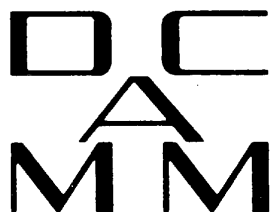


# **DANISH CENTER FOR APPLIED MATHEMATICS AND MECHANICS**

**ANNUAL REPORT  
2011**



**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 as of January 2012**

Morten Brøns	Dept. of Mathematics, DTU
Allan P. Engsig-Karup	Dept. of Informatics and Mathematical Modelling, DTU
Anton Evgrafov	Dept. of Mathematics, DTU
Jesper Henri Hattel	Dept. of Mechanical Engineering, DTU
Jan Høgsberg	Dept. of Mechanical Engineering, DTU
Martin Heide Jørgensen	Dept. of Mechanical Engineering, AAU
Kim Knudsen	Dept. of Mathematics, DTU
Erik Lund	Dept. of Mechanical Engineering, AAU
Lars Pilgaard Mikkelsen	DTU Wind Energy
Søren R.K. Nielsen	Dept. of Civil Engineering, AAU
Christian Niordson	Dept. of Mechanical Engineering, DTU
Pauli Pedersen	Dept. of Mechanical Engineering, DTU
Jens Starke	Dept. of Mathematics, DTU
Mathias Stolpe	DTU Wind Energy
Jens Nørkær Sørensen	DTU Wind Energy

**Chairman**

Christian F. Niordson, Associate Professor  
Department of Mechanical Engineering, Solid Mechanics.  
Nils Koppels Allé, Building 404  
Technical University of Denmark  
2800 Kgs. Lyngby, Denmark  
cn@mek.dtu.dk

## FOREWORD

This 2011 annual report contains information on publications, seminars and guests. The report mainly serves as a reference and documentation for accomplished activities. Detailed information is available on our homepage: [www.dcammm.dk](http://www.dcammm.dk) and on the homepages of the cooperating departments.

DCAMM organized or co-organized 12 PhD courses in 2011, of which 9 were held under The DCAMM Research School, which received funding from Forskeruddannelsesudvalget (FUU) under the Ministry of Science, Technology and Innovation, for course activities and scholarship programmes for visiting students and postdocs. Although the school does not receive external funding as of August 2011, and the individual cooperating departments must provide funding for their activities, DCAMM still facilitates the organizational structure for PhD courses for DTU Informatics, DTU Mathematics and DTU Mechanical Engineering. Details on the activities in 2012 are available on the DCAMM website.

DCAMM organized 11 seminars in 2011 including the Annual Speaker Seminar held by Professor Paulo A.F. Martins from Technical University of Lisbon, Portugal.

The 13<sup>th</sup> bi-annual international DCAMM Symposium was held March 14-16, 2011 at Munkebjerg Hotel, Vejle, with more than 113 participants. Furthermore, two workshops were held with participation by both academic and industrial participants, one of these was held April 6, 2011 at Aalborg University in honour of the 70<sup>th</sup> birthday of Professor, Dr.techn. Niels Olhoff.

As of 1 January 2012, the departments cooperating in DCAMM are:

from the **Technical University of Denmark**:

DTU Informatics

DTU Mathematics

DTU Mechanical Engineering (Solid Mechanics, Fluid Mechanics, Coastal and Maritime Engineering, Engineering Design and Product Development, Manufacturing Engineering, Materials and Surface Engineering, Maritime Engineering, Thermal Energy Systems)

DTU Wind Energy

from **Aalborg University**:

Department of Civil Engineering

Department of Mechanical and Manufacturing Engineering

As of March 29, 2012 DCAMM is extended by the membership of Aarhus School of Engineering.

I thank our international contacts for their support and inspiration.

Christian Niordson

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## 1. MEMBERS 2011

44 professors  
150 scientific members      at the six cooperating departments at the Center  
173 PhD students

30 elected members  
8 foreign members

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

## 2. FOREIGN MEMBERS

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

### 3. GUESTS FOR EXTENDED PERIODS IN 2011 (more than a fortnight)

#### **Guest professors & post docs:**

Caputo, Jean Guy, University of Rouen, France, 1.8.11 – 30.8.11

Carlsson, Leif A., Florida Atlantic University, USA, 1.5.11 – 31.5.11

Drummond, Centre de Recherche Paul-Pascal. CNRS, France, 17.1.11 – 28.1.11

Efendiev, Messoud, Department of Dynamical Systems, Institute of Biomathematics and Biometry (IBB), Germany, 25.2.11 – 25.3.11 & 1.5.11 – 1.6.11

Jacobson, Bo. O., Lund University, Sweden, 17.1.11 – 28.1.11

Jaskula, Marian, Jagiellonian University – a couple of months 2011

Jegou, Sebastien, Department of Mechanics, Materials and Process, Arts et Métiers Paris Tech, France, 1.2.11 – 31.7.11

Kelley, C.T., Department of Mathematics, North Carolina State University, USA, June 2011.

Kloeckner, Andreas, Courant Institute of Mathematical Sciences, New York University, USA, August 2011

Korukcu, Mehmet Özgün, Uludağ University, Faculty of Engineering and Architecture Mechanical Engineering Department, Bursa, Turkey, 1.9.11 – 30.9.12

Naumov, Igor, Institute of Thermophysics, SB RAS, Sibiria, 1.5.11 – 3.7.11

Persson, Bo N.J., Research Centre Juelich, Germany, 17.1.11 – 28.1.11

Smith, David, 1.9.11 – 30.9.11

Warburton, Tim, Rice University, USA, May 2011

Kim, Rae Young, KAIST, South Korea, 14.7.11 – 11.8.11

#### **PhD students**

Gaile, Stefanie, University of Erlangen-Nuremberg, Germany, 2.5.11 – 31.5.11

Oztop, Muin, Columbia University, New York, USA, 28.1.11 – 1.5.11

Otomori, Masaki, Department of Mechanical Engineering and Science, Kyoto University, Japan, 20.3.11 – 21.5.11

Park, Byuong-Ug, KAIST, South Korea, 8.8.11 – 22.12.11

Da Silveira, Otavio Augusto Alves, Universidade Federal do Rio Grande do Sul, Brasilien, 1.4.11 – 31.7.11

Yang, Zhiven, Dalian University of Technology, China, 28.9.11 – 27.9.12



## 4. PUBLICATIONS IN 2011

### 4A. INTERNATIONAL JOURNALS WITH PEER REVIEW

Ali, Syed Talat; Li, Qingfeng; Pan, Chao; Jensen, Jens Oluf; Nielsen, Lars Pleth; Møller, Per  
Effect of chloride impurities on the performance and durability of polybenzimidazole-based high temperature proton exchange membrane fuel cells. International Journal of Hydrogen Energy, (2011), 36(2), 1628-1636.

Daemi, N.; Mahboubi, F.; Alimadadi, Hossein  
Effect of plasma nitriding on electrodeposited Ni-Al Composite coating. Materials & Design, (2011), 32(2), 971-975.

Amir, Oded; Sigmund, Ole  
On reducing computational effort in topology optimization: how far can we go? Structural and Multidisciplinary Optimization, (2011), 44(1), 25-29.

Andkjær, Jacob Anders; Sigmund, Ole.  
Topology optimized low-contrast all-dielectric optical cloak. Applied Physics, (2011), 98(2).

Andreasen, Casper Schousboe; Sigmund, Ole  
Saturated poroelastic actuators generated by topology optimization. Structural and Multidisciplinary Optimization, (2011), 43(5), 693-706.

Gersborg, Allan Roulund; Andreasen, Casper Schousboe  
An explicit parameterization for casting constraints in gradient driven topology optimization. Structural and Multidisciplinary Optimization, (2011), 44(6), 875-881.

