jakob Skov.
Multibeam fiber laser cutting. Journal of Laser Applications, (2009), 21(3), 133-138

Tang, Peter Torben; Jaskula, M.; Kubiczek, M.; Mizushima, Io; Pantleon, Karen; Arentoft, Mogens.
Pulse reversal plating of nickel-cobalt alloys. Transactions of the Institute of Metal Finishing, (2009), 87(2), 72-77

Pedersen, Michael
"Well-posedness of inverse problems for systems with time dependent parameters." Arabian Journal for Science and Engineering. Section B: Engineering, vol. 1(1), pp. 39-58.

Pedersen, Niels Leergaard.
Reducing bending stress in external spur gears by redesign of the standard cutting tool. Structural and Multidisciplinary Optimization, (2009), 38(3), 215-227

Pedersen, Niels Leergaard; Pedersen, Pauli.
Bolt-plate contact assemblies with prestress and external loads: Solved with super element technique. Computers & Structures, (2009), 87(21-22), 1374-1383

Pedersen, Pauli; Pedersen, Niels Leergaard.
Analytical optimal designs for long and short statically determinate beam structures. Structural and Multidisciplinary Optimization, (2009), 39(4), 343-357

Araujo, A. L.; Mota Soares, C. M.; Herskovits, J.; Pedersen, Pauli.
Visco-piezo-elastic parameter estimation in laminated plate structures. Inverse Problems in Science and Engineering, (2009), 17(2), 145-157

Pedersen, Preben Terndrup; Li, Yujie.
On the global ship hull bending energy in ship collisions. Marine Structures, (2009), 22(1), 2-11

Pedersen, Preben Terndrup; Jensen, Jørgen Juncher.
Estimation of hull girder vertical bending moments including non-linear and flexibility effects using closed form expressions. Journal of Engineering for the Maritime Environment, (2009), 223(3), 377-390

Kratmann, Kasper Koops; Sutcliffe, M.P.F.; Lilleheden, L.T.; Pyrz, Ryszard; Thomsen, Ole Thybo.
A Novel Image Analysis Procedure for Measuring Fibre Misalignment in Unidirectional Fibre Composites. Composites Science and Technology. 2009 ; vol. 69, No. 2, February. pp. 228-238.

Quispitupa, Amilcar; Berggreen, Christian; Carlsson, Leif A..
On the analysis of a mixed mode bending sandwich specimen for debond fracture characterization. Engineering Fracture Mechanics, (2009), 76(4), 594-613

Quispitupa, Amilcar; Berggreen, Christian; Carlsson, Leif A..
Design Analysis of the Mixed Mode Bending Sandwich Specimen. Journal of Sandwich Structures & Materials, (2009).

Rasmussen, Henrik K.; Skov, Anne Ladegaard; Nielsen, Jens Kromann; Laille, Phillippe.
Elongational dynamics of multiarm polystyrene. Journal of Rheology, (2009), 53(2), 401-415

Lyhne, Anders; Rasmussen, Henrik K.; Hassager, Ole.
Simulation of Elastic Rupture in Extension of Entangled Monodisperse Polymer Melts. Physical Review Letters, (2009), 102(13), 138301

Nielsen, Jens Kromann; Hassager, Ole; Rasmussen, Henrik K.; McKinley, Gareth H..
Observing the Chain Stretch Transition in a Highly Polyisoprene Melt Using Transient Extensional Rheometry. Journal of Rheology, (2009), 53(6), 1327-1346

Nielsen, Kristian; Rasmussen, Henrik K.; Adam, Aurèle J.L.; Planken, Paul C M.; Bang, Ole; Jepsen, Peter Uhd.
Bendable, low-loss Topas fibers for the terahertz frequency range. Optics Express, (2009), 17(10), 8592-8601

Rasmussen, John;Christensen; Søren Tørholm; Zee, Mark De.
Computational analysis of the influence of seat pan inclination and friction on muscle activity and spinal joint forces. International Journal of Industrial Ergonomics. 2009 ; vol. 39, No. 1, JAN. pp. 52-57

Rasmussen, John; de Zee, Mark.
Design Optimization of Airline Seats**.** Journal of Passenger Cars - electronic and electrical systems. 2009 ; vol. 1, No. 1, pp. 580-584

Hansen, Ernst Albin; Jensen, Kurt, Hallen Jostein; Rasmussen, John; Pedersen, Preben K.
Effect of chain wheel shape on crank torque, freely chosen pedal rate, and physiological responses during submaximal cycling. Journal of Physiological Anthropology. 2009 ; vol. 28, No. 6, November. pp. 261-267

de Zee, Mark ; Cattaneo, Paolo ; Svensson, Peter ; Pedersen, Thomas Klit ; Melsen, Birte ; Rasmussen, John ; Dalstra, Michel.
Prediction of the articular eminence shape in a patient with unilateral hypoplasia of the right mandibular ramus before and after distraction osteogenesis : a simulation study. Journal of Biomechanics. 2009 ; vol. 42, No. 8, MAY 29. pp. 1049-1053

Rokni, Masoud; Sundén, Bengt.
On Developments of k-τ and k-ω Models for Near-Wall Turbulence of Engineering Duct Flows. International Journal of Transport Phenomena, (2009), 11(3), 233-253

Román Marin, José Manuel; Rasmussen, Henrik K..
Lagrangian Finite-Element Method for the Simulation of K-BKZ Fluids with Third Order Accuracy. Journal of Non-Newtonian Fluid Mechanics, (2009), 156(3), 177-188

Román Marín, José Manuel; Rasmussen, Henrik K..
Lagrangian finite element method for 3D time-dependent non-isothermal flow of K-BKZ fluids. Journal of Non-Newtonian Fluid Mechanics, (2009), 162(1-3), 45-53

Pinya, M. A. S.; Madsen, H. and Rosbjerg, D.
Assessment of the risk of inland flooding in a tidal sluice regulated catchment using multi-variate statistical techniques, *Phys. Chem. Earth* (2009), 34(10-12), 662-669.

Shen, Wen Zhong; Zhang, J.H.; Sørensen, Jens Nørkær**.**
The Actuator Surface Model: A New Navier-Stokes Based Model for Rotor Computations. Journal of Solar Energy Engineering, (2009), 131(1), 011002

Shen, Wen Zhong; Zhu, Wei Jun; Sørensen, Jens Nørkær.
Aeroacoustic Computations for Turbulent Airfoil Flows. A I A A Journal, (2009), 47(6), 1518-1527, DOI: 10.2514/1.40399

Shen, Wen Zhong; Hansen, Martin Otto Laver; Sørensen, Jens Nørkær.
Determination of the angle of attack on rotor blades. Wind Energy, (2009), 12(1), 91-98

Wang, Xu Dong; Shen, Wen Zhong; Zhu, Wei Jun; Sørensen, Jens Nørkær; Chen, Jin.
Shape Optimization of Wind Turbine Blades. Wind Energy, (2009), 12(8), 781-803, we.335