Andreassen, Erik; Clausen, Anders; Schevenels, Mattias; Lazarov, Boyan Stefanov; Sigmund, Ole  
Efficient topology optimization in MATLAB using 88 lines of code. Structural and Multidisciplinary Optimization, (2011), 43(1), 1-16.

Aref, Hassan; Pedersen, Johan Rønby; Stremmer, Mark A.; Tophøj, Laust Emil Hjerrild  
Nonlinear Excursions of Particles in Ideal 2D Flows. Physica D: Nonlinear Phenomena, vol: 240(2), 199-207 (2011). Elsevier BV North-Holland.

Azizi, Reza; Niordson, Christian Frithiof; Legarth, Brian Nyvang  
Size-effects on yield surfaces for micro reinforced composites. International Journal of Plasticity, (2011), 27(11), 1817-1832.

Baby, S.; Krüger, V.; Kragic, D.; Kjellström, H.  
Automatic Primitive Segmentation and Action Recognition. Advanced Robotics. (2011), 25, 6-7, 871-891.

Bang-Møller, Christian; Rokni, Masoud; Elmegaard, Brian

Exergy analysis and optimization of a biomass gasification, solid oxide fuel cell and micro gas turbine hybrid system. *Energy*, (2011), 36(8), 4740-4752.

Bay, Niels; Eriksen, Morten; Tan, Xincui; Wibom, Ole.

A friction model for cold forging of aluminium, steel and stainless steel provided with conversion coating and solid film lubricant. *C I R P Annals: Manufacturing Technology*, (2011), 60(1), 303-306.

Bay, Niels

Trends and Visions in Metal Forming Tribology. *Steel Research International*, (2011), 82 (Special issue), 15-26, T124.

Podgornik, B.; Zajec, B.; Bay, Niels; Vizintin, J.

Application of hard coatings for blanking and piercing tools. *Wear*, (2011), 270(11-12), 850-856.

Bassa, Alp; Beelen, Peter

A Proof of a Conjecture by Schweizer on the Drinfeld Modular Polynomial  $\Phi T(X,Y)$ . *Journal of Number Theory*, vol: 131, 1276-1285 (2011). Academic Press.

Bassa, Alp; Beelen, Peter

The Galois Closure of Drinfeld Modular Towers. *Journal of Number Theory*, vol: 131(3), 561-577 (2011).

Hashim, S.; Berggreen, Christian; Tsouvalis, N.; McGeorge, D.; Chirica, I.; Moore, P.; Boyd, S.; Nisar, J.; Anyfantis, K.; Misirlis, K.; Juin, E.; Hayman, B.; Dow, R.; Orsolini, A..

Fabrication, testing and analysis of steel/composite DLS adhesive joints. *Ships and Offshore Structures*, (2011), 6(1-2), 115-126.

Hayman, B; Berggreen, Christian; Lundsgaard-Larsen, Christian; Delarche, Antoine; Toftegaard, Helmuth Langmaack; Dow, R.S.; Downes, J.; Misirlis, K.; Tsouvalis, N.; Douka, C..

Studies of the Buckling of Composite Plates in Compression. *Ships and Offshore Structures* (2011), 6(1-2), 81-92.

Quispitupa, Amilca; Berggreen, Christian; Carlsson, L.A.

Face/core interface fracture characterization of mixed mode bending sandwich specimens. *Fatigue & Fracture of Engineering Materials and Structures*, (2011), 34(11), 839-853.

Ducrozet, G.; Bingham, H. B.; Engsig-Karup A. P.; Bonnefoy, F.; Ferrant, P. A

Comparative study of two fast nonlinear free surface water wave models. *Journal of Computational Physics*, (2011).

Ducrozet, Guillaume; Bingham, Harry B.; Engsig-Karup, Allan Peter; Bonnefoy, Félicien; Ferrant, Pierre.

A comparative study of two fast nonlinear free surface water wave models. *International Journal for Numerical Methods in Fluids*, (2011).

Naserizadeh, R.; Bingham, Harry B.; Noorzad, A.

A coupled boundary element-finite difference solution of the elliptic modified mild slope equation. *Engineering Analysis with Boundary Elements* – 2011, (2011), 35(1), 25-33.

Bissacco, Giuliano; Hansen, Hans Nørgaard; Tristo, G.; Valentincic, J..

Feasibility of wear compensation in micro EDM milling based on discharge counting and discharge population characterization. *C I R P Annals: Manufacturing Technology*, (2011), 60(1), 231-234.

Toth, T.; Ferraro, D.; Chiarello, E.; Pierno, M.; Mistura, G.; Bissacco, Giuliano; Sempredon, C.;

Suspension of Water Droplets on Individual Pillars, (2011) *Langmuir*.

Blasques, José Pedro Albergaria Amaral; Stolpe, Mathias

Maximum Stiffness and Minimum Weight Optimization of Laminated Composite Beams Using Continuous Fiber Angles. *Structural and Multidisciplinary Optimization*, vol: 43(4), (2011).

Brander, David

Singularities of Spacelike Constant Mean Curvature Surfaces in Lorentz-Minkowski Space. Cambridge Philosophical Society. *Mathematical Proceedings*, vol: 150, 527-556 (2011). Cambridge University Press.

Luczak, M.; Manzato, S.; Peeters, B.; Branner, K.; Berring, P.; Kahsin, M.

Dynamic Investigation of Twist-bend Coupling in a Wind Turbine Blade. *Journal of Theoretical and Applied Mechanics*, (2011), 49(3), 765-789.

Kærn, Martin Ryhl; Brix, Wiebke; Elmegaard, Brian; Larsen, Lars Finn Sloth

Performance of residential air-conditioning systems with flow maldistribution in fin-and-tube evaporators. *International Journal of Refrigeration*, (2011), 34(3), 696-706.

Kærn, Martin Ryhl; Brix, Wiebke; Elmegaard, Brian; Larsen, Lars Finn Sloth

Compensation of flow maldistribution in fin-and-tube evaporators for residential air-conditioning. *International Journal of Refrigeration*, (2011) 34(3), 1230-1237.

Kushch, V.I.; Shmegeera, S.V.; Brøndsted, P.; Mishnaevsky Jr., L.

Numerical simulation of progressive debonding in fiber reinforced composite under transverse loading. *Int. J. Eng. Sci.*, (2011), 49(1), 17-29.

Brøns, Morten

Canard Explosion of Limit Cycles in Templator Models of Self-Replication Mechanisms. *Journal of Chemical Physics*, vol: 134(14), 144105 (2011).

Calaon, Matteo; Islam, Aminul; Hansen, Hans Nørgaard; Tristo, G.; Valentincic, J..

Experimental investigation of new manufacturing process chains to create micro-metal structures on polymer substrates for lab-on-chip sensors. *International Journal of Advanced Manufacturing Technology*, (2011).

Carli, Lorenzo; Genta, G.; Cantatore, Angela; Barbato, G.; De Chiffre, Leonardo; Levi, R.

Uncertainty evaluation for three-dimensional scanning electron microscope reconstructions based on the stereo—pair technique. *Measurement Science and Technology*, (2011), 22(3).

Macchi, Francesca; Hoffmann, Søren V.; Carlsen, Martin; Vad, Brian; Imparato, Alberto; Rischel, Christian; Otzen, Daniel E.

Mechanical Stress Affects Glucagon Fibrillation Kinetics and Fibril Structure *Langmuir*, vol: 27(20), 12539-12549 (2011). American Chemical Society.

Cavar, Dalibor; Meyer, Knud Erik

Investigation of turbulent boundary layer flow over 2D bump using highly resolved large eddy simulation. *Journal of Fluids Engineering*, (2011), 133(11).

Ceron, Ermanno; Bay, Niels; Arentoft, Mogens; Tang, Peter Torben

Testing a New Microporous Lubricant Carrier for Cold Forging. *Stee Research International*, (2011), 82 (Special issue), 240-244, T125.

Emarat, Narumon; Forehand, David I.M.; Christensen, Erik Damgaard; Greated, Clive A..

Experimental and numerical investigation of the internal kinetics of a surf-zone plunging breaker *European Journal of Mechanics B – Fluids*, (2011), 32, 1-16.

Christensen, Ole; Jakobsen, Mads Sielemann

Dual Pairs of Gabor Frames for Trigonometric Generators without the Partition of Unity Property. *Asian-European Journal of Mathematics* 4, no. 4, 589-603 (2011).

Christensen, Ole; Kim, Hong Oh; Kim, Rae Young

On the Duality Principle by Casazza, Kutyniok, and Lammers. *Journal of Fourier Analysis and Applications*, vol: 17(4), 640-655 (2011).

Christensen, Ole; Laugesen, Richard S.

Approximately Dual Frames in Hilbert Spaces and Applications to Gabor Frames. *Sampling Theory in Signal and Image Processing*, vol. 9, 77-90 (2011). Sampling Publishing.

Drozdov, A.; Christiansen, J.D.C.

Cyclic viscoelastoplasticity of polypropylene: effects of crystalline structure. *Acta Mechanica Sinica*. (2011), 221, 201-222.

Drozdov, A.; Christiansen, J.D.C.

Mullins' Effect In Semicrystalline Polymers: Experiments and Modeling. *Meccanica*. (2011), 46, 2, 359-370.

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Volume growth and viscoplasticity of polymer/clay nanocomposites: experiments and modeling. *International Journal of Applied Mathematics and Mechanics*. (2011), 7, 17, 87-110.

Vingaard, M.; Christiansen, J.D.C.

Activation energy of poly (methyl methacrylate) from rheometry and polymer welding. *Journal of Materials Science and Engineering*. (2011) 46, 13, 4660.

Christiansen, Thomas; Hummelshøj, Thomas Strabo; Somers, Marcel A.J.

Gaseous carburising of self-passivating Fe-Cr-Ni alloys in acetylene-hydrogen mixtures. *Surface Engineering*, (2011), 27(8), 602-608.

Christiansen, Thomas; Somers, Marcel A.J.

Low temperature gaseous surface hardening of stainless steel. *H T M: Journal of Heat Treatment and Materials*, (2011), 66(2), 109-115.

Oddershede, Jette; Christiansen, Thomas; Ståhl, Kenny; Somers, Marcel A.J.

Extended X-Ray Absorption Fine Structure Investigation of Carbon Stabilized Expanded Austenite and Carbides in Stainless Steel AISI 316. *Steel Research International*, (2011), 82(10), 1248-1254.

Pedersen, Hanne; Christiansen, Thomas; Somers, Marcel A.J.

Nitrocarburizing in ammonia-hydrocarbon gas mixtures. *H T M: Journal of Heat Treatment and Materials*, (2011), 66(2), 76-81.

Clausen, Lasse Røngaard; Elmegaard, Brian; Ahrenfeldt, Jesper; Henriksen, Ulrik Birk

Thermodynamic analysis of small-scale dimethyl ether (DME) and methanol plants based on the efficient two-stage gasifier. *Energy*, (2011), 37(10), 5805-5814.

Darula, R.; Ziaran, S.

An experimental study of optimal measurement point location for gear wheel state-of-wear measurements by means of vibro-acoustic diagnostics. *Journal of Mechanical Engineering Research and Developments*. (2011) 62, 2, 61-79.

De Chiffre, Leonardo; Carli, Lorenzo; Eriksen, Rasmus Solmer

Multiple height calibration artefact for 3D microscopy. *C I R P Annals: Manufacturing Technology*, (2011), 60(1), 535-538.

Kruth, J.P.; Bartscher, M.; Carmignato, S.; Schmitt, R.; De Chiffre, Leonardo; Weckenmann, A.

Computed tomography for dimensional metrology. *C I R P Annals: Manufacturing Technology*, (2011), 60(2), 821-842.

Jensen, Jesper Buch; Bahl, Christian Robert Haffenden; Engelbrecht, Kurt, Elmegaard, Brian; Pryds, Nini

Analysis of single blow effectiveness in non-uniform parallel plate regenerators. *International Journal of Heat and Mass Transfer*, (2011), 54(21-22), 4746-4751.

Engsig-Karup, A. P.; Madsen, M. G.; Glimberg, S. L.

A massively parallel GPU-accelerated model for analysis of fully nonlinear free surface waves. E-published in *International Journal for Numerical Methods in Fluids*, July, 2011.

Eriksen, Rasmus Solmer; Arentoft, Mogens; Grønbæk, J.; Bay, Niels  
Test of Tribological Performance of Robot Assisted Polished Too. Surfaces. Steel Research International, (2011), 82 (Special Issue), 1108-1111, T126.

Arentoft, Mogens; Eriksen, Rasmus Solmer; Hansen, Hans Nørgaard; Paldan, Nikola Aulin.

Towards the first generation microbulk forming system. C I R P Annals: Manufacturing Technology, (2011), 60(1), 335-338.

Evgrafov, Anton; Gregersen, Misha Marie; Sørensen, Mads Peter  
Convergence of Cell Based Finite Volume Discretizations for Problems of Control in the Conduction Coefficients. E S A I M: Mathematical Modelling and Numerical Analysis, vol: 45(6), 1059-1080 (2011).

Niemann, S.L.; Fredsøe, Jørgen; Jacobsen, Niels Gjø  
Sand Dunes in Steady Flow at Low Froude Numbers: Dune Height Evolution and Flow Resistance. JJournal of Hydraulic Engineering (New York), (2011), 137(1), 5.

Friis, Kasper Storgaard; Khan, M.I.; Bay, Niels; Zhou, Y..  
Resistance microwelding of 316L stainless steel wire to block. Science and Technology of Welding and Joining (Print), (2011), 16(6), 546-552.

Friis, Kasper Storgaard; Godi, Alessandro; De Chiffre, Leonardo  
Characterization and robust filtering of multifunctional surfaces using ISO standards. Measurement Science and Technology, (2011), 22(12).

Fuhrman, David R.; Sumer, B. Mutlu; Fredsøe, Jørgen  
Roughness-induced streaming in turbulent wave boundary layers. Journal of Geophysical Research, (2011), 116, C10002.

Gravesen, Jens; Evgrafov, Anton; Nguyen, Dang Manh  
On the Sensitivities of Multiple Eigenvalues. Structural and Multidisciplinary Optimization, vol: 44(4), 583-587 (2011).

Lassen, Benny; Willatzen, Morten; Gravesen, Jens  
Möbius Semiconductor Nanostructures and Deformation Potential Strain Effects Journal of Nanoelectronics and Optoelectronics, vol: 6(1), 68-75 (2011).

Haglund, Fredrik  
Variable geometry gas turbines for improving the part-load performance of marine combined cycles – Combined cycle performance. Applied Thermal Engineering, (2011), 31(4), 467-476.

Hansen, Hans Nørgaard; Hocken, R.J.; Tosello, Guido  
Replication of micro and nano surface geometries. C I R P Annals: Manufacturing Technology, (2011), 62(2), 695-714.

Hansen, Hans Nørgaard, Tosello, Guido, Gasparin, Stefania, De Chiffre, Leonardo  
Dimensional metrology for process and part quality control in micro manufacturing. International Journal of Precision Technology, (2011), 2(2-3), 118-135.