Wang, Xu Dong; Chen, Jin; Shen, Wen Zhong; Zhang, Shiqiang.
Integration study on airfoil profiles for wind turbines. China Mechanical Engineering, (2009), 20(2), 211-213, 20090220

Johansen, T.; Schramm, Jesper.
Low-Temperature Miscibility of Ethanol-Gasoline-Water Blends in Flex Fuel Applications. Energy Sources. Part A. Recovery, Utilization, and Environmental Effects, (2009), 31(18), 1634-1645

Sigmund, Ole.
Manufacturing tolerant topology optimization. Acta Mechanica Sinica, (2009), 25(2), 227-239

Donoso, Alberto; Sigmund, Ole.
Optimization of piezoelectric bimorph actuators with active damping for static and dynamic loads. Structural and Multidisciplinary Optimization, (2009), 38(2), 171-183

Mortensen, Asger; Sigmund, Ole; Breinbjerg, Olav.
Prospects for poor-man's cloaking with low-contrast all-dielectric optical elements. European Optical Society. Journal. Rapid Publications, (2009), 4, 5, 09008

Yang, Lirong; Lavrinenko, Andrei; Hvam, Jørn Märcher; Sigmund, Ole.
Design of one-dimensional optical pulse-shaping filters by time-domain topology optimization. Applied Physics Letters, (2009), 95(26), 261101

Silva, M. B.; Skjødt, Martin; Bay, Niels; Martins, P. A. F..
Revisiting single-point incremental forming and formability/failure diagrams by means of finite elements and experimentation. Journal of Strain Analysis for Engineering Design, (2009), 44(4), 221-234

Silva, M.B.; Skjødt, Martin; Vilaca, P.; Bay, Niels; Martins, P.A.F..
Single point incremental forming of tailored blanks produced by friction stir welding. Journal of Materials Processing Technology, (2009), 209(2), 811-820

Sorokin, Sergey.
Linear dynamics of elastic helical springs : Asymtotic analysis of wave propagation. Proceedings of the Royal Society. Mathematical, Physical and Engineering Sciences. 2009 ; vol. 465, No. 2105, May 8. pp. 1513-1537

Achtziger, Wolfgang; Stolpe, Mathias "Global optimization of truss topology with discrete bar areas-Part II: Implementation and numerical re-sults." Computational Optimization and Applications, vol. 44(2), pp. 315-341, Springer New York LLC (2009).

Jakob Stoustrup.
Plug & play control: Control technology towards new challenges. European Journal of Control, 15(3-4):311-330, May-August 2009.

Jakob Stoustrup.
Diagnosis of Process and Systems. Ed: Zdzislaw Kowalczuk, chapter 2: Fault Diagnosis and fault tolerant control: an optimization based approach, pages 23-42. Number 7 in Control and Computer Science: Information Technology, Control Theory, Fault and System Diagnosis.

P. Odgaard and J. Stoustrup.
Estimation of uncertainty bounds for the future performance of a power plant. IEEE Transactions on Control Systems Technology, 17(1):199-206, January 2009.

K.Z. Østergaard, J. Stoustrup, and P. Brath.
Linear parameter varying control of wind turbines covering both partial load and full load conditions., 19(1):92-116, January 2009.

Mads Sølver Svendsen; Jan Helbo; Jakob Stoustrup; Michael Rygaard Hansen; Dejan B. Popovic and Mikkel Melters Pedersen.
AAU-BOT1: a platform for studying dynamic, life-like walking. Applied Bionics and Biomechanics, vol. 6(no. 3-4):285-299, 2009.

Sørensen, B. F.; Goutianos, S. and Jacobsen, T. K.
Strength scaling of adhe-sive joints in polymer-matrix composites, International Journal of Solids and Structures, Vol.46, pp. 741-61, 2009.

Sørensen, B. F. and Jacobsen, T. K..
Delamination of fibre composites: determination of mixed mode cohesive laws, Composite Science and Technology, Vol. 69, pp. 445-56, 2009.

Sørensen, Jens Nørkær; Gelfgat, A. Yu; Naumov, I. V.; Mikkelsen, Robert Flemming.
Experimental and numerical results on three-dimensional instabilities in a rotating disk-tall cylinder flow. Physics of Fluids, (2009), 21(5), 054102

Ivanell, S.; Sørensen, Jens Nørkær; Mikkelsen, Robert Flemming; Henningson, D..
Analysis of Numerically Generated Wake Structures. Wind Energy, (2009), 12(1), 63-80

Troldborg, Niels; Sørensen, Jens Nørkær; Mikkelsen, Robert Flemming.
Numerical simulations of wake characteristics of a wind turbine in uniform inflow. Wind Energy, (2009), 13(1), 86-99

Larsen, E.H.; Willumsen, N.J.; Mobjerg, N.; Sørensen, Jens Nørkær.
The lateral intercellular space as osmotic coupling compartment in isotonic transport. Acta Physiologica (Print Edition), (2009), 195(1), 171-186

Sørensen, John Dalsgaard
Framework for Risk-based Planning of Operation and Maintenance for Offshore Wind Turbines. / Sørensen, John Dalsgaard. I: Wind Energy. 2009 ; vol. 12, nr. 5, 10.06.2009. s. 493-506

Abrahamsen, Asger Bech; Mijatovic, Nenad; Seiler, Eugen; Sørensen, Mads Peter; Koch, Martin; Nørgård, Per Bromand; Pedersen, Niels Falsig; Træholt, Chresten; Andersen, Niels Hessel; Østergaard, Ja"Design study of 10 kW superconducting generator for wind turbine applications." IEEE Transactions on Applied Superconductivity, vol. 19(3), pp. 1678-1682, IEEE (2009).

Thoft-Christensen, Palle
Life-Cycle Cost-Benefit (LCCB) Analysis of Bridges from a User and Social Point of ViewThoft-Christensen, P. 2009 I : Structure . 5, 1, s. 49-57. 9 s.

Thomassen, Carsten
"The chromatic polynomial and list colorings." Journal of Combinatorial Theory. Series B, vol. 99(2), pp. 474-479, Academic Press (2009).

Kawarabayashi, Ken-ichi; Thomassen, Carsten "Decomposing a planar graph of girth 5 into an inde-pendent set and a forest." Journal of Combinatorial Theory. Series B, vol. 99(4), pp. 674-684, Academic Press (2009).

Thomsen, Ole Thybo.
Sandwich Materials for Wind Turbine Blades - Present and Future. Journal of Sandwich Structures & Materials. 2009 ; vol. 11, No. 1, JAN. pp. 7-26

Jakobsen, Johnny; Thomsen, Ole Thybo; Andreasen, Jens H; Bozhevolnaya, Elena. Crack Deflection Analyses of Different Peel Stopper Designs for Sandwich Structures. Composites Science and Technology. 2009 ; vol. 69, No. 6, MAY. pp. 870-875

Bozhevolnaya, Elena ; Jakobsen, Johnny ; Thomsen, Ole Thybo.
Fatigue Performance of Sandwich Beams With Peel Stoppers. / I: Strain. 2009 ; vol. 45, No. 4, AUG. pp. 349 - 357

Bozhevolnaya, Elena ; Jakobsen, Johnny ; Thomsen, Ole Thybo
Fatigue Performance of Sandwich Panels with Peel Stoppers. Strain. 2009 ; vol. 45, No. 4, pp. 349-357

Frostig, Yeoshua ; Thomsen, Ole Thybo.
Nonlinear Behavior of Thermally Loaded Curved Sandwich Panels with a Transversely Flexible Core. Journal of Mechanics of Materials and Structures. 2009 ; vol. 4, No. 7-8, pp. 1287-1326

Frostig, Yeoshua ; Thomsen, Ole Thybo
On the free vibration of sandwich panels with a transversely flexible and temperature dependent core material properties - Part II: Numerical study.I: Composites Science and Technology. 2009 ; vol. 69, No. 6, May 2009. pp. 863-869

Frostig, Yeoshua ; Thomsen, Ole Thybo
On the free vibration of sandwich panels with a transversely flexible and temperature-dependent core material properties - Part I: Mathematical formulation.Composites Science and Technology. 2009 ; vol. 69, No.6, May 2009. pp. 856-862

Chandrasekaran, Karthik; Tiedje, Niels Skat; Hald, John.
Solidification paths in modified Inconel 625 weld overlay material. Presented at: International conference on advances in solidification processes. Graz, Austria, 2008. International Journal of Cast Metals Research, (2009), 22(1-4), 306-310

Pedersen, Karl Martin; Tiedje, Niels Skat.
Influence of rare earths on shrinkage porosity in thin walled ductile cast iron. International Journal of Cast Metals Research, (2009), 22(1-4), 302-305

Toftegaard, H; Sørensen B. F.; Linderoth, S.; Lundberg, M. and Feih, S.,
"Effects of heat-treatment on the mechanical strength of coated YSZ: An experimental assessment", J. Am. Ceram. Soc., 2009, Vol. 92, pp. 2704-12.

Tosello, Guido; Hansen, Hans Nørgaard; Gasparin, Stefania**.**
Applications of dimensional micro metrology to the product and process quality control in manufacturing of precision polymer micro components. C I R P Annals, (2009), 58(1), 467-472

Tosello, Guido; Gava, Alberto; Hansen, Hans Nørgaard; Lucchetta, Giovanni; Marinello, Francesco.
Characterization and analysis of weld lines on micro-injection moulded parts using atomic force microscopy (AFM). Wear, (2009), 266(5-6), 534-538

Tosello, Guido; Gava, Alberto; Hansen, Hans Nørgaard; Lucchetta, Giovanni.
Study of process parameters effect on the filling phase of micro injection moulding using weld lines as flow markers. International Journal of Advanced Manufacturing Technology (SPECIAL ISSUE), (2009), 1-17

Barini, Emanuele Modesto; Tosello, Guido; De Chiffre, Leonardo.
Uncertainty analysis of point-by-point sampling complex surfaces using: DOE for complex surfaces verification with CMM. Precision Engineering (Special Issue CIRP-CAT 2007), (2009), 1-6

Worgull, Matthias; Heckele, Mathias; Mappes, Timo; Matthis, B.; Tosello, Guido; Metz, Tobias; Gavillet, Jerome; Koltay, Peter; Hansen, Hans Nørgaard.
Sub-µm structured lotus surfaces manufacturing. Microsystem Technologies, (2009), 15(8), 1327-1333

Tvergaard, Viggo; Hutchinson, John W.
Analyses of crack growth along interface of patterned wafer-level Cu-Cu bonds. International Journal of Solids and Structures, (2009), 46(18-19), 3433-3440

Tvergaard, Viggo**.**
Behaviour of voids in a shear field. International Journal of Fracture, (2009), 158(1), 41-49

Kuroda, M.; Tvergaard, Viggo
Effects of microscopic boundary conditions on plastic deformations of small-sized single crystals. International Journal Solids Structures, (2009), 46, 4396-4408.

Vidic-Perunovic, Jelena; Jensen, Jørgen Juncher.
Parametric roll due to hull instantaneous volumetric changes and speed variations. Ocean Engineering, (2009), 36(12-13), 891-899

Walther, Jens Honore; Sbalzarini, Ivo F..
Large-scale. parallel discrete element simulations of granular flow. Engineering Computations, (2009), 26(6), 688-697

Gonnet, P.; Walther, Jens Honore; Koumoutsakos, Petros.
9-SHAKE: An extension to SHAKE for the explicit treatment of angular contraints. Computer Physics Communications, (2009), 180(3), 360-364

Kotsalis, E. M.; Walther, Jens Honore; Kaxiras, E.; Koumoutsakos, P.
A control algorithm for multiscale flow simulations of water. Physical Review E (Statistical, Nonlinear, and Soft Matter Physics), (2009), 79(4), 045701(R)

Zambrano, Harvey A; Walther, Jens Honore; Koumoutsakos, Petros; Sbalzarini, Ivo.
Thermophoretic Motion of Water Nanodroplets confined inside Carbon Nanotubes. Nano Letters, (2009), 9(1), 66-71

Zambrano, Harvey A; Walther, Jens Honore; Jaffe, Richard Lawrence.
Thermally driven molecular linear motors - A molecular dynamics study. Journal of Chemical Physics, (2009), 131(24)

Fan, Yi; Zhong, Xiaolong; Liu, Johan; Wang, Teng; Zhang, Yang; Cheng, Zhaonian.
Computational fluid dynamics for effects of coolants on on-chip cooling capability with carbon nanotube micro-fin architectures. Microsystem Technologies: Micro- and Nanosystems Information Storage and Processing Systems, (2009), 15(3), 375-381

5B. BOOKS

Andersen, Lars; Damkilde, Lars; Kristensen, Anders Schmidt; Lund, Erik
Proceedings of the Twenty Second Nordic Seminar on Computational Mechanics. Aalborg : Aalborg University. Department of Civil Engineering, 2009. 380 s. (DCE Technical Memorandum; 11).

Elmegaard, Brian; Veje, Christian; Nielsen, Mads Pagh; Mølbak, Tommy.
Proceedings of SIMS 50: Modeling of Energy Technology. Fredericia, Denmark, 2009 (358)

Hansen, Carsten Broder; Hansen, Per Christian; Hansen, Vagn Lundsgaard; Andersen, Mette Mi
"Matematiske horisonter." - Kgs. Lyngby, Denmark: Technical University of Denmark (DTU), p. 288 (2009).

Bras-Amorós, Maria; Høholdt, Tom
"Applied algebra, algebraic algorithms and error-correcting codes."
18th International Symposium, AAECC-18, Tarrago-na, Spain, 8-12 June, 2009, proceedings.
Lecture Notes in Computer Science; 5527 Berlin (p. 243) Springer Verlag, (2009).