Politis, E.S.; Prospathopoulos, J.; Cabezon, D.; Hansen, Kurt Schaldemose; Chaviaropoulos, P.K.; Barthelmie, R.J.  
Modeling wake effects in large wind farms in complex terrain: the problem, the methods and the issues. *Wind energy*, (2011), 15(1), 161-182.

Hansen, Martin Otto; Aagaard Madsen, Helge  
Review paper on wind turbine aerodynamics. *Journal of Fluids Engineering*, (2011), 133(11).

Aagaard Madsen, Helge; Riziotis, V.; Zahle, Frederik; Hansen, Martin Otto Laver; Suel, H.; Grasso, F.; Larsen, Torben J.; Politis, E.; Rasmussen, Flemming.  
Blade element momentum modeling of inflow with shear in comparison with advanced model results. (2011). *Wind Energy*

Nachiappan, Vivek Chidambaram; Hattel, Jesper Henri; Hald, John  
High-temperature lead-free solder alternatives. *Microelectronic Engineering*, (2011), 88(6), 981-989.

Hiller, Jochen; Fuchs, Teobald O.J.; Kasperl, Stefan; Reindl, Leonard M..  
Einfluss der Bildqualität röntgentomographischer Abbildungen auf Koordinatenmessungen: Grundlagen, Messungen und Simulation. *Technisches Messen – T M* (2011), 78(7-8), 334-347.

Pullini, Daniele; Carotenuto, Gianfranco; Palomba, Mariano; Mosca, Alessandra; Horsewell, Andy; Nicolais, Luigi  
In situ synthesis of high-density contact-free Ag-nanoparticles for plasmon resonance polystyrene nanocomposites. *Journal of Materials Science*, (2011), 46(24), 7905-7911.

Hosseinzadeh, Elham; Barari, Amin; Fouladi, Fama; Domairry, Davood Ganji.  
Numerical analysis of fourth-order boundary value problems in fluid mechanics and mathematics. *Thermal Science*, (2011), 14(4), 1101-1109.

Hvilshøj, M.; Bøgh, S.  
“Little Helper” – An Autonomous Industrial Mobile Manipulator Concept.  
*International Journal of Advanced Robotic Systems*. (2011), 8, 2.

Høgsberg, Jan Becker The role of negative stiffness in semi-active control of magneto-rheological dampers. *Structural Control and Health Monitoring*, (2011), 18(3), 289-304.

Ibsen, Lars Bo; Barari, Amin  
Monotonic Loading of Circular Surface Footings on Clay. *Journal of Mechanical Science and Technology*. (2011), 25(12). 3151-3158.

Farrokhzad, Farzad; Choobbasti, Asskar Janalizadeh J.; Barari, Amin; Ibsen, Lars Bo  
Assessing Landslide Hazard Using Artificial Neural Network: case study of Mazandaran, Iran. *Carpathian Journal of Earth and Environmental Sciences*. (2011), 6(1). 251-261.

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Predicting Subsurface Soil Layering and Landslide Risk with Artificial Neural Networks: a case study from Iran. *Geologica Carpathica*. (2011), 62(5). 477-485.
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On the electrochemical migration mechanism of tin in electronics. *Corrosion Science*, (2011) 53(10), 3366-3379.
- Minzari, Daniel; Jellesen, Morten Stendahl; Møller, Per; Ambat, Rajan  
Morphological study of silver corrosion in highly aggressive sulfur environments. *Engineering Failure Analysis*, (2011), 18(8), 2126-2136.
- Minzari, Daniel; Grumsen, Flemming Bjerg; Jellesen, Morten Stendahl; Møller, Per; Ambat, Rajan  
Electrochemical migration of tin in electronics and microstructure of the dendrites. *Corrosion Science*, (2011), 53(5), 1659-1669.
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Provocation test with metallic palladium in a palladium-allergic patient. *Contact Dermatitis*, (2011), 65(5), 304-306.
- Thyssen, Jacob P.; Jensen, Peter; Lidén, Carola; Julander, Anneli; Jellesen, Morten Stendahl; Menné, Torkil; Johansen, Jeanne D.  
Assessment of nickel and cobalt release from 200 unused hand-held work tools for sale in Denmark – Sources of occupational metal contact dermatitis? *Science of the Total Environment*, (2011), 409(22), 4663-4666.
- Jensen, Jakob Søndergaard  
Topology optimization of nonlinear optical devices. *Structural and Multidisciplinary Optimization*, (2011), 43(6), 731-743.
- Jensen, Jakob Søndergaard; Sigmund, Ole  
Topology optimization for nano-photonics. *Laser & Photonics Reviews*, (2011), 5(2), 308-321.
- Matzen, René; Jensen, Jakob Søndergaard; Sigmund, Ole  
Systematic design of slow-light photonic waveguides. *Optical Society of America. Journal B: Optical Physics*, (2011), 28(10), 2374-2382.



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- S128. ZAMBRANO, HARVEY A: Molecular Dynamics Studies of Nanofluidic Devices (May 2011)
- S129. AAGE, NIELS: Topology optimization of radio frequency and microwave structures (April 2011)
- S130. MATZEN, RENÉ: Topology Optimization for Transient Wave Propagation Problems (March 2011)
- S131. ANDREASEN, CASPER SCHOUSBOE: Multiscale topology optimization of solid and fluid structures (May 2011)
- S132. KÆRN, MARTIN RYHL: Analysis of flow maldistribution in fin-and-tube evaporators for residential air-conditioning systems (August 2011)

- S133 BEHRENS, TIM: Simulation of Moving Tailing edge Flaps on a Wind Turbine Blade using a Nivier-Stokes based Immersed Boundary Method (July 2011)
- S134 BLASQUES, JOSÉ PEDRO ALBERGARIA AMARAL: Optimal Design of Laminated Composite Beams (August 2011)
- S135 AZIZI, REZA: Multi-scale modelling of composites (September 2011)
- S136 JACOBSEN, NIELS GJØL: A Full Hydro- and Morphodynamic Description of Breaker Bar Development (April 2011)

## 7. OTHER THESES

ALI, SYED TALAT: “Surface Embedded Metal Oxide Sensors (SEMOS)”, DTU Mechanical Engineering, 2011. PhD Thesis

AMIR, ODED: “Efficient Reanalysis Procedures in Structural Topology Optimization”, DTU Mathematics, 2011. PhD Thesis.

ANDERSEN, NINA MARIANNE: “In Silico Models of Blood Coagulation”, DTU Mathematics, 2011. PhD Thesis.

BORGHOFF, JULIA: “Cryptanalysis of Lightweight Ciphers”, DTU Mathematics, 2011. PhD Thesis.

CARLI, LORENZO: “3D-SEM Metrology for Coordinate Measurements at the Nanometer Scale”, DTU Mechanical Engineering, 2011. PhD Thesis.

DUPUIS, JEAN-FRANCOIS: “Automated Design of Advanced Mechatronic Systems”, DTU Mechanical Engineering, 2011. PhD Thesis.

HERZOG, DENNIS: “Parametric Human Movements: Learning, Synthesis, Recognition, and Tracking”, Aalborg University, Dept. of Mechanical Engineering, 2011. PhD Thesis.

JENSEN, JAKOB SØNDERGAARD: “Waves and Vibrations in Inhomogeneous Structures – bandgaps and optimal designs”, DTU Mechanical Engineering, 2011. Doctoral Thesis.

KOTAS, PETR: “Integrated Modeling of Process, Structures and Performance in Cast Parts”, DTU Mechanical Engineering, 2011. PhD Thesis.

LINDGAARD, ESBEN: “Buckling Optimization of Composite Structures”, Aalborg University, Dept. of Mechanical Engineering, 2011. PhD Thesis.