Jensen, Jørgen Juncher; Soares, Carlos Guedes; Papanikolaou, Apostolos.
Methods and Tools. Risk-based Ship Design: Methods, Tools and Applications, Springer, 195-301

Klit, Peder; Casper, Knud; Pedersen, Niels Leergaard.
Machine Elements: Analysis and Design. Kgs. Lyngby, Denmark: Polyteknisk Forlag, 2009 (264)

Krenk, Steen.
Non-linear Modeling and Analysis of Solids and Structures. Cambridge: Cambridge University Press, 2009 (349)

Sørensen, John Dalsgaard
Baggrundsundersøgelser ifm. udarbejdelse af Nationale Annekser til EN1990 og EN1991 : Sikkerhedsformat, lastkombinationer, partialkoefficienter, udmattelse, snelast, vindlast, mm.. / Sørensen, John Dalsgaard ; Munch-Andersen, Jørgen ; Hansen, Svend Ole ; Sørensen, Finn O. ; Christensen, Hans Henrik ; Lind, Peter ; Poulsen, Annemarie. København : Dansk Standard, 2009. 138 s. (DS-information; DS/INF 172).

6 . LIST OF ELECTRONICALLY AVAILABLE DCAMM REPORTS INDICATING FINAL REFERENCE

1 - 703: Consult the DCAMM web-site: www.dcamm.dk

704. PEDERSEN, PAULI: A Direct Analysis of Elastic Contact (February 2005)

705. PEDERSEN, PAULI: Analytical Stiffness Matrices for Tetrahedral Elements (April 2005)

706. BORG, ULRIK, NIORDSON, CHRISTIAN F., FLECK, NORMAN F. & TVERGAARD, VIGGO: A viscoplastic strain gradier analysis of materials with voids or inclusions (May 2005)

707. NIORDSON, CHRISTIAN F. & TVERGAARD, VIGGO: Size-effects on cavitation instabilities (May 2005)

708. GERSBORG-HANSEN, A., BENDSØE, M.P. & SIGMUND, O.: Topology optimisztion of heat conduction problems using the finite volume methods (November 2005)

709. PEDERSEN, PAULI: On the Influence of Clearance in Orthotropic Disc-Pin Contacts (November 2005)

710. TOPHØJ, LAUST, MØLLER, SØREN & BRØNS, MORTEN: Streamline patterns and their bifurcations near a wall with Navier slip boundary conditions (December 2005)

711. SIGMUND, OLE & CLAUSEN, PETER M.: Topology optimization using a mixed formulation: An alternativ way to solve pressure load problems (December 2005)

712. KALLESØE, BJARNE S.: A Low Order Model for Analyzing effects of Blade Fatigue Load Control (January 2006)

713. HALKJÆR, SØREN, SIGMUND, OLE & JENSEN, JAKOB S.: Maximizing band gaps in plate structures (February 2006)

714. PEDERSEN, NIELS L.: On simultaneous shape and orientational design for eigenfrequency optimization (June 2006)

715. MUNOZ, E., ALLAIRE, G & BENDSØE, M.P.: On two formulations of an optimal insulation problem (August 2006)

716. CHRISTENSEN, C.D. & BYSKOV, E.: Advanced Postbuckling of the Plastic Shanley-Hutchinson Column (September 2006)

717. CHRISTENSEN, C.D. & BYSKOV, E.: Plastic Imperfection Sensitivity of the Shanley-Hutchinson Column (September 2006)

718. LEGARTH, BRIAN NYVANG: Necking of anisotropic micro-films with strain-gradient effects (September 2006)

719. PEDERSEN, NIELS LEERGAARD & PEDERSEN, PAULI: On Prestress Stiffness Analysis of Bolt-Plate Contact Assemblies (September 2006)

720. THOMSEN, JON JUEL & FIDLIN, ALEXANDER: Near-elastic vibro-impact analysis by discontinuous transformations and averaging (September 2006)

721. LUND, ERIK: Buckling topology optimization of laminated multi-material composite shell structures (October 2006)

722. NIORDSON, CHRISTIAN F.: Void growth to coalescence in a non-local material (November 2006)

723. DU, JIANBIN & OLHOFF, NIELS: Topological design of freely vibrating continuum structures for maximum values of simple and multiple eigenfrequencies and frequency gaps (January 2007)

724. DU, JIANBIN & OLHOFF, NIELS: Minimization of sound radiation from vibrating bi-material structures using topology optimization (January 2007)

725. PEDERSEN, NIELS LEERGAARD & PEDERSEN, PAULI: Design of Bolt-Plate Contact Assemblies (January 2007)

726. PEDERSEN, PAULI: Suggested Benchmarks for Shape Optimization for Minimum Stress Concentration (January 2008)

727. JENSEN, JAKOB S.: Topology optimization of dynamics problems with Pade approximants (February 2007)

728. THOMSEN, JON JUEL: Effective properties of mechanical systems under high-frequency excitation at multiple frequencies (March 2007)

729. HANSEN, M. H: Aeroelastic instability problems for wind turbines (June 2007)

730. PEDERSEN, NIELS LEERGAARD & PEDERSEN, PAULI: Design of Notches and Grooves (August 2007)

731. FIDLIN, ALEXANDER & THOMSEN, JON JUEL: Nontrivial effects of high-frequency excitation for strongly damped mechanical systems (November 2007)

732. JOHANSEN, LEON & LUND, ERIK: Optimization of Laminated Composite Structures Using Delamination Criteria and Hierarchical Models (November 2007)

733. PEDERSEN, NIELS LEERGAARD: Improving Bending Stress in Gears by Redesign of the Cutting Tool (January 2008)

734. OLHOFF, NIELS & SEYANIAN, ALEXANDER P.: Bifurcation and Post-buckling Analysis of Bimodal Optimum Columns (February 2008)

735. DÜHRING, MARIA B. & JENSEN, JAKOB S. & SIGMUND, OLE: Acoustic design by topology optimization (February 2008)

736. PEDERSEN, PAULI: Contact analysis with non-linear elasticity and combined cone/spherical indenters (May 2008)

737. LEGARTH, BRIAN NYVANG: Analyses of the stress field during debonding of Z-pins bridging an unbonded interface (June 2008)

738. PEDERSEN, PAULI & PEDERSEN, NIELS LEERGAARD: Analytical optimal designs for long and short beam structures (June 2008)

739. ANDREASEN, CASPER SCHOUSBOE & GERSBORG, ALLAN ROULUND & SIGMUND, OLE: Topology optimization of microfluidic mixers (November 2008)

740. PEDERSEN, NIELS LEERGAARD & PEDERSEN, PAULI: Bolt-Plate Contact Assemblies with Prestress and External Loads (April 2009)

741. LEGARTH, BRIAN NYVANG & NIORDSON, CHRISTIAN: Debonding failure and size effects in micro reinforced composites (July 2009)

742. STOLPE, MATHIAS: On some fundamental properties of structural topology optimization problems (November 2009)

7. LIST OF DCAMM S-REPORTS (from no. S85) AND OTHER PhD. THESES

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)

S90. de la COUR, DORTHE D.: Identification of Material and Friction Parameters from Deep Drawing (August 2003)

S91. LEGARTH, BRIAN NYVANG: Fracture and Damage with Plastic Anisotropy (April 2004)

S92. PEDERSEN, SINE L.: Simulation and Analysis of Roller Chain Drive Systems (September 2004)

S93. KAWAMOTO, ATSUSHI: Generation of Articulated Mechanisms by Optimization Techniques (December 2004)

S94. HANSEN, LARS VOXEN: Design of fiber laser packages: Reducing and enhancing sensitivity to mechanical vibrations (February 2005)

S95. BORG, ULRIK: Size Effects in Crystal Plasticity (January 2007).

S96. GERSBORG-HANSEN, ALLAN: Topology Optimization of Flow Problems (April 2007).

S97. KALLESØE, BJARNE SKOVMOSE: Aeroservoelasticity of Wind Turbines (April 2007).

S98. FELTER, CHRISTIAN LOTZ: Lubrication of Piston Rings in Large 2- and 4-stroke Diesel Engines (March 2007).

S99. DAM, BJARKE SKOVGÅRD: Experimental and Numerical Investigations of Sprays in Two Stroke Diesel Engines (May 2007).

S100. ZHU, WEI JUN: Aero-Acoustic Computation of Wind Turbines (October 2007).

S101. KJØLHEDE, KLAUS: Experimental Contribution to the Problem of Model Parameter Identification in Rotating Machines via Active Magnetic Bearings (March 2007).

S102. ØSTERGAARD, RASMUS C.: Interface Fracture in Composite Materials and Structures (November 2007).

S103. LUCHT, TORE: Analysis of Cracks in Large Diesel Engines (November 2007).

S104. LINDGREEN, BRITTA: Large Deformations of Polymers (February 2008).

S105. NORDKVIST, NICOLAI: Motion Control alon Relative Equilbria (February 2008).

S106. HANSEN, MICHAEL SONNE: Geometrical and mechanical aspects of structure and exibility in proteins (September 2007).

S107. LUNDSGAARD-LARSEN, CHRISTIAN: Predicting and Improving Damage Tolerance of Composite Structures (August 2008).

S108. JONCQUEZ, SOIZIC ANNICK GABRIELLE: Second-order Forces and Moments acting on Ships in Wawes (August 2009)

S109. DÜHRING, MARIA BAYARD: Optimization of acoustic, optical and optoelastic devices (July 2009)

OTHER THESES

ANDERSEN, MICHAEL SKIPPER**: "**Kinematically Over-determinate Musculoskeletal Systems", 2009 (144) . (Special Report; 66). PhD Thesis

BERGMANN, RENÉ: "High-temperature Lead-free Solder for MEMS-Packaging", 2009 (225). PhD Thesis.

BINGÖL, FERHAT: "Complex Terrain and Wind Lidars" – Risø National Laboratory for Sustainable Energy, 2009 (60). PhD Thesis.

BROE, BRIAN RIGET: "Wind Turbindes: Unsteady Aerodynamics and Inflow Noise" – Risø Natinal Laboratory for Sustainable Energy, 2009 (138). PhD Thesis.

DIAS, KEALEY: "The Dynamics of complex Polynomial Vector Fields in One Variable", 2009. PhD Thesis.

IVARSSON, ANDERS: "Modeling of heat release and emissions from droplet combustion of multi componene fuels in compression ignition engines", 2009

(111). PhD Thesis.

JOHANSEN, LEON STENHOLT**: "**Analysis and Optimization of Composite Structures using Adaptive Analysis Methods**".** PhD Thesis.

JOHANNES, MART**"**Failure and fatigue Phenomena Associated with Local Effects in Advanced Sandwich Structures", 2009. (134). (Special Report; 61). PhD Thesis.

KÜTER, ANDRE: "Management of Reinforcement Corrosion. A Thermodynamic Approach", 2009. (302). PhD Thesis.

LARSEN, ANDERS ASTRUP: "Process optimization of friction stir welding based on thermal models", 2009. (110). PhD Thesis.

MARIEGAARD, JESPER SANDVIG: "Numerical Approximation of Boundary Control for the Wave Equation – with Application to an Inverse Problem", 2009. (169). PhD Thesis

MIOLANE, CHARLOTTE VIKKELSØ: "Block Cipher Analysis", 2009. (176). PhD Thesis.

NYGAARD, PETER VAGN: "Non-destructive elcrochemical monitoring of reinforcement corrosion", 2009. (287). PhD Thesis.

OVERGAARD, LARS C.T.: "Structural Instability Phenomena in Wind Turbine Blades", 2009 (137). (Special Report; 60). PhD Thesis

RASMUSSEN, ANDERS RØNNE: "Thermoviscous Model Equations in Nonlinear Acoustics: Analytical and Numerical Studies of Shocks and Rarefaction Waves", 2009. (126). PhD Thesis.

ROMÁN MARIN, JOSÉ MANUEL: "Numerical simulation of three-dimensional viseolastic flow", 2009. (232). PhD Thesis.

SHEN, WEN ZHONG: "Computational Aerodynamics and Aeroacoustics for Wind Turbines", 2009. (352). PhD Thesis.

TABRIZIAN-GHALEHNO, NAJA: "Advanced Anoidizing Technology., 2009. (195). PhD Thesis.

TUTUM, CEM CELAL: "Optimization of Thermo-mechanical Conditions in Friction Stir Welding", 2009. (230). PhD Thesis.

VELTE, CLARA MARIKA: "Characterization of Vortex Generator Induced Flow", 2009. (232). PhD Thesis

WINTHER, MICHAEL: "Optimization-based Analysis of Large Cable-net Structures for Fishery", 2009. (Special Report No. 65). PhD Thesis

8. DCAMM SEMINARS GIVEN IN 2009

Professor Kalyanmoy Deb: Niches of Evolutionary Computing in Applied Optimization. 4 December 2009. Dept. of Mechanical Engineering, IIT Kanpur, India

Dr. Ricardo A. Lebensohn: Dilatational plastic behavior of polycrystalline materials with intergranular cavities.2 September 2009.Materials Science and Technology Division, Los Alamos National Laboratory, USA.

Pinhas Bar-Yoseph: Novel Computational Methods for Simulation of Wound Healing and Analysis of Arterial and Metabolic Disease.1 September 2009. Computational Mechanics Lab., Biomechanics Center, Technion, Israel.