PEDERSEN, JOHAN RØNBY: “Chaos and Integrability in Ideal Body-Fluid Interactions”, DTU Mathematics, 2011. PhD Thesis.

SICHANI, MT. “Estimation of Extreme Responses and Failure Probability of Wind Turbines under Normal Operation by Controlled Monte Carlo Simulation”, Aalborg University, Department of Civil Engineering, 2011. PhD Thesis.

UMAÑA, VALÉRIE GAUTHIER: “Post-Quantum Cryptography”, DTU Mathematics, 2011. PhD Thesis.

## 8. DCAMM SEMINARS GIVEN IN 2011

PhD, Msc., Eng. Marta Dragon-Louiset: Buckling of stiffened flat plates under longitudinal compression and pressure. 14. December 2011. Research & Development, Dassault Aviation, France.

Professor, dr. ing. Tore Børvik: Are numerical simulations of ballistic impact predictive?. 8 November 2011. Structural Impact Lab (SIMLab), Centre for Research-based Innovation (CRI) and Dept. of Struct. Eng., Norwegian University of Science and Technology, Trondheim, Norway.

Prof., Dr. Steve Winterstein: Probability-based Engineering Analysis and Design. 15-17 June 2011. Stanford University, CA, USA.

Distinguished Professor Jie Lie: The Probability Density Evolution Theory for Nonlinear Stochastic Dynamic Systems. 27 May 2011. School of Civil Engineering, Tongji University, Shanghai, China.

Svetlana Kirillova: RNA structural comparison. 24 May 2011. Department of Structural and Computational Biology, Max F. Perutz Laboratories, Vienna, Austria.

Director, PhD Byung Man Kwak: Optimal Design in Kwak's Laboratory with an Introduction to the Mobile Harbor Project. 29 April 2011. Samsung Chair Professor of Mechanical Engineering, Director of KAIST Mobile Harbor Project, KAIST, Korea.

Professor Gengdong Cheng: Efficient Algorithm of Probability based Design Optimization of Complex Structures and Related Issues. 8 April 2011. Dalian University of Technology, Dalian, Laoning, China.

PhD., D.Sc. Alexander P. Seyranian: Two problems on stabilization of statically unstable systems by vibration. 8 April 2011. Lomonosov Moscow State University, Russia.

Lorenzo Bardella: Studies of Small-Scale Plasticity. 7 April 2011. DICATA, University of Brescia, Italy.

Professor Sung-Kie Youn: Integrating Product Design Processes through Splines – From CAD to Optimization. 19 January 2011. Department of Mechanical Engineering, KAIST, Korea.

**APPENDIX: List of members 2011**

## 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

CIVIL, AAU:	Department of Civil Engineering
M-TECH, AAU:	Department of Mechanical and Manufacturing Engineering

Abdelrahemm, Mohammed A.	(MAT)	PhD student
Aggerbeck, Martin	(MEK-MTU)	PhD student
Ali, Syed Talat	(MEK-MTU)	PhD student
Alimadadi, Hossein	(MEK-MTU)	PhD student
Alkhzaimi, Hoda	(MAT)	PhD student
Ambat, Rajan	(MEK-MTU)	Associate Professor
Amir, Oded	(MEK-FAM)	Postdoc
Amtoft, Kristoffer	(M-TECH, AAU)	PhD student
Andersen, Frederik Herland	(MEK-FM)	PhD student
Andersen, Ingrid Marie Vincent	(MEK-SKK)	PhD student
Andersen, Lars	(CIVIL, AAU)	Associate Professor, PhD
Andersen, Martin	(M-TECH, AAU)	PhD student
Andersen, Michael Skipper	(M-TECH-AAU)	PhD student
Andersen, Morten	(MAT)	PhD student
Andersen, Poul	(MEK-SKK)	Associate Professor
Andersen, Søren Bøgh	(MEK-FAM)	PhD student
Andersen, Søren Juhl	(MEK-FM)	PhD student
Andersen, Søren Mikkøl	(CIVIL, AAU)	Assistant Professor
Andkjær, Jacob Anders	(MEK-FAM)	PhD student
Andreasen, Casper Schousboe	(MEK-FAM)	Researcher
Andreasen, Jens H.	(M-TECH, AAU)	Associate Professor
Andreassen, Erik	(MEK-FAM)	PhD student
Angel, Jais Andreas Breusch	(MEK-MPP)	PhD student
Azizi, Reza	(MEK-FAM)	PhD student
Baby, Sanmohan	(M-TECH, AAU)	Postdoc
Back-Pedersen, Andreas		Elected member, PhD.
Baghsheikhi, Saeed	(MEK-MTU)	PhD student
Bai, Shaoping	(M-TECH, AAU)	Assistant Professor
Bak, Brian Lau Verndal	(M-TECH, AAU)	PhD student
Bang-Møller, Christian	(MEK-TES)	PhD student
Baran, Ismet	(MEK-MPP)	PhD student
Bay, Niels	(MEK-MPP)	Professor
Beelen, Peter	(MAT)	Associate Professor

Bejder, Erik	(M-TECH, AAU)	Associate Professor
Bendsøe, Martin		Elected member, Professor
Berggreen, Christian	(MEK-SKK)	Associate Professor
Bhowmik, Subrata	(MEK-SKK)	PhD student
Bialas, Zuzana	(RISØ)	PhD student
Bihlet, Uffe	(MEK-MTU)	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
Bohn, Kim René	(M-TECH, AAU)	Associate Professor
Bohr, Tomas		Elected member, Professor
Borbye, Jakob	(MEK-FM)	PhD student
Borg, Ulrik		Elected member, Senior Engineer
Borghoff, Julia	(MAT)	Postdoc.
Brander, David	(MAT)	Assistant Professor
Branner, Kim	(RISØ)	Senior Scientist
Bredmose, Henrik	(MEK-FM)	Assistant Professor
Brix, Wiebke	(MEK-TES)	Assistant Professor
Brohus, Henrik	(CIVIL, AAU)	Associate Professor, ph.d.
Bræstrup, M. W.		Elected member, PhD.
Brøndsted, Povl	(RISØ)	Senior Scientist
Brøns, Morten	(MAT)	Professor, PhD
Buhl, Jacob	(M-TECH, AAU)	Scientific Assistant
Buhl, Thomas	(RISØ)	Senior Scientist
Bureau, Emil	(MEK-FAM)	PhD student
Byskov, Esben	(CIVIL, AAU)	Emeritus Professor, dr.techn.
Bøgh, Simon	(M-TECH, AAU)	PhD student
Baastrup, Jen-Jørgen	(M-TECH, AAU)	Scientific Assistant
Calaon, Matteo	(MEK-MPP)	Research Assistant
Cantatore, Angela	(MEK-MPP)	Postdoc
Carli, Lorenzo	(MEK-MPP)	PhD student
Carlsen, Martin	(MAT)	PhD student
Cavar, Dalibor	(RISØ)	Assistant Professor
Cederkvist, Jan		Elected member, PhD.
Cerda, Alejandro	(MEK-FAM)	PhD student
Ceron, Emanno	(MEK-MPP)	PhD student
Cerullo, Michele	(MEK-FAM)	PhD student
Chivae, Hamid Sarlak	(MEK-FM)	PhD student
Chougule, Prasad	(CIVIL, AAU)	PhD student
Christensen, Erik Damgaard	(MEK-SKK)	Professor
Christensen, Ole	(MAT)	Professor, dr.scient.
Christiansen, Jesper De Claville	(M-TECH, AAU)	Professor
Christiansen, Niels Hørbye	(MEK-SKK)	PhD student
Christiansen, Peter	(MEK-MPP)	PhD student
Christiansen, Thomas	(MEK-MTU)	Senior Scientist
Christiansen, Torben R. Bilgrav	(MEK-SKK)	PhD student
Clausen, Johan Christian	(AAU-CIVIL)	Assstant Professor
Clausen, Lasse Røngaard	(MEK-TES)	PhD student
Cordtz, Rasmus	(MEK-FM)	PhD student
Dahl, Jonas	(M-TECH, AAU)	PhD student
Dahl, Kristian Vinter	(MEK-MTU)	Postdoc.
Damkilde, Lars	(CIVIL, AAU)	Professor
Dammann, Bernd	(IMM)	Associate Professor
Danckert, Joachim	(M-TECH, AAU)	Professor
Dang, Quang Vinh	(M-TECH, AAU)	PhD student
Danielsen, Hilmar	(MEK-MTU)	Postdoc.
Darula, Radoslav	(M-TECH, AAU)	PhD student