Tekn. Dr. Jonas Faleskog: On the role of particle cracking on the onset of brittle and ductile fracture. 26 August 2009.Department of Solid Mechanics, KTH Engineering Sciences Royal Institute of Technology, Stockholm, Sweden

Professor Ravi-Chandar: Dynamic Response of Materials in Ring and Tube Expansion Experiments.27 May 2009. Department of Aerospace Engineering and Engineering Mechanics. The University of Texas at Austin, US

Professor Alan Cocks: Micromechanical Modelling of Damage Development and Sintering in Engineering Mateterials.13 May 2009. Department of Engineering Science, University of Oxford, UK

A. A. Lubrecht: Efficient Numerical Methods: application to Engine Lubrication. 11 May 2009.LaMCoS, INSA Lyon, France

Speakers at DCAMM's 40th anniversaray in November

Pauli Pedersen – "40 years of DCAMM history"
Ole Christensen – "Wavelets – a mathematical microscope"
Poul Scheel Larsen – "Thermodynamics – Historic develpments, some applications and pitfalls"
Annual speaker: Norman Fleck from Cambridge – "Strain gradient plasticity theories – theory vs. experiment"

APPENDIX: List of members 2009

Abbreviations:

from Technical University of Denmark

IMM: Dept. of Informatics and Mathematical Modelling
MAT: Dept. of Mathematics
MEK-FAM: Dept. of Mechanical Engineering, Solid Mechanics
MEK-FM: Dept. of Mechanical Engineering, Fluid Mechanics
MEK-MPP: Dept. of Mechanical Engineering, Manufacturing Engineering
MEK-MTU: Dept. of Mechanical Engineering, Materials Science and Engineering
MEK-SKK: Dept. of Mechanical Engineering, Maritime Engineering
MEK-TES: Dept. of Mechanical Engineering, Thermal Energy Systems
RISØ: National Laboratory of Sustainable Energy

from Aalborg University

IBA-AAU: Department of Civil Engineering
ME-AAU: Department of Mechanical Engineering

Aage, Niels	(MEK-FAM)	PhD student
Ali, Syed Talat	(MEK-MTU)	PhD student
Alimadadi, Hossein	(MEK-MTU)	PhD student
Ambat, Rajan	(MEK-MTU)	Associate Professor
Amir, Oded	(MAT)	PhD student
Andersen, Lars	(IBA-AAU)	Associate Professor, PhD
Andersen, Michael Skipper	(ME-AAU)	PhD student
Andersen, Nina Marianne	(MAT)	PhD student
Andersen, Poul	(MEK-SKK)	Associate Professor
Andersen, Søren Bøgh	(MEK-FAM)	PhD student
Andersen, Søren Mikkel	(IBA-AAU)	PhD student
Andkjær, Jacob Anders	(MEK-FAM)	PhD student
Andreasen, Casper Schousboe	(MEK-FAM)	PhD student
Andreasen, Jens H.	(ME-AAU)	Associate Professor
Ankergren, Ulrik Mark	(MEK-SKK)	PhD student
Azizi, Reza	(MEK-FAM)	PhD student
Back-Pedersen, Andreas		Elected member, PhD.
Bai, Shaoping	(ME-AAU)	Assistant Professor
Bang-Møller, Christian	(MEK-TES)	PhD student
Bay, Niels	(MEK-MPP)	Professor
Beelen, Peter	(MAT)	Associate Professor
Bendsøe, Martin		Elected member, Professor
Berggreen, Christian	(MEK-SKK)	Associate Professor
Bhowmik, Subrata	(MEK-SKK)	PhD student
Bingham, Harry B.	(MEK-SKK)	Associate Professor
Bisacco, Giuliano	(MEK-MPP)	Assistant Professor, PhD
Blasques, José Pedro A. A.	(MEK-SKK)	PhD student
Bogomolny, Michael	(MAT)	Postdoc.

Bohr, Tomas		Elected member, Professor
Borbye, Jakob	(MEK-FM)	PhD student
Borghoff, Julia	(MAT)	PhD student
Brander, David	(MAT)	Assistant Professor
Brander, Kristian	(MAT)	PhD student
Branner, Kim	RISØ	Senior Researcher
Bredmose, Henrik	(MEK-FM)	Assistant Professor
Brix, Wiebke	(MEK-TES)	PhD student
Brohus, Henrik	(IBA-AAU)	Associate Professor, ph.d.
Bræstrup, M. W.		Elected member, PhD.
Brøndsted, Povl	RISØ	Senior Researcher
Brøns, Morten	(MAT)	Professor, PhD
Buhl, Thomas	RISØ	Senior Researcher
Byskov , Esben	(IBA-AAU)	Emeritus Professor, dr.techn.
Canh, Nam Nguyen	(MAT)	Postdoc.
Carli, Lorenzo	(MEK-MPP)	PhD student
Cavar, Dalibor	(MEK-FM)	Assistant Professor
Cederkvist, Jan		Elected member, PhD.
Cerda, Alejandro	(MEK-FAM)	PhD student
Chamoun, George Chauouki	(MAT)	Postdoc
Charca, Samuel	(ME-AAU)	Postdoc
Chidambaram, Vivek	(MEK-MPP)	PhD student
Christensen, Ole	(MAT)	Associate Professor, dr.scient.
Christiansen, Caspar Ask	(MEK-FM)	PhD student
Christiansen, Thomas	(MEK-MTU)	Senior Scientist
Clausen, Johan Christian	(AAU-CIVIL	Postdoc
Clausen, Lasse Røngaard	(MEK-TES)	PhD student
D'Angelo, Luca	(MEK-MPP)	PhD student
Dahl, Jonas	(ME-AAU)	PhD student
Dahl, Kristian Vinter	(MEK-MTU)	Postdoc.
Damkilde, Lars	(IBA-AAU)	Professor
Dammann, Bernd	(IMM)	Associate Professor
Danielsen, Hilmar	(MEK-MTU)	Postdoc.
De Chiffre, Leonardo	(MEK-MPP)	Professor
De Grave, Arnaud	(MEK-MPP)	Assistant Professor
Dimitrov, Nikolai	(MEK-SKK)	PhD student
Ditlevsen, Ove Dalager	(MEK-SKK)	Emeritus Professor
Dühring, Maria B.	(MEK-FAM)	PhD student
Duun, Marie Bro	(MAT)	PhD student
Egelund, Arne Jørgensen	(MEK-TES)	Associate Professor
Elmegaard, Brian	(MEK-TES)	Head of Section, Associate Prof.
Engsig-Karup, Allan Peter	(IMM)	Assistant Professor
Enz, Stephanie	(MEK-FAM)	PhD student
Eriksen, Rasmus Solmer	(MEK-MPP)	PhD student
Estupinan, Edgar Alberto	(MEK-FAM)	PhD Student
Evgrafov, Anton	(MAT)	Assistant Professor
Fedorov, Vladimir	(MEK-SKK)	PhD student
Frandsen, Henrik Lund	RISØ	Researcher

Fredsøe, Jørgen	(MEK-SKK)	Professor
Frier, Christian	(IBA-AAU)	Assistant Professor, PhD
Friis, Kasper Leth	(MEK-MPP)	PhD student
Frisvad, Jeppe	(IMM)	Assistant professor
Fuhrman, David R.	(MEK-SKK)	Assistant Professor
Gasparin, Stefania	(MEK-MPP)	Research Assistant
Gauravaram, Praveen	(MAT)	Postdoc.
Gersborg, Allan Roulund	(MEK-FAM)	Assistant Professor
Graeme, Keith		Elected member
Gravesen, Jens	(MAT)	Associate Professor, dr.phil
Gregersen, Misha Marie	(MAT)	Postdoc
Gunnarsson, Sverrir Grjimir	(MEK-MTU)	PhD student
Gunneskov, Ole		Elected member, PhD.
Haglind, Fredrik	(MEK-TES)	Postdoc.
Haider, Sajjad	(MEK-FM)	PhD student
Hald, John	(MEK-MTU)	Affiliated Professor
Halkjær, Søren		Elected member
Hansen, Hans Nørgaard	(MEK-MPP)	Professor
Hansen, Kim Rene	(MEK-FM)	PhD student
Hansen, Kurt Schaldemose	(MEK-FM)	Assistant Professor
Hansen, Martin Otto Laver	(MEK-FM)	Assistant Professor
Hansen, Morten Lund.	RISØ	Senior Researcher
Hansen, Nilas Mandrup	(MEK-SKK)	PhD student
Hansen, Per Chr.	(IMM)	Professor, dr. techn.
Hansen, Søren Vinther	(MEK-SKK)	PhD student
Hansen, Vagn Lundsgaard	(MAT)	Professor, PhD
Hassing, Henrik		Elected member
Hattel, Jesper Henri	(MEK-MPP)	Professor
Haugaard, Martin Asger	(MEK-FAM)	PhD student
Henriksen, Christian	(MAT)	Associate Professor, PhD
Hernández, Gabriel G. M.	(MEK-FM)	PhD student
Hjorth, Poul	(MAT)	Associate Professor, PhD
Horsewell, Andy	(MEK-MTU)	Professor
Hosseinzadeh, Elham	(MEK-TES)	PhD student
Hougaard, Peter		Elected member, PhD.
Hummelshøj, Thomas	(MEK-MTU)	PhD student
Hvejsel, Christian Gram	(ME-AAU)	PhD student
Høgsberg, Jan Becker	(MEK-SKK)	Associate Professor
Høholdt, Tom	(MAT)	Professor
Ibsen, Lars Bo	(CIVIL-AAU)	Professor, MSO, PhD
Imran, Tajammal	(MEK-FAM)	Postdoc
Islam, Mohammad Aminul	(MEK-MPP)	Postdoc.
Ivarsson, Anders	(MEK-FM)	PhD student
Jacobsen, Christian Brix		Elected member, PhD.
Jakobsen, Niels Gjøl	(MEK-SKK)	PhD student
Jariyaboon, Manthana	(MEK-MTU)	Postdoc
Jellesen, Morten Stendahl	(MEK-MTU)	Postdoc
Jensen, Henrik Myhre		Elected member, Professor

Jensen, Jakob S.	(MEK-FAM)	Associate Professor, PhD
Jensen, Jarl	(MEK-FAM)	Associate Professor, HD
Jensen, Jørgen Juncher	(MEK-SKK)	Head of Section, Professor
Jensen, Lars Rosgaard	(ME-AAU)	Associate Professor
Jensen, Michael Vincent	(MEK-FM)	PhD student
Jensen, Palle Martin	(MEK-SKK)	PhD student
Jessen, Jannie	(IBA-AAU)	PhD student
Johansen, Axel Ohrt	(MEK-TES)	PhD student
Jørgensen, Jakob Heide	(IMM)	PhD student
Jørgensen, John Bagtermp	(IMM)	Assistant Professor
Kallesøe, Bjarne S.	RISØ	Senior Researcher
Kepler, Jørgen Asbøl	(ME-AAU)	Associate Professor
Kirkegaard, Poul Henning	(IBA-AAU)	Associate Professor
Kjærsgaard-Rasmussen, Jimmy	(MEK-FM)	PhD student
Klit, Peder	(MEK-FAM)	Professor, PhD
Knudsen, Thomas S.		Elected member, PhD.
Knudsen, Kim	(MAT)	Associate professor
Knudsen, Lars Ramkilde	(MAT)	Professor
Kotas, Petr	(MEK-MPP)	PhD student
Krenk, Steen	(MEK-SKK)	Professor
Kristensen, Hans O. H.	(MEK-SKK)	Senior Researcher
Kristensen, Anders Schmidt	(IBA-AAU)	Associate Professor
Kristensen, Sten Esbjørn	(MEK-SKK)	PhD student
Kærgaard, Kasper Hauberg	(MEK-SKK)	PhD student
Kwan, Maxine Mei Sum	(ME-AAU)	PhD student
Lahriri, Said	(MEK-FAM)	PhD student
Lajic, Zoran	(MEK-SKK)	PhD student
Larsen, Mikael	(ME-AAU)	Associate professor
Larsen, Poul Scheel	(MEK-FM)	Emeritus Professor
Lazarov, Boyan Stefanov	(MEK-FAM)	Postdoc., PhD
Leander, Gregor	(MAT)	Assistant Professor
Lee, Seunghwan	(MEK-MTU)	Associate Professor
Legarth, Brian N.	(MEK-FAM)	Associate Professor, PhD
Lindberg, Ole	(MEK-SKK)	PhD student
Lind-Nielsen, Birger		Elected member, PhD.
Lomholt, Trine Colding	(MEK-MTU)	PhD student
Lund, Erik	(ME-AAU)	Professor
Lund, Morten Enemark	(ME-AAU)	PhD student
Lundsgaard-Larsen, Christian	(MEK-SKK)	PhD student
Madsen, Kaj	(IMM)	Professor, dr. techn.
Madsen, Per A.	(MEK-SKK)	Professor
Mariegaard, Jesper Sandvig	(MAT)	PhD student
Marin, José Manuel Román	(MEK-MPP)	PhD student
Markvorsen, Steen	(MAT)	Professor, dr. techn.
Matusiewicz, Krystian	(MAT)	Postdoc.
Matzen, René	(MEK-FAM)	PhD student
Meyer, Knud Erik	(MEK-FM)	Assistant Professor
Mikkelsen, Lars Pilgaard	RISØ	Senior Researcher