Davidsdóttir, Svava	(MEK-MTU)	PhD student
De Chiffre, Leonardo	(MEK-MPP)	Professor
Dimitrov, Nikolai	(MEK-SKK)	PhD student
Ditlevsen, Ove Dalager	(MEK-SKK)	Emeritus Professor
Dolomanova, Viktoriya	(M-TECH, AAU)	PhD student
Dukovska-Popovska, Iskra	(M-TECH, AAU)	Associate Professor
Egelund, Arne Jørgensen	(MEK-TES)	Associate Professor
Elesin, Yuriy	(MEK-FAM)	Postdoc
Elmegaard, Brian	(MEK-TES)	Head of Section, Associate Prof.
Elmegaard, Michael	(MAT)	PhD student
Endelt, Benny Ørtoft	(M-TECH, AAU)	Associate Professor
Engsig-Karup, Allan Peter	(IMM)	Assistant Professor
Eriksen, Rasmus Normann W.	(MEK-SKK)	PhD student
Eriksen, Rasmus Solmer	(MEK-MPP)	PhD student
Eriksen, Thomas	(M-TECH, AAU)	PhD student
Evgrafov, Anton	(MAT)	Associate Professor
Faber, Lene	(M-TECH, AAU)	Associate Professor
Farahani, Saeed D.	(M-TECH, AAU)	PhD student
Fedorov, Vladimir	(MEK-SKK)	PhD student
Frandsen, Henrik Lund	(RISØ)	Scientist
Fredsøe, Jørgen	(MEK-SKK)	Professor
Friis, Kasper Storgaard	(MEK-FAM)	Postdoc
Fuglede, Niels	(MEK-FAM)	PhD student
Fuhrman, David R.	(MEK-SKK)	Associate Professor
Galle, Stefanie Bianca	(MAT)	Postdoc
Gasparin, Stefania	(MEK-MPP)	PhD student
Gauravaram, Praveen	(MAT)	Postdoc.
Giversen, Søren	(MEK-SKK)	PhD student
Godi, Allesandro	(MEK-MPP)	PhD student
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.
Habib, Tufail	(M-TECH, AAU)	PhD student
Haglund, Fredrik	(MEK-TES)	Associate Professor
Haider, Sajjad	(MEK-FM)	Postdoc
Hald, John	(MEK-MTU)	Affiliated Professor
Halkjær, Søren		Elected member
Haloui, Safia	(MAT)	Postdoc
Hamilton, Andrew	(M-TECH, AAU)	Postdoc
Hansen, Hans Nørgaard	(MEK-MPP)	Professor
Hansen, Jens Zangenberg	(RISØ)	PhD student
Hansen, John M.	(RISØ)	Senior Scientist
Hansen, Kim Rene	(MEK-FM)	Postdoc
Hansen, Klaus Schütt	(M-TECH, AAU)	PhD student
Hansen, Kurt Schaldemose	(MEK-FM)	Senior Researcher
Hansen, Martin Otto Laver	(MEK-FM)	Associate Professor
Hansen, Morten Hartvig	(RISØ)	Senior Scientist
Hansen, Nilas Mandrup	(MEK-SKK)	PhD student
Hansen, Per Chr.	(IMM)	Professor, dr. techn.
Harthøj, Anders	(MEK-MTU)	PhD student
Hassing, Henrik		Elected member
Hattel, Jesper Henri	(MEK-MPP)	Professor
Henriksen, Christian	(MAT)	Associate Professor, PhD
Hiller, Jochen	(MEK-MPP)	Postdoc
Hjorth, Poul	(MAT)	Associate Professor, PhD

Hoffmann, Kristoffer	(MAT)	PhD student
Horsewell, Andy	(MEK-MTU)	Professor
Hosseinzadeh, Elham	(MEK-TES)	PhD student
Hougaard, Peter		Elected member, PhD.
Hudecz, Adriana	(MEK-FM)	PhD student
Hvilshøj, Mads	(M-TECH, AAU)	PhD student
Hvolby, Hans-Henrik	(M-TECH, AAU)	Professor
Høgsberg, Jan Becker	(MEK-SKK)	Associate Professor
Høholdt, Tom	(MAT)	Professor
Højlund, Carsten	(M-TECH, AAU)	PhD student
Haastrup, Morten	(M-TECH, AAU)	PhD student
Ibsen, Lars Bo	(CIVIL, AAU)	Professor, MSO, PhD
Ingvorsen, Kristian Mark	(MEK-FM)	PhD student
Islam, Mohammad Aminul	(MEK-MPP)	Postdoc.
Ivarsson, Anders	(MEK-FM)	Assistant Professor
Jabbari, Masoud	(MEK-MPP)	PhD student
Jacobsen, Christian Brix		Elected member, PhD.
Jacobsen, Niels Gjøøl	(MEK-SKK)	Postdoc
Jakobsen, Johnny	(M-TECH, AAU)	Postdoc
Jakobsen, Kasper Rønnow	(MEK-MTU)	PhD student
Janakiraman, Shravan	(MEK-FAM)	PhD student
Jellesen, Morten Stendahl	(MEK-MTU)	Postdoc
Jensen, Bjarne	(MEK-SKK)	PhD student
Jensen, Erik Appel	(M-TECH, AAU)	Associate Professor
Jensen, Henrik Myhre		Elected member, Professor
Jensen, Jacob Hjelmager	(MEK-SKK)	Associate Professor
Jensen, Jakob S.	(MEK-FAM)	Associate Professor, PhD
Jensen, Jørgen Juncher	(MEK-SKK)	Head of Section, Professor
Jensen, Lars Rosgaard	(M-TECH, AAU)	Associate Professor
Jensen, Louise Søgaard	(MEK-MTU)	PhD student
Jessen, Jannie	(CIVIL, AAU)	PhD student
Johansen, Axel Ohrt	(MEK-TES)	PhD student
Juhl, Thomas Brokholm	(M-TECH, AAU)	PhD student
Jørgensen, Jakob Heide	(IMM)	PhD student
Jørgensen, John Bagtermp	(IMM)	Assistant Professor
Jørgensen, Martin Felix	(MEK-FAM)	PhD student
Jørgensen, Steffen Nordahl	(M-TECH, AAU)	PhD student
Jøøørgensen, Kaj Asbjørn	(M-TECH, AAU)	Associate Professor
Kabus, Simon	(M-TECH, AAU)	PhD student
Kallesøe, Bjarne S.	(RISØ)	Senior Scientist
Kepler, Jørgen Asbøl	(M-TECH, AAU)	Associate Professor
Kimiaefar, Amin	(M-TECH, AAU)	PhD student
Kirkegaard, Poul Henning	(CIVIL, AAU)	Associate Professor
Kjartansdóttir, Cecilia	(MEK-MTU)	PhD student
Klit, Peder	(MEK-FAM)	Professor, PhD
Klitkou, Rasmus	(M-TECH, AAU)	PhD student
Knudsen, Kim	(MAT)	Associate professor
Knudsen, Lars Ramkilde	(MAT)	Professor
Knudsen, Thomas S.		Elected member, PhD.
Kolakowska, Ewa	(M-TECH, AAU)	Associate Professor
Kolmogorov, Dmitry	(MEK-FM)	PhD student
Kotas, Petr	(MEK-MPP)	PhD student
Kragh, Knud	(RISØ)	PhD student
Krenk, Steen	(MEK-SKK)	Professor
Kristensen, Anders Schmidt	(CIVIL, AAU)	Associate Professor
Kristensen, Hans O. H.	(MEK-SKK)	Senior Researcher
Kristensen, Sten Esbjørn	(MEK-SKK)	PhD student