Mikkelsen, Robert Flemming	(MEK-FM)	Assistant Professor
Minzari, Daniel	(MEK-MTU)	PhD student
Mishnaevsky, Leon	RISØ	Senior Resercher, Dr.-Ing.
Montgomery, Melanie	(MEK-MTU)	
Morosi, Stefano	(MEK-FAM)	PhD student
Moslemian, Ramin	(MEK-SKK)	PhD student
Mouritsen, Ole Ø.	(ME-AAU)	Associate Professor
Munoz, Eduardo	(MAT)	PhD student
Møller, Per	(MEK-MTU)	Professor
Mørch, Christian Sandersen	(MEK-FM)	PhD student
Néstor, Ramos García	(MEK-FM)	PhD student
Nezhentseva, Anastasia	(IBA-AAU)	PhD student
Nguyen, Dang Manh	(MAT)	PhD student
Nielsen, Anders Vedel	(MEK-SKK)	PhD student
Nielsen, Claus Suldrup	(MEK-FM)	Research Assistant
Nielsen, H. Bruun	(IMM)	Associate Professor, PhD
Nielsen, Jan Balle		Elected member, PhD.
Nielsen, Kasper Kirstein	(MEK-MPP)	PhD student
Nielsen, Kim Lau	(MEK-FAM)	PhD student
Nielsen, Leif Otto		Elected member, Associate Prof.
Nielsen, Niels-Jørgen Rishøj		Elected member, PhD.
Nielsen, Peter Nørtoft	(MAT)	PhD student
Nielsen, Søren R.K.	(IBA-AAU)	Professor, dr.techn.
Nielsen, Ulrik Dam	(MEK-SKK)	Assistant Professor
Niordson, Christian	(MEK-FAM)	Associate Professor, PhD
Nwaogu, Ugochukwu Chivuzoh	(MEK-MPP)	PhD student
Okulov, Valery	(MEK-FM)	Professor
Olesen, Christian Gammelgaard	(ME-AAU)	PhD student
Olesen, Esben Lindgaard	(ME-AAU)	PhD student
Olhoff, Niels	(ME-AAU)	Professor
Ottosen, Niels Saabye		Elected member, Professor
Pantleon, Karen	(MEK-MTU)	Associate Professor
Pedersen, Benjamin Pjedsted	(MEK-SKK)	PhD student
Pedersen, Johan Rønby	(MAT)	PhD student
Pedersen, Louis	(MAT)	PhD student
Pedersen, Michael	(MAT)	Professor
Pedersen, Niels L.	(MEK-FAM)	Associate Professor, dr.techn.
Pedersen, Pauli	(MEK-FAM)	Emeritus Professor, dr.techn., HD
Pedersen, Preben Terndrup	(MEK-SKK)	Professor, PhD
Pedersen, Rune	(MEK-FAM)	PhD student
Pedersen, Thomas Ørts		Elected member, PhD.
Pedersen, Troels Dyhr	(MEK-FM)	PhD student
Perram, John W.		Elected member, Professor
Perunovic, Jelena Vidic	(MEK-SKK)	PhD student
Petersen, Thomas		Elected member, PhD
Pillai, Saju	(ME-AAU)	Postdoc
Pyrz, Ryszard	(ME-AAU)	Professor
Quispitupa, Amilcar	(MEK-SKK)	Postdoc.

Ramachandran, Gireesh K.V. R.	(MEK-FM)	PhD student
Ramirez, José G. Rangel	(IBA-AAU)	PhD student
Rasmussen, Henrik K.	(MEK-MPP)	Assistant professor
Rasmussen, Johannes Tophøj	(MEK-FM)	PhD student
Rasmussen, John	(ME-AAU)	Professor
Rasmussen, Marie-Louise H.	(MAT)	PhD student
Rathinavelu, Umadevi	(MEK-MTU)	PhD student
Rauhe, Jens Christian M	(ME-AAU)	Associate Professor
Ravn-Jensen, Kim		Elected members, PhD.
Richelsen, Ann Bettina	(MEK-FAM)	Professor, PhD
Rojas, Marielba	(IMM)	Associate Professor, PhD
Rokni, Masoud	(MEK-TES)	Associate Professor
Rosbjerg, Dan		Elected members, Professor
Røgen, Peter	(MAT)	Associate Professor
Santos, Ilmar F.	(MEK-FAM)	Associate Professor, Dr.-Ing.
Schilder, Frank	(MAT)	Assistant Professor, dr.phil.
Schjødt-Thomsen, Jan	(ME-AAU)	Associate Professor
Schmidt, Henrik Nikolaj Blicher	(MEK-MPP)	Assistant Professor
Schramm, Jesper	(MEK-FM)	Assistant Professor
Seng, Sopheak	(MEK-SKK)	PhD student
Shen, Wen Zhong	(MEK-FM)	Assistant Professor
Shin, Keun Woo	(MEK-SKK)	PhD student
Sichani, Mahdi Teimouri	(IBA-AAU)	PhD student
Sigmund, Ole	(MEK-FAM)	Professor, dr.techn.
Sivebæk, Ion Marius	(MEK-MPP)	Assistant professor
Skjødt, Martin	(MEK-MPP)	PhD student
Skovgaard, Ove	(MAT)	Professor
Somers, Marcel A. J.	(MEK-MTU)	Section head, Professor
Sorenson, Spencer C	(MEK-FM)	Professor
Sorokin, Sergey	(ME-AAU)	Professor, PhD
Spangenberg, Jon	(MEK-MPP)	PhD student
Stang, Henrik		Elected member, Associate Prof.
Starke, Jens	(MAT)	Associate Professor
Sterndorff, Martin J.		Elected member, PhD.
Stolpe, Mathias	(MAT)	Associate Professor
Stoustrup, Jakob		Elected member, Professor
Sumer, B. Mutlu	(MEK-SKK)	Professor
Svendsen, Martin Nymann	(MEK-SKK)	PhD student
Svensson, Eilif		Elected member, Manager
Søe-Knudsen, Alf	(ME-AAU)	PhD student
Sørensen, Bent	RISØ	Senior Researcher
Sørensen, Jens Nørkær	(MEK-FM)	Professor
Sørensen, John Dalsgaard	(IBA-AAU)	Professor MSO, ph.d.
Sørensen, Mads Peter	(MAT)	Associate Professor
Sørensen, Niels Jakob		Elected member, PhD
Tabrizian-Ghalehno, Naja	(MEK-MPP)	PhD student
Thoft-Christensen, Palle	(IBA-AAU)	Emeritus Professor, ph.d.
Thomassen, Carsten	(MAT)	Professor

Thomsen, Jon Juel	(MEK-FAM)	Associate Professor, dr.techn.
Thomsen, Kim	(MEK-FAM)	PhD student
Thomsen, Ole Thybo	(ME-AAU)	Professor
Thomsen, P. Grove	(IMM)	Emeritus Professor
Thomsen, Søren Steffen	(MAT)	PhD student
Thorborg, Jesper	(MEK-MPP)	Assistant Professor
Tiedje, Niels Skat	(MEK-MPP)	Associate Professor
Toft, Henrik Stensgaard	(IBA-AAU)	PhD student
Toftegaard, Helmuth L.	RISØ	Senior Researcher
Tosello, Guido	(MEK-MPP)	Research Assistant
Tutum, Cem Celal	(MEK-MPP)	PhD student
Tvergaard, Viggo	(MEK-FAM)	Professor, dr.techn.
Umana, Valerie Gauthier	(MAT)	PhD student
Velte, Clara Marika	(MEK-FM)	PhD student
Vidic-Perunovic, Jelena	(MEK-SKK)	Postdoc.
Völcker, Carsten	(IMM)	PhD student
Walther, Jens Honore	(MEK-FM)	Associate Professor
Wang, Fengwen	(MEK-FAM)	PhD student
Yu, Kajiia	(MEK-MPP)	PhD student
Zafar, Ashar	(ME-AAU)	PhD student
Zambrano, Harvey A	(MEK-FM)	PhD student
Zee, Mark de	(ME-AAU)	Associate Professor
Zenner, Erik	(MAT)	Assistant Professor
Zermeno, Victor Manuel R.	(MAT)	PhD student
Zhang, Lai	(MAT)	PhD student
Zhang, Yang	(MEK-MPP)	PhD student
Zhou, Lelai	(ME-AAU)	PhD student
Zhu, Wei Jun	(MEK-FM)	Postdoc.
Øye, Stig	(MEK-FM)	Senior Researcher

ISSN 0106-6366