Kristiansen, Morten	(M-TECH, AAU)	Associate Professor
Kröger, Voker	(M-TECH, AAU)	Associate Professor
Kærn, Martin Ryhl	(MEK-TES)	PhD student
Lahriri, Said	(MEK-FAM)	PhD student
Larsen, Jan Balle		Elected member, PhD.
Larsen, Jon Steffen	(MEK-FAM)	PhD student
Larsen, Mikael	(M-TECH, AAU)	Associate professor
Larsen, Poul Scheel	(MEK-FM)	Emeritus Professor
Laustsen, Steffen	(M-TECH, AAU)	PhD student
Lazarov, Boyan Stefanov	(MEK-FAM)	Postdoc., PhD
Leander, Gregor	(MAT)	Associate Professor
Lee, Seunghwan	(MEK-MTU)	Associate Professor
Legarth, Brian N.	(MEK-FAM)	Associate Professor, PhD
Leong, Martin Klitgaard	(M-TECH, AAU)	PhD student
Lilholt, Hans	(RISØ)	Chief Scientist
Lindberg, Ole	(MEK-SKK)	PhD student
Lindgren, Peter	(M-TECH, AAU)	Associate Professor
Lind-Nielsen, Birger		Elected member, PhD.
Lomholt, Trine Colding	(MEK-MTU)	PhD student
Lund, Erik	(M-TECH, AAU)	Professor
Lund, Morten Enemark	(M-TECH, AAU)	PhD student
Lützen, Marie		Elected member, Assistant Professor
Madaleno, Liliana	(M-TECH, AAU)	PhD student
Madsen, Bo	(RISØ)	Senior Scientist
Madsen, Jan Busk	(MEK-MTU)	PhD student
Madsen, Ole	(M-TECH, AAU)	Professor
Madsen, Per A.	(MEK-SKK)	Professor
Mahshid, Rasoul	(MEK-MPP)	PhD student
Mamani, Samuel Charca	(M-TECH, AAU)	Postdoc
Manca, Marcello	(MEK-SKK)	PhD student
Marhadi, Kun	(MAT)	Postdoc
Markvorsen, Steen	(MAT)	Professor, dr. techn.
Marmaris, Konstantinos	(MAT)	PhD student
Marschler, Christian	(MAT)	PhD student
Meyer, Knud Erik	(MEK-FM)	Associate Professor
Mikkelsen, Lars Pilgaard	(RISØ)	Senior Scientist
Mikkelsen, Robert Flemming	(MEK-FM)	Senior Researcher
Mishnaevsky, Leon	(RISØ)	Senior Scientist
Montgomery, Melanie	(MEK-MTU)	Associate Professor
Morsbøl, Jonas	(M-TECH, AAU)	PhD student
Mosegaard, Klaus	(IMM)	Professor
Moslemian, Ramin	(MEK-SKK)	PhD student
Moumeni, Elham	(MEK-MPP)	PhD student
Mouritsen, Ole Ø.	(M-TECH, AAU)	Associate Professor
Müller, Pavel	(MEK-MPP)	PhD student
Møller, Per	(MEK-MTU)	Professor
Néstor, Ramos García	(MEK-FM)	Researcher
Nezhentseva, Anastasia	(CIVIL, AAU)	PhD student
Nguyen, Dang Manh	(MAT)	PhD student
Nielsen, Chris Valentin	(MEK-MPP)	PhD student
Nielsen, Claus Suldrup	(MEK-FM)	PhD student
Nielsen, Daniel Rønne	(MEK-TES)	PhD student
Nielsen, H. Bruun	(IMM)	Associate Professor, PhD
Nielsen, Izabela Ewa	(M-TECH, AAU)	Associate Professor
Nielsen, Johan S. Rosenkilde	(MAT)	PhD student
Nielsen, Karl Brian	(M-TECH, AAU)	Professor
Nielsen, Kim Lau	(MEK-FAM)	PhD student

Nielsen, Kjeld	(M-TECH, AAU)	PhD student
Nielsen, Leif Otto		Elected member, Associate Prof.
Nielsen, Martin Bjerre	(MEK-SKK)	PhD student
Nielsen, Michael Wenani	(MEK-MPP)	PhD student
Nielsen, Niels-Jørgen Rishøj		Elected member, PhD.
Nielsen, Oluf Skov	(M-TECH, AAU)	PhD student
Nielsen, Peter	(M-TECH, AAU)	Associate Professor
Nielsen, Peter Nørtoft	(MAT)	PhD student
Nielsen, Peter Søe	(MEK-MPP)	PhD student
Nielsen, Rasmus Bruus	(M-TECH, AAU)	Associate Professor
Nielsen, Søren R.K.	(CIVIL, AAU)	Professor, dr.techn.
Nielsen, Ulrik Dam	(MEK-SKK)	Assistant Professor
Niordson, Christian	(MEK-FAM)	Associate Professor, PhD
Niu, Bin	(M-TECH, AAU)	Postdoc
Nwaogu, Ugochukwu Chivuzoh	(MEK-MPP)	PhD student
Obeidat, Anas	(MEK-FM)	PhD student
Okulov, Valery	(MEK-FM)	Professor
Olafsson, Olafur Magnus	(MEK-SKK)	PhD student
Olesen, Christian Gammelgaard	(M-TECH, AAU)	Assistant Professor
Olesen, Esben Lindgaard	(M-TECH, AAU)	Assistant Professor
Olesen, Peter Bjerg	(M-TECH, AAU)	PhD student
Olhoff, Niels	(M-TECH, AAU)	Emeritus Professor
Oshkovr, Simin A.	(M-TECH, AAU)	PhD student
Ottosen, Niels Saabye		Elected member, Professor
Pakkanen, Kirsi Inkeri	(MEK-MTU)	PhD student
Paletti, Hara Naga K. T.	(M-TECH, AAU)	PhD student
Pantleon, Karen	(MEK-MTU)	Associate Professor
Paulsen, Bo Terp	(MEK-SKK)	PhD student
Pedersen, Benjamin Pjedsted	(MEK-SKK)	PhD student
Pedersen, David Bue	(MEK-MPP)	PhD student
Pedersen, Louis	(MAT)	PhD student
Pedersen, Michael	(MAT)	Professor
Pedersen, Mikkel Rath	(M-TECH, AAU)	PhD student
Pedersen, Niels L.	(MEK-FAM)	Associate Professor, dr.techn.
Pedersen, Pauli	(MEK-FAM)	Emeritus Professor, dr.techn., HD
Pedersen, Preben Terndrup	(MEK-SKK)	Emeritus Professor, PhD
Pedersen, Thomas Ørts		Elected member, PhD.
Pedersen, Troels Dyhr	(MEK-FM)	Postdoc
Peters, Christiane Pascale	(MAT)	Postdoc
Petersen, Henrik Gordon		Elected member, Professor
Petersen, Thomas		Elected member, PhD
Petersen, Thomas Ditlev	(M-TECH, AAU)	Assistant Professor
Petersen, Thor Ugelvig	(MEK-SKK)	PhD student
Pillai, Saju	(M-TECH, AAU)	Postdoc
Pinero, Fernando	(MAT)	PhD student
Potamiche, Catalina-Gabriela	(M-TECH, AAU)	Scientific Assistant
Poulios, Konstantinos	(MEK-FAM)	PhD student
Pyrz, Ryszard	(M-TECH, AAU)	Professor
Rabbani, Raja Abid	(MEK-TES)	PhD student
Ramachandran, Gireesh K.V. R.	(MEK-FM)	PhD student
Rask, Morten	(RISØ)	PhD student
Rasmussen, Henrik K.	(MEK-MPP)	Associate Professor
Rasmussen, Johannes Tophøj	(MEK-FM)	PhD student
Rasmussen, John	(M-TECH, AAU)	Professor
Rauhe, Jens Christian M	(M-TECH, AAU)	Associate Professor
Ravn-Jensen, Kim		Elected members, PhD.
Read, Robert	(MEK-SKK)	Postdoc

Rech, Mads		Elect. Mem., CFD Specialist – aerodyn..
Redanz, Pia		Elected member, Senior Engineer
Richelsen, Ann Bettina	(MEK-FAM)	Professor, PhD
Roczek-Sieradzian, Agnieszka	(RISØ)	PhD student
Rogowska, Magdalena	(MEK-MTU)	PhD student
Rokni, Masoud	(MEK-TES)	Associate Professor
Rootzén, Helle	(IMM)	Professor, Head of Department
Rosbjerg, Dan		Elected members, Professor
Rosenbech, Bent	(M-TECH, AAU)	Scientific Assistant
Rothuizen, Erasmus Damgaard	(MEK-TES)	PhD student
Rytter, Niels Gorm	(M-TECH, AAU)	Associate Professor
Røgen, Peter	(MAT)	Associate Professor
Røn, Troels	(MEK-MTU)	PhD student
Santos, Ilmar F.	(MEK-FAM)	Associate Professor, Dr.-Ing.
Saremi, Sina	(MEK-SKK)	PhD student
Sarhadi, Ali	(MEK-MPP)	PhD student
Schilder, Frank	(MAT)	Assistant Professor, dr.phil.
Schjødt-Thomsen, Jan	(M-TECH, AAU)	Associate Professor
Schlechtingen, Meik	(MEK-FAM)	PhD student
Schløer, Signe	(MEK-FM)	PhD student
Schramm, Jesper	(MEK-FM)	Associate Professor
Seng, Sopheak	(MEK-SKK)	PhD student
Shen, Wen Zhong	(MEK-FM)	Associate Professor
Sichani, Mahdi Teimouri	(CIVIL, AAU)	PhD student
Sigmund, Ole	(MEK-FAM)	Professor, dr.techn.
Sivebæk, Ion Marius	(MEK-MPP)	Associate Professor
Skovgaard, Ove	(MAT)	Professor
Somers, Marcel A. J.	(MEK-MTU)	Section head, Professor
Sonne, Mads Rostgaard	(MEK-MPP)	PhD student
Sorokin, Sergey	(M-TECH, AAU)	Professor, PhD
Spangenberg, Jon	(MEK-MPP)	PhD student
Stang, Henrik		Elected member, Associate Prof.
Starke, Jens	(MAT)	Associate Professor
Steger-Jensen, Kenn	(M-TECH, AAU)	Associate Professor
Sterndorff, Martin J.		Elected member, PhD.
Stolpe, Mathias	(MAT)	Associate Professor
Storbjerg, Simon Haahr	(M-TECH, AAU)	PhD student
Sumer, B. Mutlu	(MEK-SKK)	Professor
Svensson, Eilif		Elected member, Manager
Sønderby, Ivan Bergquist	(RISØ)	PhD student
Sørensen, Bent	(RISØ)	Head of Research Programme
Sørensen, Jens Nørkær	(MEK-FM)	Professor
Sørensen, John Dalsgaard	(CIVIL, AAU)	Professor, ph.d.
Sørensen, Mads Peter	(MAT)	Associate Professor
Sørensen, Niels Jakob		Elected member, PhD
Sørensen, Rasmus Mørk	(M-TECH, AAU)	PhD student
Sørensen, René	(M-TECH, AAU)	PhD student
Sørensen, Søren Emil	(M-TECH, AAU)	PhD student
Sørensen, Søren Nørgaard	(M-TECH, AAU)	PhD student
Tahar, Siavash Talebi	(M-TECH, AAU)	PhD student
Taps, Stig B.	(M-TECH, AAU)	Associate Professor
Thoft-Christensen, Palle	(CIVIL, AAU)	Emeritus Professor, ph.d.
Thomassen, Søren Lindhard	(M-TECH, AAU)	PhD student
Thomassen, Carsten	(MAT)	Professor
Thomsen, Jon Juel	(MEK-FAM)	Associate Professor, dr.techn.
Thomsen, Kim	(MEK-FAM)	PhD student
Thomsen, Ole Thybo	(M-TECH, AAU)	Professor

Thomsen, Søren Steffen	(MAT)	Assistant Professor
Thorborg, Jesper	(MEK-MPP)	Assistant Professor
Tiedje, Niels Skat	(MEK-MPP)	Associate Professor
Toft, Henrik Stensgaard	(CIVIL, AAU)	Assistant Professor
Toftgaard, Helmuth L.	(RISØ)	Senior Scientist
Tommerup, Søren	(M-TECH, AAU)	Assistant Professor
Tosello, Guido	(MEK-MPP)	Assistant Professor
True, Hans	(IMM)	Emeritus Professor
Tutum, Cem Celal	(MEK-MPP)	Postdoc
Tvergaard, Viggo	(MEK-FAM)	Professor, dr.techn.
Umana, Valerie Gauthier	(MAT)	PhD student
Vajari, Danial	(MEK-FAM)	PhD student
Vedel-Smith, Nikolaj Kjelgaard	(MEK-MPP)	PhD student
Velte, Clara Marika	(MEK-FM)	Postdoc
Villa, Matteo	(MEK-MTU)	PhD student
Vinther, Frank	(MAT)	PhD student
Wahlgren, Søren	(RISØ)	PhD student
Walther, Jens Honore	(MEK-FM)	Associate Professor
Wandahl, Søren	(M-TECH, AAU)	Associate Professor
Wang, Fengwen	(MEK-FAM)	PhD student
Wang, Peng	(M-TECH, AAU)	PhD student
Weldeyesus, Alemseged G.	(MAT)	PhD student
West, Ole	(MEK-MTU)	PhD student
Wiggers, Sine Leergaard		Elected member, Assistant Professor
Wind-Willassen, Øistein	(MAT)	PhD student
Wu, Guanglei	(M-TECH, AAU)	PhD student
Zadeh, Mazyar Nesari	(M-TECH, AAU)	PhD student
Zafar, Ashar	(M-TECH, AAU)	PhD student
Zermeno, Victor Manuel R.	(MAT)	PhD student
Zhang, Lai	(MAT)	PhD student
Zhang, Yang	(MEK-MPP)	PhD student
Zhou, Lelai	(M-TECH, AAU)	PhD student
Zhu, Wei Jun	(MEK-FM)	Senior Researcher
Ögren, Magnus	(MAT)	Postdoc
Østergaard, Niels Højen	(M-TECH, AAU)	PhD student
Øye, Stig	(MEK-FM)	Senior Researcher
Aage, Niels	(MEK-FAM)	Researcher







